DRAFT GENERAL MANAGEMENT PLAN AND
ENVIRONMENTAL IMPACT STATEMENT FOR

NEW RIVER GORGE NATIONAL RIVER

WELCOME!

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National Park Service
U.S. Department of the Interior

Draft General Management Plan and
Environmental Impact Statement for

New River Gorge National River

West Virginia
2009

United States Department of the Interior

NATIONAL PARK SERVICE
New River Gorge National River
104 Main Street, P.O. Box 246
Glen Jean, West Virginia 25846

Dear Reader:

The National Park Service is pleased to provide you with a copy of the Draft General Management Plan/Environmental Impact Statement for New River Gorge National River. This is an exciting time in the history of the park. The Draft General Management Plan (GMP), once reviewed and finalized, will guide the management of the park for the next 20 years.

We invite you to comment on this plan. You may do so by any one of several methods. The preferred method of comment is on the park's planning web site at http://parkplanning.nps.gov/neri. Second, you may mail your comments to Superintendent Don Striker, New River Gorge National River, P.O. Box 246, Glen Jean, WV 25846.

Whether you comment on the web site or through the mail, if you include your address, phone number, e-mail address, or other personal identifying information, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

The National Park Service will accept comments on the Draft GMP from the public for a period of 60 days following publication of the Environmental Protection Agency's Notice of Availability in the *Federal Register*. The closing date for sending in your comments will be announced in the local media and on the park's planning website at http://parkplanning.nps.gov/neri. It can also be obtained by calling the park office at (304) 465-0508.

Additionally, we will hold public meetings to solicit comments on the Draft GMP during the public review period. Dates, times, and locations will be announced on the agency's planning website, http://parkplanning.nps.gov/neri, and in local papers.

Additional copies of the Draft GMP may be obtained by contacting the park at (304) 465-0508. CDs and a limited number of printed copies are available. We prefer that you request a CD as the printed copies are expensive to produce. The document is also available for download at the park's planning web site. Finally, the document is available for review at park headquarters at 104 Main Street, Glen Jean, WV.

We look forward to receiving your comments.

Sincerely,

Don Striker
Superintendent

TAKE PRIDE IN AMERICA

Draft General Management Plan and

Environmental Impact Statement

New River Gorge National River

West Virginia

2009

General Management Plan/Environmental Impact Statement

New River Gorge National River

Fayette, Raleigh, and Summers Counties, West Virginia

This Draft General Management Plan/Environmental Impact Statement describes five alternatives for future management of New River Gorge National River, the environment that would be affected by the alternative management actions, and the environmental consequences of implementing the alternatives.

Alternative 1 is a continuation of current management and trends. The park's enabling legislation and the existing *General Management Plan* (NPS 1982) would continue to guide park management. The NPS would manage park resources and visitor use as it does today, with no major change in direction. Improvements to visitor facilities and park operations facilities would include only projects that are already approved and fully funded. (Built aspects of this alternative would be included in the action alternatives (Alternatives 2 to 5).)

Alternative 2 emphasizes the substantial differences among subareas of the gorge, improving them to reflect their differing character, resources, and visitor experiences. Management actions would build upon the cultural resource, interpretive, and recreational opportunities of the north and south ends of the park, while retaining a primitive and remote feeling in the middle of the park.

Alternative 3 would unify the park by providing a north-south through park hike and bike trail that enables visitors to travel the park on singletrack trails at or near the river. Existing scenic roads would be enhanced. New access and facilities in the middle of the park would balance opportunities for visitors throughout the park.

Alternative 4 recognizes river gateways and the rim to river experiences that take visitors to them as the primary access points and orientation venues in the park. River gateways would be enhanced to tell gorge stories while providing improved river, trail, and recreational access. The NPS and gateway communities would work cooperatively to enhance rim to river experiences.

Alternative 5 would preserve areas for primitive recreational experiences from end to end of the park. Interspersed with these primitive areas would be cultural and interpretive resource focal areas where visitors could explore communities and other places that once populated the gorge, experience the river, and enjoy a variety of recreational experiences. A north-south through park connector composed of improved scenic roads and trails would enable visitors to travel the length of the park, visiting these areas and accessing the backcountry. Partnerships with gateway communities and improved rim to river experiences would foster links to the park as a whole and to specific cultural and interpretive resource areas within the park. Other connecting trails outside the park – made possible through partnerships – would offer visitors an opportunity to hike or bike from New River Gorge National River to the Bluestone National Scenic River, the Gauley River National Recreation Area, and other attractions in the region.

Environmental impacts that would result from implementation of the alternatives are addressed in the GMP/EIS. Impact topics include: physiography, geology, and soils; floodplains; water quality; vegetation; aquatic wildlife; terrestrial wildlife; rare, threatened, and endangered species; scenic resources; archeological resources, cultural landscapes; historic structures; ethnographic resources; cultural landscapes; historic resources; regional and local economy; communities; visitor use and visitor experience; park access; and park operations.

How to Comment on This Plan

This general management plan/environmental impact statement is available online at the New River Gorge National River web site at http://parkplanning.nps.gov/NERI and is being distributed for public and agency review and comment for a period of 60 days. Comments can be made on-line or in the form of email and letters and must be post marked by the due date posted on the website. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. *If you want us to withhold your name and address, you must state this prominently at the beginning of your comment.* We will make all submissions from organizations and businesses, people, and groups identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Please comment on-line at the park website or address comments to: Don Striker, Superintendent, New River Gorge National River, P.O. Box 246, Glen Jean, WV 25846-0246; E-mail: NERI_Superintendent@nps.gov

Summary

On November 10, 1978, President Jimmy Carter signed into law a bill that included a provision establishing the New River Gorge National River as a unit of the national park system. As stated in the legislation the park was established:

> *"for the purpose of conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge and preserving as a free-flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations"*

The park encompasses land within Raleigh, Fayette, and Summers Counties and the city of Hinton and is near the city of Beckley and Fayetteville. The authorized boundary currently encompasses 72,186 acres within a 53-mile corridor along the New River that extends from the city of Hinton on the south to the upstream limit of Hawks Nest State Park on the north. Since 1978 the NPS has acquired 52,960 acres from willing sellers within the boundary and has secured conservation easements on another 164 acres.

The National Park Service (NPS) is responsible for managing New River Gorge National River to conserve its scenery, natural and historic resources, and wildlife and to provide for its enjoyment in a manner that will leave the park unimpaired for the enjoyment of future generations (NPS 2006a).

Purpose and Need for the General Management Plan

This document is a draft general management plan and environmental impact statement (GMP/EIS) for New River Gorge National River. This general management plan replaces the existing *New River Gorge General Management Plan* (NPS 1982). The purpose of the GMP is to provide a decision-making framework that ensures that management decisions effectively and efficiently carry out the NPS mission at New River Gorge National River. It will guide management decision making at the park for the next 15 to 20 years.

Many considerations suggest that a new GMP is needed for New River Gorge National River. The current general management plan for the park is 25-years-old. The NPS has implemented many of its recommended actions. Some are no longer appropriate because of changing conditions and circumstances. New issues have emerged in recent years that the GMP does not address because they were not anticipated in 1982 when the plan was prepared. Also recent NPS policies related to management and planning for all national park units are not reflected in the 25-year-old GMP.

The new GMP for New River Gorge National River addresses several needs:

- it ensures that the park's fundamental and other important resources and values are preserved and protected
- it meets NPS legal requirements for comprehensive general management planning as a guide for more specific projects, to base decisions on adequate environmental information and analysis, and to track progress toward goals
- it provides a logical trackable rationale for decision-making by the NPS that focuses first on why the park was established and what the desired future conditions of those resources should be
- it considers the concerns, expectations, and values of the public and of the remaining private landowners in the park related to land protection and management of resources and visitor experience in the park
- it ensures that management decisions by the NPS promote the efficient use of public funds and that managers are accountable to the public for their management decisions

Major Management Issues Addressed in the New GMP

The new GMP addresses the management issues currently facing the park. As part of the GMP planning process the NPS Planning Team engaged the public to assist with identifying the issues. Major management issues identified include the following:

- **Resource Management**
  - maintaining natural processes and restoring natural systems, particularly limiting future man-made forest fragmentation
  - improving water quality in the New River and its tributaries
  - protecting, preserving, and restoring – as appropriate – the park's cultural resources
  - protecting scenic resources in and around New River Gorge
- **Visitor Experience and Visitor Use**
  - enhancing visitor orientation and understanding of the experiences the park offers
  - increasing the types of experiences visitors can have in the park
  - enhancing hiking, biking, and horseback riding opportunities
  - providing safe legal access across railroad rights-of-way
  - enhancing access to places where classic park experiences and other visitor experiences occur

- enhancing the quality of existing visitor experiences by reducing crowding and improving facilities at existing visitor use areas

- **Socio-Economic Environment**
  - sustaining communities that remain within the park
  - prioritizing further land protection within the park boundary
  - working cooperatively with the owners of private land remaining within the park boundary

- **Partnerships**
  - working collaboratively with the park's gateway communities to define and accomplish shared goals
  - expanding participation in regional economic development planning efforts
  - expanding collaboration with the park's other partners, such as the state parks, state and county agencies, non-profit and private partners for special projects, and organized stakeholder groups
  - enhancing local appreciation of the park by conveying to the public – particularly local residents – that the NPS and the public are partners who have a mutual interest in protecting the park's forest, waters, and wildlife resources that the public has enjoyed for generations and continues to enjoy today

Overview of the Alternatives Considered

The GMP/EIS considers five alternatives for future management of the park. Each alternative assumes a different management approach to addressing the major park management issues, including the Continuation of Current Management (Alternative 1) and four action alternatives (Alternatives 2, 3, 4, and 5).

Five broad organizing principals are inherent in each of the four GMP action alternatives:

- **Visitor Experience**

  Park programs would reflect a central theme that helps visitors better understand how the park is organized, the opportunities that are available, and how to travel in the complicated network of local roads and trails in the park's rugged terrain.

- **Natural Resource Management**

  Natural processes would dominate in large contiguous forest blocks that support diverse and abundant endemic and rare plant and animal communities.

- **Cultural Resource Management**

Successful partnerships would make possible stabilization, rehabilitation, or restoration of the park's most significant historic resources; interpretation would occur at restored or rehabilitated cultural resource sites or at discovery sites.

- **Visitor Use and Visitor Facilities**

Visitor facilities would be programmed and located to support the desired visitor experiences in the park's central theme; they would be designed to have minimal impact on park resources.

- **Partnerships and Cooperative Actions**

NPS, gateway communities, and private landowners would work cooperatively to achieve shared goals; partnerships would achieve a seamless network of regional parks, open spaces, trails, and heritage sites in southern West Virginia that supports a vibrant tourism economy.

- **Alternative 1**

Alternative 1 is a continuation of current management and trends. The park's enabling legislation and the existing *General Management Plan* (NPS 1982) would continue to guide park management. The NPS would manage park resources and visitor use as it does today, with no major change in direction. Improvements to visitor facilities and park operations facilities would include only projects that are already approved and fully funded. (Built aspects of this alternative would be included in the action alternatives (Alternatives 2 to 5).)

- **Alternative 2**

Alternative 2 emphasizes the substantial differences among subareas of the gorge, improving them to reflect their differing character, resources, and visitor experiences. Cultural resources and interpretive experiences would be emphasized in themed areas in the north and south ends of the park; primitive recreation would be emphasized in the middle of the park. Throughout the middle of the park large tracts of intact forest would be managed as backcountry (68.5%) with negligible new forest fragmentation. Significant cultural resources in the north and south ends of the park resources would be restored or rehabilitated and adaptively reused; a few sites in the middle of the park would be managed as discovery sites which visitors would find and learn about as they explore remote areas of the park. Trails would connect major cultural sites in the north and south ends of the park. New visitor facilities would expand opportunities in the north and south ends of the park. NPS would provide technical assistance to gateway communities. NPS would expand participation in regional economic development efforts and cooperative efforts with the state parks, public agencies, and visitor use groups.

- **Alternative 3**

Alternative 3 would unify the park by providing a north-south through park hike and bike trail that enables visitors to travel the park on singletrack trails at or near the river. Recreation, scenic experiences, and discovery of cultural resources would be emphasized along the new through park trail. Only the park's most intact and unfragmented forest tracts – dispersed throughout the park – would be managed as backcountry (43%) with negligible new forest fragmentation. Numerous cultural resources along the though park trail and in the vicinity of visitor facilities would be managed as discovery sites which visitors would find and learn about as they explore remote areas of the park which visitors would find and learn about as they explore remote areas of the park. The through park trail would connect the park from end to end; other trails would parallel the river. New visitor facilities would be added in the middle of the park. NPS would provide technical assistance to gateway communities. NPS would expand participation in regional economic development efforts and cooperative efforts with the state parks, public agencies, and visitor use groups.

- **Alternative 4**

Alternative 4 recognizes river gateways and the rim to river experiences that take visitors to them as the primary access points and orientation venues in the park. Cultural and recreation resources and experiences would be emphasized in proximity to gateways and along rim to river trails and roads. Large tracts of intact forest that are not near river gateways and primary rim to river travel routes would be managed as backcountry (60.8 %) with negligible new forest fragmentation. Significant cultural resources in the vicinity of river gateways would be rehabilitated and adaptively reused; many sites along rim to river trails and near gateways would be managed as discovery sites which visitors would find and learn about as they explore remote areas of the park. Trails would connect the rim to the river and provide access to recreation and interpretive sites in the vicinity of river gateways. New visitor facilities would be added in the vicinity of river gateways. NPS and gateway communities would enter into cooperative partnerships. NPS would expand participation in regional economic development efforts and cooperative efforts with the state parks, public agencies, and visitor use groups.

- **Alternative 5**

Alternative 5 would preserve areas for primitive recreational experiences from end to end of the park. Interspersed with these primitive areas would be cultural and interpretive resource focal areas where visitors could explore communities and other places that once populated the gorge, experience the river, and enjoy a variety of recreational experiences. A north-south through park connector composed of improved scenic roads and trails would enable visitors to travel the length of the park, visiting these areas and accessing the backcountry. Primitive recreation experiences would be emphasized throughout the park along the new through park

connector; river gateways and focal areas would be managed for a broad variety of interpretive and recreational experiences. Large tracts of intact forest along one or both sides of the New River throughout the park would be managed as backcountry (66.4%) with negligible new forest fragmentation. Significant cultural resources in river gateways and focal areas would be restored or rehabilitated and adaptively reused; many sites along the through park connector would be managed as discovery sites which visitors would find and learn about as they explore remote areas of the park. The through park connector would connect the park from end to end; other trails would connect the rim to the river and would provide access to recreation and interpretive sites in the vicinity of river gateways. New facilities would expand visitor opportunities in the vicinity of river gateways and in focal areas. Partnerships with gateway communities and improved rim to river experiences would foster links to the park as a whole and to specific cultural and interpretive resource areas within the park. NPS would expand participation in regional economic development efforts and cooperative efforts with the state parks, public agencies, and visitor use groups. Other connecting trails outside the park – made possible through partnerships – would offer visitors an opportunity to hike or bike from New River Gorge National River to the Bluestone National Scenic River, the Gauley River National Recreation Area, and other attractions in the region.

Boundary Adjustments

The NPS has reviewed the park boundary and made a determination that seven boundary adjustments are needed to enhance the visitor experience and to address operational issues. Collectively these adjustments would add approximately 222.2 acres to the park.

Analysis has revealed that the boundary adjustment required to protect the scenic resources in and around the gorge that are critical to fulfilling the park's purpose would be impracticable because of potential community impacts and costs. In lieu of boundary adjustments and land acquisition the NPS would seek to protect the park's scenic resources from impacts of new development on lands in and around the gorge by working with communities and private landowners. Cooperative actions would focus on land use planning that would encourage sustainable design of new development and that would reduce the impact of new development on scenic values and important resource areas.

Wilderness Eligibility Assessment

The new GMP for New River Gorge National River includes a wilderness eligibility assessment (see Appendix D). The purpose of the wilderness eligibility assessment is to evaluate all NPS lands and waters within the park boundary for their eligibility for inclusion in the national wilderness preservation system. Based on the findings of the Wilderness Eligibility Assessment the NPS has determined that park land within the current park boundary do not meet the primary eligibility criteria for

wilderness designation and are therefore ineligible for further wilderness study. Park-owned lands within the boundary of the park will therefore not be subject to wilderness preservation provisions but will be managed in accordance with the NPS Organic Act of 1906 and other laws, executive orders, regulations, and policies applicable to units of the national park system.

Hunting in the Park

During the preparation of this draft EIS, Congress in Section 7115 of Public Law 111-11, the Omnibus Public Land Management Act of 2009, which was signed into law on March 30, 2009, directed that "Section 1106 of the National Parks and Recreation Act of 1978 (16 USC 460m-20) is amended in the first sentence by striking "may" and inserting "shall"." Hunting, which had been discretionary at New River Gorge until the passage of Public Law 111-11 in March 2009, is no longer discretionary but is now authorized. According to 36 CFR § 2.2(b)(4), "Where hunting or trapping or both are authorized, such activities shall be conducted in accordance with Federal law and the laws of the State within whose exterior boundaries a park area or a portion thereof is located. Nonconflicting State laws are adopted as a part of these regulations."

As part of its consideration of the hunting issue, NPS has consulted available scientific data pertinent to hunting in the park and compiled those data in an *Assessment of Hunting Impacts at New River Gorge National River, West Virginia* (Hooper et al 2006). Findings of this study indicate that hunting in accordance with applicable state regulations has not caused adverse effects on any of the species of mammals or birds that are or may be hunted and that currently occur within the park boundaries. Recent study further indicates that no evidence exists to support that position that any other species found within the park boundaries have been adversely affected by hunting. (Hopper et al 2006). Continuation of hunting in the park would therefore continue to have a negligible impact on terrestrial habitat and dependent species.

Pursuant to the park's enabling legislation and 36 C.F.R. Part 24, park managers have also consulted with the West Virginia Division of Natural Resources (WVDNR) regarding potential hunting program options. In October 2007 a newsletter was sent to 797 individuals and groups on the park mailing list outlining the hunting options under consideration at that time. Public scoping meetings to discuss potential alternatives and important issues, including hunting, were held November 6, 7 and 8th, 2007. About 300 people attended one of the three meetings.

In Alternative 5 (Preferred Alternative) hunting would continue largely as it is today except for the following:

- parts of the historic Grandview State Park would be opened to limited bow hunting via a permit/ lottery system

- upland open land bird habitat would be increased by creating/restoring early successional habitat in historic resource zones (where such management is consistent with the park's cultural landscape restoration goals)
- the NPS and WVDNR would collaboratively monitor park-specific game harvest and hunter use levels using a voluntary hunter registration/permit process and designated hunting units; this process would include distribution of information to hunters (hunt unit maps, state regulations, etc.) and a voluntary end-of-season hunter questionnaire provided by the NPS
- NPS and WVDNR would develop a cooperative game management plan specific to designated hunt units in the park that would also identify management strategies to improve hunter satisfaction and enhance outreach opportunities to both hunters and non-hunters

Continuation of hunting in the park along with the actions proposed in Alternative 5 (Preferred Alternative) would have a local minor beneficial impact on wildlife habitat and dependent species.

Biking in the Park

The NPS has considered and evaluated alternative actions for expansion of biking opportunities in the park as part of the alternatives analysis in this GMP/EIS. The NPS has consulted the general public and park user groups interested in biking during development of the biking options. In October 2007 a newsletter was sent to 797 people and groups on the park mailing list outlining the biking options under consideration. Public meetings to discuss alternatives and important issues, including biking in the park were held November 6, 7, and 8, 2007. About 300 people attended one of the three meetings.

The GMP alternatives evaluated in this GMP/EIS generally propose that additional biking opportunities could occur on new trails in the park generally as follows:

- in frontcountry zones, river corridor zones, historic resource zones, and park development zones – biking could occur on a variety of trail types
- in backcountry zones – biking could occur only on singletrack trails
- in historic resource, river corridor, and park development zones – biking could occur on a limited basis on a variety of trail types

No biking would be permitted in the Endless Wall management zone.

Alternative 5 (Preferred Alternative) would also include potential joint hiking and biking use of several existing and new trails. The final location of new biking trails

will be identified in the biking component of the park's new trail management plan. The plan will be prepared for the preferred alternative as a planning effort subsequent to approval of the GMP/EIS. Following completion of the plan a special regulation will be promulgated pursuant to 36 CFR Chapter 4 §4.30 adding the newly designated routes to the list of routes where biking is permitted in the Superintendent's Compendium.

Camping in the Park

Alternative 5 (Preferred Alternative) would include a variety of camping facilities that would be further evaluated in a camping management plan for the park, to be developed following completion of the GMP/EIS. In Alternative 5 the NPS would develop up to four new developed campgrounds, improve existing primitive campgrounds, and add backcountry campsites along the new Through Park Connector and other park trails. The camping management plan would address a variety of camping management issues as to how these facilities would be designed and managed, such as whether backcountry camping would be designated or not designated and whether NPS would in the future charge fees for camping and institute a camping reservation system. A camping fee would enable the NPS to provide a higher level of customer service and would benefit visitors. In formulating the plan the Superintendent would be permitted to designate specific areas for camping use and/or impose local restrictions, use limits, and closures. The camping management plan would be would be developed with public involvement.

Affected Environment and Environmental Consequences of the Alternatives

The environmental impact statement (EIS) portion of this GMP describes the affected natural, cultural, scenic, and socio-economic environment within and near the park and the anticipated impacts on the environment associated with the five GMP alternatives. Seventeen topics are addressed, including physiography, geology, and soils; floodplains; water quality; vegetation; aquatic wildlife; terrestrial wildlife; rare, threatened, and endangered species; scenic resources; archeological resources; cultural landscapes; historic structures; ethnographic resources; regional and local economy; communities; visitor use and visitor experience; park access; and park operations.

Determining environmental consequences included identifying the regulations and polices applicable to each impact topic, defining the methods used to conduct the analysis, and defining relative terms to qualify impacts, such as "negligible" or "moderate" effects for each impact topic. Analysis were performed to evaluate impacts within the park and in nearby communities and on a more regional scale in terms of cumulative impacts. Analyses involved comparing conditions that would occur with changes in management (Alternatives 2, 3, 4, and 5) to conditions that would occur if current management practices continued (Alternative 1). The results

are presented in Table 2.37 of the GMP/EIS and are summarized for selected impact topics below.

- **Impacts of Natural and Scenic Resource Management Actions**

In Alternative 1 existing natural and scenic resource management actions would continue consistent with applicable laws and policies resulting in long-term minor to moderate beneficial impacts to natural and scenic resources. When compared to Alternative 1, in Alternatives 2 to 5 long-term major beneficial impacts would occur to natural, scenic, and cultural resources throughout the park as a result of managing large areas as backcountry where natural processes and features would persist largely unaltered by human-induced impacts. Areas of the park to be managed as backcountry would be as follows:

- Alternative 2 – 68.5 percent backcountry
- Alternative 3 – 43.0 percent backcountry
- Alternative 4 – 60.8 percent backcountry
- Alternative 5 – 66.4 percent backcountry

In Alternative 1 land disturbances associated with development of new visitor use facilities and other management actions would result in negligible to long-term minor adverse impacts to natural resources. By comparison Alternatives 2 to 5 would have negligible or long-term minor to moderate adverse impacts. The total estimated disturbance area associated with the alternatives would be approximately as follows:

- Alternative 2 – 190 acres
- Alternative 3 – 220 acres
- Alternative 4 – 180 acres
- Alternative 5 – 300 to 320 acres

Best management practices and mitigation measures would be used to reduce the magnitude of impacts of anticipated disturbance on the park's soils, water quality, vegetation, and wildlife.

- **Impacts of Cultural Resource Management Actions**

In Alternative 1 historic structures would be stabilized and modern structures would be removed as historic properties remaining in private ownership are acquired by the NPS, generally resulting in long-term minor to moderate beneficial impacts to historic structures, cultural landscapes, and potential ethnographic resources. In Alternative 2 cultural resource management actions would focus on treatment and interpretation of representative early settlement resources in the south end of the park, representative industrial resources and discovery sites in the north end of the park, and representative discovery sites

along trails in the middle of the park (approximately 10 sites), resulting in long-term minor to major beneficial impacts on cultural resources. In Alternative 3 cultural resource management actions would focus on stabilization and interpretation of cultural resources as discovery sites (from 30 – 35 sites), rehabilitation and adaptive reuse of early settlement farmhouses, and stabilization of remaining historic structures at Thurmond, resulting in long-term minor to moderate beneficial impacts on cultural resources. In Alternative 4 cultural resource management actions would focus on treatment and interpretation of representative coal mining, timbering, and railroading resources at or near river gateways, representative early settlement resources in the southern end of the park, representative discovery sites along trails at or near river gateways and along rim to river trails (approximately 20 to 25 sites), resulting in long-term minor to major beneficial impacts to cultural resources. In Alternative 5 cultural resource management actions would focus on treatment and interpretation of representative coal, timbering, and railroading resources at or near river gateways at Thurmond, Grandview/Prince, and Hinton, representative early settlement resources in the southern end of the park, and representative discovery sites along the through park connector, trails at or near river gateways, and along rim to river trails; collectively these actions would result in long-term minor to major beneficial impacts to cultural resources.

- **Public Use, Enjoyment, and Experience Management Actions**

In Alternative 1, public use, enjoyment, and experience management actions would have long-term minor to moderate beneficial impacts on visitor use and experience. When compared to Alternative 1, Alternatives 2 to 5 would result in long-term major beneficial impacts to visitor use and visitor experience, as a result of the following management actions:

- in Alternative 2 new facilities and interpretive programs would be located in three themed areas of the park – the early settlement and farming area, the primitive outdoor experience area, and the industrial gorge

- in Alternative 3 new facilities and interpretive programs – including a new through park trail – would support diverse visitor experiences throughout the park

- in Alternative 4 new facilities and interpretive programs would be clustered within or near river gateways

- in Alternative 5 new facilities and interpretive programs – including a new through park connector – would emphasize a combination of

primitive outdoor experiences in the park's forest complemented by diverse opportunities for visitors in and around specific focal areas

- **Impacts of Park Operations Management Actions**

In Alternative 1 the continuation of current management would result in a local long-term moderate adverse impact on park operations due to staffing and funding constraints, increased pressure to provide infrastructure and facilities, the unfilled need for additional partnership and collaboration, increased resource threats, and the lack of management zoning. In Alternative 1 new facilities associated with the New River Parkway once constructed by the Federal Highway Administration and the WV Department of Transportation would result in a major beneficial impact on park operations.

In Alternatives 2 to 5 the desired future conditions would better define management goals for park staff and would guide development of targeted strategies to protect and improve park resources. Active management of resources as well as strategic use of partner organizations, grants, universities, scholars, interns, and volunteers would allow park staff to better meet the park mission and goals. New sources of funding would become available as NPS works with users and visitors to create partnerships, friends groups, and other mechanisms to support park purposes. Additional funding from partnerships would be greatest in Alternatives 4 and 5 where NPS would implement more aggressive and diversified partnership programs. Addition of six areas and 212.5 acres to the park to provide for parking and access would improve the ability of rangers to manage these uses within the park. Collectively the common management actions in Alternatives 2 to 5 would result in a local long-term minor to major beneficial impact on park operations. Addition of staff for implementation of new programs would have a local short-term minor adverse impact on the park budget.

- **Impacts of Land Protection Actions**

In Alternative 1 the NPS would continue to protect land within the park boundary as funding allows – responding to opportunities as they arise – resulting in long-term minor beneficial impacts, depending upon which properties become available in the marketplace lacking a prioritized acquisition program. In Alternatives 2 to 5 future land protection would focus on purchasing property within the park boundary from willing sellers that includes significant resources and values that are fundamental or otherwise important to the park or that are needed to enhance the visitor experience and to address operational issues. This revised approach would result local long-term moderate beneficial impacts on the park's natural and cultural resources.

- **Impacts of Partnership and Community Collaboration Actions**

In Alternative 1 the NPS would continue to collaborate with other agencies, local communities, and private landowners in the park on a variety of resource management issues, largely on an as-needed basis, resulting in negligible to long-term minor beneficial impacts on natural and cultural resources. In Alternatives 2 to 5 the NPS would expand partnerships with local users, park neighbors, gateway communities, other agencies, private landowners in the park, and regional economic development interests, resulting in long-term minor to major beneficial impacts on natural and cultural resources, as well as on the visitor experience and park operations. Such partnerships would seek to develop a seamless network of regional parks, open spaces, trails, and heritage sites within southern West Virginia that would increase protection and enhancement of biodiversity and create a greater array of educational and appropriate recreational opportunities. The benefits of increased partnerships would be greatest in Alternatives 4 and 5.

- **Economic Impacts**

In 2025 continuation of current park management (Alternative 1) would result in $125,763,690 ($2007) of visitor and NPS spending in the region, with an estimated 3,159 jobs in businesses supported by NPS-related activities.

By comparison in 2025 the total annual direct and indirect impacts from related jobs and spending of the action alternatives are estimated to be:

- Alternative 2 – $136,823,490 ($2007) (3,408 related jobs)
- Alternative 3 – $142,103,590 ($2007) (3,552 related jobs)
- Alternative 4 – $150,763,590 ($2007) (3,801 related jobs)
- Alternative 5 – $161,172,490 ($2007) (4,087 related jobs)

Agency Preferred Alternative – Alternative 5

The NPS has identified Alternative 5 as the preferred alternative to guide long-term management of New River Gorge National River. Selection of Alternative 5 as the preferred alternative is based on the analysis and findings of the GMP planning team as well as on public comments received during the planning process. The GMP planning team has determined that Alternative 5 would fulfill the NPS statutory mission and responsibilities at the park and would be advantageous when compared to Alternatives 1, 2, 3, and 4 with respect to protecting the park's natural and cultural resources; enhancing interpretation, education, and public understanding; enhancing public use and enjoyment of the park; effectively managing the park; and, providing effective technical assistance to the park's community partners.

The Next Steps

After distribution of the Draft General Management Plan/Environmental Impact Statement, there will be a 60-day public review and comment period. The NPS will hold public meetings where the public will have opportunities to provide comments on management alternatives, including the preferred alternative. The public will also be able to comment on-line or in the form of email and letters, which must be post marked by the due date posted on the website. Following the comment period the NPS planning team will evaluate comments received from other federal agencies, organizations, businesses, people, and groups regarding the draft plan. It will then prepare the Final General Management Plan. The final plan will incorporate changes made in response to the comments received, as appropriate. The final plan will include letters from government agencies, any substantive comments on the draft document, and NPS responses to those comments. Following distribution of the final plan there will be a 30-day no-action period, after which the NPS Regional Director will sign a record of decision approving the plan. The record of decision will document the NPS selection of the preferred alternative. Once it is signed, the NPS will be able to proceed with implementation of management actions identified in the approved park management plan.

Implementation of the Plan

Implementation of the approved park management plan will depend on future NPS funding and servicewide priorities. Some actions will also depend upon partnership funds, time, and effort. The approval of a Final General Management Plan does not guarantee that funding and staffing needed to implement the plan will be forthcoming. Full implementation of the plan could be many years in the future.

Once the Regional Director has approved the plan, additional feasibility studies and more detailed planning, environmental documentation, and consultations would be completed, as appropriate, before the NPS can implement certain actions in the selected alternative. Future program and implementation plans, describing specific actions that managers intend to undertake and accomplish, will tier from the desired conditions and long-term goals set forth in this GMP.

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How to Read This Plan…

The National Park Service (NPS) has developed this Draft General Management Plan/ Environmental Impact Statement to guide management decision-making at New River Gorge National River for the next 15 to 20 years. The public and many local, state, and federal agencies have assisted the NPS with preparing the plan. This plan is divided into five chapters:

Chapter 1 – Purpose of and Need for Action describes the federal action and reasons why the general management plan (GMP) is being prepared. Chapter 1 presents the park's purpose and significance statements and describes the fundamental and other important resources and values that are critical to achieving the park's purpose and maintaining its significance. This section also describes the planning process and issues addressed in the plan.

Chapter 2 – Alternatives describes, evaluates, and compares the Continuation of Current Management Alternative and five action alternatives. The Continuation of Current Management Alternative provides a baseline from which the three action alternatives can be evaluated. Desired resource conditions, opportunities for visitor experience, as well as levels of development intensity necessary to accomplish each alternative are presented. Alternative 5 is the federal agency's preferred alternative and the environmentally preferred alternative.

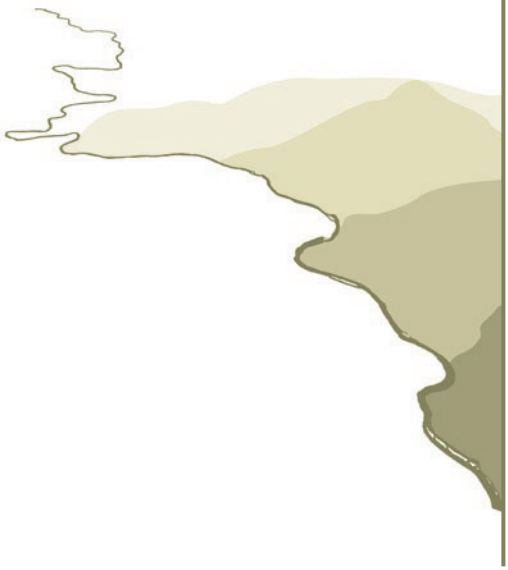
Chapter 3 – Affected Environment describes the existing natural, cultural, and socioeconomic resources that could be potentially affected by implementing either one of the alternatives.

Chapter 4 – Environmental Consequences describes the potential impacts to the park's resource values that could result from implementing either one of the alternatives.

Chapter 5 – Consultation, Coordination, and Compliance describes the public involvement and agency coordination process that occurred during the GMP planning process. Required compliance mandates are also summarized.

Appendices provide additional supporting technical data and relevant background material cited throughout the plan.

References and Legal Citations are cited from which background and supporting documentation was obtained.



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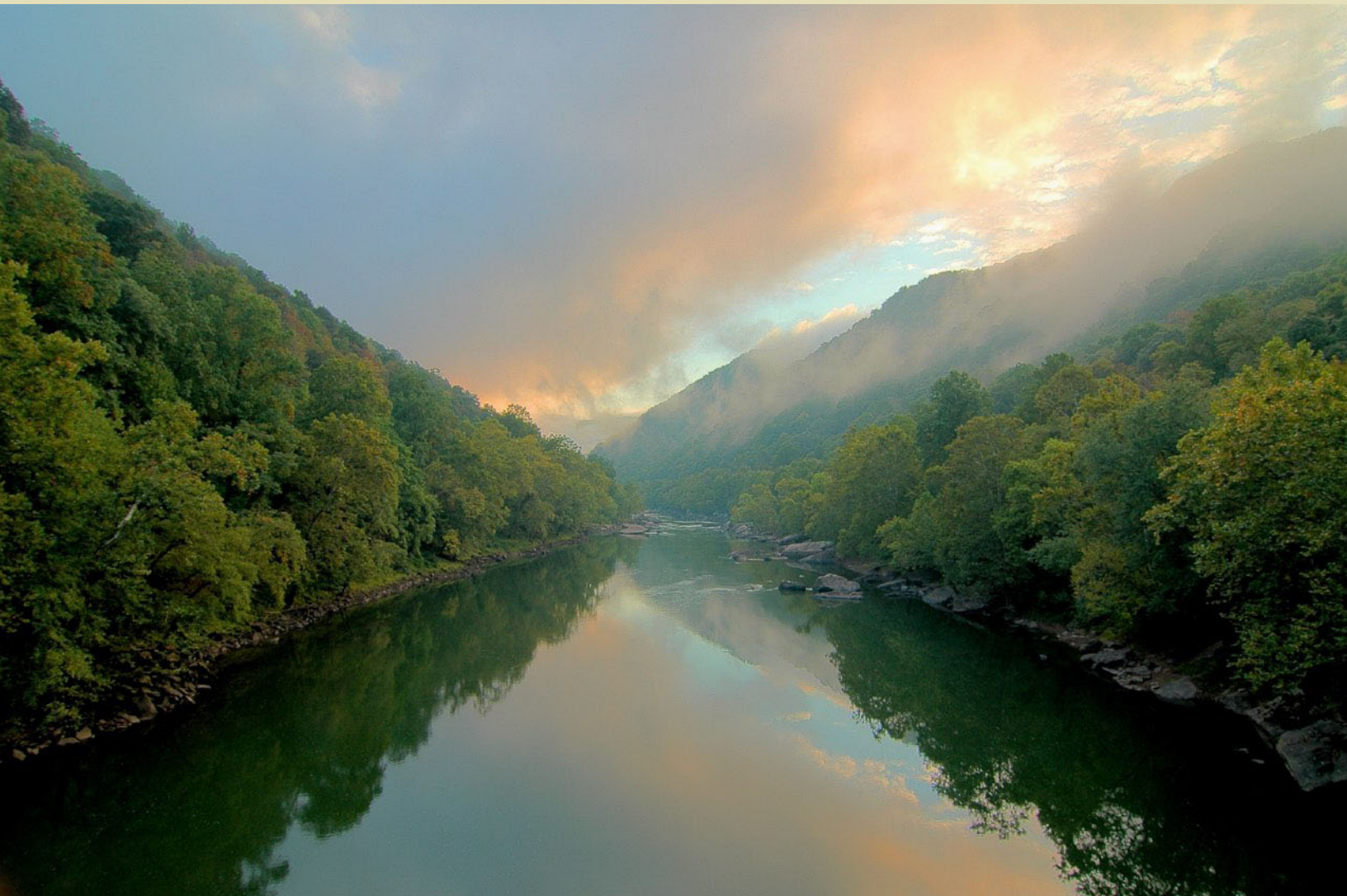
1 Purpose and Need for Action



Flowing water – the definitive creative force of the New River Gorge.

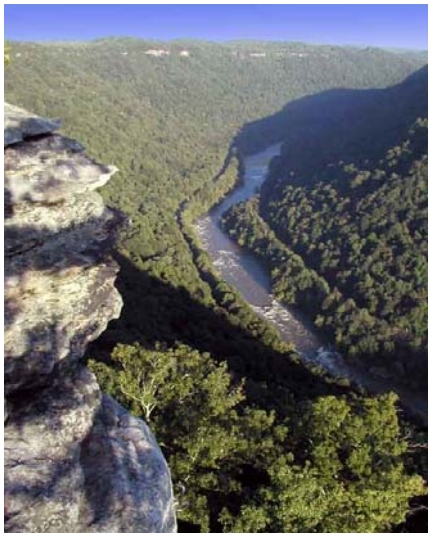
Four coal seams that are among the best bituminous coal in the world.

Flowing water is the definitive force of the New River Gorge. The New River, one of the oldest rivers in the world, continues to sculpt the longest and deepest river gorge in the Appalachian Mountains.

Opposite side: New River at McCreery – one of the oldest rivers in the world.

1.0 Purpose and Need for Action

1.1 Proposed Federal Action



New River Gorge viewed from Diamond Point ▲

On November 10, 1978, President Jimmy Carter signed into law a bill that included a provision establishing the New River Gorge National River in Raleigh, Summers, and Fayette County, West Virginia, as a unit of the national park system. The National Park Service (NPS) is responsible for managing New River Gorge National River to conserve its scenery, natural and historic resources, and wildlife and to provide for its enjoyment in a manner that will leave the park unimpaired for the enjoyment of future generations (NPS 2006a).

The proposed federal action considered in this environmental impact statement (EIS) is the implementation of a programmatic management framework – in the form of a general management plan – to accomplish the purposes for which New River Gorge National River was established by Congress. This general management plan replaces the existing *New River Gorge General Management Plan* (NPS 1982). It will guide management decision making at the park for the next 15 to 20 years.

The General Management Plan/Environmental Impact Statement (GMP/EIS) complies with all applicable statutory requirements and policies, including the National Environmental Policy Act of 1969, as amended, the National Historic Preservation Act, as amended, and National Parks and Recreation Act of 1978. It addresses the following:

- the types of management actions required for the preservation of park resources
- the types and general intensities of development (including visitor circulation and transportation patterns, systems, and modes) associated with public enjoyment and use of the area, including general locations, timing of implementation and anticipated costs
- visitor carrying capacities and implementation commitments for all areas of the park
- potential modifications to the external boundaries of the park and the reasons for the proposed changes

1.2 Purpose of the Action

The purpose of the GMP is to provide a decision-making framework that ensures that management decisions effectively and efficiently carry out the NPS mission at New River Gorge National River. NPS managers at the park routinely make many difficult decisions about the preservation of the park's significant natural and cultural resources for public enjoyment, about competing demands for limited resources, about priorities for using available funds and staff, and about differing local and nationwide interests and views of what is most important at the park. The

decision-making framework in the park's GMP will provide the guidance to make these management choices in a manner that is consistent with the purposes for which New River Gorge National River was established by Congress as a unit of the national park system and that protects the park's fundamental and other important resources and values.

1.3 Need for the Action

Many considerations suggest that a new GMP is needed for New River Gorge National River. The current general management plan for the park is 25 years old. The NPS has implemented many of its recommendations. Some are no longer appropriate because of changing conditions and circumstances. New issues have emerged in recent years that the GMP does not address because they were not anticipated in 1982 when the plan was prepared. All recent NPS policies related to management and planning for all national park units are not reflected in the 25-year-old GMP.

The new GMP for New River Gorge National River addresses several needs:

- it ensures that the park's fundamental and other important resources and values are preserved and protected
- it meets NPS legal requirements for comprehensive general management planning as a guide for more specific projects, to base decisions on adequate environmental information and analysis, and to track progress toward goals
- it provides a logical trackable rationale for decision-making by the NPS that focuses first on why the park was established and what the desired future conditions of those resources should be
- it considers the concerns, expectations, and values of the public and of the remaining private landowners in the park related to land protection and management of resources and visitor experience in the park
- it ensures that management decisions by the NPS promote the efficient use of public funds and that managers are accountable to the public for their management decisions

The plan's outcome will be an agreement among the NPS, its partners at New River Gorge National River, and the public as what resource conditions and visitor experiences should exist at the park and how those conditions can best be achieved and maintained over time.

1.4 The Park's Origin and Legislative History

President Jimmy Carter signed legislation establishing New River Gorge National River on November 10, 1978 (P.L. 95-625) (see Appendix A). As stated in the legislation the park was established as a unit of the national park system:

> *"for the purpose of conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge and preserving as a free-flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations"*

The earliest discussion regarding creation of a park to protect the New River and its gorge began in the late 1950s. Some residents of communities near the park believed that a national park designation for the park was needed to protect the park's resources and would at the same time enhance the area's tourism appeal with potentially significant economic benefits to southern West Virginia.

While there was strong local support of a new national park in the region, the real effort to protect the New River came as a result of a major conservation effort upstream on the river in Virginia and North Carolina. The controversy focused on a series of proposed pump storage dams on the river. Many West Virginians were strongly opposed to the proposed dams because they would have significantly altered river flows downstream. In 1974, this effort led to the formation of the West Virginia Chapter of the National Coalition to Save the New River and to creation of the New River Gorge National Park Committee. These groups were subsequently instrumental in promoting public support for the 1976 addition of the New River in North Carolina to the National Wild and Scenic River System, bringing to an end the proposals for energy development projects on the river upstream.

The conservation effort then turned to the West Virginia section of the New River. A number of key community leaders emerged from the existing river conservation groups. Working together for another two years they built the support needed for the park in the local communities along the river leading ultimately to creation of New River Gorge National River.

Subsequent to the original 1978 enabling legislation a number of additional pieces of legislation further defined the NPS mission at New River Gorge National River and provided for several minor boundary adjustments (see Table A.1 in Appendix A).

1.5 Park Boundary, Size, and Ownership

New River Gorge National River is located in the Appalachian Mountains of southern West Virginia (see Figure 1.1). The park encompasses land within Raleigh, Fayette, and Summers Counties and the city of Hinton and is near the city of Beckley and Fayetteville.

The authorized boundary for New River Gorge National River currently encompasses 72,186 acres within a 53-mile corridor along the New River that extends from the city of Hinton on the south to the upstream limit of Hawks Nest State Park on the north. The park includes most of the 62,000 acres identified in the park's 1978 enabling legislation plus land added through four subsequent Congressionally-authorized boundary adjustments. In 1986, Congress authorized addition of 10 acres for constructing the Glen Jean Headquarters Complex (P.L. 99-590). Other modifications made in 1988, 1996, and 2002 were made to protect scenic resources and to facilitate better park management (P.L. 100-534, P.L. 104-333, and PL 107-356). Since 1978 the NPS has acquired 52,960 acres from willing sellers within the park boundary and has secured conservation easements on another 164 acres.

1.6 New River Gorge National River Overview

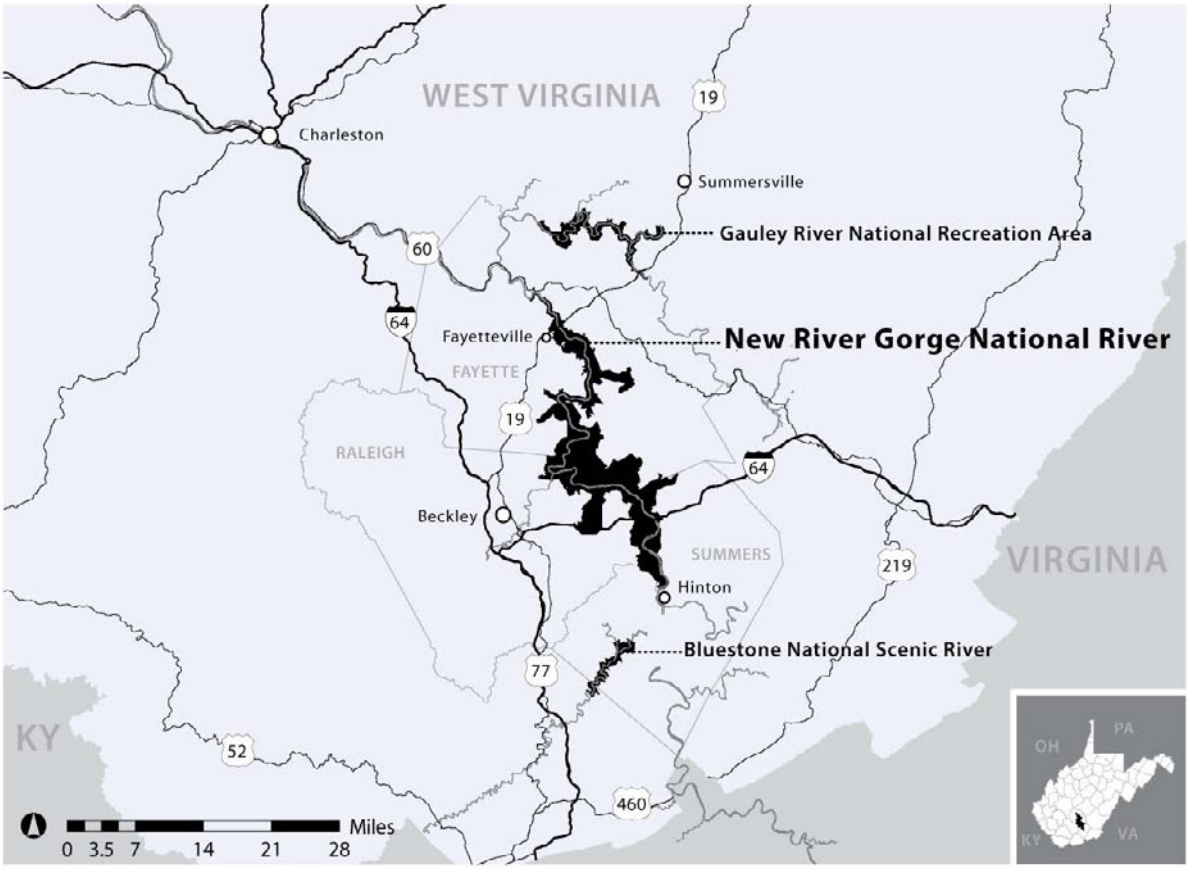
1.6.1 The Park's Regional Context

New River Gorge National River is located in the Appalachian Mountains of southern West Virginia (see Figure 1.1). Nine mountain counties compose the southern West Virginia region, including Raleigh, Mercer, Fayette, Greenbrier, Monroe, McDowell, Nicholas, Wyoming, and Summers. The park encompasses land within Raleigh, Fayette, and Summers Counties and adjoins the cities of Beckley and Hinton and the town of Fayetteville. Beckley is the largest city in the region and is its major economic and cultural center. Major roads providing access to the region converge in Beckley, including the West Virginia Turnpike (I-77/I-64), U.S. Route 19, and Interstate 64 (I-64). Both U.S. Route 19 and I-64 pass through New River Gorge National River just outside of Beckley.

Southern West Virginia has undergone considerable change in recent years. Through the early to mid 20th century the region boomed as mining companies brought in workers to mine the rich coal deposits of the Kanawha, New River, Pocahontas, and Winding Gulf coal fields. New towns grew up and the region prospered. By the mid 20th century the more accessible coal deposits were exhausted and the coal industry began its decline. As jobs in the mining industry declined so did the region's population. Struggling to maintain its communities and quality of life, the region in recent years has sought to develop new industries, with a major effort aimed at capitalizing on the region's natural beauty, cultural heritage, and recreation potential to become a major tourist destination in the Appalachian Mountains.

Figure 1.1

Regional Location



New River Gorge National River
WEST VIRGINIA
National Park Service US Department of the Interior

Despite its industrial heritage southern West Virginia remains “wild and wonderful”. Much of the area is densely forested rugged terrain, with free-flowing streams and rivers that cut through the Appalachian plateau forming some of the most beautiful river canyon scenery in the eastern United States. The New River flows north through the region converging with the Gauley River to form the Kanawha River at Gauley Bridge in Fayette County. The Greenbrier River is a major tributary to the New River. Recreation opportunities are extensive within a network of public recreation lands and natural areas. Three national park units, ten state parks, and nine state forests are located within the region. Sections of the Monongahela National Forest lie at its eastern edge in Greenbrier and Nicholas Counties. The Gauley River and the New River offer some of the best whitewater paddling opportunities in the United States.

Many cultural heritage sites tell the stories of the region’s industrial and social history. Six counties are within the National Coal Heritage Area, recognized as of

national historical significance for its contribution to the industrialization of the United States. Two national scenic byways – the Coal Heritage Trail and the Midland Trail – wind through the mountains and valleys.

1.6.2 Natural Resource Overview

New River Gorge National River is located in the Kanawha section of the Appalachian Highlands. The dramatic New River Gorge – over 1000 feet deep – is the most prominent physiographic feature at the park. Other outstanding geologic features in the park include exposed cliffs, rock cities, massive boulders, rock overhangs, and unusual formations caused by spheroidal weathering. Coal-bearing sediments, exposed throughout the gorge, were mined historically yielding some of the best bituminous coal in the world.

The New River which flows north through the park is one of the oldest rivers in the world. River flow is regulated by the Bluestone Dam which is operated by the U.S. Army Corps of Engineers for flood control, recreation, and low flow enhancement. Despite general flow moderation, infrequent highly localized severe flooding continues to occur on the New River and its tributaries.

Baseline water quality data and ongoing monitoring of the New River indicate that water quality is generally satisfactory for water contact recreation such as swimming, boating, and fishing, although it is adversely impacted by fecal coliform contamination. Because of occasional fecal coliform concentrations in excess of water quality standards, the state of West Virginia has designated the New River and many of its tributaries as impaired, based on state water quality standards. Contamination is largely the result of improper treatment and disposal of domestic waste from private land within the watershed outside the park boundary.

Aquatic habitats in the New River and its tributaries support a diversity of fish. The New River within the park is one of the most important warmwater fisheries in West Virginia and is one of the most heavily fished areas in the eastern United States. The native fish fauna is distinct from those of the rest of the Ohio River system, with relatively few native species and a high degree of fish whose ranges are restricted to the local area.

The expanse of mixed mesophytic forest that covers most of the park is part of the largest remaining area of midatlantic forest in the world. Much of the forest remains largely unfragmented by roads, trails, utility corridors, or developed areas. These large blocks of unfragmented forest are largely intact natural landscapes and are globally significant because of their combined expanse and because they provide significant critical habitat for neotropical migratory birds, especially for wood warblers. Many rare vegetation communities are included within the large unfragmented forest blocks. Most mammalian wildlife species found in West Virginia are present in the park.

Within the park, there are occurrences of two mammal species federally-designated as endangered and one mammal species federally-designated as a species of special concern.

1.6.3 Cultural Resource Overview

Five historic contexts provide a framework for describing and understanding the cultural resources within the boundaries of the park: 1) historic development of the New River coal field, 2) historic development of the railroad industry, 3) historic development of the lumber industry, 4) Euro-American settlement/agriculture, and 5) development of recreation/state park resources.

Many of the park's cultural resources are the ruins of the New River communities – mostly "ghost towns" today – where the thousands of miners and their families worked and lived in the gorge during its industrial heyday from 1873 to 1930. These communities and related industrial sites now abandoned and generally in ruins, are largely historical archeological sites.

Notable historic structures within the park include industrial buildings related to coal mining and railroading and the communities that housed the people who worked the mines, cut the timber, and operated the railroad. Notable structures also include the farmsteads and community buildings built in the gorge by the early settlers and their descendents prior to and during the period of industrialization. Four historic districts in the park are listed on the National Register of Historic Places. Eight individual properties are listed on or determined eligible for the National Register of Historic Places. Only one resource – the Nuttallburg Coal Mining Complex and Town Historic District – has been determined by the West Virginia State Historic Preservation Officer to be of national significance.

The park's cultural landscapes are the geographic areas – including both cultural and natural resources – that are associated with the historic events and activities in the park's past and/or with the people who have lived and worked in the park and that are integral to its significance. People and groups who are traditionally associated with the park include the descendents of distinct ethnic groups who migrated to the New River Gorge region and intermingled over time and established unique relationships with the landscape. These are the descendents of Euro-American frontier families, African American families, immigrant miners, and the federally recognized Shawnee Tribe. Preliminary investigations suggest that the most significant ethnographic resource for the park's traditionally associated people is the landscape of the mixed mesophytic forest and associated watersheds in association with the collective memory – the stories – that animate and are animated by the landscape.

Archeologists have recorded 342 archeological sites in the park. Based solely on the number of identifiable components found at the sites, it appears that Prehistoric

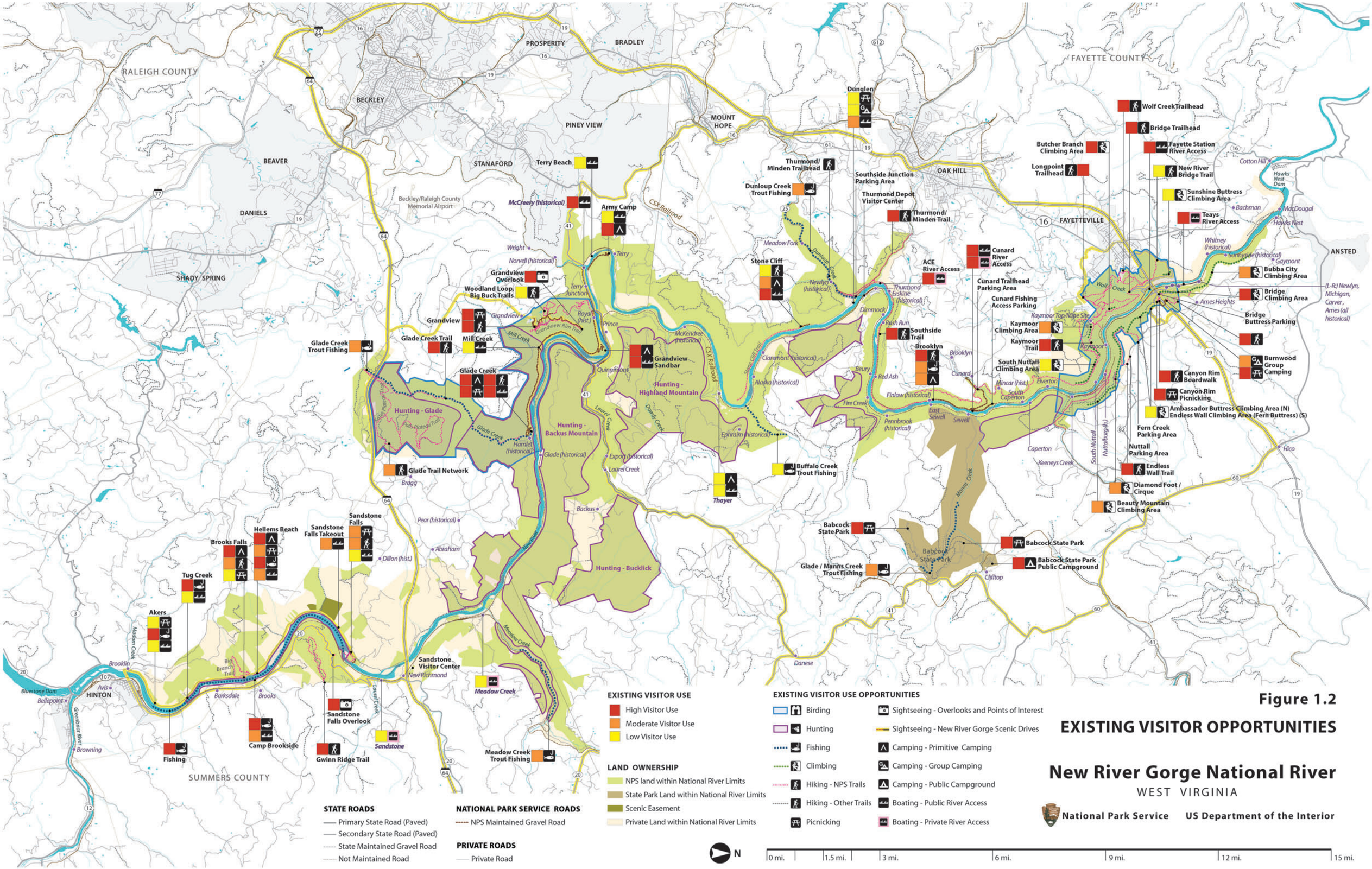
occupation in New River Gorge peaked during the Late Archaic (3000 – 1000 B.C.). The most common sites utilized by prehistoric residents were open habitations and rock shelters. None of the sites have been determined eligible for or nominated to the National Register of Historic Places.

1.6.4 Visitor Experience and Visitor Use Overview

In 2007 approximately 1.18 million people visited New River Gorge National River, mostly during the summer months. The dramatic New River Gorge landscape and the whitewater recreation opportunities of the New River attract most first-time visitors to the park. Those new to the park quickly discover that within the spectacular gorge landscape and along the river are hidden the remains of dozens of towns that tell the stories of West Virginia's coal, lumber and railroading industries that flourished in New River Gorge during the late nineteenth and early twentieth century. For most visitors the spectacular terrain of the gorge, the free-flowing New River, and the tranquil setting – interspersed with the remnants of the gorge's human history – offer appealing opportunities for a variety of recreation and learning experiences.

A few experiences at New River Gorge are "classic" because they showcase the park's most significant natural and cultural resource (see Figure 1.2). These experiences occur in a few specific places where visitors go most often – where they know they will most easily experience the best of the gorge and typically where the NPS has facilitated access and provides visitor services and interpretation. From Canyon Rim, visitors experience dramatic rim-to-river views of the gorge, the New River Bridge, and the broader Appalachian Plateau. At Grandview, visitors have a traditional family recreation experience, including picnicking, playing, hiking, and outdoor theatre. The site also provides access to spectacular rim-to-river views in the Turkey Spur area. Sandstone Falls provides visitors the opportunity to experience the sights, sounds, and smells of the river. A boardwalk enables visitors to get very close to the river at the site of the park's largest waterfall. At the Sandstone Visitor Center visitors obtain information about the park – its resources and stories and the experiences available. The Endless Wall Trail takes visitors along the cliff top to Fern Point, Diamond Point, and numerous vantage points from which they experience the open expanse of the gorge and spectacular views of the Appalachian Plateau and the New River some 1000 feet below. Visitors learn about the park's industrial heritage at Kaymoor and Nuttallburg. Along the Fayette Station Road visitors can experience travel through the gorge as it was before the New River Bridge was built in 1977, winding down to the bottom of the gorge, crossing the river on a narrow bridge, and winding back up the gorge wall to the rim. At Thurmond visitors learn about the history and culture of New River Gorge during its industrial heyday.

The New River attracts paddlers of all abilities seeking the thrill, exhilarating rush, and social bonding of the whitewater experience. Some of these visitors are



EXISTING VISITOR USE

- High Visitor Use
- Moderate Visitor Use
- Low Visitor Use

LAND OWNERSHIP

- NPS land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

EXISTING VISITOR USE OPPORTUNITIES

- Birding
- Hunting
- Fishing
- Climbing
- Hiking - NPS Trails
- Hiking - Other Trails
- Picnicking
- Sightseeing - Overlooks and Points of Interest
- Sightseeing - New River Gorge Scenic Drives
- Camping - Primitive Camping
- Camping - Group Camping
- Camping - Public Campground
- Boating - Public River Access
- Boating - Private River Access

STATE ROADS

- Primary State Road (Paved)
- Secondary State Road (Paved)
- State Maintained Gravel Road
- Not Maintained Road

NATIONAL PARK SERVICE ROADS

- NPS Maintained Gravel Road

PRIVATE ROADS

- Private Road

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Figure 1.2

EXISTING VISITOR OPPORTUNITIES

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

extreme adventurists who paddle the Class IV rapids of the lower gorge in rafts and kayaks. Most are outfitted paddlers riding the river with experienced guides in organized commercial trips. Increasingly families are making guided and unguided river trips with teenage children or in family flotillas, preferring the more gentle rapids of the upper gorge. Collectively the whitewater paddlers – including the outfitted paddlers who ride with commercial outfitters and the private paddlers who ride on their own – compose one of the largest groups of visitors to the park. In 2007 approximately 124,620 outfitted paddlers and 31,470 private paddlers – or over 13 percent of all park visitors – floated the New River.

Many visitors to the park seek opportunities to camp in the frontcountry and backcountry as part of a variety of outdoor experiences. Camping use is greatest from May through September. Campsites are generally full on weekends from Memorial Day through Labor Day. Visitors enjoy opportunities for picnicking at developed NPS facilities and at undesignated picnic sites in both the frontcountry and the backcountry.

The hard sandstone walls of New River Gorge offer some of the best climbing opportunities in the eastern United States and in recent years has become one of the most popular climbing areas in the country. Climbers most heavily use the Nuttall Sandstone cliffs which extend for five miles upstream and three miles downstream of the New River Bridge.

Approximately 76 miles of official NPS trails provide visitor access to the park's frontcountry and backcountry areas. Portions of nine trails are open to bicycles, providing access to a variety of places such as overlooks, the New River, and historic sites in the lower gorge.

Fishing is one of the most popular activities on the New River. Its fish diversity makes the New River an excellent warm-water fishery. Spring and fall are the best times of the year to fish the New River, when the water is cooler and most fish species are more aggressively feeding.

New River Gorge National River when combined with the Bluestone National Scenic River and the Gauley River National Recreation Area forms the largest public hunting area in southern West Virginia. Hunting is permitted within most of the New River Gorge National River, but is restricted from the former Grandview State Park area and other high use areas. Much of the land still in private ownership within the park boundary is leased to private hunting clubs and is restricted to club member use only.

For those who visit the park by private vehicle or bus there are a number of driving opportunities on roads that provide access to the park's scenic resources, as well as take visitors to points of interest where other experiences are offered. Scenic drives in the park follow along the rim, along the river, and from the rim to the river.

▲ *Fundamental Resources – Geologic and hydrologic features such as sandstone boulders that help create rapids in New River Gorge*

▲ *Fundamental Resources – Rare and endangered species such as the Virginia big-eared bat*

1.7 Foundation for Planning

The *New River Gorge National River Foundation for Planning* (NPS 2009) provides the basic guidance for management decisions made at the park. It is a formal statement of the park's core mission that summarizes what is most important about the park. The *Foundation for Planning* is composed of six elements: 1) the park's statement of purpose, 2) the park's statement of significance, 3) the park's primary interpretive themes, 4) the park's fundamental and other important resources and values, 5) the park's legislative mandates and other special mandates, and 6) general legislative and policy requirements

The GMP Planning Team developed the *Foundation for Planning* early in the GMP planning process. It incorporates data collected in preparation for developing the GMP as well as input from the public and government agencies received during project scoping (see Section 1.9 below).

1.7.1 Park Statement of Purpose

Park purpose statements convey the reasons for which the park was set aside as a unit of the national park system. They are grounded in a thorough analysis of park legislation and legislative history, and provide fundamental criteria against which the appropriateness of general management plan recommendations, operational decisions, and actions are tested.

The purposes of New River Gorge National River are to:

- preserve an important free-flowing segment of the New River
- preserve, protect, and conserve outstanding resources and values in and around the New River Gorge, including geologic and hydrologic features, terrestrial and aquatic ecosystems, historic and archeological resources, cultural heritage, and scenic character
- provide opportunities for public understanding, appreciation, and enjoyment of the park's natural, cultural, scenic, and recreational resources and values

▲ *Fundamental Resources – Panoramic views such as the view from Dowdy Bluff*

1.7.2 Park Statement of Significance

Park significance statements describe why the park's resources and values are important enough to warrant national park designation. They accomplish the following: 1) they describe why an area is important within a global, national, regional, and national park systemwide context, 2) they are directly linked to the purpose of the park, 3) they are substantiated by data or consensus, and 4) they reflect the most current scientific or scholarly inquiry and cultural perceptions, which may have changed since the park's establishment.

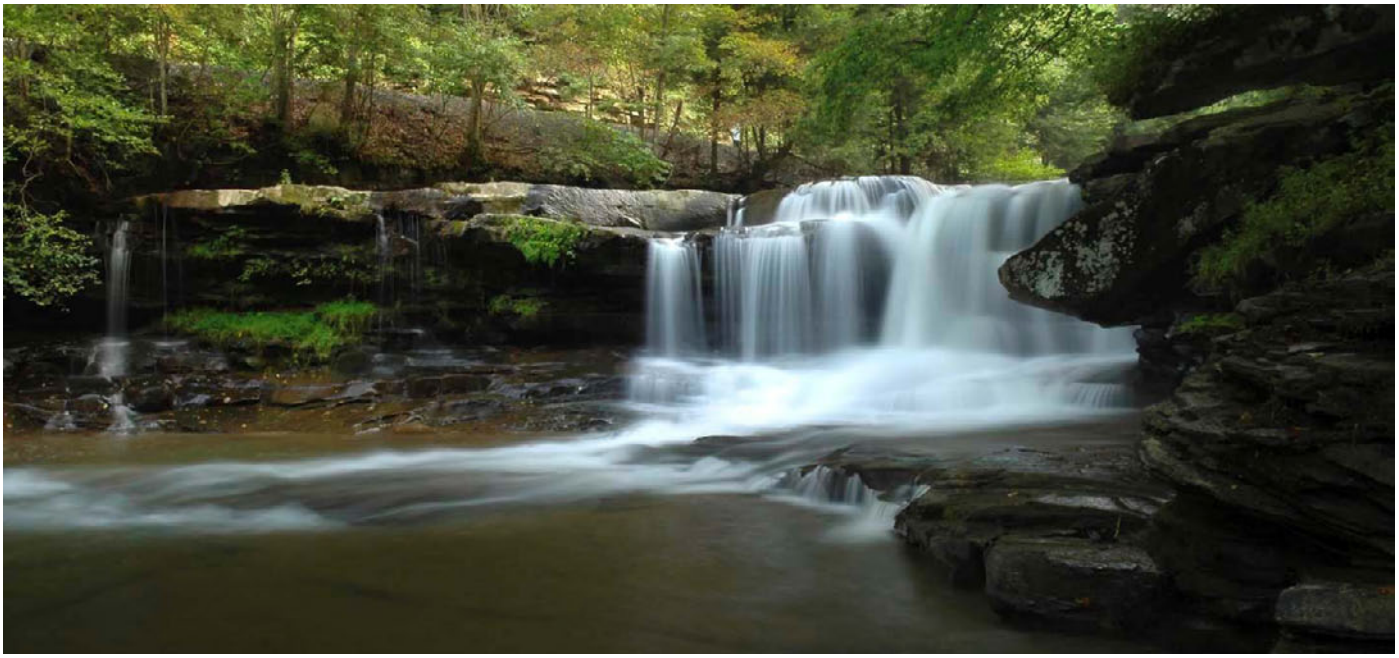
Six statements express why the resources and values of New River Gorge National River are important enough to warrant national park designation (see Table 1.1).

1.7.3 Fundamental and Other Important Resources and Values

Fundamental resources and values are the park's attributes – its features, systems, processes, experiences, stories, scenes, sounds, smells, opportunities for visitor enjoyment, or others – that are critical to achieving the park's purpose and to maintaining its significance. **Other important resources and values** are the other park attributes that are important, although they are not related to the park's purpose and significance. Table 1.1 presents the statements that describe the fundamental and other important resources and values of New River Gorge National River. Together – the fundamental resources and values and the other important resources and values – are what warrant primary consideration during planning and management or that are important to park management and planning.

Fundamental Resources – Recreation experiences such as rock climbing and rappelling ▲

Fundamental Resources – Historic structures such as Commercial Row at Thurmond ▲



Fundamental Resources – Hydrologic features such as the falls at Dunloup Creek ▲

Table 1.1 Park Significance Statements and Related Resources and Values

Significance Statements	Related Fundamental Resources and Values and Other Important Resources and Values
Statement 1 Flowing water is the definitive creative force shaping the geologic features of the New River Gorge. The New River, one of the oldest rivers in the world, continues to sculpt the longest and deepest river gorge in the Appalachian Mountains.	**Related Fundamental Resources and Values** ■ Geologic processes and the features they have created that exemplify the geology of the Appalachian Plateau, including sandstone and shale exposures over 1000 meters high (representing more than 100 million years of geologic time), house-sized boulders scattered from rim to river, plant and invertebrate fossils, steep channel drop-offs, and coal seams composed of some of the best bituminous coal in the world
Statement 2 The waters of this free flowing segment of the New River system contain a mosaic of hydrologic features and aquatic habitats, support a unique aquatic ecosystem, and nourish a riparian zone that supports rare plants, animals, and communities.	**Related Fundamental Resources and Values** ■ a variety and density of riverine hydrologic features and processes unparalleled in the Eastern United States, including pools, backwaters, glides, runs, shoals, riffles, torrents, cascades, chutes, rapids, and waterfalls ■ a highly productive aquatic ecosystem that includes distinct assemblages of native fish (many found nowhere else), mussels, crayfish, macroinvertebrates, and a broad array of other aquatic life, including rare amphibians, reptiles, birds, and mammals ■ the riparian zone is the most biologically diverse part of the park, and contains globally rare communities and essential habitat for several rare species **Other Important Resources and Values** ■ other aquatic/wetland resources, including vernal pools, wetlands, ephemeral streams, and seeps that provide habitat for rare species ■ clean water that supports healthy aquatic and riparian environments
Statement 3 New River Gorge National River lies at the core of a globally significant forest, contains the most diverse flora of any river gorge in central and southern Appalachia, and provides essential habitat for endangered mammals and rare birds and amphibians.	**Related Fundamental Resources and Values** ■ rare expanse of unfragmented and varied forest types ■ a diverse mosaic of habitats occurring over a large elevational gradient that supports forty identified plant communities containing at least 1,342 species and 54 rare plants ■ abundant and diverse breeding populations of birds that spend part of their lives in the tropics but depend upon the unfragmented forests here for breeding, especially wood warblers, vireos, and thrushes **Other Important Resources and Values** ■ clean air

Table 1.1 Park Significance Statements and Related Resources and Values (continued)

Significance Statements	Related Fundamental Resources and Values and Other Important Resources and Values
Statement 4 New River Gorge National River contains a large, outstanding, and representative group of historic places that testify to the experiences of those diverse people who settled and developed this part of Appalachia between the 19th and mid-20th centuries.	**Related Fundamental Resources and Values** ■ rare historic colliery structures and coke ovens of unmatched integrity, such as at Nuttallburg and Kaymoor, and the historic structures and ruins associated with more than 50 company owned towns ■ railroad depots, rail yards, rail grades, steel and timber trestle bridges, railroad equipment, archeological sites and associated towns, like Thurmond, developed to support the railroad ■ rare surviving examples of subsistence farms, such as Trump-Lily and Richmond-Hamilton **Other Important Resources and Values** ■ former community sites, homesteads, and other places in the park where the ancestors of families long associated with the New River lived and worked and where their living descendents today have traditional associations and land-based ties ■ the knowledge and cultural values of the families long associated with New River Gorge who have traditionally used the waters of the New River system, the aquatic plants and animals that inhabit those waters, and the native terrestrial plants and animals in and around New River Gorge ■ the history and archeology associated with the park's lumbering industry, Civilian Conservation Corps-era state parks, and Native Americans
Statement 5 New River Gorge National River has diverse and extraordinary scenic resources and views accessible to visitors from the river, rocky overlooks, trails, and rural roads throughout the park.	**Related Fundamental Resources and Values** ■ panoramic views of the New River, its gorge, and the other landforms shaped by the New River as it cuts through the Appalachian Plateau ■ cultural landscapes that reflect settlement and industry influenced by a rugged and isolated setting **Other Important Resources and Values** ■ natural visibility and lightscape, both in daytime and at night
Statement 6 New River Gorge National River provides visitors with exceptional opportunities for exploration, adventure, discovery, solitude and community.	**Related Fundamental Resources and Values** ■ experience and enjoyment visitors derive from the direct interaction with the outstanding scenic, natural, and cultural resources through a variety of recreational activities **Other Important Resources and Values** ■ experience of a tranquil setting characterized by largely natural sounds

▲ A *Rugged Land, A Rugged People – Living History at Fayette Station*

1.7.4 Primary Interpretive Themes

Interpretive themes are the most important ideas, concepts, or stories to be communicated to the public about the park. At New River Gorge National River there are six primary interpretive themes (Table 1.2). These themes relate directly to the park's purpose and significance. They connect the fundamental resources and values that contribute to the park's significance with relevant ideas, meanings, concepts, contexts, beliefs, and values. The themes provide the framework for interpretation at the park, drive what is appropriate in the park, and provide the basis for the park's educational programs. Park managers take these themes into account when setting priorities for events and activities. The themes also provide direction for planners and designers of the park's exhibits, publications, and audiovisual programs.

Table 1.2 Primary Interpretive Themes

Primary Interpretive Theme
■ **The New River and Geologic Processes** The ancient New River and its tributaries, together with the forces of geological processes, continue to sculpt the gorge, shape the landscape of its watershed, and reveal a sequence of rock layers that serve as windows into time.
■ **Ecological Diversity, Uniqueness, and Abundance** With its mosaic of varied, unique, and unbroken habitats, and the quality of its air, water, and night sky, the lands and waters in and around the New River Gorge are sanctuary for a remarkable array of native plants and animals.
■ **Barrier, Corridor, and Refuge** Through time, the New River Gorge has been: a barrier to travel, economic prosperity, and communication; a corridor for navigation, migration, and exploitation; and a refuge for both people and wildlife.
■ **Exploitation** The industrialization of America came at a cost; New River Gorge is a reminder not only of the exploitation of resources, but also the exploitation of people in an age of unrestricted capitalism.
■ **A Rugged Land, A Rugged People** Whether securing sustenance or extracting wealth from this rugged land, the people of New River Gorge developed a culture of hard labor, perseverance, and faith just to maintain a lifestyle that was devoid of luxury or ease.
■ **Evolving Ethics and Changing Perceptions of the Land** Over time, human perceptions of the value of the land in and around the New River Gorge have shifted dramatically from a challenging wilderness to be conquered and exploited to a treasured wildness to be enjoyed and protected for future generations.

1.7.5 The Park's Legislative and Other Special Mandates

A number of legislative mandates and other special mandates provide additional direction as to how the park is to be managed (see Appendix A, Tables A.1 and A.2)

Several federal and state natural resource management programs have also designated the New River and its associated wildlife and habitat as areas of special management interest (see Appendix A, Table A.3), including the following:

- Nationwide Rivers Inventory – Rivers with Outstandingly Remarkable Values (National Park Service, 1982)
- Nationally Significant Wildlife Ecosystem (U.S. Fish and Wildlife Service, 1977)
- Resource Category 1 Habitat (U.S. Fish and Wildlife Service, 1986)
- High Quality Stream (State of West Virginia, 1986)
- Protected Stream (State of West Virginia, 1969)
- American Heritage River (Executive Order 13061, 1998)
- Aquatic Resource of National Importance (U.S. Environmental Protection Agency, 2007)

These designations generally require elevated review of federal and state actions that have the potential to impact significant river-related resources and values. They also generally mandate avoidance or minimization of impacts on special resources.

1.7.7 Legislative and Policy Requirements

The *NPS Management Policies* (NPS 2006a) and a number of federal laws, acts, and executive orders vital to the NPS mission also guide management of units of the national park system (see Appendix B). Collectively these policies and servicewide laws define the conditions desired in national parks and ensure that parks are managed in accordance with national regulations consistently applied to all parks in the system. In addition the laws of the state of West Virginia apply to management of some resources at New River Gorge National River (see Appendix B).

New River Gorge National River
Envisioning the Future

What is a vision statement?

- The vision for New River Gorge National River describes what the park will be like in 20 years.

How was the vision crafted?

- Accomplishing the park's purpose is the primary essential quality expressed in the vision of the park's future.
- The vision also reflects the goals and desires for the park's future expressed by the many parties involved in the GMP planning process who have an interest in how the park is managed.

How will we use it?

- By embracing the vision of the park's future the NPS and others – the private landowners in the park, its local community neighbors, its partners, and the general public – will share an understanding as to what the essential qualities of the park will be in the future.
- Working together the NPS and others will use this vision as a guide to articulate the specific goals, objectives, and actions needed to make the vision a reality over the next two decades.

1.8 2028 Vision for New River Gorge National River

■ Overview

In 2028 New River Gorge National River lies at the heart of a protected network of natural, cultural, scenic, and recreational resources that epitomizes the rugged grandeur and heritage of the Appalachian Mountains in southern West Virginia. Natural processes, natural beauty, and history combine at the park to create a spectacular opportunity for the people of the United States and the world to understand and enjoy the country's most dramatic Appalachian Mountain river gorge. Managed with maximum use of natural resource restoration and historic preservation partnerships, the park is relevant to its users, and the public appreciates the park's significance and stature as a unit of the national park system.

■ Natural Resources

The park's natural resources – once exploited during the industrialization of America – have recovered. The park is an oasis of wildness in the eastern United States and is a model for other places coming back from past industrial uses. The New River runs free-flowing for 53 miles through the park, changing from a river coursing gently through a wide valley to a wild river pounding through the lower New River Gorge, carved over 1,000 meters into the rocks of the Appalachian Plateau. The waters of the New River and its tributaries – no longer impaired by man-induced pollutants – support a highly productive aquatic ecosystem. Within the gorge the largely unbroken expanse of forest supports diverse plants and wildlife native to the river gorges of the Appalachians. Rimrock areas, cliffs, dark forest seeps, and riverside flatrock areas support rare ecological communities. Abundant and diverse breeding bird populations flourish in the forest canopy.

■ Cultural Resources

Remnants of the park's past - hidden within the forest – tell the stories of former life in the Appalachian Mountains. Creative partnerships have made it possible to stabilize, rehabilitate, or restore the most significant historic resources. In the gentle terrain of the upper gorge are restored and rehabilitated early European farmsteads. Within the gorge is a wealth of historically significant abandoned places, some in ruins and some stabilized and rehabilitated, where people worked and lived during the late 18th and 19th centuries, supplying the coal and lumber that helped fuel American industry.

■ Scenic Resources

The park's setting – both dramatic and tranquil – inspires visitors in many ways. From overlooks, trails, and the river there are stunning views of natural lands – rugged forest, deep gorges, the river, mountain streams, and outstanding rock formations. The lack of modern intrusions adds to the drama of the park's scenery.

■ Visitor Experience

Visitors to the park enjoy the many high quality experiences it has to offer – to explore history, to seek adventure, to feel solitude, to be challenged, and to share life experiences with others. Park facilities and programs reflect a central theme that helps visitors better understand how the park is organized, the opportunities that are available, and how to travel in the complicated network of local roads and trails in the park's rugged terrain. Visitor facilities support desired experiences and are designed and located with minimal impact on park resources. Interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources.

Scenic views – such as from the Brooks Falls overlook – are protected ▲

■ Regional Partnerships

Throughout the region recreational opportunities are enhanced and the visitor base is growing. Solid partnerships exist between the National Park Service, the park's neighboring communities, the Coal Heritage Area, regional economic development interests, and other state and federal agencies. Visitor programs are coordinated to tell complementary stories of the region's heritage, such as the uniquely American industrial stories related to coal mining, railroading, and lumbering, as well as the story of post-industrial recovery. A network of scenic roads and trails connects the region's attractions. Visitors stopping at attractions are informed about other places of interest and the programs offered throughout the region.

Cultural resources tell the stories of former life in the gorge, such as town life at Thurmond ▲

■ Local Partnerships

Ecosystem restoration and smart growth strategies are in place in the park's neighboring communities. The National Park Service's inventory, monitoring, and recovery programs for native species contribute to community efforts to restore and maintain healthy ecosystems. Land use planning technical assistance from the National Park Service helps its community partners accomplish long-term goals that are compatible with the park's purpose.

The New River offers diverse opportunities for visitor use and enjoyment ▲

The park's neighbors understand and appreciate its significance as a unit of the national park system. Local citizens are proud to have the National Park Service as a neighbor and assist in showcasing their heritage. The park's volunteer program is popular; all ages can participate in meaningful ways to benefit resources and visitors.

Partnerships with local communities – such as Hinton – help to accomplish shared goals ▲

1.9 Planning Issues and Concerns

1.9.1 Scoping Process

The NPS began project scoping in February 2004 when the Project Agreement and list of potential GMP issues were developed. The NPS initiated the public scoping process with a series of stakeholder meetings held during the week of June 28th, 2005. Scoping has been ongoing since that time, both internally with the NPS staff and externally with federal, state, and local agencies and with the general public (see Table 5.1). Objectives of the scoping process are to get information regarding:

- the issues related to management of the park
- the range of management alternatives that should be considered in the GMP to address those issues
- the types of impacts that should be used to evaluate and compare alternative management actions

Scoping activities included:

- identification of issues and impact topics
- review of other related projects and NEPA documents
- preparation of a public involvement plan
- identification of consultation and coordination required with other interested agencies and organizations
- development of a schedule for NEPA compliance which allowed for adequate time to prepare and distribute alternatives under consideration for public review and comment prior to selection of the preferred alternative
- initiation of required consultation with federal and local agencies

External scoping included a variety of public involvement activities beginning early in, and continuing throughout, the GMP planning process:

- the NPS hosted a series of stakeholder meetings involving approximately 40 people and groups during the week of June 27th, 2005 at the park headquarters in Glen Jean, West Virginia
- the NPS hosted public meetings on January 24, 25, and 26, 2006 to provide information about the GMP planning process and foundation for planning and to gather public comments
- the NPS issued a notice of intent to prepare the GMP in the *Federal Register* on January 30, 2006
- the NPS hosted public meetings on March 14, 15, and 16, 2006 to gather public comment related to issues at the park and future visions for the park

- the NPS hosted public meetings on May 9, 10, and 11, 2006 to present the resource analysis findings and to gather public comment about desired visitor experiences in the park
- the NPS hosted public meetings on July 25, 26, and 27, 2006 to gather public comment on a range of preliminary alternative concepts for future management of the park
- the NPS hosted public meetings on November 6, 7, and 8, 2007 to again gather public comment on alternatives for future management of the park – including a fifth alternative developed subsequent to the July 2006 public meetings
- the NPS issued press releases prior to each of the five public meetings on January 11, 2006, March 3, 2006, May 3, 2006, July 20, 2006, and October 22, 2007; each press release was faxed and emailed to eight television/radio stations and to local newspapers in Beckley, Fayetteville, Charleston, Summersville, Hinton, and Bluefield; public meeting announcements were placed in the *Fayette Tribute*, the *Register-Herald* (Beckley), and the *Hinton News*
- the NPS mailed newsletters to interested parties two weeks in advance of each set of public meetings
- the NPS made newsletters and announcements of upcoming events available electronically on the NPS Planning, Environment, and Public Comment (PEPC) web site (http://parkplanning.nps.gov/neri), which provided opportunities for the public to review the planning team's findings and allowed the public to submit comments electronically through the PEPC system

Project scoping identified a wide range of issues and concerns relevant to management of New River Gorge National River. They fall into four general categories, as follows:

- issues and concerns that are appropriately addressed by the GMP
- issues and concerns that are addressed by servicewide law or policy guidance
- issues and concerns that will be addressed in future site specific detailed implementation plans
- issues and concerns that are beyond the scope of the GMP or future implementation plans

The *GMP/EIS Scoping Report* (NPS 2006b) summarizes the full range of issues and concerns identified during the GMP scoping process from June 2005 through September 2006. Section 1.9.2 below provides a discussion of the most significant of the issues and concerns falling into the first category of those that are

appropriately addressed by the new GMP. Management concerns are also summarized below in Chapter 3 for each topic addressed in the description of the park's affected environment.

Appendix B summarizes the servicewide laws and policies that guide how the NPS routinely manages units of the national park system. These address the issues and concerns raised during scoping that fall into the second category listed above.

1.9.2 Resource Management Issues and Concerns

- **Maintaining Natural Processes and Restoring Natural Systems**

Since the middle of the last century the park environment has generally been recovering from the industrial activities that occurred in the park during the heyday of the coal mining, lumbering, and railroading in New River Gorge. While the park's forest and wildlife populations are recovering, there are present today forces in the ecosystem that threaten natural succession back to the healthy native mixed mesophytic forest community that existed prior to the arrival of European settlers and industrialists who cleared the primeval forest. Threats include fragmentation by roads, new residential development, and other human disturbances (both historic and present day), the introduction of non-native species, exotic pests, deer over-browsing, timber harvesting, fire (both wild and human-induced), and air pollution. Moderation of flood flows by Bluestone Dam also threatens the long-term viability of rare plant communities along the New River that are dependent upon periodic flooding.

Management guidance is needed that: 1) identifies how the NPS should limit future man-made forest fragmentation and restore areas fragmented by past development, 2) describes what the role of fire should be in maintaining forest communities, 3) provides options for maintaining rare riparian communities that are dependent upon periodic flooding, 4) identifies strategies for removal of non-native species and for treatment of exotic pests, and 5) identifies how the NPS should approach restoring important extirpated species and protecting threatened and endangered species and their habitat.

- **Water Quality Management**

At the GMP community meetings members of the public most frequently identified poor water quality in the New River and its tributaries as the most important management issue facing the park. The state of West Virginia has designated the New River as "impaired" for its entire length in the park because of occasional fecal coliform concentrations in excess of water quality standards (WV DNR 2006). The state has also designated several tributaries to the New River as impaired. Probable human-caused sources of the contamination include residential and municipal development, wastewater discharge, farming, and livestock grazing outside the park, as well as recreational use inside the park.

Management guidance is needed that: 1) identifies how the NPS would partner with its community neighbors to address regional water quality management issues, and 2) identifies management actions that the NPS would take to address water quality impacts of recreational use inside the park.

- **Cultural Resource Management**

The park's cultural resources require further documentation and evaluation to assess appropriate management actions. Many of the park's historic archeological sites, historic structures, and cultural landscapes have not been evaluated to determine their historic significance. There is no documentation of the park resources that traditionally associated people and groups currently use or used historically in the park. Additional archeological research is needed to document unidentified prehistoric archeological sites and to fully understand the significant sites investigated in previous field studies.

Many historic ruins and standing structures throughout the park are threatened by continued deterioration and loss due to weathering, decay, vandalism, salvage, and the destructive effects of rapid and dense vegetation growth. Appropriate management actions are needed to protect the park's most significant resources, to possess a high level of integrity, and to be intrinsically important to the park's mission. Stabilization and adaptive reuse of some of the park's most significant resources – such as standing structures at Thurmond – may require considerable investment for rehabilitation or restoration because of lead and asbestos contamination.

Management guidance is needed that: 1) establishes the extent to which the NPS would protect, preserve, or restore the cultural resources in the park, and 2) describes how the parks cultural resources would be interpreted.

- **Protecting Scenic Resources in and around the Gorge**

One of the three elements of the park's purpose is to conserve outstanding resources and values in and around the New River Gorge. The potential for new development on private land within the park boundary and outside the park boundary threatens the ability of the NPS to protect these resources and values, particularly its ability to protect the park's outstanding scenic resources. The public has expressed considerable concern regarding the impacts of new development on the park's outstanding scenic resources. Viewshed studies indicate extensive areas in the park vicinity where new development – if it should occur in the future – could be visible from the park and could potentially impact the park setting and visitor experience. Addition of these areas to the park is impracticable because of potential community impacts and cost.

Management guidance is needed that: 1) identifies areas outside of the park boundary that are critical to the park's purpose but whose acquisition is

impracticable, and 2) describes how the NPS would cooperate with its local community partners and private landowners to minimize future adverse impacts on the park associated with potential development of these areas.

1.9.3 Visitor Experience and Visitor Use Issues and Concerns

- **Experiencing the Park and Visitor Orientation**

Most visitors to New River Gorge National River experience few of the recreation opportunities the park has to offer and do not hear many of the stories that the park has to tell. Only about 25 percent of the park's visitors spend more than five hours in the park (Manni et al. 2005). Forty percent of park visitors stop at Canyon Rim Visitor Center (including the New River Bridge Overlook) and the Sandstone Visitor Center, after which the majority move on and do not visit other sites within the park. Twenty percent of visitors go to Grandview for day-use activities and to attend Theatre West Virginia and approximately 13 percent are paddlers on commercial river trips or private paddlers whose visits are generally confined to the river corridor (NPS 2008a). Crowding occurs at some sites – such as the most popular river accesses and overlooks – while much of the park receives light visitor use.

Reasons why visitors spend so little time in the park – or are there primarily for one purpose – are that they frequently do not understand what the park has to offer. Also, the park is so physically and thematically complicated that it is hard to understand, making planning a visit difficult. Many of the special places where its diverse stories are or can be told and its many recreation opportunities are hidden in the rugged terrain of the river gorge accessed via a complicated network of winding mountain roads.

Management guidance is needed that: 1) identifies where visitors would go in the park to hear its stories and experience the many recreation opportunities it offers, 2) identifies the types and levels of visitor activities that the park would accommodate while still protecting park resources and promoting stewardship, and 3) describes the general ways and degrees to which the park would tell all the park's stories through interpretive and educational programs.

- **Hiking and Equestrian Use**

Many park users feel that the park's trail system does not provide a diversity of trail types that enables different visitor experiences for people of all ages and physical conditions. The park does not have a clearly defined opportunity for a multi-day backpacking trip. Many of the park's official trails are administrative roads which hikers do not find appealing to use. Equestrian use of trails is limited to one trail.

Management guidance is needed that: 1) identifies generally where new official hiking trail connections should be provided, 2) determines if equestrian use should be expanded and, if so, where it is appropriate in the park, and 3) describes how

the NPS could cooperate with its community neighbors and other agencies to provide trail connections outside the park.

- **Biking**

Park users express strong interest in expanding opportunities for biking – particularly mountain biking. NPS policy permits bicycles only on state roads and the park's official roads unless a special rule is promulgated allowing bicycles in other areas. Future expansion of the bike trail network to include biking would require preparation of a bike plan and promulgation of a special rule by the park superintendent.

Management guidance is needed that: 1) identifies where in the park additional biking trails should be considered, 2) what types of trails would be constructed (i.e., designated versus undesignated trails, tread surface type, etc.), and 2) identifies how the NPS would cooperate with biking user groups to plan, develop, and maintain trails.

- **Hunting**

During the preparation of this draft EIS, Congress in Section 7115 of Public Law 111-11, the Omnibus Public Land Management Act of 2009, which was signed into law on March 30, 2009, directed that "Section 1106 of the National Parks and Recreation Act of 1978 (16 USC 460m-20) is amended in the first sentence by striking "may" and inserting "shall"." Hunting, which had been discretionary at New River Gorge until the passage of Public Law 111-11 in March 2009, is no longer discretionary but is now authorized. Title 36 CFR § 2.2(b)(4) provides: "Where hunting or trapping or both are authorized, such activities shall be conducted in accordance with Federal law and the laws of the State within whose exterior boundaries a park area or a portion thereof is located. Nonconflicting State laws are adopted as a part of these regulations."

Management guidance is needed to ensure that the hunting program meets park and user needs.

- **Pedestrian Access across Railroad Rights-of-Way**

The CSX Mainline runs at the river level through the entire park on river right as well as on river left[1] from Cunard downstream. Frequent freight and coal trains move daily on the Mainline through the park. The only legal pedestrian and vehicular access that currently exists across the CSX right-of-way exists is where public roads cross the tracks. At many locations in the park visitors frequently illegally cross the CSX right-of-way on foot to reach the river, exposing them to potential injury from passing trains.

[1] *River Left (RL) – includes the shoreline and adjacent upland on the left side of the* New River when looking downstream
River Right (RR) – includes the shoreline and adjacent upland on the right side of the New River when looking downstream

Management guidance is needed that identifies where in the park actions should be taken to provide legal pedestrian access across the CSX right-of-way to the river.

- **Access and Parking**

Many visitors perceive road access to the park to be poor and limiting to their park experiences. Limited road access is largely the result of the difficulty in building and maintaining safe roads in the gorge. Many locations within or adjoining the park used by visitors for access have no formal parking facilities or do not have adequate parking to meet visitor demand more than 80 percent of the time. Parking is particularly problematic at river access sites and at trailheads used for climbing areas.

Management guidance is needed that: 1) identifies what areas in the park would be opened for public access by new roads and/or by improvements to existing roads, 2) describes how additional parking would be provided at functionally obsolete facilities and where new parking facilities are needed, 3) describes options for innovative transportation solutions that could provide alternate means to get visitors to sites that cannot accommodate additional vehicular access, and 4) identifies sites outside of the park boundary where visitor parking facilities are needed to enable safe visitor access to popular sites within the park.

- **Other Visitor Facilities**

The public has expressed a strong desire for enhanced facilities and new day use areas for their activities throughout the park. Primary among the visitor facility issues are the following:

- crowding at river accesses and on the river occurs on peak visitation days as a result of outfitted paddler trip logistics
- the supply of drive-to camping and non-designated primitive campsites generally does not meet demand
- camping facilities are not available in the vicinity of climbing areas
- there are not enough opportunities for picnicking at the river level
- comfort stations are not available or are inadequate to meet demand in many visitor use areas
- visitors with disabilities would like better access to the park

Management guidance is needed that: 1) describes the general types, sizes, and locations of public or private facilities that would support park activities and visitor experiences, and 2) describes the potential partners who could assist the NPS with providing additional visitor facilities.

1.9.4 Socio-Economic Environment Issues and Concerns

- **Sustaining Communities within the Park**

Since establishment of the park the NPS has acquired properties within the park boundary from willing sellers as funding has allowed. Acquisition has occurred in all areas of the park, ranging from the most remote locations to rural settlements to larger communities. In some locations the NPS has acquired entire communities, buying property from willing sellers, and then removing structures, except where they are historically significant or can be efficiently used to support park operations. The result is that some communities in the park have disappeared, today leaving only a few small communities and named settlement areas within the park boundaries.

Management guidance is needed that: 1) determines if the practice of acquiring property within the park's communities should continue, 2) – if a decision is made to no longer acquire property in communities – describes how the NPS will partner with its neighbors inside the park to preserve community character and quality of life in a manner consistent with the park's purpose, and 3) describes how the NPS will manage the land that it owns within these communities.

1.9.5 Land Protection Issues and Concerns

- **Land Protection Priorities**

The NPS currently responds to all private property owners who express interest in willingly selling their property to the federal government for park purposes. In some years land acquisition funds and staff capacity to complete real estate transactions have not kept pace with landowner interests in selling property.

Management guidance is needed that identifies private properties in the park that should be given high priority for negotiation and acquisition because they: 1) include significant resources and values that are fundamental to the park, 2) are properties which could be used for needed visitor use facilities, and/or 3) are properties which could be used to enhance park operations and management.

- **Stewardship of Private Land Remaining within in the Park Boundary**

In general there is a need for better cooperation and communications between the NPS and private landowners who live in the park. Private landowners have concern regarding the future use of their property, and possible government interference with what they can do with their land. Conversely, some property owners have made changes to their properties since the park's establishment that have had adverse impacts on resources that are fundamental to the park's purpose.

Management guidance is needed that: 1) identifies elements of a stewardship program designed to enhance cooperative working relationships between the NPS

and the remaining private landowners in the park, and 2) identifies the types of private properties in the park where the stewardship program should be focused.

1.9.6 Partnerships Issues and Concerns

- **Gateway Community Partnerships**

Partnerships between the NPS and its gateway community neighbors have the potential to benefit both parties. The counties and incorporated cities in the park vicinity make management decisions that directly and indirectly affect the park's resources and the experiences that visitors have. These relate to overall community development, public investments in the transportation system, and the provision of facilities and services, such as water supply, storm drainage, and wastewater management. The NPS has technical skills and experience that are of use to local communities in dealing with the issues and challenges they face. Similarly the park can benefit from successful local resource management programs that enhance environmental conditions – such as water quality management – and from thoughtful land use planning and implementation of smart growth strategies for the lands adjoining the park and the places where park visitors stay while visiting the park.

Management guidance is needed that: 1) generally describes the types of technical assistance that the NPS could provide to its neighboring community partners, and 2) identifies the areas adjoining the park or that provide access to the park that are of interest because they already impact or have the potential to impact park resources or the visitor experience.

- **Regional Tourism Partnerships**

Many public and not-for-profit organizations in southern West Virginia share an interest in conservation of the region's natural and cultural resources. For some the mission strictly relates to conservation of resources, for others the interests are focused on recreational use of resources or educational programs related to resources. For many organizations their mission is to revitalize the region's economy through growth of the tourism industry. By cooperatively working together these entities – including the National Park Service – could more effectively and efficiently accomplish their disparate yet overlapping conservation, interpretive, education, and economic development goals. The National Park Service and the three parks that it owns and operates in the region is one of the most significant entities present in the region, and its parks are the major economic generator within the tourism economy.

Management guidance is needed that: 1) generally describes how the NPS could partner with the public and not-for-profit organizations in the region, 2) identifies the potential new attractions within the park that could be considered in the future, such as commercial lodging facilities and adaptive reuse of rehabilitated historic

buildings, 3) and generally identifies actions that would promote growth in park visitation.

- **Other Partnerships**

While many partnerships help the NPS accomplish its mission at the park the possible benefits of expanded and new partnerships are diverse. The parks volunteer program could be greatly expanded, particularly through the park's newly created friends group. Partnerships with the two state parks and other state agencies having management interests and responsibilities in the park (such as the West Virginia Department of Highways (WV DOH), Department of Environmental Protection (WV DEP), Department of Natural Resources (WV DNR), and State Historic Preservation Office (WV SHPO)) could help accomplish mutual goals. Several user groups have offered assistance with planning, developing, and maintaining visitor facilities in the park.

Management guidance is needed that: 1) identifies the general resource management and visitor programs that could benefit from increased volunteer participation, 2) describes the shared goals of state management entities and the NPS that would benefit from enhanced partnering, and 3) identifies user groups with technical skills and institutional capacity to assist with providing appropriate visitor facilities.

- **Local Appreciation of the Park**

Congress established New River Gorge National River as a unit of the national park system to conserve its scenery, natural and historic resources, and wildlife, while at the same time providing for its enjoyment in a manner leaving it unimpaired for the enjoyment of future generations. Many park users – from the local area and from the region – do not appreciate the NPS mission at the park and do understand the mandate that the NPS has to protect resources and to enforce NPS management policies regarding activities within the park. Many feel that rather than making park resources more accessible, the national park designation and the ensuing park management by the NPS has created barriers to public use and enjoyment of those resources. Residents complain that since the park was created and land acquired by the federal government they are no longer able to do many things that were previously permitted or ignored by landowners.

Management guidance is needed that: 1) makes the park more relevant to local users, 2) enhances local understanding of the park's resources and their significance, 3) communicates to the public that NPS management and enforcement actions are aimed at protecting the resources that the public has enjoyed for generations and continues to enjoy today at the park, and 4) describes strategies for generally promoting environmental stewardship in the community.

Table 1.3

New River Gorge National River
Impact Topics RETAINED for Further Analysis

Topics
Physiography, Geology and Soils
Floodplains
Water Quality
Vegetation
Aquatic Wildlife
Terrestrial Wildlife
Rare, Threatened, and Endangered Species
Scenic Resources
Archeological Resources
Cultural Landscapes
Historic Structures
Ethnographic Resources
Regional and Local Economy
Communities
Visitor Use and Visitor Experience
Park Access
Park Operations

Table 1.4

New River Gorge National River
Impact Topics DISMISSED from Further Analysis

Topics
Wetlands
Ecologically Critical and Unique Natural Areas
Air Quality
Natural Visibility
Lightscape and Night Skies
Soundscapes
Prime Farmland and Unique Soils
Hazardous or Toxic Contaminants
Climate Change
Energy Requirements and Conservation Potential
Natural and Depletable Resources
Wilderness
Wild and Scenic River Resources
Park Museum Collections
Indian Trust Resources
Indian Sacred Sites
Environmental Justice

1.10 Impact Topics

1.10.1 Impact Topics Retained for Further Analysis

Understanding the consequences of making one management decision versus another is important to evaluating the GMP alternatives. As a result NPS GMPs are typically accompanied by an environmental impact statement (EIS) that identifies and analyzes the anticipated impacts of alternative management actions on resources and on park visitors and neighbors. This GMP/EIS includes an analysis of the potential impacts of four action alternatives and the no action alternative, which is a continuation of current management. The alternatives are described in Chapter 2. To focus the environmental analysis, the issues identified during scoping were used to derive a number of impact topics. Impact topics are park resources and values that could be affected, either beneficially or adversely, by implementing any of the alternatives under consideration. Selection of the impact topics retained for analysis is based on federal laws, regulations, Executive Orders, NPS Management Policies (NPS 2006a), NPS staff knowledge of the park and the issues and concerns expressed by the public and other agencies during the GMP scoping process. Chapter 3 – Affected Environment contains a thorough description of the resources and values related to the impact topics retained for the impact analysis. Chapter 4 – Environmental Consequences – provides a detailed analysis of the impacts of the actions associated with the five alternatives under consideration.

1.10.2 Impact Topics Considered and Dismissed from Further Analysis

Not all impact topics are relevant to all parks or to all management decisions. As a result, impact topics are divided into two groups – those for which impacts of the alternatives are evaluated in detail and those which are dismissed from detailed analysis. Impact topics are dismissed from detailed analysis if they are found to be not relevant to the evaluation of GMP alternatives because either: 1) implementing the alternatives would have no effect or a negligible effect on the resource or condition, or 2) the resource or condition does not occur in the park. Following is a discussion of the impact topics dismissed from detailed analysis in this GMP/EIS, with the rationale for dismissal.

- **Wetlands**

All wetlands in units of the national park system are protected and managed in accordance with Executive Order 11990, “Protection of Wetlands”; NPS Director’s Order 77-1,”Wetland Protection”, and its accompanying handbook (NPS 2002d); and *NPS Management Policies* (NPS 2006a). This guidance requires the NPS to protect and enhance natural wetland values, and requires the examination of impacts on wetlands. It is NPS policy to avoid affecting wetlands and to minimize impacts when they are unavoidable.

Wetlands in New River Gorge National River generally include the following:

- permanently flooded riverine and lacustrine wetlands within the channel of the New River
- numerous scattered temporarily or seasonally flooded wetlands within the floodplain of the New River, including riverine wetlands, palustrine forested wetlands, palustrine scrub-shrub deciduous wetlands, and palustrine emergent wetlands
- numerous scattered permanently and semipermanently flooded palustrine wetlands in diked/impounded and excavated areas generally located in upland areas that have been mined
- a few scattered palustrine forested wetlands, palustrine scrub-shrub deciduous wetlands, and palustrine emergent wetlands in upland areas
- Kates Branch wetland, located at the Kates Branch spring in the Glade Creek watershed, is a locally significant wetland composed of palustrine emergent seasonally flooded wetland and palustrine scrub-shrub/palustrine forested broad leaved seasonally flooded saturated wetland influenced by beaver activity. Within the Kates Branch wetland are several species of rare plants, including many that reach their southernmost or northernmost distributional limits within the wetlands (Eye 1981).

No adverse impacts to the park's wetlands are anticipated under any of the GMP alternatives. Areas that may include wetlands would be surveyed and wetlands delineated and mapped prior to project design to ensure that any development undertaken by the NPS would not affect these areas. No uses of water originating from wetlands are proposed. The wetland impact topic has been dismissed from further analysis in this GMP/EIS.

- **Ecologically Critical and Unique Natural Resources**

CEQ NEPA Regulations (40 CFR 1508.27(3)) require federal agencies to assess the effects of their actions on ecologically critical areas. Ecologically critical places and unique natural features in the park include habitats of rare, threatened or endangered species. These habitat areas will be addressed in this GMP/EIS under the "Endangered or Threatened Plants and Animals and Habitat" impact topic.

Ecologically critical places in the park also include the aquatic habitat of the New River, which has been designated "Resource Category 1" by the US Fish and Wildlife Service pursuant to its mitigation policy (46 CFR 7656-7663). This will be addressed in this GMP/EIS under the "Aquatic Wildlife and Habitat" impact topic.

- **Air Quality**

The 1963 Clean Air Act, as amended (42 USC 74-1 *et seq.*) requires federal land managers to protect park air quality. *NPS Management Policies* (NPS 2006a)

address the need to analyze air quality during park planning.

Review of air quality data for the New River Gorge National River region reveals the following:

- New River Gorge National River is designated an air quality attainment area and a Class II Clean Air Area. This designation establishes a limit on the allowable increase in sulfur dioxide and particulate matter concentrations, effectively preventing additional pollutant-emitting industrial development in the park vicinity. Because the park is within a Class II Clean Air Area, NPS is not required to conduct air quality or visibility monitoring within the park.
- The closest ambient air quality monitors to the park are located in Greenbrier County (for daily maximum hourly ozone – O_3), Charleston (for monthly average sulfur dioxide – SO_2), and Beckley (for particulates – $PM_{2.5}$). Concentrations of ozone, sulfur dioxide and particulates recorded from 2000 to 2003 at these monitors revealed concentrations below the National Ambient Air Quality Standards (Aldehoch 2003).
- Monitoring data recorded in Babcock State Park since 1983 indicate that sulfate concentrations and atmospheric deposition of sulfate have decreased over the past 20 years, there has been no overall trend in concentration and deposition of nitrate, and there has been a slight increase in concentration and deposition of ammonium (Mahan 2005). Monitoring data recorded in Eggleston since 1989 show a slight increase in dry nitrogen deposition and no trend in dry sulfur deposition (Mahan 2005).

All the GMP alternatives would have local short-term negligible adverse impacts on air quality caused by fugitive dust from soil erosion and disturbance during construction and maintenance of park facilities. These impacts would be mitigated through requirements for contractors and NPS maintenance personnel to apply water and dust control agents at construction sites. GMP Alternatives 1 through 5 would have local long-term negligible adverse impacts on air quality caused by increased local traffic during peak visitation periods. Because both short-term and long-term adverse impacts would be negligible, the air quality impact topic has been dismissed from further analysis in this GMP/EIS.

- **Natural Visibility**

Natural visibility enhances the extent to which visitors can experience the park's scenic resources. At New River Gorge natural visibility remains quite high despite problems with regional haze elsewhere in the state. Photographic monitoring data collected at Grandview from 1995 to 2000 indicate that summer exhibits the poorest visibility, with slight, moderate, and considerable haze intensities occurring 43 percent, 20 percent, and 17 percent of the time, respectively (Mahan 2005).

Visibility is best in winter, with slight, moderate, and considerable haze intensities occurring 64 percent, 4 percent, and 1 percent of the time, respectively (Mahan 2005). (Weather concealed views the remainder of the year.)

Data from regional haze monitoring sites nearest to the park have revealed similar findings. The nearest sites – located at Dolly Sods Wilderness Area (WV), James River Wilderness Area (VA), and Linville Gorge Wilderness Area (NC) – exhibit patterns of poorer visibility in summer and higher visibility in winter and spring. Reduced visibility at these sites is generally the result of extinction (the light lost over distance due to scattering and absorption of gases) due to increases in ammonium sulfate (Aldehoch 2003).

Under the Clean Air Act, as amended (42 USC 74-1 *et seq.*), Congress has established a national goal for visibility to prevent any future impairment and to remedy any manmade impairment of visibility in Class I areas resulting from manmade air pollutants. As this time, New River Gorge National River is not designated a Class I area under the Clean Air Act. Consequently the park is not subject to the regional haze rule adopted pursuant to the Clean Air Act (40 CFR Part 51, July 1, 1999) and is not included in the national visibility monitoring program known as the Interagency Monitoring of Protected Visual Environments (IMPROVE) program.

All the GMP alternatives would have local short-term negligible impacts on visibility caused by fugitive dust from soil erosion and disturbance during construction and maintenance of park facilities. These impacts would be mitigated through requirements for contractors and NPS maintenance personnel to apply water and dust control agents at construction sites. GMP Alternatives 1 through 5 would have local long-term negligible impacts on visibility caused by increased local traffic during peak visitation periods. Because both short-term and long-term impacts would be negligible, the natural visibility impact topic has been dismissed from further analysis in this GMP/EIS.

- **Lightscape and Night Skies**

NPS Management Policies (NPS 2006a) require the NPS to preserve to the greatest extent possible, the natural darkness and other components of the natural lightscape. The natural lightscape is composed of the natural resources and values that exist in the absence of human-caused light.

Lightscape and night sky baseline assessment information is not available for New River Gorge National River. However predictive modeling of night sky conditions at the park in 1992 revealed a 5.72 mean Shaaf Class for the entire park and a Shaaf Class of 6 in 76.4 percent of the park (Albers et al. 2001). This indicates that in 1992 most of the park was characterized by relatively pristine night sky conditions

(Shaaf Class 7 = pristine) and that artificial lighting from nearby developed areas affected a relatively small portion of the park.

All the GMP alternatives would have long-term negligible impacts on the park's lightscape and night skies. For all GMP alternatives future management of the park will comply with NPS management polices to protect natural darkness and other components of the natural lightscape. The NPS will restrict the use of artificial lighting to those areas where security, basic human safety, and specific cultural resource requirements must be met. Minimal-impact lighting techniques will be used including shielded light fixtures to prevent light spill over and use of low-intensity lights. Artificial lighted, when used, will be shielded to prevent the disruption of the night sky, subterranean processes in the park's abandoned mines, physiological processes of living organisms, and other natural processes. The NPS will also seek the cooperation of park visitors, neighbors, and local government agencies to prevent or minimize the intrusion of artificial light into the night scene of the park's ecosystem. Therefore lightscape and night skies impact topic was dismissed from further analysis in this GMP/EIS.

- **Soundscapes**

NPS Management Policies (NPS 2006a) require the NPS to preserve, to the greatest extent possible, the natural soundscapes of parks. These encompass all the natural sounds that occur in parks, including the physical capacity for transmiting those natural sounds and the interrelationships among park natural sounds of different frequencies and volumes. The NPS is also required to restore to the natural condition wherever possible those park soundscapes that have become degraded by unnatural sound (noise), and to protect natural landscapes from unacceptable impacts.

Measurements of baseline acoustic conditions are not available for New River Gorge National River. In general natural ambient sound levels are very low in most areas of the park, except in the New River vicinity where high levels of natural sounds emanate from rapidly moving water. Human-made sounds originating in the park emanate from park operations, visitor activities, and traffic on park roads. Where land within the park remains in private ownership human-made sounds are associated with various residential landowner activities. Other extraneous sound generators in the park include traffic on public roads – particularly I-64 and US Route 19 – and train traffic on the CSX Corporation's rights-of-way.

All the GMP alternatives would have a short-term negligible adverse impact on the park's natural soundscape. Construction activities associated with planned new or modified facilities or transportation projects would generate temporary unwanted construction-related sound that would be direct and short-term in nature and concentrated in areas near construction sites. In accordance with normal construction practice, noise-generating construction equipment would be equipped

with effective noise control devices. All equipment would be properly maintained to ensure that no additional unwanted sound would be generated. The park would further prevent and/or minimize unwanted construction sound by managing its intensity, frequency, magnitude, and duration in any one place on any particular day.

All the GMP alternatives would also a have long-term negligible adverse impact on the park's natural soundscape caused by increased traffic. While the mix of vehicles using park roads or vehicle speeds would generally remain unchanged, there would be some minor shifts in traffic patterns and local increases in traffic volumes in some areas of the park. These shifts and increases would not likely result in measurable long-term sound impacts. Therefore the soundscape impact topic was dismissed from further analysis in this GMP/EIS.

- **Prime Farmland and Unique Soils**

CEQ NEPA Regulations (40 CFR 1508.27) require federal agencies to assess the impacts of their actions on soils classified by the US Natural Resources Conservation Service (NRCS) as prime farmland or unique soils. Prime farmlands are defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Unique farmlands are lands other than prime farmland that are used for the production of specific high value food and fiber crops.

The NRCS has classified several soil series within the park are as prime farmland; no soil series within the park are classified by the NRCS as unique soils. Prime farmland soils include the following soil types: Lily loam (LlB), Gilpin silt loam (GaB and GlB), Shouns silt loam (ShB), Meckesville (McB), Kanawha fine sandy loam (Ka), Ashton fine sandy loam (As), Pope (Po), and Rayne silt loam (RaB). These soils occur on small nearly level areas on ridgetops and on the floodplain and terraces of the New River generally upstream of Meadow Creek. Agricultural use in these areas is limited to a number of small farms along River Road in the vicinity of Sandstone Falls. Many areas have been irreversibly converted to nonagricultural uses or severely disturbed as a result of railroad development and mining-related activities.

No major developments would occur in any of the GMP alternatives in areas of undisturbed prime farmland soils. Recreational facilities such as trails could be built in floodplains and on ridgetops that contain prime farmland soils; however, these facilities would typically be located in areas that are not currently used for agriculture and the total area of prime farmland soil that would be converted to trail surface or otherwise irreversibly converted to nonagricultural uses would be negligible. Therefore the prime farmland and unique soils impact topic was dismissed from further analysis in this GMP/EIS.

- **Climate Change**

Climate change refers to any significant changes in average climatic conditions or variability for an extended period. Recent reports by the US Climate Change Science Program, the National Academy of Sciences, and the United Nations Intergovernmental Panel on Climate Change provide evidence that climate change is occurring and will accelerate in the coming decades. While climate change is a global phenomenon, it manifests differently depending on regional and local factors.

Predictive climate change information for West Virginia and specifically for the geographic area of New River Gorge National River is limited. The effects of climate change in the state are expected to be variable based on elevation and other factors. Generally, it can be anticipated that climate change induced effects will include increased average temperatures and higher precipitation. Considering that the majority of West Virginia is forested, the most substantial changes can be expected to occur to the forest vegetation and the species and biological processes that depend upon them. State-specific and regional predictions related to climate change and its potential environmental effects are discussed below.

Climate change will affect New River Gorge National River and areas of the northeast United States resulting in direct impacts to the ecosystem, agriculture, forestry, fishing, tourism, and other outdoor activities, such as recreation dependent on water quantity and snowfall. Historic climate trends in the northeast show an overall decrease in the number of average days with snow on the ground, an increase in average temperature, and varying changes in precipitation depending on the specific area of the region. Computer models designed to predict trends in climatic condition suggest that the recently observed trends will continue. These trends are expected to result in warmer winters and longer and hotter summers. Some models project more frequent occurrence of intense extreme weather events. These changing conditions could result in intensified flood events, changes in stream flow, more frequent and severe storm damage, and increased fire activity.

Environmental impacts of climate change in the northeast could manifest in a multitude of ways. A change in average temperatures of even 4.5 degrees over the next century could change the forested habitats of the region. The extensive forests of the northeast which provide important roles in carbon storage, wildlife habitat function, tourism, and forest-dependent industries could be affected significantly. Climate models suggest that one of the region's major forest types – maple/beech/birch – is very likely to be completely displaced by more southern forest types. With the changing climatic factors and subsequent environmental components it is projected that forest pest species and weedy plant species will be better suited to take advantage of the changing conditions and place further pressure on these important habitats. More severe weather patterns could lead to changing river and stream flows, lead to increased erosion, and create challenges

for management of recreational activities and park facility functions. Climate change could also affect the visitors' park experience in a variety of ways, including:

- changing character of fall foliage with a change in the forest type
- changes in wildlife activities, such as fishing and bird watching
- longer summer season
- shorter winter recreation season
- changes in river hydrology affecting river recreation and aquatic resources
- increasing frequency and intensity of severe storms

Climate change is a far-reaching and long-term issue that will affect the park, its resources, visitors, and management beyond the scope of this GMP/EIS and its 15-20 year timeframe. Although some effects of climate change are considered known or likely to occur, many potential impacts are unknown. Much depends on the rate at which temperature will continue to rise and whether global emissions of greenhouse gases can be mitigated before serious ecological thresholds are reached. Climate change science is a rapidly advancing field and new information is being collected and released continually. Because the drivers of climate change are largely outside park control, the NPS alone does not have the ability to prevent climate change from happening. The full extent of climate change impacts to resources and visitor experience is not known, nor do managers and policy makers yet agree on the most effective response mechanisms for minimizing impacts and adapting to change.

With these pressing challenges there are three general management concerns upon which individual parks should focus:

- external changes affecting internal resources and management (how a park is different now, and how it might be different in the future as a result of global climate change)
- internal decision-making and how it affects external/global process such as a park's individual contribution to climate changing factors such as our carbon footprint and what park managers are doing to reduce it (see Energy Requirements and Conservation Potential below)
- educating park visitors on the topic of climate change and bringing together groups to address issues in a meaningful way to address potential impacts at a local and national level

More specifically at New River Gorge National River the NPS would work directly on climate change issues by participating in the Climate Friendly Parks (CFP) program to learn more about the issues the NPS faces and utilize the Climate Leadership In the Parks (CLIP) tool with the goal of identifying, quantifying, and reducing the

park's greenhouse gas emissions. The park would need to continue to assess the effects that climate change is already having on the park ecosystems, as well as effects scientists expect to see in the future. Many of the indicators being used in the NPS vital signs monitoring program would be useful in documenting changes in the parks ecosystem with climate change. The CLIP tool and other programs that are developed as NPS continues to improve understanding of this challenge would assist with taking action to reduce emissions of greenhouse gases, including emissions associated with facilities, visitation, and business practices. As the park learns more concerning the specific impacts of climate change managers would formulate adaptive management strategies and actions that may enhance the resilience of the ecosystem. Examples could include working with other land management agencies to ensure that migration corridors are established or enhanced that would facilitate the opportunity for bird and other mobile species to move northward or to higher elevations while the southern regions continue to warm and forest environments change and biomes shift with the changing climate.

An additional component of the park's response to climate change would be education. While incorporating the best scientific knowledge available the park would develop interpretive materials and programs to explain to the public how climate change is affecting the national parks and changes that scientists expect in the future, as well as to highlight steps underway by the NPS to reduce greenhouse gas emissions. It would become increasingly important for NPS to develop strategies to incorporate current and emerging knowledge about the potential affects at the local level while working with visitors and communities to be as prepared as possible to address them.

The issues presented above and the general framework of how the park would move forward to address them, are common to all the GMP alternatives. As a result the global warming impact topic was eliminated from further analysis in this GMP/EIS.

- **Energy Requirements and Conservation Potential**

NPS Management Policies (NPS 2006a) require the NPS to conduct its activities in ways that use energy wisely and economically.

Management actions in all GMP alternatives would comply with NPS sustainable energy design and energy management requirements. Any facility development, whether it is a new building, a renovation, or an adaptive reuse of an existing facility, must include improvements in energy efficiency and reduction in greenhouse gas emissions for both the building envelope and the mechanical systems that support the facility. Maximum energy efficiency should be achieved. Energy-efficient construction projects should be used as an educational opportunity for the visiting public. All projects that include visitor services facilities must incorporate Leadership in Energy and Environmental Design (LEED) standards to achieve a silver rating.

In all GMP alternatives the facilities, vehicles, and equipment would be operated and managed to minimize consumption of energy, water, and nonrenewable fuels. Full consideration would be given to the use of alternative fuels. Alternative transportation programs and the use of bio-based fuels would be encouraged, where appropriate. Renewable sources of energy and new developments in energy-efficiency technology, including products from the recycling of materials and waste, would be used where appropriate and cost-effective over the life cycle. However, energy efficiencies would not be pursued if they will cause adverse impacts on park resources and values.

Because of these commitments to energy conservation and sustainability energy requirements and conservation potential was dismissed from further analysis in this GMP/EIS.

- **Natural and Depletable Resources**

NPS Management Policies (NPS 2006a) require the NPS to apply principles for sustainable design throughout the national park system. Sustainability is the concept of living within the environment with the least impact on the environment. The objectives of sustainability within the NPS are to design facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting and to maintain and encourage biodiversity; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use.

Through use of sustainable design concepts all of the GMP alternatives would conserve natural resources and would not result in a substantial loss of natural or depletable resources. Therefore the natural and depletable resources impact topic was dismissed from further analysis in this GMP/EIS.

- **Wilderness**

The Wilderness Act of 1964 established the National Wilderness Preservation System to include federal lands found through wilderness eligibility assessment and study to possess wilderness characteristics. The Act mandates a policy for the enduring protection of wilderness resources for public use and enjoyment. Based on the findings of the Wilderness Eligibility Assessment for New River Gorge National River (see Section 1.11 and Appendix D) – completed in coordination with this GMP planning process – the NPS has determined that all park lands within the current park boundary do not meet the primary eligibility criteria for wilderness designation and are therefore ineligible for further wilderness study. Therefore the wilderness impact topic was dismissed from further analysis in this GMP/EIS.

- **Wild and Scenic River Resources**

The Wild and Scenic Rivers Act establishes a system of rivers that possess outstanding scenic, recreational, geological, cultural, or historic values, and

maintains their free-flowing conditions for future generations. The New River was found to possess several characteristics making it eligible for inclusion in the National Wild and Scenic Rivers System, including wildlife, cultural, recreational, and geological outstandingly remarkable values. The New River, however, has not been recommended as suitable for inclusion in the National Wild and Scenic Rivers System nor designated a Wild and Scenic River. Management actions included in the GMP alternatives would not adversely impact the values that potentially qualify the New River for inclusion in the National Wild and Scenic Rivers System. Therefore the wild and scenic river resources impact topic was dismissed from further analysis in this GMP/EIS.

- **Park Museum Collections**

NPS Management Policies (NPS 2006a) require the NPS to collect, protect, preserve, provide access to, and use objects, specimens, and archival and manuscript museum collections in the disciplines of archeology, ethnography, history, biology, geology, and paleontology to aid understanding among park visitors, and to advance knowledge in the humanities and sciences. The museum collections at New River Gorge National River pertain to the areas of history, archives, archeology, and natural history. The *House Report 109-80* (NPS 2008) and the *Collection Management Plan, New River Gorge National River* (NPS 2004) provides recommendations related to collection documentation, archives and manuscript collections, archeological collections, collections storage, museum environment, security and fire protection, staffing, and programming and funding sources. Implementation of these recommendations is included as part of GMP Alternative 1 – Continuation of Current Management and is also common to the four action alternatives (GMP Alternatives 2, 3, 4 and 5). These actions would result in a major long-term beneficial impact on the park's collection. Therefore the park museum collections impact topic was dismissed from further analysis in this GMP/EIS.

- **Indian Trust Resources**

Secretarial Order 3175 requires that any anticipated impacts to Indian Trust Resources from a proposed project or action be explicitly addressed in environmental documents. There are no Indian Trust resources within the boundaries of New River Gorge National River. None of the land within the park is held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore the Indian Trust Resources impact topic was dismissed from further analysis in this GMP/EIS.

- **Indian Sacred Sites**

The Native American Graves Protection Act (25 U.S.C. 3001 et seq.) and Executive Order 13007, "Indian Sacred Sites" require managers of federal lands to avoid adversely affecting the physical integrity of Indian sacred sites. Because there are no federally-recognized Indian Tribes associated with New River Gorge National

River, there are no sacred sites as defined by Executive Order 13007 with the boundaries of New River Gorge National River. Therefore the Indian sacred sites impact topic was dismissed from further analysis in this GMP/EIS.

- **Environmental Justice**

Executive Order 12891, "General Actions to Address Environmental Justice in Minority Populations and Low Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse health or environmental impacts of their programs and policies on minorities or low-income populations or communities.

According to the most recent US Census data (U.S. Census 2000), minority and low-income populations as defined in E.O. 12891 reside in Summers, Raleigh, and Fayette Counties, in the vicinity of New River Gorge National River. These groups were fully included in public scoping. No issues or concerns specific to these populations were identified as a result of public scoping. No management actions under any of the alternatives evaluated in the GMP/EIS are directed at minority/low income populations nor are any of the potential effects of the alternatives believed to have disproportionate effects on minority/low income populations. For these reasons the environmental justice impact topic was dismissed from further analysis in this GMP/EIS.

1.11 Wilderness Eligibility Assessment

NPS Management Policies (NPS 2006a) require that all lands and waters within the national park system be evaluated for their eligibility for inclusion within the national wilderness preservation system. If lands are determined eligible for wilderness, they must be managed in accordance with a wilderness management plan that ensures that their wilderness character is preserved. If needed, the wilderness management plan would be included as an action component of the park's new GMP.

1.11.1 Purpose of the Wilderness Eligibility Assessment

The new GMP for New River Gorge National River includes a wilderness eligibility assessment (see Appendix D). The purpose of the wilderness eligibility assessment is to evaluate all NPS lands and waters within the park boundary for their eligibility for inclusion in the national wilderness preservation system. To be eligible for wilderness designation lands and waters must: 1) be at least five thousand acres in size (or a sufficient size to make practicable their preservation and use in an unimpaired condition), and 2) possess wilderness characteristics as identified in the Wilderness Act of 1964. Characteristics that generally qualify an area for wilderness eligibility include the following:

- the earth and its community of life are untrammeled by humans, where humans are visitors and do not remain

- the area is undeveloped and retains its primeval character and influence without permanent improvements or human habitation
- the area generally appears to have been affected primarily by the forces of nature, with the imprint of human work substantially unnoticeable
- the area is protected and managed so as to preserve its natural conditions
- the area offers outstanding opportunities for solitude or a primitive and unconfined type of recreation

Lands that have been logged, farmed, grazed, mined, or otherwise used in ways not involving extensive development or alteration of the landscape may also be considered suitable for wilderness designation if, at the time of assessment, the effects of these activities are substantially unnoticeable or their wilderness character could be maintained or restored through appropriate management actions.

1.11.2 Need for the Wilderness Eligibility Assessment

The wilderness eligibility assessment is needed for the following reasons:

- to comply with *NPS Management Policies* (NPS 2006a) requiring that all NPS lands and waters be evaluated for their eligibility for inclusion in the national wilderness preservation system
- to notify the public of its intentions to conduct the assessment and publish a determination that lands are either “eligible” or “ineligible” for further wilderness study
- to ensure that the park’s new GMP includes management recommendations for visitor experiences and resource conditions that are consistent with preservation of wilderness resources and wilderness character, if determined appropriate

1.11.3 Findings of the Wilderness Eligibility Assessment

Based on the findings of the Wilderness Eligibility Assessment for the park (see Appendix D) the NPS has determined that park land within the current park boundary do not meet the primary eligibility criteria for wilderness designation and are therefore ineligible for further wilderness study. Park-owned lands within the boundary of the park will therefore not be subject to wilderness preservation provisions but will be managed in accordance with the NPS Organic Act of 1906 and other laws, executive orders, regulations, and policies applicable to units of the national park system.

1.12 Park Boundary Adjustment

As part of the GMP planning process the NPS reviews the park boundary and – if appropriate – makes recommendations for potential boundary adjustments. Boundary adjustments may be made for the following purposes:

- to protect significant resources and values
- to enhance opportunities for public enjoyment related to the park purposes
- to protect park resources critical to fulfilling the park's purposes
- to address operational and management issues

The NPS has completed a boundary study to identify the need for a boundary adjustment for these purposes and to consider all alternatives in lieu of a boundary adjustment that would protect the park's resources and/or address management issues (see Appendix E).

- **Boundary Adjustments to Address Operational and Management Issues**

Findings of the Boundary Study have concluded that seven boundary adjustments are needed to enhance the visitor experience and to address operational issues (see Table 1.5 and Appendix E). Collectively the seven proposed boundary adjustments would add approximately 222.2 acres to the park.

Findings of the Boundary Study have also indicated that there are three areas where it would be appropriate to delete certain privately-owned lands from the park (see Table 1.6 and Appendix E). Collectively the three proposed boundary adjustments would delete approximately 75.4 acres from the park.

- **Actions Recommended to Protect Significant Resources and Values**

The park's enabling legislation states that one element of the park's purpose is "to conserve outstanding resources and values in and around the New River Gorge" (PL 95-625 Section 1101). The legislation further states that "the Secretary shall on his own initiative, or at the request of any local government having jurisdiction over land located in or adjacent to the gorge area, assist and consult with the appropriate officials and employees of such local government in establishing zoning laws or ordinances which will assist in achieving the purposes of this title" (PL 95-625 Section 1104).

The potential for new development on private land threatens the ability of the NPS to conserve outstanding resources and values in and around the gorge. The public has expressed considerable concern regarding the impacts of new development on these resources and values.

Viewshed and natural resource studies indicate extensive areas in the park vicinity where new development – if it should occur in the future – would be visible from the

Table 1.5

New River Gorge National River
Locations where Park Boundary Adjustments are Proposed to Add Areas to the Park

- **Junkyard** (61 acres) – Located south of Burma Road; addition would provide parking for trail access to Junkyard rock climbing area and a potential alternative location for a climber campground
- **Canyon Rim** (8 acres) – Located near Canyon Rim Visitor Center; addition would bring federally-owned property within boundary as well as provide protection for Canyon Rim Visitor Center
- **Ambassador** (13 acres) – Located on Fayette Station Road; addition would provide parking for trail access to Ambassador Buttress and Fern Buttress rock climbing areas
- **Keeney Creek** (34 acres) – Located near Winona; addition would protect Keeney Creek rail grade trestles and provide parking for trail access to the Nuttallburg Visitor Use Area
- **Cunard** (10 acres) – Located near top of Cunard Access Road; addition would provide satellite parking for future boater shuttle system
- **Dowdy Bluff** (92 acres) – Located between Dowdy and Slater Creeks in Highland Mountain area; addition would provide parking and trail access to hunting and backcountry areas
- **Polls** (4.2 acres) – Located on north side of Polls Branch Road; addition would provide parking access to Kates Branch/Polls Branch trails

Table 1.6

New River Gorge National River
Locations where Park Boundary Adjustments are Proposed to Delete Areas from the Park

- **City of Fayetteville** (37 acres) – Site of the city's water treatment plant; deletion would remove city municipal facilities from the park
- **Kaymoor Top** (0.4 acre) – Site of two privately-owned structures; deletion would move the park boundary from its current location where it bisects the two structures
- **Gatewood Road** (two parcels totaling 38 acres) – Site of a private sewage treatment facility; deletion would correct a mapping error

park and would potentially impact the park setting, the visitor experience, and important resource areas (see Appendix E). Addition of these areas to the park is impracticable because of potential community impacts and cost. In lieu of boundary adjustments and land acquisition the NPS would seek to protect park resources from impacts of new development on these lands by working with communities and private landowners. Cooperative actions would focus on land use planning that would encourage sustainable design of new development and that would reduce the impact of new development on scenic values and important resource areas (see Section 2.4.5 below).

1.13 Relationship to Other Plans

Various public agencies and governmental bodies have recently completed plans or have projects underway that directly and/or indirectly relate to New River Gorge National River. The NPS has also completed plans for a number of sub-areas within the park and for management of park resources.

1.13.1 National Park Service Plans

The following includes plans for which NPS has completed final plans/NEPA compliance documents and for which a NEPA decision document (Record of Decision or Finding of No Significant Impact) has been approved.

- **New River Gorge National River General Management Plan**

The *New River Gorge General Management Plan* (NPS 1982) established a comprehensive 10- to 15-year management strategy for the 62,000-acre New River Gorge National River authorized by Congress in the park's 1978 enabling legislation. The GMP provided a comprehensive strategy to guide management of the park and described the actions to be taken related to management zoning, resource management, visitor use, development of park facilities, and land protection. Existing development described in GMP Alternative 1 (see Chapter 2, Section 2.2) is based upon the direction established in the 1982 GMP, as amended through subsequent plans as described below.

- **Land Protection Plan**

The final *Land Protection Plan – New River Gorge National River* (NPS 1984) identified tracts of land considered essential to management of the park and that the NPS would acquire immediately should they become available. The Land Protection Plan (LPP) identified local zoning as the recommended method of protection, supplemented by easements, as the recommended method of protection for the remaining land within the park boundary.

Following adoption of the LPP local zoning was not been implemented in Raleigh or Summers County and the public was not receptive to the use of easements. As a result in 1988 the NPS Mid-Atlantic Regional Director approved a memorandum

summarizing the need for NPS to rely more heavily on other land protection measures, including fee acquisition, and establishing principles for determining deviations from the approved LPP (NPS 1988a). Since 1988 the land acquisition priorities at the park have remained constant and the method of protection has shifted almost entirely from an emphasis on cooperative agreements, zoning, and easements to fee acquisitions. Three boundary changes (1988, 1996, and 2002) and fee acquisitions have resulted in a park unit with approximately 72,189 total acres of which approximately 70 percent is in federal ownership.

- **Strategic Plan**

The *Strategic Plan for New River Gorge National River* (NPS 2006e) is a five-year plan that is reviewed and revised every three years. It contains the park's mission statement, annual goals, long-term goals, actions needed to accomplish long-term goals, and external factors that could affect goal accomplishment.

- **Canyon Rim and Burnwood**

The *Canyon Rim/Burnwood Development Concept Study/Environmental Assessment* (NPS 1988a) identified the Canyon Rim site on the east side of US Route 19 as the park's primary location for visitor contact for interpretation and information and the Burnwood site on the west side of US Route 19 as a location for an environmental education and park operations facility. The NPS has implemented the recommendations for the Canyon Rim site as planned, including the Canyon Rim Visitor Center and related facilities. At the Burnwood site trails, picnic facilities, water supply, and wastewater treatment facilities were generally built as planned. The environmental education center and operations facility are currently in design. A research room for the park's core unexhibited collections will also be added to the site in the future through a separate planning activity.

- **Fayette Station**

The *Environmental Assessment - Fayette Station: Designs for Parking Areas and Comfort Stations* (NPS 1995c) identified Fayette Station as the primary outfitted paddler and private paddler access take-out on the Lower New River. Improvements recommended at the Middle Beach included parking, circulation enhancements, and a comfort station. Other facilities recommended included a new upstream day use area and development of parking at the Cole site to support use of the Middle Beach and the upstream day use area. The NPS has implemented the recommendations for the Middle Beach area. The upstream day use area has not been developed. The Cole site was acquired. The NPS has been unable to acquire adjacent private property needed for a pedestrian connection to the river and has been unable to secure an agreement with the CSX Corporation for access under or over the railroad right-of-way.

- **Teays Area**

The *Development Concept Plan/Environmental Assessment – Teays* (NPS 1995b) addressed several management issues in the Teays area of the lower gorge. Actions taken as a result of the plan include reconstruction of the Fayette Station Bridge (for one-way vehicular use and pedestrian use), improvements to WV Route 82 (including designation as a one-way road), improvements to the Wolf Creek and Fern Creek trailheads, improvements to the Ajax Mine pullout and Bridge Buttress parking area, and demolition of the Laing House. NPS has not yet made recommended improvements to the New River Bridge trailhead. As indicated in the plan, a seasonal shuttle system was operated in the late 80s and early 90s. Shuttle operation was discontinued after the Fayette Station Bridge was replaced and vehicle traffic across the river resumed. The shuttle concession now operates only for special events.

- **Nuttallburg**

The *Nuttallburg Visitor Use Area Implementation Plan/Environmental Assessment* (NPS 2008c) identified Nuttallburg as the focal point within the park for interpretation of early 20th century coal mining technology in the New River Gorge and its association with Henry Ford. Recommended improvements are currently in design. They include stabilization and preservation of key cultural features on the site, rehabilitation of major town road traces, installation of interpretive media and vault toilets, construction of four small parking facilities, and provision of trails through improvement to existing trails and abandoned railroad rights-of-way.

- **Kaymoor**

The *Kaymoor Development Concept Plan/Environmental Assessment* (NPS 1992b) identified management actions for treatment of historic structures, land protection, and visitor access, use, and safety at the Kaymoor Mine and town sites. Actions taken as a result of the plan included stabilization of the powder house and Low Moor fan house, survey of site for hazardous materials and ensuing clean-up, construction of new stairs from the bench to the bottom, improvements to the bench level access road, acquisition of land for a trailhead, construction of the Kaymoor top trailhead and parking area, and placement of wayside exhibits and portable toilets at the new trailhead. Some structures were found to be in extremely poor condition and potentially hazardous to the public. These were demolished rather than stabilized as planned, including the head house, processing plant, and power house. Other actions not implemented include fencing the clean-up site and the CSX railroad right-of-way as well as coordination with WV DNR to establish a hunting safe zone.

- **Cunard**

The *Cunard Development Concept Plan/Environmental Assessment* (NPS 1990a) identified actions to improve the function and visitor experience at the Cunard river access. Most of the plan's recommendations have been implemented.

Improvements to the access road included widening, some paving, and addition of drainage structures, pull-outs, and guardrails. Parking was added at Cunard top for private vehicles and at the river for private and commercial vehicles at the river. Access to the Brooklyn area was enhanced by improving the railroad right-of-way. The existing raft slide was replaced and two new slides added. An accessible combined toilet/changing facility was constructed and interpretive waysides placed adjacent to it. Improvements to the Brooklyn area included a fishing boat launch, private parking, three walk-in primitive campsites, a portable toilet, and a trailhead for the Brooklyn-Southside Junction trail. Despite these improvements the river access experiences crowding and circulation and parking deficiencies during peak periods of visitor use, particularly affecting private paddlers.

Additional improvements to the Cunard access road were completed in late 2007 to correct damage caused by slides, to increase its capacity, and to reduce the potential for future slide damage.

- **Glen Jean**

The "Glen Jean Headquarters Site Development Plan" (NPS 1986) identified Glen Jean as the site of the new park headquarters. The plan recommended construction of a new park headquarters building, operations facility, and maintenance facility. It also included acquisition and adaptive reuse of the Bank of Glen Jean for park offices. The Post Office and two of five existing commercial structures were to be retained. The new NPS facilities recommended in the plan have generally been implemented, although the actual site plan, size, and use of the various structures changed during final design. All of the existing commercial structures were acquired by the NPS and none were retained as originally recommended.

- **Thurmond**

The *Thurmond Development Concept Plan/Environmental Assessment* (NPS 1992c) proposed to preserve and interpret the Thurmond area as part of the regional railroad network from 1873 to the present. The plan called for installing protective fencing in the rail yard to ensure visitor safety; establishing interpretive programs and media; improving the Thurmond-Minden hiking trail and developing a new trail to Cunard; and; developing park operations and support facilities and pubic use areas at Southside Junction. The NPS has implemented all of these recommendations with a few minor changes during final design. Lack of a formal agreement with the CSX Corporation regarding a rail line crossing required a change to design of the parking area at Southside Junction.

The 1992 plan for Thurmond also recommended that all remaining structures in the rail yard and commercial areas be purchased, preserved, and adaptively used to interpret the town's significance. Since completion of the plan several primary structures were lost, including the engine house (due to fire) and several CSX structures (due to demolition). As a result the NPS reconsidered the design options

for the site in an amendment to the Thurmond Plan (NPS 2000). The amended plan scaled back the 1992 plan goals but did not substantially change the emphasis on preservation and interpretation. As recommended in the plan the depot has been restored and adapted for use as a visitor center. The structures on commercial row have been stabilized but the interior rehabilitation to date has been minimal. The NPS has acquired and stabilized 20 residential structures and the retaining has been repaired. Access remains limited to the CSX bridge which has only a single lane for both vehicles and pedestrians. Discussions with WV DOH have not yet identified specific alternatives for constructing a new bridge or for upgrading the existing structure to improve access.

- **Stone Cliff**

The *Stone Cliff Site Development Plan/Environmental Assessment* (NPS 1990c) proposed development of a boat launch and day use facility at Stone Cliff, a site used since the early 1970s for outfitted paddler access. At the existing access site the plan recommended development of 20 pull-through parking spaces, a drop-off staging area for outfitted and private paddlers, a comfort station with changing rooms, and facilities for day-use recreation activities. It also recommended continuation of existing primitive camping and revegetation of disturbed areas using native seed. The NPS has implemented all of the recommended actions within the previously existing access site. However plans to develop a comfort station and additional picnic facilities upstream of the main parking area were abandoned, as was the widening of the road to access the sites of the additional facilities. The road was closed to vehicular use and designated the Stone Cliff Trail for hikers/bikers. These actions were eliminated in response to concerns of resource management agencies regarding potential impacts to significant aquatic habitat and species.

- **Middle Gorge Area**

The *Middle Gorge Development Concept Plan/Environmental Assessment* (NPS 1994a) identified management actions for balanced land and water activities in the middle gorge extending from below Glade Creek downstream to above Stone Cliff.

  - **Mill Creek** - Recommended actions that have been implemented include: access road and parking area graveled, launch site graveled, and campsites eliminated at day-use site but informal walk-in camping occurs on the beach upstream of the launch site. Recommended actions not implemented include: no toilets provided and structures remain in disrepair and are not stabilized or removed.

  - **Quinnimont** – Recommended actions that have been implemented include: the historic church retained and Prince Depot identified as the central location for interpreting Prince and Quinnimont. Recommended actions not implemented include: historic structures other than the church removed, no fire or burglar alarms installed, and no waysides added.

- **Grandview Sandbar** – Recommended actions that have been implemented include: access road graded and graveled, primitive campsites designated, picnic facilities and toilets provided, park designated; spur roads defined, primitive lunch area retained, frequent ranger patrols implemented, and brochure on camping rules provided. Recommended actions not implemented include: none.

- **Prince Brothers' Store** – Recommended actions that have been implemented include: structure stabilized. Recommended actions not implemented include: fire and burglar alarms not installed.

- **Royal** – Recommended actions that have been implemented include: none. Recommended actions not implemented include: no signage added, no parking developed, no trail to river improvements, and no interpretation of old town site.

- **McCreery** – Recommended actions that have been implemented include: launch ramp stabilized, portable toilets provided, and crowding reduced by making Terry Beach accessible to private boaters. Recommended actions not implemented include: railroad bridge not acquired, recommended traffic pattern changes not implemented (because bridge not acquired), no changing stations or utilities provided, and no parking or access road paved.

- **Terry Beach** – Recommended actions that have been implemented include: buildings on federal property removed. Recommended actions not implemented include: public road not closed to public use.

- **Army Camp** – Recommended actions that have been implemented include: residential access road improved, primitive campsites designated to separate day and night users, toilets and picnic tables provided, parking designated, spur roads defined, frequent ranger patrols implemented, and brochure on camping rules provided. Recommended actions not implemented include: no wayside exhibits developed.

- **McKendree Hospital** – Recommended actions that have been implemented include: none. Recommended actions not implemented include: no vegetation cleared, no access road drainage improvements, no parking added, no picnic sites added, no signage installed, no trail developed, and no interpretive waysides added.

- **Thayer** – Recommended actions that have been implemented include: river access property acquired, boat launch added, day use picnic area developed, portable toilets provided, walk-in campsites developed, and church stabilized. Recommended actions not implemented include: no alarms installed and not wayside exhibits provided.

- **Campsite for Boaters** – Recommended actions that have been implemented include: site and road acquired by the NPS, road not used, and primitive camping continues uncontrolled. Recommended actions not implemented include: none.

- **McKendree Road** – Recommended actions that have been implemented include: minor road improvements made by state to repair flooding damage. Recommended actions not implemented include: road not adequately improved to enable use as a scenic two-way route, no vista clearing, no picnic sites added, and no wayside exhibits provided.

- **Trails** – Recommended actions that have been implemented include: none. Recommended actions not implemented include: through park trail not developed.

- **Grandview**

The *Grandview Development Concept Plan/Interpretive Prospectus/ Environmental Assessment* (NPS 1999) proposed to expand or improve visitor use facilities and the infrastructure at Grandview and to hire additional staff to enhance the education program and to maintain/protect the new facilities. Recommendations included development of a new visitor contact station, public restrooms, and an environmental education facility located near the main entrance. Improvements were also proposed for the Cliffside Amphitheatre to be funded jointly by the NPS and Theatre West Virginia. The operations center was to be screened and possibly moved toward the pond with a possible separate access for maintenance traffic. Additional picnic shelters and redesign of Shelter 1 were recommended. Major improvements were recommended in the vicinity of the Turkey Spur overlook, including more and safer access, relocation of parking to a new parking area 1700 feet from the overlook, and closure of the access road to vehicles in the area between the new parking area and the overlook. A few new connector trails were identified as well as a possible trail connection to the river. Recommended infrastructure improvements included connection to the municipal sewer system (or construction of on-site collection and treatment system), possible burying of the 12 kilovolt power line, and possible upgrading of an administrative road to provide river access from Grandview.

Currently the trail system remains the same and has not been expanded. The parking area and roads have been resurfaced and striped. A sewage treatment facility has been constructed to treat waste from the theatre but the remainder of the park facilities remain on septic systems; an upgrade and eventual connection to a municipal line is still anticipated. The administrative road to the river has been upgraded and repaired to continue use by administrative vehicles and to permit river access by hikers/bikers; no plans are being considered to upgrade the

administrative road to permit vehicle use by visitors. No action has been taken to bury the 12 KV power line.

- **Glade Creek Area**

The *Glade Creek Development Concept Plan/Interpretive Prospectus* (NPS 1990b) was based on a concept that recreational uses could be accommodated in the Glade Creek area, including both vehicle-supported uses and backcountry uses. The plan recommended that the Glade Creek Access Road (WV Route 22) be retained for access to the Glade Creek Trail, and that two trailheads be developed each with parking and a vault toilet. A number of improvements were recommended for the Glade Creek Trail including drainage devices and a footbridge and elimination of vehicles from the I-64 bridge service road. Road improvements were proposed for Shoreline Road from Royal to the mouth of Glade Creek, including repairs to Mill Creek bridge and installation of a crossing gate at the CSX right-of-way; five drive-in campsites and a vault toilet were recommended along the road at the mouth of Glade Creek. The Mary Ingles Trail was proposed through the entire Glade Creek area with five walk-in campsites and a vault toilet along the trail east of Glade Creek. The Plumley Mountain Trail was proposed to be converted to a hiking/horse trail, with development of a trailhead. The Uplands Trail was proposed to be developed using portions of existing jeep roads for hiking and horseback riding, also with development of a trailhead.

Currently both the trailheads and parking have been developed on the Glade Creek access road, although neither has a vault toilet; the footbridge has been constructed across Glade Creek and the I-64 bridge service road is closed to motor vehicles. Shoreline Road from Royal to Glade Creek has been improved for vehicle access; the warning gate has not been installed at the CSX crossing; five drive-in campsites and a vault toilet have been constructed downstream of the mouth of Glade Creek and a boat launch and five walk-in campsites have also been constructed. The Mary Ingalls Trail has not been developed because several parcels along the proposed route near I-64 are privately owned; a boat access and walk-in campsites along the proposed trail have been developed downstream of the site proposed in the plan. Plans for the Plumley Mountain Trail and trailhead have not been implemented because use of the proposed trailhead would require crossing two parcels of private property; this access has not been acquired due to an unresolved adverse possession claim to the property at the proposed trailhead location. The Uplands Trail has not been implemented because land suitable for development as a trailhead is private property located outside the park boundary. The trail segment from Bragg to the park boundary remains a state road. However, a segment of the proposed trail – known as the Polls Branch Trail – is currently accessible to hikers from the upper Glade Creek trailhead.

- **New River Gorge National River Climbing Management Plan**

The *New River Gorge National River Climbing Management Plan Environmental Assessment* (NPS 2005a) presents a strategy for responding to the increasing visitor use, resource impacts, and user conflicts associated with rock climbing in the park. The plan's objectives are: to create a management tool that addresses resource protection and visitor use related to climbing activities; to build partnerships with climbers, climbing groups and commercial organizations in managing climbing in the park; to provide guidance on managing commercial and group use; and, to maximize input from the public and the climbing communities throughout the planning process. The plan recommends use of a variety of approaches and tools to manage climbing, including education and outreach efforts, improvements to facilities, and the use of new and existing trails. It provides for a balance between recreational use and resource protect. Climbing activities will be managed to a greater degree than prior to the plan's adoption to ensure that resources are protected and that climbers continue to have opportunities for a high quality experience.

- **New River Gorge National River Water Resource Management Plan**

The *Water Resources Management Plan, New River Gorge National River, Gauley River National Recreation Area, Bluestone National Scenic River, West Virginia* (Purvis 2002) provides a comprehensive description of the park's water resources, describes the water resource issues facing the park, and formulates management actions that address those resource issues. The plan identifies 11 water resource issues, categorizes each as a high, medium, or low priority, and identifies management actions to address each issue.

- **New River Gorge National River Vista Management Plan**

The *Vista Management Plan, New River Gorge National River* (NPS 2005b) defines a concept and establishes site specific strategies to preserve, re-establish, and maintain important vistas within the park. The plan's purpose is to identify the key vistas to maintain and enhance within the park, to provide management guidance that will improve the visitors' experience at each of the key park vistas, and to establish direction and guidance for reducing maintenance at each vista while preserving its characteristics. Vista plans are included for 20 high priority vistas in the park.

- **New River Gorge National River Integrated Pest Management Plan**

The *Integrated Pest Management Plan – New River Gorge National River, Gauley River National Recreation Area, Bluestone National Scenic River* (NPS 2003a) identifies the management actions needed to reduce risks to the public, park resources, and the environment from pests and pest-related management strategies. Integrated pest management procedures are used to determine when to control pests and whether to use mechanical, physical, chemical, cultural, or biological means. Action plans are included for specific 24 pests at the park.

- **Park Museum Storage Plan**

House Report 109-80 accompanying the Interior, Environment and Related Agencies Act of 2006 required the NPS to report recommendations and findings describing a servicewide approach to museum collections storage. For New River Gorge National River, the report recommended:

- move infrequently used collections to the multi-park shared facility at Appomattox Courthouse with adjustments regarding which objects based upon an evaluation of condition, size, and/or site significance
- develop an on-site facility as a research room for the core unexhibited collections that meets NPS standards and consolidates curatorial functions with other administrative operations out of the floodplain, with a cost and space savings from storing infrequently used collections at Appomattox Courthouse

- **New River Gorge National River Collection Management Plan**

The *Collection Management Plan, New River Gorge National River* (NPS 2004a) provides the park with a tool to assist park managers in prioritizing the needs of its curatorial program. Recommendations are provided related to collection documentation, archives and manuscript collections, archeological collections, collections storage, museum environment, security and fire protection, staffing, and programming and funding sources. The plan indicates that as soon as possible the collection now housed at the Glen Jean Bank – which is located within the 25-year floodplain – should be moved to storage facilities that are not susceptible to flooding. Ultimately all of the park's collections stored in four locations in the park are to be housed in one facility. The plan also outlines steps the park can take to improve its curatorial program, the highest priorities of which are to dedicate one full-time curator/collections manager to the park and to hire a term museum technician with training in archives.

1.13.2 Local Government Plans

- **Fayette County Comprehensive Plan**

Fayette County completed and adopted the *2001 Comprehensive Plan – Fayette County, West Virginia* (Fayette County 2001) as "an advisory tool for ensuring that the growth of Fayette County is managed in an orderly and rational manner". The plan designates five districts plus an overlay planned unit development district.

Central Service District. The plan identifies the US Route 19 corridor between Mount Hope and Hico as the Central Development Service District (including land within the park on the north side of US Route 19 only); this area is expected to continue to serve as the principal residential, commercial and industrial center of the county and should accommodate the majority of the projected future county growth.

Rural/Agricultural Conservation District. Within the Development Service District the existing larger historic settlement areas serve as regional activity centers, including Mount Hope, Oak Hill, Fayetteville, Montgomery, and Gauley Bridge. Rural/agricultural conservation districts compose the bulk of the remaining area within the county; the plan intends to maintain and conserve rural character and farmlands within these areas by limiting development to residential uses, with landowners given several options to determine permitted densities based on sliding-scale or density bonus formula options.

Community Centers. Existing villages and crossroad settlements within the Rural/Agricultural Conservation District serve as community centers for rural residential development and provide for commercial services for the surrounding rural areas; the designated communities centers within and adjacent to the park include Ansted, Thurmond, and Meadow Bridge. These communities are expected to remain small in physical area and population, to continue to provide limited highly localized commercial services and employ opportunity, and to maintain a "unique sense of place" as identified by their existing character, scale, density and architectural style." If these communities have water and sewer service it is to be designed to serve existing development and not to extend into adjacent undeveloped rural areas.

Highway Corridor District. The highway corridor district encompasses land within 1,000 feet of the US Route 19 and 60 rights-of-way or anything within view from the route (whichever is greater). The plan recommends that the county implement requirements to protect and improve visual appearance in these corridors by adopting design guidelines for buffering, landscaping, lighting, signage, and structures.

Resource Conservation District. Land areas along all tributary streams compose the rural conservation district. These areas include wetlands that are adjacent to tributary streams as well as floodplains, stream valleys, steep slopes, and soils with development constraints. Suitable land use in these areas is described as passive recreation and low density residential development that is designed to protect sensitive natural features.

- **Raleigh County**

The *Raleigh Country Comprehensive Plan* (Raleigh County 1997) includes a set of generalized goals and objectives and short plan statements related to housing, community attitudes, solid waste, recreation facilities, economic development, land use, water and sewer, public safety, education, and transportation. The plan recognized that diversification of the local economy, development of new jobs, and improvements in the quality of the county's housing were needed (in 1997) to maintain a stable population and avoid the severe out migration being experienced in the county. Some of the significant recommended plan actions included: adoption of a building code (now in effect), zoning ordinance (now in effect), and subdivision regulations (now in effect); expansion of industrial parks to attract industry not related to the coal industry; removal of dilapidated structures; and new

construction and renovation of water and sewer systems. The plan also states that the county will cooperate with the NPS.

- **Summers County 2020 Plan**

In 2002 Summers County adopted the *Summers County 2020 – A Community Shared Vision* (Summers County 2002) that outlined the county's a long-range plan focused on laying the foundation for sustainable community and economic development within the county. The Vision identified both short- and long-term goals related to economic development, land use and infrastructure, tourism development, community image, and education. Several goals directly or indirectly have relevance to New River Gorge National River. Among the actions related to tourism development are advocating for construction of the New River Parkway (see Section 1.10.3 below) and support for the ongoing initiative to restore Camp Brookside in the park. The land use and infrastructure actions include establishment of a county planning commission, development of a land use management plan, completion of a countywide sewer feasibility study, extension of public water and sewer to all feasible areas of the county.

- **City of Hinton Strategic Plan**

The *Hinton 2010: Planning for the Future – 2005 Strategic Plan* (WVUES 2005) presents a strategic vision for the city of Hinton's future. The plan includes a mission statement, an analysis of existing conditions in the city, a set of goals, and specific approaches or strategies that must be implemented to accomplish each goal. A major component of the strategic plan is creation of a cultural district encompassing the Old Hinton Commercial District between WV Route 20 (Summers Street)/ Commercial Street and Maple Avenue between 2nd and 10th Streets. Most of this area is located within the authorized boundary of New River Gorge National River. The plan identifies projected components of the district, suggesting uses for the train depot, the freight depot and other properties that would be in a mix of public and private ownership. A proposed Hinton Green Space Park is suggested for much of the area within the boundary of New River Gorge National River.

1.13.3 Other Plans and Projects

- **New River Parkway Plan and Land Management System**

The West Virginia Department of Transportation (WVDOT), Division of Highways (DOH) proposes to construct a 10-mile segment of the New River Parkway from Interstate 64 to Hinton, West Virginia. Much of the right-of-way will be within New River Gorge National River. A final environmental impact statement (US DOT 2003) and record of decision (US DOT 2004) have been completed for the project and final engineering design plans are currently in preparation. As part of the project the WV Division of Highways has identified proposed boat and river access, overlook, trailhead, and multiple use facilities, which will be constructed in conjunction with the parkway. In addition a land management system (LMS) will be implemented

within 500 feet on either side of the parkway centerline. The LMS will include land use regulations and performance standards that will help to ensure that areas within the parkway corridor are protected and managed appropriately and in accordance with the policies set forth in the *New River Parkway Master Plan* (NEPA 1992). The New River Parkway Authority (NRPA) will be responsible for certifying that all new development within the corridor is designed in compliance with the LMS. Raleigh and Summers Counties are required to adopt and enforce the development LMS standards and certification process.

- **West Virginia Statewide Transportation Improvement Plan**

West Virginia makes improvements to roads throughout the state in accordance with a statewide transportation improvement plan (STIP). The STIP is a multi-year plan that is updated periodically through amendments. The current STIP is for Federal Fiscal Years (FY) 2006 to 2008 (WV DOT 2005 and 2005 – 2006). A new STIP for FY 2008 to 2013 is available for review in draft form (WV DOT 2007).

Planned highway improvements to state and federal roads within the park identified in the 2008 to 2013 STIP (WVDOT 2007) include routine maintenance to the New River Bridge, resurfacing of I-64, reconstruction of the New River bridges at Thurmond and Prince (WV State Route 41), and reconstruction of the Dunloup Creek Bridge (WV County Route 25) (WV DOT 2005, 2005 – 2006, and 2007). Construction of the New River Parkway on river left from above Sandstone to Hinton, including a bridge across the New River, is anticipated as soon as funding is committed.

- **National Coal Heritage Area Strategic Management Action Plan**

The *National Coal Heritage Area Strategic Management Action Plan* (PBQD 2000) identifies the actions to be taken to preserve and interpret the National Coal Heritage Area (NCHA). The mission of the NCHA is to preserve, protect, and interpret historic, cultural, and natural resources associated with West Virginia's coal mining heritage to help stimulate tourism and economic development, thereby improving the quality of life for the region's residents. The plan establishes goals to guide the growth of the NCHA that provide direction for many initiatives to be implemented in four phases over 10 years. One goal is to develop cooperative partnerships which nurture capable project sponsors and viable grass roots organizations that build human, technical, and financial capacity and support plan implementation within the NCHA region.

New River Gorge National River is entirely within the 11-county NCHA. The NCHA plan recognizes that the NPS plays a significant role in development of the NCHA and in achieving its mission through technical assistance, planning guidance, and encouragement of sustained partnerships with federal and state agencies, and local and regional organizations. Canyon Rim Visitor Center is recognized in the plan as one of the four existing centers in a major transportation corridor within the NCHA. Thurmond is recognized in the plan as a destination center related to several of the NCHA interpretive themes. All action alternatives considered in the New River

Gorge GMP propose to strengthen and enhance the connections between the park and the NCHA (see Section 2.4.9 Regional Tourism Partnerships below).

- **Fayette County Comprehensive Wastewater Management Plan**

The *Fayette County Comprehensive Wastewater Management Plan* (Fayette County 2005) identifies wastewater management solutions to address water quality problems in Fayette County designed to achieve water quality standards to protect public health and safety, as well as to protect the tourism industry vital to the county. Solutions focus on upgrading and expanding the existing sewer system and developing cluster systems to serve villages throughout the county, where needed, and repairing and upgrading individual onsite systems. Community cluster systems are recommended in the park vicinity at Jodie, Brooklyn/Cunard, Winona, Summerlee, Bachman, and Lookout. Package plant replacements are recommended at numerous locations in the park vicinity, including Thurmond Depot, Babcock State Park, and the New River Gorge campgrounds. Wastewater management issues associated with recreational use of the river were recognized as a major source of pollutant loading.

Initial implementation efforts are identified as the Winona cluster system, funding for improvements to 120 on-site systems, and elimination of storm sewer overflows and infiltration and inflow issues at one of the county's wastewater treatment facilities. The plan also recommends implementation of a public outreach program to educate outfitters and recreational users about proper wastewater management.

- **Dunloup Creek Final Watershed Plan**

Flooding along Dunloup Creek has been a long-term, recurring problem causing damage to residences, small businesses, and numerous other structures – including the Park Headquarters Complex in Glen Jean. Findings of the *Dunloup Creek Final Watershed Plan* (USDA NRCS 2007) recommend a voluntary buy-out as the preferred action to reduce flood-related problems for threatened properties within the 100-year floodplain. Private properties within the floodplain would be acquired, restored to natural conditions (including removal of all structures), and maintained in perpetuity as natural floodplain (USDA NRCS 2007).

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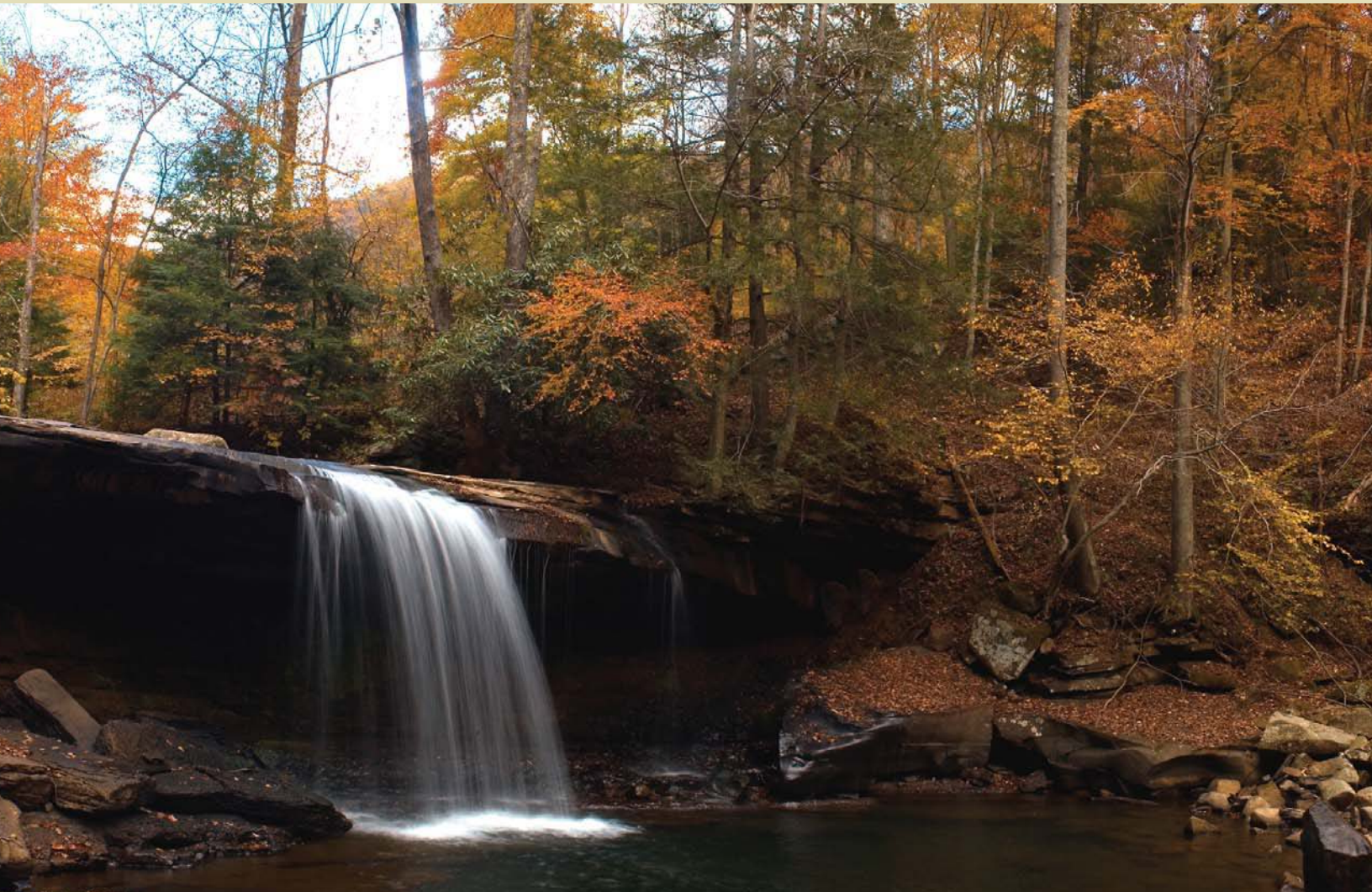
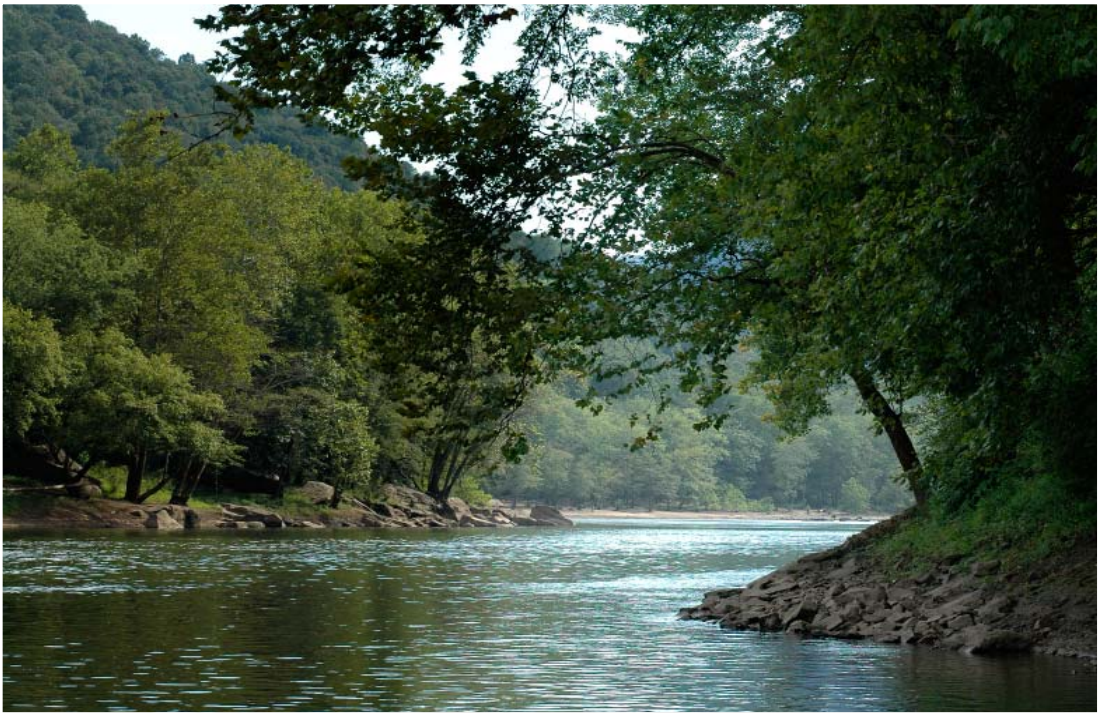
2 Alternatives



A riparian zone that is biologically diverse and contains globally rare communities.



A highly productive aquatic ecosystem includes a broad array of aquatic life.

The waters of the New River system contain a mosaic of hydrologic features and aquatic habitats, support a unique aquatic ecosystem, and nourish a riparian zone that supports rare plants, animals and communities.

Opposite side: Claypool Falls – one of the park's many riverine hydrologic features.

2.0 Alternatives

2.1 Introduction

A range of long-term management alternatives are possible for New River Gorge National River that would achieve the park's purpose, protect its fundamental and other important resources and values, and realize the vision for its future. Working cooperatively with its partners the NPS has developed, evaluated, and compared five reasonable management alternatives. This chapter of the GMP/EIS presents the five alternatives, compares their impacts and costs, and identifies the preferred alternative. Data used to compare their impacts – or what would happen if each alternative was adopted – are summarized from the detailed environmental impact analysis presented in Chapter 4 below, prepared pursuant to the National Environmental Policy Act (NEPA).

The alternatives include a "status quo" alternative – referred to as Alternative 1 Continuation of Current Management – and four action alternatives (Alternatives 2, 3, 4, and 5). The Continuation of Current Management Alternative provides the baseline for comparing the impacts of implementing the action alternatives.

Each action alternative includes a management strategy composed of the following elements:

- an overall management concept (summarized in Table 2.1)
- a set of organizing principles (summarized in Table 2.2)
- management zoning (identification of areas where potential resource conditions and visitor experience opportunities would be emphasized)
- a summary of management actions that respond to the issues and concerns raised during project scoping
- proposed hunting and biking management strategies
- management prescriptions for specific areas of the park (description of the desired resource conditions and visitor experiences, as well as the actions necessary to achieve those conditions and experiences)

Common to the action alternatives are the following additional elements:

- parkwide desired conditions and management strategies to accomplish those conditions throughout the park
- proposed boundary modifications to address park operational and management issues

Implicit in all the alternatives are the NPS management actions implemented as part of routine park management pursuant to the *NPS Management Policies* (NPS 2006a)

and applicable laws, regulations, and servicewide mandates and policies (summarized in Appendix B below).

2.1.1 Development of Alternatives

Development of the GMP alternatives occurred through a progression of planning steps used by the NPS to prepare GMPs for all units of the national park system, as outlined in the *NPS General Management Planning Dynamic Sourcebook* (NPS 2008b). The park's GMP Planning Team led the process, conducting many internal planning workshops, and hosting frequent collaborative work sessions with other interested parties, including the full park staff, the general public, local governments, civic organizations, park user groups, and various federal, state, and local agencies (see chronology of public involvement and agency coordination activities in Section 5.1 below).

The process initially focused on developing the park's *Foundation for Planning* (NPS 2009). This summarized what is most important about the park and provided the basic guidance for management decisions made at the park. The NPS hosted public meetings in January 2006 to obtain public comment on the proposed statements of the park's purpose, significance, fundamental and other important resources and values, and interpretive themes as part of developing the *Foundation for Planning* (NPS 2009).

The planning process then turned to identifying management issues and concerns and developing a long-term vision for the park. The NPS invited the public to assist with these tasks at three sets of public meetings, held in February, March, and May 2006. Five categories of issues emerged related to resource management, visitor experience and use, working with local communities, land protection, and partnerships (see Section 1.9.2 above). The GMP Planning Team also crafted a 2028 Vision Statement for the park which summarizes what the NPS, its partners, and the public would like the park to be like in 20 years (see Section 1.8 above).

The GMP Planning Team subsequently considered strategies to address the planning issues and concerns and to accomplish the long-term vision for the park. From this emerged the overall management concepts for the action alternatives considered in this GMP/EIS. Three action alternatives (Alternatives 2, 3 and 4) were initially presented to the public for comment at a set of public meetings in July 2006 and made available for comment on the park's website. Many people suggested that they would like to combine aspects of the three alternatives, notably asking for an alternative that includes an emphasis on backcountry preservation and historic resource themes, a through park route, and an emphasis on river gateways and working with communities. The NPS subsequently developed a fourth action alternative (Alternative 5) that addressed those concerns.

In the summer of 2007 the GMP Planning Team circulated a newsletter that summarized the five action alternatives and hosted a fifth set of meetings to obtain public comment on the revised alternatives. At that time additional management proposals were also presented for public review and comment related to wilderness designation, hunting, and biking in the park. Public comments received at the meetings provided guidance for further refinement of the action alternatives that are described and compared in this GMP/DEIS.

2.1.2 Identification of the Preferred Alternative

The NPS has identified **Alternative 5** as the preferred alternative to guide long-term management of New River Gorge National River. This decision is based on the comparison of alternatives summarized in this GMP/DEIS, public comments received during the planning process, and findings of the "Choosing By Advantages" process.

Full implementation of the approved plan could be many years in the future. Implementation will depend on future NPS funding levels and service-wide priorities, and on partnership funds, time, and effort. Approval of the GMP/EIS does not guarantee that funding or staffing for proposed actions will be available. Implementation of specific projects associated with the selected long-term management alternative will require detailed implementation planning and further analysis of impacts pursuant to the National Environmental Policy Act.

- **Findings of Comparison of Alternatives**

Analysis of the environmental consequences of the alternatives supports selection of Alternative 5 as the preferred alternative. Following is a summary of the comparison of alternatives based on findings presented in detail in Chapter 4 of this GMP/EIS:

- All action alternatives would contribute local long-term moderate to major beneficial impacts in all impact categories; by comparison the continuation of current management would result in minor to moderate beneficial impacts in all impact categories
- All action alternatives would result in major beneficial impacts to natural and scenic resources, primarily as a result of managing large areas of the park as unfragmented backcountry forest and implementing a set of desired conditions that would guide development of targeted strategies to protect and improve the park's significant natural and scenic resources; Alternatives 2 and 5 would preserve the greatest area of unfragmented forest (approximately two-thirds of the park)
- Alternatives 2, 4, and 5 would result in major beneficial impacts to cultural resources, with Alternatives 2 and 5 providing slightly more major beneficial impacts; Alternative 5 would address the long-term preservation needs of more of the park's cultural resources than the other alternatives

Table 2.1 Overall Management Concepts for Alternatives 1 to 5

Alternative	Alternative Concept Overview
Alternative 1 *Continuation of Current Management*	**Alternative 1** is a continuation of current management and trends. The park's enabling legislation and the existing *General Management Plan* (NPS 1982) would continue to guide park management. The NPS would manage park resources and visitor use as it does today, with no major change in direction. Improvements to visitor facilities and park operations facilities would include only projects that are already approved and fully funded (see Figure 2.2). (Built aspects of this alternative would be included in the action alternatives (Alternatives 2 to 5).)
Alternative 2 *Themed Gorge Segments*	**Alternative 2** emphasizes the substantial differences among subareas of the gorge, improving them to reflect their differing character, resources, and visitor experiences (see Figure 2.4). Management actions would build upon the cultural resource, interpretive, and recreational opportunities of the north and south ends of the park, while retaining a primitive and remote feeling in the middle of the park.
Alternative 3 *Through Park Connections*	**Alternative 3** would unify the park by providing a north-south through park hike and bike trail that enables visitors to travel the park on singletrack trails at or near the river (see Figure 2.6). Existing scenic roads would be enhanced. New access and facilities in the middle of the park would balance opportunities for visitors throughout the park.
Alternative 4 *River Gateways and Rim to River Experiences*	**Alternative 4** recognizes river gateways and the rim to river experiences that take visitors to them as the primary access points and orientation venues in the park (see Figure 2.8). River gateways would be enhanced to tell gorge stories while providing improved river, trail, and recreational access. The NPS and gateway communities would work cooperatively to enhance rim to river experiences.
Alternative 5 (Preferred) *Exploration Experiences*	**Alternative 5** would preserve areas for primitive recreational experiences from end to end of the park (see Figure 2.10). Interspersed with these primitive areas would be cultural and interpretive resource focal areas where visitors could explore communities and other places that once populated the gorge, experience the river, and enjoy a variety of recreational experiences. A north-south through the park connector composed of improved scenic roads and trails would enable visitors to travel the length of the park, visiting these areas and accessing the backcountry. Partnerships with gateway communities and improved rim to river experiences would foster links to the park as a whole and to specific cultural and interpretive resource areas within the park. Other connecting trails outside the park – made possible through partnerships – would offer visitors an opportunity to hike or bike from New River Gorge National River to the Bluestone National Scenic River, the Gauley River National Recreation Area, and other attractions in the region.

Table 2.2 General Comparison of Alternatives

	Alternative 1 Continuation of Current Management	Alternative 2 Themed Gorge Segments	Alternative 3 Through Park Connection	Alternative 4 River Gateways & Rim to River Experiences	Alternative 5 Exploration Experiences
New Idea and Emphasis	none	cultural and interpretive focus in north and south	scenic road and trail connections that connect the park	river gateways and connections to and from them	recreational experiences interspersed with interpretive experiences
Way to Unify the Park and Improve Its Image	not much improvement	brand three very different segments	emphasis on through park trail and river	emphasis on river and community gateways	emphasis on through park connector and river gateways
Visitor Experience	varied quality	reflects theme of each segment, with very different intensity of use for each	river and trail emphasis	rim to river emphasis	broad recreation experiences with opportunities to explore park history
Focus of Visitor Activities	vary	most intense at north and south segments	distributed throughout the length of the park	concentrated at gateways	concentrated at river gateways and focal areas

Table 2.3 Broad Organizing Principles of the Four GMP Action Alternatives

Subject	Alternative 2 Themed Gorge Segments	Alternative 3 Through Park Connections	Alternative 4 River Gateways and Rim to River Experiences	Alternative 5 Exploration Experiences
Visitor Experience **General Principle**: Park programs would reflect a central theme that helps visitors better understand how the park is organized, the opportunities that are available, and how to travel in the complicated network of local roads and trails in the park's rugged terrain	Visitor experiences relating to interpretation of cultural resources would be emphasized in themed areas in the north and south ends of the park; primitive recreation would be emphasized in the middle of the park	Recreation, scenic experiences, and discovery of cultural resources would be emphasized along a new through park trail	Cultural and recreation resources and experiences would be emphasized in proximity to gateways and along rim to river trails and roads	Primitive recreation experiences would be emphasized throughout the park along a new through park connector; river gateways and focal areas would be managed for a broad variety of interpretive and recreational experiences
Natural Resource Management **General Principle**: Natural processes would dominate in large contiguous forest blocks that support diverse and abundant endemic and rare plant and animal communities	Throughout the middle of the park large tracts of intact forest would be managed as backcountry (68.5%) with negligible new forest fragmentation	Only the park's most intact and unfragmented forest tracts – dispersed throughout the park – would be managed as backcountry (43%) with negligible new forest fragmentation	Large tracts of intact forest removed from river gateways and primary rim to river travel routes would be managed as backcountry (60.8 %) with negligible new forest fragmentation	Large tracts of intact forest along one or both sides of the New River throughout the park would be managed as backcountry (66.4%) with negligible new forest fragmentation
Cultural Resource Management **General Principle**: Successful partnerships would make possible stabilization, rehabilitation, or restoration of the park's most important historic resources; interpretation would occur at restored or rehabilitated cultural resource sites or at discovery sites	Significant cultural resources in the north and south ends of the park resources would be restored or rehabilitated and adaptively reused; a few sites in the middle of the park would be managed as discovery sites	Numerous cultural resources along the Though Park Trail and in the vicinity of visitor facilities would be managed as discovery sites	Significant cultural resources in the vicinity of river gateways would be rehabilitated and adaptively reused; many sites along rim to river trails and near gateways would be managed as discovery sites	Significant cultural resources in river gateways and focal areas would be restored or rehabilitated and adaptively reused; many sites along the through park connector would be managed as discovery sites
Visitor Use and Park Facilities **General Principle**: Visitor facilities would be programmed and located to support the desired visitor experiences in the park's central theme; they would be designed to have minimal impact on park resources	Trails would connect major cultural sites in the north and south ends of the park New visitor facilities would be added in the north and south ends of the park	The through park trail would connect the park from end to end; other trails would parallel the river New visitor facilities would be added in the middle of the park	Trails would connect the rim to the river and provide access to recreation and interpretive sites in the vicinity of river gateways New visitor facilities would be added in the vicinity of river gateways	The through park connector would connect the park from end to end; other trails would connect the rim to the river and would provide access to recreation and interpretive sites in the vicinity of river gateways New facilities would be added in the vicinity of river gateways and in focal areas
Partnerships and Cooperative Actions **General Principle**: NPS, gateway communities, and private landowners in the park would work cooperatively to achieve shared goals; partnerships would achieve a seamless network of regional parks, open spaces, trails, and heritage sites in southern West Virginia that supports a vibrant tourism economy	NPS would provide technical assistance to gateway communities NPS would expand participation in regional economic development efforts and cooperative efforts with the state parks, public agencies, and visitor use groups	Same as Alternative 2	NPS and gateway communities would enter into cooperative partnerships NPS would expand participation in regional economic development efforts and cooperative efforts with the state parks, public agencies, and visitor use groups	Same as Alternative 4

and – through the park's leasing program – would provide an income stream for their long-term maintenance All action alternatives would result in major beneficial impacts on visitor use and visitor experience; Alternative 5 would address the majority of visitor use issues expressed by the public and, as a result, is the only action alternative that would not have associated adverse impacts on visitor use and visitor experience

- All action alternatives would result in regional short-term and long-term minor to moderate beneficial impacts on the economy; Alternative 5 would have the greatest direct and indirect economic impact in terms of jobs, earnings, NPS spending, and visitor spending
- All action alternatives would result in minor to major beneficial impacts on communities within and near the park; in Alternatives 4 and 5 more aggressive partnering with gateway communities would better enhance relevance of the park to local visitors and better enable the NPS to respond to concerns of local residents about how the park is managed
- All action alternatives would result in innovative partnerships that would generate new income streams to support park management; in Alternatives 4 and 5 more new sources of funding would become available to support park operations as a result of more aggressive partnering with gateway communities, regional economic development interests, other government agencies, user groups, and the park's friends
- All action alternatives would result in minor to moderate short-term adverse impacts associated with construction of new visitor use facilities and cultural resource management actions; management actions included in Alternative 5 would disturb the largest total area as a result of development of new facilities; mitigation measures and best management practices would be used to avoid or minimize potential impacts from implementation of future management actions in the action alternatives

- **Summary of Public Involvement in Alternatives Development**

In July 2006 the NPS presented the Alternatives 1 through 4 to the public in a series of three public meetings. The alternatives were also posted on the NPS Planning, Environment and Public Comment (PEPC) website. Comments received revealed an overall concern regarding the extent to which each alternative would protect the natural resources of the park, protect the primitive character of the park, protect the park's wildlife (particularly its birds), and provide additional trails (particularly single-track trails and backcountry trails offering a multi-day trip opportunity). Many people suggested that they would like to combine aspects of each alternative, suggesting an alternative that combines the emphasis on backcountry preservation and historic resources themes in Alternative 2, the through park trail in Alternative 3, and the emphasis on gateways and working with communities in Alternative 4.

In response to the public comment received the NPS developed Alternative 5 which combined the features in Alternatives 2, 3, and 4, suggested by the public following the July 2006 public meetings. In October 2007 the NPS circulated a newsletter summarizing Alternatives 1 to 5, including options for hunting and biking in the park and preliminary findings of the wilderness eligibility assessment. All parties on the park's mailing list received the newsletter. NPS also posted it on the NPS PEPC site. Following release of the newsletter the NPS hosted a series of three public meetings to present the alternatives and to receive public comment. Approximately 292 people attended.

Since the November 2008 public meetings the NPS has received approximately 700 written comments on the proposed alternatives. Most comments supported the continuation of hunting (Alternatives 1 or 3) or enhancement of hunting (Alternative 5) and opposed wilderness designation. Many comments supported the development of biking trails in frontcountry and backcountry zones (most represented in Alternative 5). The public in general supported Alternative 5 in preference to Alternatives 1 to 4.

- **Summary of Findings from the Choosing By Advantages Decision-Making Process**

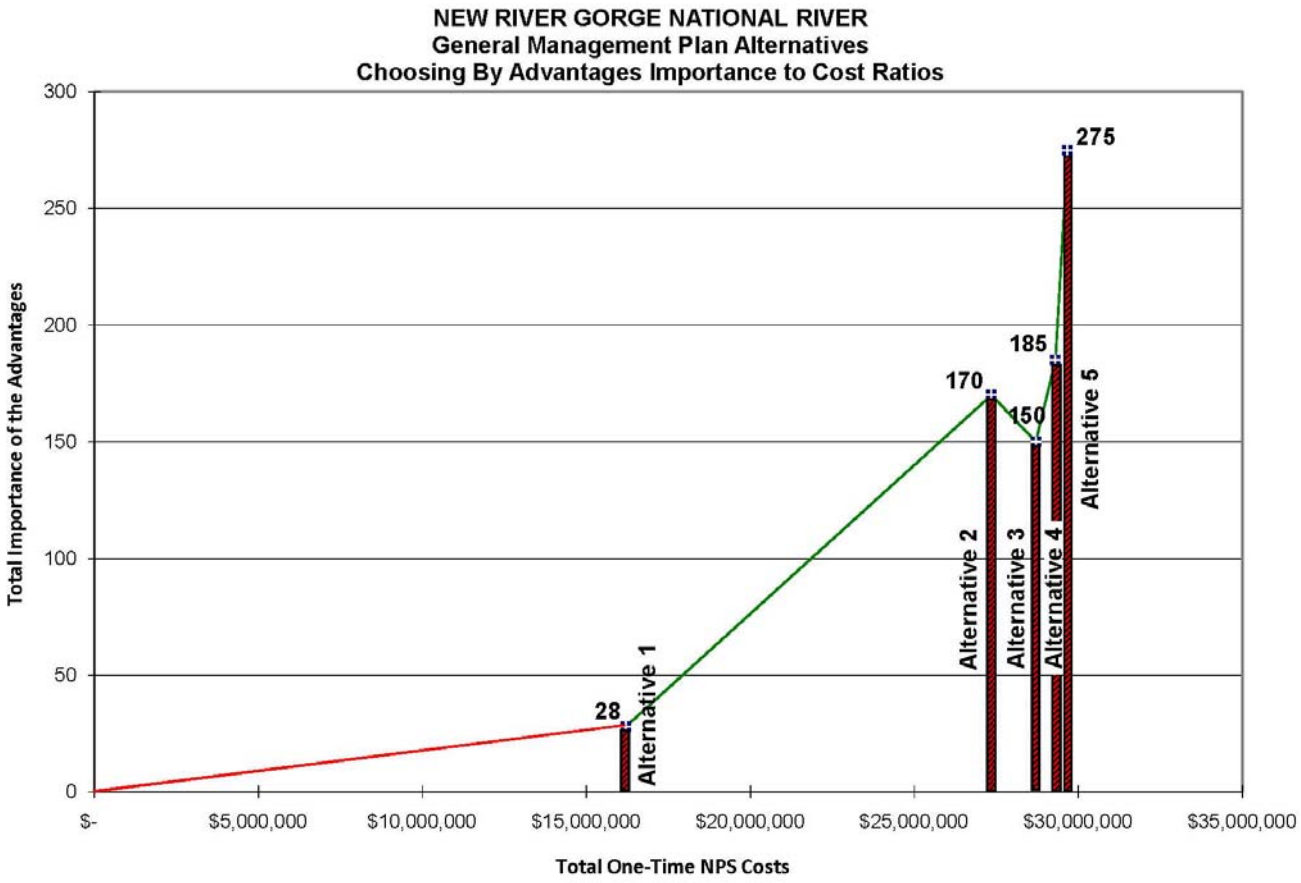
The GMP planning team also used the "Choosing By Advantages" (CBA) process to organize and evaluate the facts most relevant to the selection of the preferred alternative and to minimize the influence of individual biases and opinions in the decision-making process. The CBA process, which has been used extensively by government agencies and the private sector, evaluates different alternatives by identifying and comparing the relative advantages of each alternative according to a set of criteria. CBA does not weight factors when making decisions. Rather it focuses on the different advantages associated with specific alternatives and determines how important those advantages are.

Findings of the CBA process determined that Alternative 5 would fulfill the statutory mission and responsibilities of the park and offer a greater overall advantage when compared to the other GMP alternatives considered. The advantages offered by Alternative 5 relative to Alternatives 1, 2, 3, and 4 are summarized as follows:

- **Protection of the park's natural resources** – Alternative 5 provides the highest degree of protection of park's natural resources. Alternative 5 would be highly advantageous when compared to Alternatives 2 and 4 and very highly advantageous when compared to Alternative 3. Alternative 1 would offer no advantage.

- **Protection of the park's cultural resources** – Alternative 5 provides the highest degree of protection of the park's cultural resources. Alternative 5 would be highly advantageous when compared to Alternatives 2 and 3 and very highly advantageous when compared to Alternatives 1 and 4.

Figure 2.1



- **Provision of exceptional opportunities for visitors** – Alternative 5 provides the most exceptional opportunities for visitors. Alternative 5 would be highly advantageous when compared to Alternatives 3 and 4 and very highly advantageous when compared to Alternatives 1 and 2. Alternative 1 would offer no advantage.

- **Overall Value** – Alternative 5 offers the best overall value. It has the greatest increase in the **total importance of advantages** for not much more money when compared to Alternatives 2, 3, and 4 (evidenced in the above importance to cost graph by the steep upward slope of the line from Alternatives 2, 3, and 4 to Alternative 5).

2.2 Alternative 1 – Continuation of Current Management

2.2.1 Overall Management Concept (Alternative 1)

Alternative 1 is a continuation of current management and trends (see Figure 2.2). The park's enabling legislation and the existing *General Management Plan* (NPS 1982) would continue to guide park management. The NPS would manage park resources and visitor use as it does today, with no major change in direction. Improvements to visitor facilities and park operations facilities would include only projects that are already approved.

2.2.2 Management Zoning (Alternative 1)

The NPS no longer uses the zoning plan from the existing *General Management Plan* (NPS 1982) because it is not a useful representation of the allocation of park resources and values needed to achieve desired conditions and visitor experiences. Furthermore, the existing GMP assigns management zoning to approximately 11,000 of the 72,189 acres within the current park boundary, leaving 52,000 acres not zoned.

In Alternative 1 there would be no new management zoning. The NPS would continue to make management decisions as it does today on an ad hoc basis using best available management practices.

2.2.3 Visitor Experience and Visitor Orientation (Alternative 1)

- **Experiencing the Park**

Visitors would have the classic park experiences as they currently exist at Sandstone Falls, the Sandstone Visitor Center, Grandview, Thurmond, Nuttallburg/Kaymoor, Endless Wall, the Canyon Rim Visitor Center, and Fayette Station Road (see Table 2.4). Other important experiences that visitors would have in the park would remain largely as they are today, focused on existing attractions and visitor facilities. Improvements associated with the future New River Parkway would greatly enhance access, visitor facilities, and the experiences visitors have in the south.

- **Visitor Orientation**

Visitor orientation would continue to focus on directing visitors to the "classic visitor experiences" at New River Gorge where they can learn about the park's history and resources. Orientation would also provide information regarding opportunities for recreation experiences in the park.

Primary venues for visitor orientation would be the visitor centers at Canyon Rim and Sandstone. From these locations visitors would go to sites of the park's classic experiences and to recreation sites. They would also receive maps describing the park's scenic drives and learn about interpretative programs. Smaller visitor

Table 2.4 Important Visitor Experiences (Alternative 1)

Important Park Experiences	That Visitors Would Have
Appreciate life in the gorge – the human history story	**Throughout the park there are cultural resource sites where human history stories could be told.** The places where visitors learn about the park's history would be dispersed throughout the park at a few locations, such as Thurmond and Nuttallburg. Most stories would continue to be told through visitor center exhibits, ranger walks and talks, waysides along park roads and trails, and special programs.
Appreciate/experience the wildness of the landscape	**A sense of wildness dominates the landscape setting in most areas of the park.** While paddling the river visitors would be transported to remote and wild areas in the upper, middle, and lower gorge, relying on the existing network of river accesses which make possible a variety of paddling experiences in a wild landscape setting. Visitors venturing into the forest would explore the park making their way along the park's existing network of trails at times near the water's edge and at times looking into the gorge. Exploration of the park by bicycle would be limited to administrative roads. Visitors camping in the forest at existing campsites would experience nature and the sense of solitude that comes from spending extended time in the outdoors. From existing developed overlooks – at Brooks, Sandstone Falls, Grandview, Turkey Spur, Kaymoor, and Canyon Rim – expansive vistas of rugged terrain, dense forest, and the turbulent river in the gorge below would evoke appreciation of the wild landscape. A new developed overlook would be added in the River Road corridor as part of the New River Parkway project.
Experience the power of the river	**Throughout the park the power of the river is evident wherever visitors can be on the river, be at the river's edge, or view the river from afar.** The New River would carry paddlers along its freeflowing course through the gorge cut by its waters deep in the Appalachian Plateau. Those who ride the river as it descends through the gorge would feel its power and experience the thrill of adventure and discovery as the water flows turbulently over and amidst massive boulders transported through time from the cliff walls above. River experiences would be available from the existing network of river accesses for paddlers of all skill levels during most spring, summer, and fall months. At the river's edge visitors could see, smell, and hear the river, feeling its power as they sense around them the scale of the gorge shaped by the flowing water. From the existing network of river accesses and day-use areas at the river's edge visitors would experience the river as it flows calmly yet powerfully on its course northward; elsewhere visitors would experience a wild river flowing turbulently around rocks and boulders. In the River Road corridor the river's edge experience would be enhanced by day-use area improvements included in the New River Parkway project. From existing developed overlooks – at Brooks, Sandstone Falls, Grandview, Turkey Spur, Kaymoor, and Canyon Rim – the depth of the gorge, the exposed cliff walls, and the massive boulders in the river below, would evidence the river's power to shape the landscape. A new developed overlook would be added in the River Road corridor as part of the New River Parkway project.
Experience scenic beauty	**Throughout the park its scenic beauty is evident from roads, trails, overlooks, and the river.** From existing roads visitors would have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. In the south end of the park, as visitors travel the future New River Parkway from Sandstone to Hinton the scenic quality of the park would be evident in the dramatic landscape visible from the New River Bridge and along the parkway. In the north end of the park, efforts would be made to enhance opportunities for scenic vistas along Fayette Station Road by working with WV DOH to add pull-outs. Visitors traveling on existing trails would continue to have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river.

KEY

- Visitor Center
- Parking Facility
- Operations Facility
- Camping
- River Access
- Overlook
- Picnicking
- Camping
- NPS land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

PROSPERITY
BRADLEY
BECKLEY
PINEY VIEW
MOUNT HOPE
STANAFORD
OAK HILL
FAYETTEVILLE
ANSTED
Beckley/Raleigh County Memorial Airport
Glen Jean
Park Headquarters
Army Camp
Wright
Terry
McCreery River Access
Terry Junction
Grandview
Glade Creek
Prince
Grandview Sandbar
Mill Creek
Quinnimont Rapids
Quinnimont
Glade Creek
Grassy Shoals Rapids
Laurel Creek
Highland
Thayer River Access
Thayer
Glade Creek Campground
Bragg
Backus
Abraham
Sandstone Falls Takeout
Sandstone Falls
Hellems Beach River Access
Future New River Parkway
Tug Creek River Access
Akers River Access
Brooks Falls
Brooklin
Bluestone Dam
HINTON
Bellepoint
Barksdale
Brooks
Brooks Falls
Greenbrier River
Browning
Camp Brookside River Access
Sandstone Falls Overlook
Gwinn Ridge Trailhead
Sandstone
Sandstone Visitor Center
Meadow Creek River Access (private)
Meadow Creek
Meadow Bridge
Laurel Creek
Southside Junction Parking Area
Dunloup Creek
Thurmond/Minden Trailhead
Dun Glen
Stone Cliff
Thurmond
Thurmond Depot Visitor Center
Silo Rapids
Red Ash
Brooklyn-Southside Junction Trailhead
Surprise Rapids
Minden Trailhead
Cunard River Access
Brooklyn
Cunard
Cunard Trailhead Parking Area
Cunard Fishing Access Parking
Elverton
Lower Railroad Rapids
Upper Railroad Rapids
Greyhound Rapids
Double Z Rapids
Keeneys Rapids
Dudleys Dip Rapids
Bridge Trailhead
Fayette Station
Wolf Creek Trailhead
Bridge Trailhead
Longpoint Trailhead
Fayette Station Rapids
Kaymoor Mine Site
Kaymoor
Kaymoor Top
Millers Folly Rapids
Ames Heights
Bridge Buttress Parking
Burnwood
Canyon Rim Visitor Center
Fern Creek Parking Area
Nuttall Parking Area
Edmund
Cotton Hill
Hawks Nest Dam
Bachman
Hawks Nest State Park
Gaymont
Means Creek
Babcock State Park
Winona
Hico
Lookout
Clifftop
Danese

Figure 2.2

ALTERNATIVE 1 CONCEPT: CONTINUATION OF CURRENT MANAGEMENT

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Table 2.4 Important Visitor Experiences (Alternative 1)

Important Park Experiences That Visitors Would Have (continued)	
Experience scenic beauty (continued)	Visitors would continue to have panoramic scenic views of the park's landscape from existing developed overlooks at Brooks, Sandstone Falls, Grandview, Turkey Spur, Kaymoor, and Canyon Rim. A new developed overlook would be added in the River Road corridor as part of the New River Parkway project. Views of the scenic river corridor and gorge walls above would be experienced by visitors who paddle the river and by visitors to existing river accesses and day-use areas at the river's edge.
Classic Park Experiences	
Paddling the New River	Paddlers would continue to experience the power of the river and the park's wild character and natural beauty as they float the river, stopping to picnic, fish, visit natural and cultural sites of interest, and/or camp. Opportunities for paddlers of all skill levels would continue from the existing network of river accesses in the upper, middle, and lower gorge. Camping and picnicking facilities and river rest stops would remain as they are today.
Sandstone Falls	The boardwalk and recreational facilities at Sandstone would continue to bring visitors to the water's edge where they can feel the power of the river, experience its beauty, and learn about the park's significant natural resources.
Sandstone Falls Visitor Center	At the Sandstone Falls Visitor Center visitors would continue to be oriented to the park.
Grandview	Social gatherings, cultural events, and recreational activities at Grandview would continue in a setting where visitors can experience the scenic beauty of the park, the wildness of its landscape, and the power of the river. Park visitors would enjoy safer access to the Turkey Spur overlook. Theatre goers would continue to enjoy productions at an updated Cliffside Amphitheatre.
Thurmond	Life in a railroading town during the park's industrial era would continue to be exemplified at Thurmond. Visitors could walk or drive town roads, looking at remaining structures, and learning about life in the gorge. Visitors would be able to access historic buildings at Commercial Row once they are stabilized and contamination is remediated.
Kaymoor and Nuttallburg	Trails would provide visitor access to historic mining areas at Kaymoor and Nuttallburg. Nationally significant mining resources at Nuttallburg would be interpreted for visitors and made more accessible through parking and trail improvements.
Experiencing the Cliffs	The massive sandstone cliffs in the Endless Wall area and elsewhere would continue to attract visitors seeking to experience their beauty as well as the thrill of adventure, exploration, and solitude of rock climbing.
Canyon Rim	At Canyon Rim visitors would continue to be oriented to the park at the visitor center and to have opportunities to view the river and the gorge from existing overlooks.
Fayette Station Road	Fayette Station Road would continue to be a major visitor attraction in the north end of the park where visitors would experience the historic travel route across the river, learn about the park's industrial heritage, view the river, and feel its power.

centers at Thurmond and Grandview – sites of two park classic experiences – would continue as secondary locations where visitors would be oriented to the park.

2.2.4 Resource Management (Alternative 1)

- **Maintaining Natural Processes and Restoring Natural Systems (Alternative 1)**

Existing natural resource management programs would continue consistent with applicable federal and state of West Virginia laws and regulations, National Park Service policies (see Appendix B), and adopted NPS plans for the park (see Section 1.11.1 above).

- **Water Quality Management (Alternative 1)**

Water quality management actions in the park would continue. NPS would collect ambient water quality data for the New River and most of its tributaries. Sanitary facilities would be provided at most developed visitor facilities. River rest stops and other sites in remote areas of the park would have few or no sanitary facilities. NPS would provide technical assistance to WVDEP, the Plateau Action Network, Fayette County, Summers County, Raleigh County, local communities, public service districts, and other appropriate groups involved in water quality management in the New River watershed in the park vicinity.

At Thurmond, wastewater collection and treatment would be provided by the NPS for existing visitor facilities and currently occupied houses.

- **Cultural Resource Management (Alternative 1)**

Existing cultural resource management programs would continue consistent with applicable federal and state of West Virginia laws and regulations, National Park Service policies (see Appendix B), and adopted NPS plans for the park (see Section 1.11.1 above). In Alternative 1 the NPS would also implement a number of cultural resource management actions.

Early Settlement/Agricultural Resources. Resources in the southern end of the park would generally be managed as follows:

- farmhouses would be stabilized
- outbuildings would be maintained in period condition
- farm fields, fence lines, and orchards would be maintained
- farm fields would be leased for agriculture
- as properties in the Richmond Bottom and Westfall Farm areas are acquired or otherwise protected, modern structures would be removed

Prince Brothers General Store. The Prince Brothers General Store exterior would be stabilized.

Thurmond. At Thurmond, the lead paint and asbestos contamination in the commercial row structures would be remediated.

Nuttallburg Mining Complex and Nuttallburg Town Site. At the former site of the Nuttallburg Mining Complex and Nuttallburg Town Site, emergency cultural resource management actions and actions identified in the *Nuttallburg Visitor Use Area Implementation Plan* (NPS 2008b) would be implemented. Collectively these actions would stabilize nationally significant cultural resources on the site and provide a focal area within the park for the interpretation of early coal mining technology in the New River Coal Field. They would also provide park visitors with a safe experience that offers opportunities for education and recreation.

Park Museum Collection. The park's collection would be relocated from the Glen Jean Bank in the Park Headquarters Complex. In accordance with the NPS Northeast Region's collection management strategy, infrequently used items in the collection would be moved to the multi-park shared facility at Appomattox Courthouse. NPS would construct a new research room for on-site storage of the park's core unexhibited collections.

- **Protecting Scenic Resources in and around the Gorge (Alternative 1)**

Viewshed studies indicate extensive areas in the park vicinity where new development – if it should occur in the future – would be visible from the park and would potentially impact the park setting, the visitor experience, and important resource areas (see Appendix F). Addition of these areas to the park is impracticable because of potential community impacts and cost. In lieu of boundary adjustments and land acquisition the NPS would seek to protect scenic resources from impacts of new development on these lands by working cooperatively with communities and private landowners. Actions would generally include the following:

- Coordination with owners of land possessing outstanding scenic values in and around the gorge
  - collaborate to seek modifications to land development proposals to avoid or mitigate adverse impacts to outstanding scenic values
- Coordination with local governments
  - provide comments on potential adverse impacts of proposed development on outstanding scenic values
  - seek to involve NPS early on in the development review process when lands with outstanding scenic values are proposed for development

2.2.5 Visitor Use and Visitor Facilities (Alternative 1)

- **Hiking and Equestrian Use (Alternative 1)**

In Alternative 1 there would be no major expansion of the park's hiking or equestrian trail system. Minor hiking trail additions would occur at the Nuttallburg Visitor Use Area, including trails 1) following historic traces at the Nuttallburg town site, 2) in the vicinity of the stabilized headhouse, conveyor, and tipple, 3) along the coke oven bank, and 4) providing climbing access at the base of the Nuttallburg sandstone headwall. Trailheads with parking facilities would be provided at the Nuttallburg Visitor Use Area at the upper, middle, switchback, and lower levels for access to the existing Nuttall Mine and Nuttallburg Tipple Trails.

- **Biking (Alternative 1)**

In Alternative 1 biking would continue to be permitted on portions of nine trails are open to bicycles, providing access to a variety of places such as overlooks, the New River, and historic sites in the lower gorge (see Table 3.36). No other biking trails would be designated.

- **Hunting (Alternative 1) (Continuation of Existing Hunting Program)**

In Alternative 1 hunting within the park would continue in accordance with the hunting and fishing regulations of the WV DNR. Hunting would generally be permitted throughout the park. A few areas would continue to be closed to hunting for safety reasons, including:

  - areas designated as safety zones in the park compendium (NPS 2007)
  - areas within the historic boundaries of Grandview State Park and Sandstone Falls State Park
  - the area within the boundary of Babcock State Park (which is managed by the state of West Virginia)

WV DNR hunting regulations and general safety provisions can be found on the internet at www.wvdnr.gov. Some of the safety measures include the prohibition of shooting within 500 feet of dwellings and shooting across roads. The NPS-designated safety zones establish no-hunting perimeters around public gathering sites such as visitor centers, parking lots, trail heads, and campgrounds. Safety zones at New River Gorge National River are listed and mapped in the compendium. The compendium is available at the following internet site (http://www.nps.gov/neri/parkmgmt/lawsandpolicies.htm).

- **Pedestrian Access across Railroad Rights-of-Way (Alternative 1)**

The NPS would continue to work with the CSX Corporation to acquire wherever possible additional legal crossings of the CSX rights-of-way in the park. Priorities would be to secure legal crossings where visitors frequently illegally cross tracks at Hinton, Depot Beach, Apple Orchard, McKendree, Todd Beach, Southside Junction,

Piney Creek, Dowdy Creek, Nuttallburg, Keeney Creek, Kaymoor, Short Creek, the Lower Railroad area, and Fayette Station.

- **Access and Parking (Alternative 1)**

Access and parking improvements would occur in three locations in Alternative 1:

- West Virginia Department of Transportation, Division of Highways would develop the New River Parkway from I-64 to Hinton, with a bridge over the New River; parking facilities would be provided at new visitor use facilities to be developed in conjunction with the parkway (see Other Visitor Use Facilities below).
- NPS would develop four trailhead parking areas that would provide visitor access to the Nuttallburg Visitor Use Area
- NPS would make improvements to Turkey Spur Road at Grandview

In addition the NPS would work cooperatively with the WV DOH to:

- facilitate improvements to WV SR 82 (widening and addition of pull-outs and actions to allow two-way traffic)
- provide parking at Thurmond in conjunction with replacement of the Thurmond Bridge

- **Other Visitor Facilities (including disabled access) (Alternative 1)**

In Alternative 1 the recreation sites currently used by visitors for picnicking, swimming, camping, and fishing would continue to be used in their current condition. Most sites would remain largely undeveloped with visitors either parking informally along the road and walking into the site or floating by on a boat. Most sites would have no toilets, trash receptacles, or site designations. Use would remain unrestricted with respect to group size and made available first-come, first-served.

Additional visitor facilities associated with Alternative 1 would include those associated with implementation of funded plans for New River Parkway, the Nuttallburg Visitor Use Area, and the Burnwood Center:

- as part of the New River Parkway project, the WV DOH would develop 1) boat and river access facilities at Mermaid Beach, 2) parking at Longbottom Overlook, 3) parking, picnicking facilities, and interpretive media at Fall Branch Access, and 4) visitor access and parking facilities at Richmond-Hamilton Farm, Vallandingham Farm, and Cochran Farm
- once the New River Parkway project is complete, the NPS would develop a loop driving tour following the parkway and the existing WV SR 20, linking Sandstone and Hinton, and enabling visitors to enjoy more scenery and visit historic communities in the southern end of the park

- as part of the Nuttallburg Visitor Use Area project, the NPS would develop trails, visitor access and parking facilities, and comfort stations.
- as part of the Burnwood Center Project the NPS would 1) relocate and rehabilitate existing picnic shelters, and 2) construct a new environmental education center (other actions at Burnwood would support park operations, including construction of a new park operations building, parking, and new utilities)

NPS would continue to make accessibility improvements at existing and new facilities with the goal of making all visitor facilities at developed visitor use areas accessible to visitors and employees with disabilities. Where practicable given river conditions, NPS would also seek to provide river access for disabled boaters that

would enable them to experience safe river trips of different lengths and levels of difficulty.

2.2.6 Working with Local Communities (Alternative 1)

- **Sustaining Communities within the Park (Alternative 1)**

Hinton. The NPS would continue to provide technical assistance to the city of Hinton with rehabilitation and adaptive reuse of the Hinton Depot and would continue to work cooperatively with the city to accomplish mutual goals regarding management and use of the New River waterfront area.

Thurmond. The small enclave of occupied private residences at Thurmond would remain as "a community within a park attraction". The level of visitor use at Thurmond would remain low and generally confined to the visitor center at the Thurmond Depot, the Commercial Row area, and the lower areas of the town where the NPS owns most of the property and houses. The NPS would continue to work cooperatively with residents to address issues associated with living in the historic town. The NPS would also develop a community water system and wastewater management system at Thurmond for NPS use; water and wastewater service would be extended to private residences in the town on a fee basis.

Other Communities within the Park. In general, as funding permits the NPS would continue to acquire property within communities in the park as they become available from willing sellers. The NPS would not take actions specifically designed to sustain the continued presence of communities that still remain in the park in the vicinity of Meadow Creek, Backus, Prince/Quinnimont, Highland, Terry, and Thayer.

2.2.7 Land Protection (Alternative 1)

- **Land Protection Priorities (Alternative 1)**

As funding permits, land protection would continue until most land remaining within the current park boundary is protected through voluntary sale of property to the

NPS or through voluntary conveyance of conservation easements to the NPS or to a qualified non-profit land trust. The NPS land protection staff would continue to respond to all opportunities for negotiation with willing sellers as they arise, subject to staff capacity and availability of acquisition funds.

- **Stewardship of Private Land Remaining within the Park Boundary (Alternative 1)**

Existing means of communication with remaining private landowners within the park would continue. The NPS would respond to landowner needs and concerns on an individual basis as they arise, seeking to address issues and provide technical assistance where practicable. New measures to enhance stewardship of private lands in the park would not be implemented.

2.2.8 Partnerships (Alternative 1)

- **Relevance of the Park to Local Visitors (Alternative 1)**

Actions currently implemented by the park to enhance local appreciation and understanding of the park would continue. These would include the standard set of NPS practices intended to strengthen the connection between the American public and the mission of the NPS. Generally these would include signage and informational materials with a recognized NPS graphic identity, presence of uniformed rangers throughout the park, contextual design of visitor facilities, and interpretive and educational programs for schools and visitors. The NPS "volunteers in the park" (VIP) and recently created Friends of New River Gorge group would continue to offer local residents opportunities to better understand the park mission and significance.

- **Gateway Community Partnerships (Alternative 1)**

The NPS would continue to work cooperatively with local governments in Summers, Raleigh, and Fayette Counties, as well as the nearby communities that are the park's gateways – Hinton, Sandstone, Meadow Bridge, Beckley, Mount Hope, Glen Jean, Oak Hill, Minden, Cunard, Fayetteville, Winona, and Ansted. These relationships would remain informal, involving provision of relatively narrowly defined technical assistance with land use planning and geographic database (GIS) management, planning and design of trail connections, treatment of cultural resources, and assistance with hosting special events.

- **Regional Tourism Partnerships (Alternative 1)**

The NPS would continue to work cooperatively on many initiatives with local chambers of commerce, convention bureaus, visitors' bureaus, economic development interests, the Coal Heritage Area, and the Tamarack Foundation. These initiatives would focus on improving awareness of the park as a unit of the national park system, attracting visitors to the region, providing information to visitors, improving wayfinding from local communities to the park, developing visitor

support services in gateway communities, and promoting public understanding of the positive impacts of the park on the quality of life in local communities.

- **Other Partnerships (Alternative 1)**

The NPS would continue to collaborate with Hawks Nest State Park to protect scenic resources in and around the gorge and to make information available to visitors about each park. Babcock State Park would continue to operate independent of collaboration with the NPS.

The NPS would continue to collaborate with state and federal agencies to address specific resource management needs at the park related to treatment of cultural resources, water quality monitoring, hunting, rare and endangered species protection, fishing access, maintenance of flows in the New River, maintenance of public roads in the park, and management of whitewater use of the river.

The NPS would continue to seek input from visitor user groups with identifying visitor use issues and identification of potential solutions for consideration.

2.2.9 Area-Specific Desired Conditions and Needed Changes (Alternative 1)

Table 2.5 identifies the desired resource conditions and desired visitor experiences for specific areas of the park in Alternative 1. The area-specific desired conditions focus on fundamental and other important resources and values and the visitor experience opportunities associated with them that would be appropriate in particular locations.

Table 2.5 also identifies the general types of actions in specific areas of the park that would be needed and allowable to achieve desired conditions in Alternative 1. These are examples of the actions needed to move from existing conditions to desired conditions. Identifying the types of needed and allowable changes helps 1) to provide a sense of what management actions might occur and what development might look like, 2) to identify the impacts of these actions, and 3) to estimate the general costs of implementing the actions.

2.2.10 Costs (Alternative 1)

The NPS has prepared estimates of annual operating costs and one-time costs associated with Alternative 1 using NPS and industry cost estimating guidelines (see Table 2.37 in Section 2.14 below). Annual recurring costs include personnel and non-labor costs, such as utilities, vehicles, travel, and supplies. One-time capital investments include construction, exhibits, research and planning. These costs are presented for comparative purposes only and will be refined at a later date based upon final design of facilities and other considerations. Some projects have the potential to be funded through partnerships and volunteers, or through shared funding with other agencies. Therefore, actual costs would vary depending on when specific actions are implemented and on contributions by partners and volunteers.

- **NPS Annual Operating Costs and Staffing Requirements (Alternative 1)**

NPS annual operating costs associated with Alternative 1 are estimated to be $13,350,000 (2009 dollars). This includes the anticipated cost for staff salaries and benefits for 160 full-time equivalent (FTE) staff, utilities, supplies, leasing (including leased park offices, as in Alternative 1), and other materials needed for park maintenance and operations.

GAO, in its report *Major Operational Funding Trends and How Selected Park Units Responded to those Trends for Fiscal Years 2001 through 2005* noted that " . . . each unit experienced an increase in daily operations allocations, but most experienced a decline in inflation-adjusted terms. " Congress later confirmed the GAO findings, noting in the House Report for Fiscal Year 2007 Appropriations Bill for the NPS that "Unfortunately, because of inadequate budget requests, the parks have had to absorb $61,000,000 over the last six years in mandatory pay costs. This figure is exclusive of other costs impacts cited by GAO including unfunded retirement and health benefit increases, and mandates for homeland security and information technology security."

New River Gorge National River has experienced these trends just as other parks have, and therefore the park has not been able to replace staff vacancies that have arisen over the past several years. In addition, inflation on fixed costs items, such as utilities, supplies and materials have also meant that permanent and seasonal staff has been reduced. Of the 160 FTE in the park's approved organizational chart, only 118 FTE are currently filled. For the purposes of this cost estimate, 160 FTE members have been assumed. Filling vacant positions would allow the park to maintain the trails, campgrounds, visitor centers, grounds and complete other necessary science, resource management and stewardship work.

- **NPS One-Time Costs (Alternative 1)**

NPS one-time costs associated with Alternative 1 are estimated to be $16,200,000 (2009 dollars) including one-time facilities costs and non-facilities costs.

Facility costs include projects such as the following:

- Thurmond community wastewater system
- Thurmond Commercial Row hazardous material abatement and fire protection
- Nuttallburg long-term stabilization of coal mine structures
- Nuttallburg visitor use facilities
- museum collections storage building

Non-facility costs include negotiation and construction of railroad crossings where park visitors need to cross the CSX mainline to access trails, river access and other facilities.

Table 2.5 Alternative 1 (Continuation of Current Management) – Area-Specific Desired Conditions and Needed Changes

Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Development Areas			
Glen Jean (Park Headquarters)	▪ park headquarters, headquarters annex (Glen Jean Bank), and operations facilities ▪ Glen Jean Bank (listed on National Register) (good condition) ▪ all structures located within 25-year floodplain ▪ park collection facility in Glen Jean Bank (within the floodplain)	▪ the park's museum collections are properly housed and curated, made available for research, and appropriately tell the park's story	▪ move the park's core unexhibited collections to a research room at the new park operations center to be developed at Burnwood ▪ move infrequently used museum collections to the multi-park shared facility at Appomattox Courthouse with adjustments regarding which objects based upon an evaluation of condition, size, and/or site significance
Fayette Station	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ river access (high use) ▪ day-use facilities (parking, picnicking, public restrooms) ▪ CSX Main Line (active) ▪ visitors (primarily private paddlers) frequently illegally cross the CSX Main Line to reach the river access	▪ visitors enjoy a safe and secure experience at the park ▪ traffic circulation and parking is managed to reduce impacts on park resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience	▪ work cooperatively with the CSX Corporation to secure safe pedestrian access to existing visitor parking ▪ work cooperatively with WV DOH to facilitate improvements to WV SR 82 (widening and addition of pull-outs – actions to allow two-way traffic)
Burnwood	▪ environmental education based at picnic pavilions (functionally obsolete) ▪ Laing Loop Nature Trail ▪ park operations facilities (functionally obsolete) ▪ public water supply and wastewater treatment facility (serving Burnwood and the Canyon Rim Visitor Center) (excess capacity)	▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park ▪ management facilities support efficient park operations ▪ park staff, volunteers, interns, contractors, and partners work in a safe and secure environment ▪ the park's museum collections are properly housed and curated, made available for research, and appropriately tell the park's story	▪ implement the Burnwood Center Development Concept Plan, generally including: - relocation and rehabilitation of existing picnic shelters - removal of other structures - construction of a new park operations center, a new environmental education building, and new utilities ▪ at the New Burnwood park operations center, develop a research room for the park's core unexhibited collections that meets NPS standards and consolidates curatorial functions with other administrative operations
Historic Resource Areas			
Hinton Depot	▪ Hinton Station (owned by the city of Hinton) (active AMTRAK station) ▪ CSX Main Line (active) and rail yard ▪ former round house site ▪ abandoned coal tipple ▪ no park facilities	▪ NPS and its gateway community neighbors work collaboratively to define and accomplish shared goals	▪ provide technical assistance to the city of Hinton with rehabilitation and adaptive reuse of the Hinton Depot ▪ work cooperatively with the city of Hinton to accomplish mutual goals regarding management and use of the New River waterfront area ▪ develop a loop driving tour following the parkway and the existing WV SR 20, linking Sandstone and Hinton
Richmond Bottom	▪ Richmond-Hamilton Farm: - farmhouse (habitable condition), split-log barns (period condition), other outbuildings (period condition) - fields not leased for agriculture - no park facilities - no interpretive programs ▪ Vallandingham Farm - log cabin (not habitable), log smokehouse, other outbuildings - vegetation impacting site - no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park	▪ at Richmond-Hamilton Farm: - work cooperatively with WV DOH to make improvements as part of the New River Parkway project, including visitor access and parking facilities - stabilize farmhouse exterior - lease farm fields for agriculture - maintain outbuildings in period condition ▪ at Vallandingham Farm: - stabilize farmhouse exterior - lease farm fields for agriculture - maintain outbuildings in period condition ▪ as other properties at Richmond Bottom are acquired or otherwise protected, remove modern structures and maintain farm fields and plantings ▪ develop a loop driving tour following the parkway and the existing WV SR 20, linking Sandstone and Hinton

Table 2.5 Alternative 1 (Continuation of Current Management) – Area-Specific Desired Conditions and Needed Changes

Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Trump-Lilly Farm	▪ farm, outbuildings, farm fields, and orchard ▪ excellent example of post-bellum subsistence farmstead in uplands of the New River ▪ listed on National Register ▪ farmhouse not habitable ▪ approximately 10 percent of historic fields are presently open ▪ no park facilities	▪ remaining elements of historic buildings, structures, and the cultural landscape are preserved or protected ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of the cultural landscapes are protected	▪ stabilize farmhouse and outbuildings exterior ▪ lease farm fields for agriculture ▪ maintain outbuildings in period condition
Westfall Farm	▪ privately-owned; recently subdivided and some new homes constructed ▪ no park facilities ▪ Cochran Farm: - outbuildings, cemetery, small pond (filling in) - most of site is an open field with - no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park	▪ at Cochran Farm: - maintain outbuildings in period condition - work cooperatively with WV DOH to make improvements as part of the New River Parkway project, including visitor access and parking facilities ▪ as properties within the historic extent of the farm are acquired or otherwise protected, remove modern structures and maintain farm fields and plantings
Phillips Farm	▪ log cabin and log outbuilding (fairly intact) ▪ timber-frame outbuilding (badly deteriorated) ▪ no park facilities	▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of the cultural landscape are protected	▪ lease farm fields for agriculture
Harrah Homestead	▪ wood-frame house, wood-frame outbuildings, log smokehouse (all in very poor condition) ▪ vegetation impacting site ▪ no park facilities	▪ remaining elements of historic buildings are preserved or protected	▪ stabilize remaining homestead buildings
Carper Farm	▪ barn ▪ agricultural fields (leased) ▪ no park facilities	▪ remaining elements of the cultural landscape are preserved or protected ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of the cultural landscape are protected	▪ maintain the remaining farm fields, fence lines, and orchards ▪ as properties within the historic extent of the farm are acquired or otherwise protected, remove modern structures and restore farm fields and plantings ▪ lease farm fields for agriculture
Prince Brothers General Store	▪ wood-frame store (recently stabilized on exterior) ▪ last surviving commercial building of its type along the New River ▪ listed on National Register (for its architectural design) ▪ no park facilities	▪ remaining elements of historic buildings, structures, and the cultural landscape are preserved or protected ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected	▪ stabilize the exterior of Prince Brothers General Store
Thurmond	▪ town mostly owned by the NPS, although some houses remain in private ownership and are occupied year-round ▪ entire town site included within the Thurmond Historic District (listed on National Register) ▪ restored Thurmond Depot (used as NPS visitor center) (listed individually on National Register) ▪ Commercial Row (stabilized on exterior) (listed individually on National Register) ▪ remnants of C&O train yard and passenger depot ▪ various frame houses (variable condition – some in poor condition, some recently stabilized on exterior only) ▪ vegetation (kudzu) negatively impacted site	▪ visitors enjoy a safe and secure experience in the park ▪ park staff, volunteers, interns, contractors, and partners work in a safe and secure environment ▪ remaining elements of historic buildings, structures, and the cultural landscape are preserved or protected ▪ views of the cultural landscape are protected ▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park ▪ communities in the park are sustained	▪ remediate lead paint and asbestos contamination in commercial row structures ▪ maintain commercial row structures in a stabilized condition ▪ provide safe drinking water and wastewater disposal via a community water system (deep wells) and a community wastewater management system (50,000 gallons per day advanced sewage treatment system)

Table 2.5 Alternative 1 (Continuation of Current Management) – Area-Specific Desired Conditions and Needed Changes

Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Thurmond (continued)	▪ structures at Commercial row have lead and asbestos contamination ▪ inadequate water supply and wastewater treatment systems		
Nuttallburg	▪ former site of Nuttallburg Mining Complex and town of Nuttallburg ▪ site included within the Nuttallburg Coal Mining Complex and Town Historic District (listed on the National Register) ▪ major mine buildings are extant; ongoing NPS stabilization project ▪ no other building remain, although stone foundations of town buildings and a bank of coke ovens remain intact; impacted by erosion and mudslides ▪ road traces and historic railroad grades remain ▪ vegetation (kudzu) negatively impacted site ▪ rare species present in the vicinity	▪ remaining elements of historic buildings, structures, and the cultural landscape are preserved or protected ▪ views of the cultural landscape are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitors enjoy a safe and secure experience in the park ▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ native plant diversity is maintained	▪ implement the Nuttallburg Visitor Use Area Implementation Plan, generally including: - long-term stabilization of the headhouse, conveyor, and tipple - treatments to stabilize other building foundations and ruins - rehabilitation of major town road traces - trail construction and maintenance - construction of visitor access and parking facilities - development of interpretive media - long-term invasive plant control
River Corridor Areas			
Hinton to Meadow Creek	▪ New River fishing (high use) ▪ Akers river access and day-use facilities (low use) ▪ Tug Creek river access (low use) ▪ Brooks Falls river access, day-use facilities, undesignated camping (in floodplain) (poor condition) (high use) ▪ Hellems Beach river access, day-use facilities, and campground (campsites in floodplain – use over capacity during peak visitation periods) (high use) ▪ Sandstone Falls river take-out (moderate use) ▪ Meadow Creek private river access (low use) ▪ future WV DOH-funded reconstruction of River Road as New River Parkway, including a bridge across the New River and recreation site enhancements ▪ CSX Main Line on river right (active)	▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park ▪ river access facilities enable paddlers of all skill levels to experience the river ▪ NPS and its gateway community neighbors work collaboratively to define and accomplish shared goals ▪ visitors enjoy a safe and secure experience at the park	▪ work cooperatively with WV DOH to make improvements as part of the New River Parkway project, including: - at Mermaid Beach, provide a hardened boat ramp, parking for vehicles with trailers, and picnicking facilities - at Longbottom Overlook, provide parking ▪ work cooperatively with the City of Hinton and the CSX Corporation to secure safe legal public access to the river across the CSX right-of-way
Stone Cliff to Arbuckle Creek	▪ Stone Cliff - river access (high use) - campground and day-use area (in floodplain) (high use) - Stone Cliff Trail and trailhead (low use) ▪ CSX Main Line on river right (active)	▪ visitors enjoy a safe and secure experience at the park	▪ work cooperatively with the CSX Corporation to secure safe legal public access to the river across the CSX right-of-way at Southside Junction
Brooklyn to Hawks Nest	▪ Brooklyn - undesignated camping (moderate use) - river fishing (no day-use facilities) (moderate use) ▪ Teays Landing river access (private) ▪ CSX Main Line on river right upstream of Cunard and on river right and river left downstream of Cunard (active) ▪ visitors frequently illegally cross CSX Main Line - to reach the lower railroad area (for fishing and boating) - to reach Short Creek (for camping and fishing) - to reach Kaymoor via the tunnel under the tracks (for hiking)	▪ visitors enjoy a safe and secure experience at the park	▪ work cooperatively with the CSX Corporation to secure safe legal public access to the river across the CSX right-of-way in the lower railroad area, at Short Creek, and at Kaymoor

Table 2.5 Alternative 1 (Continuation of Current Management) – Area-Specific Desired Conditions and Needed Changes

Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Forest Areas			
Sewell Mountain	▪ Big Branch Trail and Trailhead (moderate use)	▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ develop a loop driving tour following the parkway and the existing WV SR 20, linking Sandstone and Hinton
Fall Branch	▪ Fall Branch Trail and Trailhead (moderate use)	▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ work cooperatively with WV DOH to make improvements as part of the New River Parkway project, including: - at Fall Branch Access, provide parking, picnicking facilities, and interpretive media ▪ develop a loop driving tour following the parkway and the existing WV SR 20, linking Sandstone and Hinton
Chestnut Mountain	▪ Sandstone Overlook – parking demand exceeds capacity ▪ Gwinn Ridge Trail provides access for hiking ▪ Gwinn Ridge Trailhead – parking demand exceeds capacity ▪ Lick Creek - water quality impaired	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide roadside interpretation from I-64 to Hinton ▪ develop a loop driving tour following the parkway and the existing WV SR 20, linking Sandstone and Hinton
Irish Mountain	▪ no park facilities	▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ develop a loop driving tour following the parkway and the existing WV SR 20, linking Sandstone and Hinton
Glade Creek	▪ popular hunting and fishing area (moderate fishing use) ▪ fish stocking in Glade Creek by WV DNR and Glade-Pinch Trout Association ▪ fish stocking in Mill Creek by WV DNR ▪ Glade Creek Trail provides fishing access and a connection from the rim to the river (admin vehicles permitted on upper section) ▪ Polls Plateau Trail, Kates Plateau Trail and Kates Falls Trail provide access for primitive camping and hunting ▪ Lower Glade Creek Trailhead ▪ Upper Glade Creek Trailhead (demand exceeds capacity) ▪ Cloverdale Road area used for access to Kates Plateau Trail although no trailhead facilities are available	▪ remaining elements of historic buildings, structures, and the cultural landscape are preserved or protected ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of the cultural landscape are protected	▪ at Bennett Farm: - maintain the remaining farm fields, fence lines, and orchards - lease farm fields for agriculture
Beauty Mountain	▪ Beauty Mountain climbing area ▪ Beauty Mountain overlook (no designated trail) ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park	▪ implement the Nuttallburg Visitor Use Area Implementation Plan, generally including: - trail construction and maintenance - construction of trailhead facilities

2.3 Management Zones Used to Develop Alternatives

The NPS uses management zones to describe the resource conditions and desired visitor experiences to be achieved in various areas of a park. The management zones identify the widest range of potential appropriate resource conditions, visitor experience, and facilities for access within the park that are consistent with its purpose, significance, and special mandates.

The NPS has identified five management zones for New River Gorge National River that were used in developing the action alternatives in this GMP/EIS (see Table 2.6):

- Backcountry Zone
- Frontcountry Zone
- River Corridor Zone
- Historic Resource Zone
- Park Development Zone

▲ *Backcountry Zone near Sewell*

The four action alternatives (Alternatives 2, 3, 4, and 5) each use this set of management zones. There are six important observations about how the zones are applied in the alternatives:

- all activities and facilities appropriate in a management zone may not be allowed or constructed everywhere a management zone occurs
- areas assigned to backcountry and frontcountry zones vary for each alternative
- areas assigned to park development zones, historic resource zones, and river corridor zones are the same for each alternative
- while some zones in the action alternatives are the same in terms of their location, what may actually happen in each zone would vary from alternative to alternative, reflecting the underlying primary ideas of each alternative concept
- communities that remain in the park are not zoned

Alternative 1 (Continuation of Current Management) has no management zones because the park's current GMP (NPS 1982) identifies zones for only approximately 11,000 of the 72,189 acres currently within the park boundary.

▲ *Frontcountry Zone near Nuttallburg*

▲ *River Corridor Zone below Cunard*

▲ *Historic Resource Zone at Richmond-Hamilton Farm*

▲ *Park Development Zone at Canyon Rim*

Table 2.6 Management Zone Summary

Zone	Overall Zone Concept	Geologic Features	Waters of the New River System
Backcountry	The **Backcountry Zone** includes the park's large contiguous tracts of intact forest. The park's backcountry forest would be maintained with negligible site-specific forest fragmentation. Management actions would ensure that native plant species would continue to dominate the forest community and that there would be negligible effects on natural processes. Remaining elements of historic buildings, structures, or sites would be protected; historic resources might be stabilized throughout the zone and interpreted where public access can be provided. Low impact recreation would occur in locations and at levels that have negligible to minor impacts on forest values. Visitor use would generally be low. In climbing areas, low impact managed climbing opportunities might occur, natural processes might be minimally modified, and visitor use is commensurate with resource protection.	▪ natural geologic processes/ features persist largely unaltered by human-induced impacts ▪ areas disturbed by mining are reclaimed and in some areas restored ▪ natural drainage patterns are restored in reclaimed areas ▪ high walls associated with mining are allowed to recover naturally	▪ rainfall-runoff dynamics and sediment delivery occur at natural levels ▪ physical, chemical, and biological properties and dynamics of water reflect natural conditions
Frontcountry	The **Frontcountry Zone** includes the park's large contiguous tracts of intact to somewhat fragmented forest. The park's frontcountry forest would be maintained with minor site-specific forest fragmentation. Management actions would ensure that native plant species would continue to dominate the forest community. Minimal modification of natural processes could occur. As in the Backcountry Forest Zone, remaining elements of historic buildings, structures, or sites would be protected; historic resources might be stabilized and interpreted where public access can be provided. Moderate impact recreation would occur in locations and at levels that have negligible to minor impacts on forest values. Visitor use would be generally moderate.	▪ natural geologic processes/ features persist with minimal human-induced impacts (to provide roads and facilities for visitor use) ▪ areas disturbed by mining are reclaimed and in some areas restored ▪ natural drainage patterns are restored in reclaimed areas ▪ high walls associated with mining are allowed to recover naturally	▪ rainfall-runoff dynamics and sediment delivery might be somewhat altered from natural levels ▪ physical, chemical, and biological properties and dynamics of water reflect natural conditions ▪ natural gradation of riparian plants occurs from water's edge to upland forest
River Corridor	The **River Corridor Zone** includes the free-flowing New River and adjoining riparian areas where natural processes support a high integrity sustainable aquatic and riparian ecosystem. Future management would continue to improve water quality in the New River so that it meets state standards for primary contact recreation and is no longer listed by the state as impaired. Remaining elements of historic buildings, structures, or sites would be protected; historic resources might be stabilized and interpreted where public access can be provided. Low impact recreation would occur in locations and at levels that do not negatively impact river and riparian values. Visitor use would vary from low to high.	▪ natural geologic processes/ features persist with minimal human-induced impacts ▪ natural drainage patterns are restored in reclaimed areas ▪ acid mine drainage (AMD) is eliminated and AMD impacts are mitigated	▪ the New River is free-flowing within the park ▪ rainfall-runoff dynamics and sediment delivery occur at natural levels ▪ the mosaic of hydrologic features reflects a natural stream ecosystem ▪ physical, chemical, and biological properties and dynamics of water reflect natural conditions ▪ hydrologic features provide a mosaic of habitats that supports a full range of naturally occurring aquatic organisms
Historic Resource	The **Historic Resource Zone** includes the park's most important historic buildings, structures, and landscapes. Management actions would preserve these resources while making them readily visible and accessible to visitors. Cultural landscapes and historic structures would be managed to retain and in some cases restore features that contribute to the public's understanding of the full range of activities that were important to the site. Where appropriate, the NPS might rehabilitate buildings so that they can be adaptively reused for purposes that are consistent with their history and in conformance with preservation standards. Special research efforts might be initiated to understand the fundamental values of these sites and their communities. Moderate impact recreation would occur in locations and at levels that do not negatively impact cultural resource values. Visitor use would generally be moderate to high.	▪ natural geologic processes/ features persist with minimal human-induced impacts (to provide roads and facilities for visitor use) ▪ all significant natural and human-induced disturbed areas are stabilized	▪ rainfall-runoff dynamics and sediment delivery might be somewhat altered from natural levels ▪ finished conditions maintain predevelopment runoff and water quality conditions ▪ physical, chemical, and biological properties and dynamics of water reflect natural conditions ▪ undisturbed natural buffers protect riparian habitat where compatible with cultural landscape preservation
Park Development	The **Park Development Zone** includes the locations in the park where the most intense and diverse visitor use occurs. These areas are convenient and accessible. Visitor facilities might include visitor centers, river access facilities, campgrounds, picnic facilities, restrooms, roads, parking, and others. This zone also includes locations where park operations are based, including facilities such as park maintenance facilities and administrative offices.	▪ natural geologic processes/ features persist with minimal human-induced impacts (to provide roads and facilities for visitor use) ▪ all disturbed areas are stabilized	▪ finished conditions maintain predevelopment runoff and water quality conditions ▪ physical, chemical, and biological properties and dynamics of water reflect natural conditions ▪ undisturbed natural buffers protect riparian habitat where compatible with park development goals

Table 2.6 Management Zone Summary (continued)

Zone	Forest	Cultural Resources	Views	Resources that Offer Exceptional Visitor Opportunities
Backcountry	▪ human-induced forest fragmentation and impacts to vertical understory structure and diversity are reduced or eliminated ▪ habitat mosaic supports a diversity and abundance of rare and native plant communities ▪ native plant diversity is increased ▪ prescribed fire occurs in fire-dependent ecosystems	▪ remaining elements of historic buildings, structures, or sites are protected ▪ historic resources might be stabilized and interpreted where public access is possible ▪ when remaining elements of historic resources are stabilized, vegetation removal/ development mimics natural processes and canopy gaps to limit fragmentation whenever possible	▪ a range of views are protected that allow visitors to: - experience the extent of the gorge, river, forest, and rim - understand the historic extent and appearance of cultural landscapes ▪ very limited management of vegetation maintains views ▪ daytime skies are predominantly free of human-induced adverse impacts ▪ nighttime skies are predominantly dark	▪ unfragmented forest blocks largely free of human disturbance exist over a broad area ▪ unfragmented forest blocks support diverse and abundant wildlife, particularly forest interior dwelling birds ▪ cliff faces and rock walls persist largely unaltered by human-induced impacts ▪ the natural quiet remains substantially free of human intrusions
Frontcountry	▪ human-induced forest fragmentation and impacts to vertical understory structure and diversity are reduced ▪ native plant diversity is increased ▪ prescribed fire occurs in fire-dependent ecosystems ▪ limited development for visitor use facilities might cause some forest fragmentation; facility design promotes forest continuity to limit potential for impacts to forest interior species	▪ remaining elements of historic buildings, structures, or sites are protected ▪ historic resources might be stabilized and interpreted where public access is possible ▪ when remaining elements of historic resources are stabilized, vegetation removal/ development mimics natural processes and canopy gaps to limit fragmentation whenever possible	▪ a range of views are protected that allow visitors to: - experience the extent of the gorge, river, forest, and rim - understand the historic extent and appearance of cultural landscapes ▪ selective management of vegetation maintains views ▪ daytime skies are predominantly free of human-induced adverse impacts ▪ nighttime skies are predominantly dark, although artificial light might occur for visitor safety at some sites	▪ large contiguous forest blocks with some human disturbance exist over a broad area ▪ forest blocks support diverse and abundant wildlife ▪ cliff faces and rock walls persist largely unaltered by human-induced impacts ▪ the natural quiet remains substantially free of human intrusions
River Corridor	▪ a nearly continuous strip of natural riparian habitat occurs along the river and small stream banks ▪ bars in the river are protected ▪ cobble and flatrock communities persist ▪ prescribed fire occurs in fire-dependent ecosystems ▪ limited development for visitor use facilities might cause some forest fragmentation; facility design limits potential for impacts to riparian species	▪ remaining elements of historic buildings, structures, or sites are protected ▪ historic resources might be stabilized and interpreted where public access is possible ▪ some natural features might incur minor modification in order to enable protection and/or stabilization of cultural resources, but modifications do not degrade aquatic or riparian resources	▪ a range of views are protected that allow visitors to: - experience the extent of the gorge, river, forest, rim - understand the historic extent and appearance of cultural landscapes ▪ limited management of vegetation maintains views ▪ daytime skies are predominantly free of human-induced adverse impacts ▪ nighttime skies are predominantly dark	▪ the New River is free-flowing within the park ▪ hydrologic features provide a mosaic of habitats that supports a full range of natural aquatic organisms experiencing natural ecological interactions ▪ the natural quiet remains substantially free of human intrusions
Historic Resource	▪ non-historic human-induced forest fragmentation and impacts to vertical understory structure and diversity are reduced or eliminated ▪ rare plant communities are maintained	▪ remaining elements of historic buildings, structures, or sites are made readily visible ▪ buildings might be adaptively reused for purposes that are consistent with their history ▪ landscapes and structures are managed to retain and introduce features that contribute to the public's understanding of the activities that were important to the site ▪ special research efforts might occur to understand the fundamental value of sites	▪ a range of views are protected that allow visitors to: - experience the extent of the gorge, river, forest, and rim - understand the historic extent and appearance of cultural landscapes ▪ selective management of vegetation maintains views ▪ daytime skies are predominantly free of human-induced adverse impacts ▪ nighttime skies are predominantly dark, although artificial light might occur for visitor safety at some sites	▪ minimal intrusions occur to the natural soundscape
Park Development	▪ development footprints are limited to protect understory habitat structure so as to mimic natural plant and animal community diversity ▪ landscaping reflects natural plant communities and promotes grassland bird species ▪ limited mowing and minimization of multiple edge features occurs ▪ prescribed fire occurs in fire-dependent ecosystems	▪ historic properties are preserved and made readily visible and accessible ▪ some historic properties are used for public enjoyment and for park operations	▪ a range of views are protected that allow visitors to: - experience the extent of the gorge, river, forest, and rim ▪ selective management of vegetation maintains views ▪ daytime skies are predominantly free of human-induced adverse impacts ▪ nighttime skies are predominantly black, although artificial light might occur for visitor safety at some sites	▪ minimal intrusions occur to the natural soundscape

Table 2.6 Management Zone Summary (continued)

Zone	Overall Visitor Experience	Activities	Types of Facilities	Access
Backcountry	▪ visitors are immersed in nature away from conveniences ▪ opportunities are present for: - sense of wildness - solitude - adventure and personal challenge - exploration and discovery - self-discovery - self-directed learning - appreciation of scenic and panoramic views - unstructured recreational activities - trail-based recreation (hiking and biking) - overnight stays	▪ high solitude, self-reliant, non-motorized outdoor activities ▪ opportunities via backcountry hiking, footpaths, e.g. hiking, limited biking, and bird watching ▪ opportunities via developed trails for rock climbing ▪ opportunities for appreciation of area history through discovery of cultural resources within a predominantly natural setting ▪ overnight camping ▪ stock use is not permitted except in upland locations where appropriately designed single-track trails can limit damage from equestrian use ▪ opportunities exist for scientific research of mid-Atlantic deciduous forest, water, and rare plant communities	▪ facilities might include: - single-track hiking trails - biking trails by exception, including stacked loop trails - trailheads (at zone periphery) - backcountry campsites (designated campsites with fire rings and vault toilet facilities – no road access) - primitive campgrounds at zone periphery (developed campsites with tables, fire rings, and vault toilets – road access)	▪ non-motorized access via limited trails ▪ very limited motorized access along the zone perimeter and restricted to established state roads, administrative roads, and park roads ▪ very limited interior motorized access for administrative use only on established administrative and park roads
Frontcountry	▪ visitors are in contact with nature fairly close to conveniences ▪ opportunities are present for: - adventure and personal challenge - exploration and discovery - self-directed learning - appreciation of scenic and panoramic views - unstructured recreational activities - trail-based recreation (hiking, limited biking, and limited equestrian use) - overnight stays	▪ non-motorized activities ▪ opportunities via developed trails, e.g. hiking, limited biking, rock climbing, and equestrian use of designated trails ▪ opportunities for appreciation of area history through discovery of cultural resources within a predominantly natural setting ▪ overnight camping ▪ stock use is not permitted except in upland locations where appropriately designed single-track trails can limit damage from equestrian use	▪ facilities might include: - roads and parking - hiking trails - biking trails, including stacked loop trails - trailheads - picnicking facilities - restrooms - overlooks (developed) - backcountry campsites (see definition above) - primitive campgrounds (see definition above) - developed campgrounds (de-enveloped campsites with tables, fire rings, vault toilets, and RV hook-ups – road access	▪ non-motorized access via limited trails and roads ▪ motorized access on state roads, administrative roads, and park roads
River Corridor	▪ visitors are in contact with nature but are fairly close to conveniences ▪ opportunities are present for: - sense of wildness - adventure and personal challenge - exploration and discovery - self-directed learning - appreciation of scenic and panoramic views - unstructured recreation - trail-based recreation (hiking and limited biking) - river and riverbank recreation (whitewater boating, fishing, and swimming) - overnight stays	▪ water-based activities (boating and fishing) ▪ opportunities via developed trails, e.g. limited hiking and limited biking ▪ opportunities for appreciation of area history through discovery of cultural resources within a predominantly natural setting ▪ overnight camping ▪ stock use is not permitted	▪ facilities might include: - roads and parking - trails and trailheads - picnicking facilities - restrooms - boat launches and river access facilities - fishing access - backcountry campsites (see definition above) - primitive campgrounds (see definition above)	▪ non-motorized access via limited trails and roads ▪ very limited motorized access on state roads, administrative roads, and park roads
Historic Resource	▪ visitors have some contact with nature but are fairly close to conveniences ▪ opportunities are present for: - educational experiences - creating a sense and awareness of the past - trail-based recreation (hiking and limited biking)	▪ learning opportunities focused on topics at cultural resources sites within historic settings ▪ frontcountry activities, e.g. walking, sightseeing, and limited biking ▪ stock use is not permitted	▪ facilities might include: - roads and parking - trails and trailheads - picnicking facilities - restrooms	▪ motorized access via state roads and park roads ▪ non-motorized access via trails
Park Development	▪ visitors are close to modern conveniences ▪ opportunities are present for: - obtaining visitor services - visiting educational and recreational facilities - staying overnight - sightseeing - trail-based recreation (hiking and limited biking)	▪ diverse educational activities ▪ diverse recreational activities ▪ park operations ▪ overnight camping ▪ hiking and limited biking ▪ stock use is not permitted	▪ facilities might include: - backcountry trails - trails and trailheads - picnicking facilities - restrooms - river access facilities - changing stations - park admin offices - park maintenance facilities - primitive campgrounds - developed campgrounds	▪ motorized access via state roads and park roads ▪ non-motorized access via trails ▪ motorized access via shuttle might occur at congested sites

Table 2.7

New River Gorge National River
Management Zoning Common to Alternatives 2 to 5

- **Park Development Zones**[1]
- **River Corridor Zones**[1]
- **Historic Resource Zones**[1]
- **Some Backcountry Forest Zones**[1] (including the following site-specific areas – see Figure 2.2)
  - Fall Branch
  - Meadow Creek North
  - Glade Creek
  - Garden Ground
  - Stretcher Neck
  - Claremont
  - Above Thurmond
  - Rush Run
  - Sewell
  - Endless Wall
- **Some Frontcountry Forest Zones**[1] (including the following site-specific areas – see Figure 2.2)
  - Meadow Creek South
  - Arbuckle Creek
  - Babcock State Park
  - Kaymoor
  - Sunshine Buttress
  - Alabama
- **Communities in the Park that are Not Zoned**
  - Meadow Bridge
  - Prince
  - Thurmond
  - Brooks
  - Backus
  - Quinnimont
  - Terry
  - Thayer

[1] *While these zones are the same in terms of their location, what may actually happen in each zone would vary from alternative to alternative, reflecting the underlying primary ideas of each alternative concept.*

2.4 Management Guidance and Actions Common to the Action Alternatives (Common to Alternatives 2 to 5)

2.4.1 Management Zoning (Common to Alternatives 2 to 5)

The NPS has identified five management zones for New River Gorge National River (see Table 2.6):

- Backcountry Zone
- Frontcountry Zone
- River Corridor Zone
- Historic Resource Zone
- Park Development Zone

For Alternatives 2 through 5 the areas assigned to park development zones, historic resource zones, and river corridor zones would be the same (see Figure 2.3). While these zones would be the same in terms of their location, what might actually happen in each zone would vary from alternative to alternative, reflecting the overall management concept for each alternative (see Table 2.1 above).

Management zoning for some backcountry forest areas would be the same in Alternatives 2 to 5 (see Table 2.7). The park's most unfragmented forest areas would be consistently designated backcountry, recognizing that these areas are significant fundamental and other important resources of the park. The backcountry zones would be managed to protect and restore unfragmented forest blocks largely free of human disturbance and to offer opportunities for visitors to be immersed in nature, relying on non-motorized access.

Management zoning for some frontcountry forest areas would also be the same in Alternatives 2 to 5 (see Table 2.7). Forested areas of the park that have a greater extent of existing fragmenting features – such as roads and trails - combined with a history of heavy recreational use would be consistently designated frontcountry. Within these areas large contiguous forest blocks would generally be maintained, although development for visitor use facilities might occur that would cause some fragmentation. Visitors would access the frontcountry forest by roads and trails.

2.4.2 Parkwide Desired Conditions and Strategies

Each GMP action alternative includes a common set of parkwide desired conditions (see Table 2.8). These provide guidance for fulfilling the park's purpose and for protecting the park's fundamental and other important resources and values. The desired conditions are the natural and cultural resource conditions that the NPS aspires to achieve and maintain over time. They are also the conditions necessary for visitors to understand, enjoy, and appreciate those resources. To accomplish the desired conditions the park would implement numerous management strategies. Some strategies are already in place. Some strategies would be new.

KEY

Common Backcountry Zone

Common Frontcountry Zone

River Corridor Zone
(All River Corridor Zones are the same in Alternatives 2, 3, 4 and 5)

Historic Resource Zone
(All Historic Resource Zones are the same in Alternatives 2, 3, 4 and 5)

Park Development Zone
(All Park Development Zones are the same in Alternatives 2, 3, 4 and 5)

Forest Areas where Management Zoning Differs in Alternatives 2, 3, 4, and 5

Differing Frontcountry or Backcountry Zones

Communities in the Park (Not Zoned)

Community

PROSPERITY
BRADLEY
PINEY VIEW
MOUNT HOPE
STANAFORD
OAK HILL
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE
Babcock State Park

Glen Jean (Park Headquarters)
Stone Cliff to Arbuckle Creek
Thurmond
Church Dun Glen
Terry Beach
Terry
Terry-Batoff Creek
Army Camp to Stone Cliff
Stretcher Neck
Quinnimont to Army Camp
Royal
Grandview
Carper Farm
Harrah Homestead
Garden Ground
Dunloup Creek
Arbuckle Creek
Dun Glen
Above Thurmond
Below Thurmond
Substation
Rush Run
Cunard
Sunshine Buttress
Marr Branch
Ames
Fayette Station
Burnwood
Kaymoor
Endless Wall
Canyon Rim Visitor Center
Brooklyn to Hawks Nest
Craig Branch
Nuttalburg
Beauty Mountain
Sewell
Prince Brothers General Store and Estate
Prince-Quinnimont
Quinnimont Church
Dowdy Creek
Glade Creek
Highland-Backus
Highland
Claremont
Thayer
Thayer Church
Arbuckle Creek to Brooklyn
Meadow Creek to Quinnimont
Backus
Bucklick Branch
Meadow Creek North
Meadow Creek West
Meadow Creek
Meadow Creek South
Sandstone Visitor Center
Richmond Farm
Sandstone Falls Island
Westall Farm
Phillips Farm
Trump/Lilly Farm
Fall Branch
Irish Mountain
Richmond Campground
Sewell Mountain
Richmond Bottom
Chestnut Mountain
Brooks Island
Bass Lake
Camp Brookside
Hinton Depot
Hinton to Meadow Creek
Babcock State Park

Figure 2.3

AREAS WHERE MANAGEMENT ZONES ARE COMMON TO ALTERNATIVES 2, 3, 4 AND 5

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Overall Park Management		
1	Managers make sound decisions about resource management based on professional studies and adequate planning that are consistent with applicable policies and regulations	▪ Prepare natural resource inventories and studies, historic resource inventories and studies, archeological inventories and studies, implementation plans, and other studies and plans that provide foundations for park management ▪ Revise the park's strategic plan in accordance with the park's General Management Plan ▪ Prepare a Resource Stewardship Strategy ▪ Monitor natural resource, cultural resource, and visitor experience conditions and implement management measures as needed to achieve desired conditions
2	Park facilities and programs reflect a central theme that helps visitors better understand how the park is organized, the opportunities that are available, and how to travel in the complicated network of local roads and trails in the park's rugged terrain.	▪ Implement management actions to achieve the area-specific desired conditions consistent with the overall concept of the preferred alternative in the park's General Management Plan
Geologic Features and Processes Exemplifying the Geology of the Appalachian Plateau		
3	Natural geologic process/features persist largely unaltered by human-induced impacts	▪ Protect designated fossil localities where encountered ▪ Identify locations prone to rock detachment ▪ Manage high walls so that recovery occurs naturally ▪ Stabilize all soils and landforms disturbed by facility development ▪ Restore areas disturbed by ATVs; block vehicular access to rehabilitated ATV routes ▪ Adhere to guidance in the *Climbing Management Plan* (NPS 2005b), particularly the following: - install top anchors to reduce soil impacts - reduce proliferation of fixed anchors on cliff face - designate chalk-free zones ▪ Generally allow areas impacted by mining to restore naturally ▪ Where feasible, restore areas disturbed by mining by: - stabilizing refuse piles - removing overburden from drainages, - containing/eradicating invasive species, - controlling or mitigating acid mine drainage - implementing vegetation restoration ▪ For mine benches, generally take the following actions: - catalog and classify mine benches for condition and disposition - maintain benches for their historical context where appropriate - otherwise mitigate failing or hazardous mine benches where feasible
Free Flowing Waters of the New River System and its Hydrologic Features and Aquatic Habitats		
4	The mosaic of hydrologic features, including the maintenance of a free-flowing segment of the New River, its tributaries, and associated processes, reflect a natural river/stream ecosystem	▪ Remove man-made obstructions in the river that are no longer in use – such as abandoned bridge piers ▪ Avoid or minimize alterations to the river channel when developing river launch facilities ▪ Manage stormwater so that rainfall-runoff dynamics and sediment delivery and transport processes occur at natural levels ▪ Restore natural drainage patterns where they have been disturbed (e.g., Marr Branch) ▪ Allow tributary streams to migrate naturally

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
		▪ Monitor flows in Wolf Creek and take management actions as appropriate to mitigate impacts of municipal groundwater withdrawals ▪ Protect upland wetlands and their processes ▪ Determine and recreate natural flow regimes (including coordination with U.S. Army Corps of Engineers to permit periodic maximum flood) ▪ Work with transportation planning, permitting, and resource management agencies to eliminate or minimize future placement of bridge piers in river and stream channels when bridges are repaired or replaced
5	Physical, chemical, and hydrological properties and dynamics of water reflect natural water quality conditions (water quality is improving)	▪ Maintain the existing NPS ambient water quality monitoring program (including continuous water quality monitoring at Thurmond) ▪ Implement water quality monitoring for streams not presently monitored (e.g. Short Creek, Fern Creek, Rush Run, Ephraim Creek, Fire Creek, Farleys Creek, Fall Branch) ▪ Obtain water quality information from the WVDEP for Mann Creek ▪ Assure funding to continue operation of the USGS stream gage ▪ Establish a perennial stream gauging program ▪ Attain a better understanding of the hydrology of tributary streams, including flood characteristics and extents, flow characteristics, time and travel, river mileage, and channel morphology ▪ Use a whole-watershed management strategy to protect the park's water resources with the goal of minimizing threats to water quality from sources both inside and outside the park ▪ Conduct water and sediment sampling upstream and downstream in the park ▪ Conduct ecological risk assessment to plants and animals using results from sampling ▪ If dangerous levels of contaminants are found, conduct systematic sampling to find source area and mitigate, as appropriate ▪ Continue to work with WVDEP, the Plateau Action Network, Fayette County, Summers County, Raleigh County, local communities, public service districts, and other appropriate groups to protect and enhance the water quality of the New River and its tributaries within the park ▪ Eliminate direct discharge of primary sewage into tributaries and increase effectiveness of existing secondary treatment systems ▪ Identify and mitigate failing waste pumping systems within the park ▪ Implement a program to provide public education and technical assistance to landowners within and adjoining the park regarding maintenance of on-site disposal systems ▪ Make excess capacity of NPS wastewater treatment facilities available for use by adjoining neighborhoods, where practicable ▪ Expand availability of sanitation facilities at developed visitor facilities, as needed ▪ Provide sanitation facilities at heavily used sites in remote areas of the park ▪ Work with outfitters to provide sanitation facilities at privately-owned remote sites used for outfitted paddler river

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
		rest stops and camping ▪ Evaluate mine drainage for negative impacts to surface water quality and mitigate where feasible
6	Hydrologic features provide a mosaic of habitats that supports a full range of natural aquatic organisms	▪ Model and/or map likely locations of special aquatic habitats, creating a dynamic map that is responsive to the transient nature of some of these habitats and the developing scientific data ▪ Describe special aquatic habitats and develop best management practices capable of providing preliminary protection (these BMPs would be a "first defense" for habitats until their specific locations and characteristics could be identified and an individually appropriate protection plan can be provided) ▪ Manage trails and other access to minimize impacts to special habitats, and integrate information on special aquatic habitats into trails and maintenance plans ▪ Eliminate introduction of non-native species to aquatic ecosystems ▪ Eliminate actions to supplement or maintain select non-native species in aquatic ecosystems ▪ Allow select introduced species that may alter some processes and interactions (e.g. continue WV State black fly treatments) ▪ Work with WV DNR, WV Cooperative Fish and Wildlife Research Unit, and other entities to ascertain the status of the candy darter population and to identify and implement measures needed to maintain the population
7	Wetlands, natural seeps, vernal pools, and ephemeral streams persist and rare species in these habitat features are protected	
8	A nearly continuous strip of natural riparian habitat occurs along the river and small stream banks that includes a natural gradation of appropriate native plants and animals occurring from the water's edge to upland forest; leaves, coarse woody debris, and other organic materials accumulate and persist at natural patterns and levels in riparian habitat	▪ Develop floodplain maps for lower reaches of the New River main stem and tributaries ▪ Identify threatened and endangered critical habitats and limit activities that would adversely impact them ▪ Determine and recreate natural flow regimes (including coordination with U.S. Army Corps of Engineers to permit periodic maximum flood) ▪ Remove exotic plants from riparian areas ▪ Identify threatened and endangered critical habitats and limit visitor access ▪ Limit overnight camping and open fires to areas with durable surfaces and less sensitive habitat (i.e., sand, gravel, cobble, rock) and require use of a fire ring or fire pan) ▪ Discourage illegal ATV and truck crossing of the CSX rail line to access campsites along the river ▪ Partner with river users to control impacts of day use ▪ Limit day use of river lunch stops downstream of Cunard to existing sites with durable surfaces and less sensitive habitat ▪ Require visitors launching boats to use designated launch ramps and to keep vehicles out of the river ▪ When restoring cultural landscapes within riparian areas, include a 50- to 100-foot wide buffer of native riparian habitat along the river ▪ Maintain an unfragmented connection between the New River and the gorge rim from Terry Beach to Red Ash Island, from I-64 to Quinnimont on river left, and the Stone Cliff segment

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
		▪ Work with adjacent landowners to preserve critical riparian habitats ▪ As private land is acquired remove all un-useable and non-historic structures and hazardous materials within riparian areas and restore native riparian habitat
9	Cobble prairie and flatrock communities persist	▪ Prohibit camping, open fires, and developed park facilities in cobble and flatrock communities ▪ Extend or add boardwalks to protect areas of the flatrock community where visitor use occurs (e.g., Sandstone Island) ▪ Increase signage and patrols to protect flatrock communities ▪ Partner with river users to limit access to flatrock communities ▪ Implement an educational program on the value and global significance of the flatrock community ▪ Remove exotic species within designated boundaries of the park's two flatrock communities ▪ Identify and implement appropriate disturbance regimes to maintain the disturbance-mediated flatrock community ▪ Evaluate results of current burn research on flatrock communities ▪ Estimate flood conditions necessary to create primary succession conditions and work to perpetuate these flows ▪ Inventory rare plant species and exotics/invasives to determine their respective roles in succession ▪ Establish long-term monitoring plans ▪ Study the growth and reproduction characteristics of existing rare plants in cobble and flatrock communities
The Park's Forest		
10	Contiguous forest exists over a range of elevation and moisture gradients	▪ Minimize irreversible modifications of contiguous (unfragmented) forest blocks ▪ Locate development on sites outside or at the edge of contiguous (unfragmented) forest blocks ▪ Design facilities to promote forest continuity and to limit impacts to forest interior species ▪ Conduct prescribed burns in fire-dependent ecosystems (e.g., rimrock pine communities) ▪ Implement measures to limit impacts of right-of-way maintenance by others (non-NPS) to the park's forests ▪ Monitor soil and vegetation conditions in climbing areas and take management actions appropriate to mitigate climbing impacts ▪ Monitor soil and vegetation conditions in rimrock forest areas and take management actions appropriate to mitigate climbing impacts ▪ Work cooperatively with Babcock State Park to achieve backcountry forest management objectives ▪ Complete a development management plan for the management of early successional habitats on the Hilton Strip and in other large blocks of early successional habitats
11	Habitat mosaic is maintained and continues to support an abundance and diversity of rare and significant animal and plant species and communities. Exemplary communities in this mosaic include: cliffs, abandoned mine portals, hemlocks, rimrock pine, mixed mesophytic forests, oak forests, riparian forests, and mature bottomland forests	▪ Maintain native plant diversity ▪ Increase plant diversity in areas where the plant community has been compromised by exotic species, invasive natives, and non-native pests ▪ Detect forest pests, forest composition, and forest structure trends within specific forest types or on specific physiographic sites

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
		▪ Maintain xeric oak-hickory forests ▪ Maintain and allow mixed-mesophytic forests to expand ▪ Maintain the high diversity of birds now supported by the park's natural communities ▪ Protect rare animals ▪ Maintain key abandoned mine portals to support sustainable populations of rare and significant species such as Allegheny woodrats, cave salamanders, Indiana bats, two species of big-eared bat, and other bat species ▪ Maintain Eastern Hemlock communities ▪ Maintain cliff communities and sustain populations of rare and significant species ▪ Maintain rimrock pine communities ▪ Maintain rights-of-way using environmentally-sensitive techniques ▪ Reduce wildlife-human confrontations ▪ Work collaboratively with WV DNR to monitor hunted game harvest, population status, and long-term viability of game species within the park
12	Natural ecosystems are unaffected by air quality – e.g. ozone, acid precipitation, fugitive dust	▪ Identify and mitigate causes of air pollution impacts within the park ▪ Control fugitive dust emissions from construction sites and construction vehicles ▪ Design park facilities to facilitate traffic movement thereby reducing emissions from idling vehicles ▪ Submit park vehicles to emissions testing ▪ Establish a program to assess the incidence of foliar ozone injury to plants ▪ Implement measures to enable detection of ozone levels that are damaging to plants
13	Opportunities to experience natural quiet remain substantially free of human intrusions	▪ Identify appropriate levels of human-caused sound for various areas of the park ▪ Improve vegetative buffers along major roads carrying traffic through the park ▪ Reduce the acreage in the park that needs close mowing or "weed whipping" ▪ Use traffic calming measures to slow traffic on park roads and on state roads, where possible
14	Daytime and nighttime skies are predominantly free of human-induced impacts	▪ Coordinate with local governments and landowners to minimize actions that impact clear daytime skies (e.g., open burning) ▪ Work with EPA and state officials to ensure National Ambient Air Quality Standards are met to minimize haze caused by ozone and particulate pollution especially in summer months ▪ Limit artificial lighting to areas where security, human safety, and specific cultural resource requirements must be met ▪ Identify areas where artificial lighting is being used but is not necessary; remove artificial lighting from these areas and restore the natural lightscape ▪ Where artificial lighting is required, use minimal impact lighting techniques ▪ Work with park neighbors, WV DOT, FHWA, and other local/state/federal agencies to restore and maintain natural lightscape conditions ▪ Coordinate with WV DOT and the New River Parkway Authority to minimize impacts of lighting associated with the New River Parkway

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Historic Places and Their Associated Cultural Resources		
15	Remaining elements of historic buildings, structures, sites, landscapes, and historic archeological sites are managed according to the Secretary of the Interior's Standards for Historic Properties	▪ Within historic resource zones and park development zones – preserve, make accessible, and interpret the following resources: - ruins of coal tipples, conveyors, and headhouse structures related to the historic coal mining industry - ruins associated with the historic lumbering industry - ruins and landscapes associated with settlements and agriculture - CCC-era structures ▪ Within historic resource zones – eliminate non-historic and modern structures and intrusions, except those needed for visitor use ▪ Within backcountry zones, frontcountry zones, and river corridor zones, maintain in good condition the following resources: - ruins of coal tipples, conveyors, and headhouses structures related to the historic coal mining industry - ruins associated with the historic lumbering industry - ruins and landscapes associated with settlements and agriculture - CCC-era structures Interpret the above-listed resources when public access is possible ▪ When removing vegetation and stabilizing historic resources in backcountry zones, frontcountry zones, and river corridor zones, limit forest fragmentation and modifications to natural features (e.g., aquatic or riparian resources) whenever possible ▪ Preserve remnant coal outcrops for future interpretation ▪ Stabilize hazardous features at coal mining sites using passive mitigation techniques ▪ Gate and fence mine openings that are potentially accessible to visitors
16	Some historic railroad routes and lumbering roads are converted to trails; those that are not converted to trails recover naturally	▪ Convert some significant historic railroad routes and lumbering roads located outside of backcountry zones to trails and rehabilitate them to their historic width, grade, and alignment ▪ Convert some ephemeral railroad routes and lumbering roads in backcountry zones to single-track trails ▪ Allow all other historic railroad routes and lumbering roads to recover naturally
17	Sensitive prehistoric and historic archeological sites and resources are stabilized and protected against destruction from vegetation, erosion, and human-induced disturbance; continuing research and fieldwork are emphasized	▪ Preserve and protect sensitive prehistoric archeological sites and resources in their natural settings where they occur outside of park development zones ▪ Preserve, protect, and interpret sensitive prehistoric archeological sites and resources where they occur within park development zones ▪ Use techniques such as increased surveillance and proper routing of trails to prevent degradation through "pot hunting" and compaction ▪ Manage vegetation at archeological sites to prevent degradation through soil erosion and tree fall ▪ Educate visitors about the significance and fragility of archeological sites and resources ▪ Continue research on topics and areas of the park about which relatively little is known

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
18	Resources that hold particular meaning to the park's traditionally associated people and groups are fully understood and managed in a sensitive manner and interpreted where appropriate	▪ Conduct research for full understanding of ethnographic resources ▪ Gather oral histories ▪ Develop interpretation plans to include traditional people and the meaning of park resources to their heritage ▪ Consult with traditionally associated people and groups and encourage them to participate in appropriate park activities ▪ establish procedures to provide access to resources that hold special meaning to traditionally associated people
19	The park's museum collections represent the appropriate breadth of collections that represent all interests of the park	
20	The park's museum collections are properly housed and curated, made available for research, and appropriately tell the park's story	▪ Implement the *Park Museum collections Management Plan* (NPS 2008) as it relates to New River Gorge National River ▪ Implement the *New River Gorge Collection Management Plan* (NPS 2004a)
Extraordinary Scenic Resources and Views		
21	Panoramic views of the river, forest, and rim in and around the gorge are protected	▪ Implement vegetation management measures to maintain views of the river, forest, and rim, as follows: - very limited management in backcountry zones - limited management in river corridor zones - selective management in frontcountry zones and park development zones - selective management in historic resource zones consistent with the cultural landscape treatment ▪ Work collaboratively with local governments and landowners to protect scenic resources in and around the gorge
22	Views of cultural landscapes are protected	▪ Implement vegetation management measures to maintain views of cultural landscapes, as follows: - very limited management in backcountry zones - limited management in river corridor zones - selective management in frontcountry zones, historic resource zones, and park development zones ▪ Work collaboratively with local governments and landowners to protect views of cultural landscape resources in the park
Exceptional Opportunities for Exploration, Adventure, Discovery, Solitude, and Community		
23	Visitors to the park enjoy the many high quality experiences it has to offer – to explore history, to seek adventure, to feel solitude, to be challenged, and to share life experiences with others	▪ Maintain and enhance the classic park experiences consistent with the preferred overall management concept in the park's GMP, including: including: - paddling the river - Sandstone Falls - Grandview - Endless Wall - Canyon Rim - Fayette Station Road ▪ Maintain and enhance the opportunities for visitors to have the park's important visitor experiences consistent with the preferred overall management concept in the park's GMP, including: - appreciating life in the gorge – the human history story - appreciating/experiencing the wildness of the landscape - experiencing the power of the river - experiencing scenic beauty

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
24	Interpretive and educational programs increase visitor understanding and appreciation of the park's resources	▪ Maintain and expand the park's diverse and active interpretive program and continue to refine, expand and improve existing programs and media, including ranger-led interpretive programs, publications, exhibits, interactive media, web sites, and programs utilizing emerging technology, etc. ▪ Increase effective venues for providing ranger-led programs to expanded audiences, such as local residents and visitors who come to the park primarily for recreation. Examples might include developing amphitheaters in major park camp-rounds or partnering with community libraries, school auditoriums, theaters or other venues cable of seating large groups. ▪ Continue to develop new education programs which benefit area youth and sustain and increase the park's priority and commitment to formal education and curriculum-based programming for students and teachers from elementary to college levels. Expand the in-class, curriculum-based, K-6 education program, middle school watershed program, and other in-school programs. ▪ Increase and improve in-park, on-site educational programs and support school field trip opportunities through partnerships and/or grants or other funding and by developing an on-site program areas, such as the Dun Glen/Thurmond area, which offer easy access to prime examples of the park's natural, cultural and recreational resources and are within an easy drive for many schools. ▪ Findings of scientific research enhance management decisions and increase public appreciation and understanding of the park's resources ▪ Natural resource education on stewardship and contemporary resource preservation is emphasized with visitors and with local community residents ▪ In-person and via the internet, visitors encounter a variety of intriguing media that stimulate their understanding of the park's fundamental and other important resources and its stewardship mandate. ▪ Prospective visitors are able to obtain timely and relevant information to help in trip planning and travel to the park
25	Park visitors are actively encouraged to visit other natural, cultural, scenic, and recreation sites in the region and to understand their relationship to New River Gorge	▪ Continue to make information about other sites in the region available to visitors: - at all visitor centers and visitor contact facilities - on the park website ▪ Include information about other sites in the region as part of the park's interpretive media and programs ▪ Increase training and distribution of park information to partners and tourism professionals. ▪ Assist regional CVBs and other tourism professionals in development of regional pod casts, travel cds, and other media promoting all of the highlights, resources, recreational opportunities and significant stories of the region. For example, travel narratives on cd, pod cast available at West Virginia Travel Plazas, or programs on local cable television access channels.. ▪ Expand partnerships with organizations promoting Appalachian arts, culture, and history to provide interpretive opportunities, including living history programs, cultural exhibitions, art shows, and musical programs.

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
26	Visitors enjoy a safe and secure experience at the park	▪ Evaluate park visitor use and development to establish no hunting areas and safety zones at and around high visitor use areas, residential areas, and administrative use areas ▪ Adopt and enforce non-conflicting state hunting regulations on park lands that are open for hunting; publish park specific regulations and closures in the Superintendent's Compendium ▪ Work with the WV DNR to include notice of park-specific regulations in their annual hunting and trapping regulations summary ▪ Inform park visitors, neighbors, and cooperators of park lands regarding those areas that are open to hunting and those areas that have been identified as no hunting or safety zones ▪ Provide information related to the State of West Virginia's General Hunting Regulations, especially as they relate to hunter and visitor safety ▪ Using a variety of media, provide early and easy access to clear, complete, and efficient way-finding and directional information that will help to make any experience with the park hassle-free. Maintain and expand visitor information at visitor centers, in publications, on the web, and through roving interpretation to help ensure a safe visit and avoid injury. ▪ Expand partnerships with other agencies, such as COE and US Coast Guard, to present public programs on key issues, such as water safety and hunting safety. ▪ Improve NPS identity at key recreation access sites, such as the Cunard and Fayette Station river launches. ▪ Maintain staff law enforcement and emergency response capabilities commensurate with levels and patterns of visitor use ▪ Maintain cooperative agreements with emergency service providers providing support for fire protection, law enforcement, emergency medical services, search and rescue, and management of hazardous material incidents ▪ Continue to collaborate with WV DNR and commercial whitewater outfitters to enhance safety and river navigation training for river guides ▪ Continue to collaborate with private paddling user groups to enhance safety and river navigation training for trip leaders ▪ Continue to require accreditation for commercial rock-climbing guide services and individual guides ▪ Maintain park roads to ensure visitor safety; close roads when slope failures threaten integrity ▪ Make improvements to visitor use areas where circulation deficiencies pose safety hazards Seek to provide visitors safe and legal access to the river where active rail lines are present: - discourage visitor illegal crossing of active rail lines - where possible seek to develop underpasses or overpasses by which visitors can safely and legally cross active rail lines - seek to acquire legal crossing of active rail lines in locations where visitor illegal crossings are concentrated ▪ Protect visitors from hazardous materials that may be present in buildings and at abandoned industrial sites

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
27	Conflicts among visitor user groups are minimized	▪ Monitor visitor experience conditions in park management zones and implement management measures as needed to achieve desired conditions ▪ Monitor and manage use of backcountry river lunch stops, campsites, and fishing areas to minimize visitor conflicts ▪ Work collaboratively with commercial and non-commercial interests to manage climbing, hiking, biking, and other special uses to minimize visitor conflicts ▪ Work collaboratively with WV DNR to manage whitewater paddling use on the New River, including: - periodic updates to the *Limits of Acceptable Change River Management Plan* (WV DNR 1998a) - annual monitoring and data collection needed to evaluate the indicators of social and resource conditions on the river - appropriate river management responses based on annual reports of river conditions ▪ Continuously manage hunting in a manner to reduce or eliminate user conflicts
Appropriate Kinds and Levels of Visitor Use and Facilities		
28	Visitor services and facilities are appropriately scaled and located, the minimum necessary to serve visitor needs and protect resources and facilitate enjoyable and educational visits to the park	▪ Provide accessible restrooms at visitor use sites ▪ Where practicable, provide restroom facilities at recreation sites that are heavily used as lunch stops, campsites, or fishing areas ▪ Seek to provide adequate parking at visitor use sites ▪ Make improvements to existing river access facilities to reduce visitor crowding and to mitigate existing impacts on park resources ▪ Work collaboratively on an ongoing basis with commercial outfitters and private paddler groups to identify and address issues related to river access and use ▪ Enhance connectivity in the park through improvements to existing public roads and park roads and addition of new road links ▪ Manage traffic circulation and parking to reduce impacts on park resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience ▪ Provide visitors with a variety of travel modes to access the park and specific visitor use sites ▪ Provide a variety of trails that enable visitors with different physical capabilities to explore the park ▪ Provide river access facilities that enable paddlers of all skill levels to experience the river ▪ Provide a variety of camping experiences for different types of visitors
29	Where feasible, new development is sited away from geologic hazard zones	▪ Create database with existing landslide data sets ▪ Conduct annual analysis to identify new landslide activity ▪ Review historic photographs to establish past landslide locations and to determine where mine spoils are located ▪ Mitigate hazards where appropriate
30	Accessible facilities enable disabled visitors to experience the park	▪ Continue to make accessibility improvements at existing facilities with the goal of making all visitor facilities at developed visitor use areas accessible to visitors and employees with disabilities ▪ Make all practicable efforts to provide disabled access at new visitor facilities

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
		▪ Take all feasible steps to ensure effective communication with individuals with hearing, visual, and cognitive disabilities
31	Appropriate recreational use continues to be welcomed in places where it does not impact resources or interpretive activities; all public activities in the park are determined to be appropriate	▪ Before permitting new public activities in the park, use NPS criteria to determine if and when they are compatible ▪ Cooperate with local groups to find alternative locations for special events ▪ Prohibit activities in the park that would damage park resources or that would not contribute to public understanding of park resources and values
32	Visitor facilities are designed and located with minimal impact on park resources and are aesthetically pleasing and functional	▪ Assess current practices, facilities, and available resources for sustainable design and maintenance ▪ Use sustainable design and construction methods, techniques, and materials for all new development projects ▪ Seek LEED certification when rehabilitating existing structures and facilities or building new structures and facilities
33	Commercial services in the park are limited to those that are necessary and compatible with the park purpose. If possible, commercial support services are based outside the park rather than inside.	▪
Partnerships and Community Relationships		
34	The public appreciates the park and understands its significance as a unit of the national park system; local citizens find the park relevant to their interests and concerns, and assist in showcasing their heritage as an integral part of the park's interpretive and resource management programs	▪ Aggressively build the capacity of the recently created Friends of New River Gorge group ▪ Implement an Experience New River Gorge Program designed to provide community leader, business owners, and leaders of stakeholder groups an inside look at and greater understanding of park operations and its mission ▪ Expand educational programs to reach more local youth ▪ Sponsor or cosponsor frequent special events in communities within the park and in gateway communities outside the park ▪ Expand the amount and distribution of informational materials about the park both locally and throughout southern West Virginia region ▪ Expand coverage of park events and issues in the media ▪ Establish information kiosks in communities within the park and in gateway communities outside the park ▪ Meet routinely with local community and park user groups to discuss issues and to identify management responses, as appropriate ▪ Work with local communities to secure funds to restore and enhance historic and cultural features that are compatible with the park's themes
35	The scope and contribution of volunteer programs in resource management, interpretation and visitor services, maintenance, and administration are enhanced; the volunteer program is popular; all ages can participate in meaningful ways to benefit resources and visitors	▪ Define the tasks that volunteers can perform in the park ▪ Develop and implement a plan for identifying and recruiting volunteers, especially those with the potential to become long-term and willing to commit to a regular work schedule ▪ Aggressively build the capacity of the recently created Friends of New River Gorge group ▪ Increase the use of interns from organizations such as local colleges, high schools, and other appropriate institutions ▪ Allocate NPS staff time for volunteer training ▪ Encourage staff involvement in community activities that support park-related values

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
36	Collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences	▪ Further develop and implement plans for historic resource treatment and interpretation in collaboration with non-profit and private sector partners, such as for: - early settlement/agricultural resource sites in the New River Parkway corridor (now River Road corridor) - Prince Brothers General Store - Thurmond ▪ Identify opportunities where partnerships with non-profit and private entities could benefit the park and its partners
37	Mutual park management goals are efficiently realized through collaboration among the NPS, Hawks Nest State Park, and Babcock State Park	▪ Develop shared strategies for dealing with common NPS/State Park resource management issues ▪ Provide official trail connection between park units ▪ Provide complementary visitor experiences and interpretive programs ▪ Make information about all three parks available to visitors ▪ Avoid redundancy in visitor services and facilities
38	State and county resource management and regulatory agencies assist the NPS with accomplishing its mission at the park	▪ Work cooperatively with state and county resource management and regulatory agencies 1) to make use of public programs available to landowners to manage resources and/or restore disturbed areas on private property, and 2) to enforce environmental regulations pertaining to the use of private property within the park ▪ Work cooperatively with state resource management agencies to accomplish various resource management goals related to water quality management, wildlife management, and cultural resource management.
39	Park user groups assist the NPS with accomplishing its mission at the park	▪ Work collaboratively with the International Mountain Biking Association to develop new single-track trails ▪ Work collaboratively with members of the professional rock climbing community to implement actions recommended in the *Climbing Management Plan* ▪ Work collaboratively with the West Virginia Professional River Outfitters to address issues related to use of the river for outfitted paddling ▪ Work collaboratively with the West Virginia Wildwater Association to address issues related to use of the river by private paddlers ▪ Identify other user groups with whom the NPS could work collaboratively to accomplish the park's mission
40	Stewardship of remaining private lands within the park is sensitive to the resources and values that are fundamental or important to the park	▪ While taking all necessary steps to not interfere with property rights, implement a program of working with landowners to promote sensitive stewardship of resources and values that are fundamental or important to the park where they occur on private property
41	Communities remaining within the park are sustained	▪ Do not seek to acquire property within the communities remaining within the park boundary except where it includes fundamental and other important resources or values that are threatened by past or imminent private landowner stewardship action ▪ Work cooperatively with local leaders and residents to implement actions in the communities remaining within the park that would sustain community character, protect natural and cultural resource, and encourage – as appropriate – development of visitor amenities and interpretive media

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
42	NPS and the its gateway communities work cooperatively to define and accomplish shared goals	▪ Take a leadership role in enhancing civic engagement to promote better understanding and communication between the NPS and its neighbors outside the park ▪ Provide technical assistance to the three counties and six gateway communities to: - address issues of mutual concern - accomplish long-term goals that are compatible with the park's purpose - encourage community efforts to implement smart growth strategies - encourage community efforts to restore and maintain healthy ecosystems
43	Collaborative partnerships within the region result in a seamless network of regional parks, open spaces, trails and heritage sites within southern West Virginia that: - protects and enhances biodiversity - creates an array of educational and appropriate recreational opportunities - supports a vibrant and sustainable tourism economy - leverages funds and/or capacity of partners	▪ Take a leadership role in convening partner groups having common and/or overlapping interests in the region ▪ Facilitate collaborative goal setting, decision-making, and development of an overall vision for the region as a tourist destination (and how it would be marketed) ▪ Provide technical assistance to partner groups with communications, seeking grants, and training, as appropriate ▪ Facilitate develop of coordinated visitor programs that tell complementary stories of the region's heritage ▪ Facilitate development of a network of scenic roads and trails that connects the region's attractions and that informs visitors stopping at attractions about other places of interest and the programs offered throughout the region ▪ Prioritize working with partners to provide connections between the Gauley, Meadow, New, and Bluestone Rivers via designated trails and scenic roadways
Park Operations		
44	Staffing from all sources is adequate in numbers and deployment to implement and support the management objectives	▪ Seek funding for additional permanent full-time resource management personnel ▪ Seek funding to create a new permanent full-time position with the primary responsibility to oversee the park's partnerships
45	The park is actively seeking non-appropriated funds to support its preservation and interpretation mission	▪ Organize and allocate staff resources to facilitate obtaining alternate support, such as through cooperative and interagency agreements, grants, donations, cost recovery, concessions, fees, earned income, and similar opportunities
46	Management facilities support efficient park operations	▪ Implement the Burnwood Center Development Concept Plan ▪ Design new management facilities to preserve the natural and cultural environments, to provide for resource conservation, to provide for energy efficiency, to limit chemical emissions, and to foster education about sustainable design ▪ Make water and sewer service available to management facilities where park staff are based
47	The park addresses climate change by reducing its greenhouse gas emissions, using sustainable practices, working to understand the effects of climate change, and engaging the public on the issue	▪ Model strategies and technologies that reduce the park's environmental impact ▪ Participate in the Climate Friendly Parks Program; inventory park-based greenhouse gas emissions and create and enact an action plan of sustainable strategies to mitigate those emissions ▪ Encourage scientific studies and inventories to identify and document changes caused by climate change, to predict

Table 2.8 Parkwide Desired Conditions and Examples of Changes Needed to Achieve Them (Common to Alternatives 2 to 5)

	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
		potential changes, and to assist in identifying potential responses to climate change ▪ Engage park employees, partners, visitors, gateway communities, and the general public on the issue of climate change, informing them of what responses are being taken at the park and encouraging them to take action to reduce their own carbon footprint
48	Historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance	▪ Where practicable rehabilitate historic structures for adaptive reuse ▪ Where practicable manage historic buildings to produce income that offsets the costs of their ongoing maintenance ▪ Rent houses to employees and other tenants at market rates ▪ Rent rehabilitated commercial buildings for commercial uses at market rates ▪ Lease fields and farm buildings through the NPS agricultural and historic leasing programs
49	Park staff, volunteers, interns, contractors, and partners work in a safe and secure environment	▪ Ensure that all park facilities and structures are maintained according to applicable regulations for their use, such as office, work space, meeting space, etc. ▪ Mitigate health and safety risks of all facilities and structures according to a comprehensive integrated pest management plan and program
Land Protection		
50	The park boundary and land acquisition strategy is sufficient to protect the nationally significant qualities of the park	▪ Generally acquire land within the authorized park boundary ▪ Generally do not acquire land within the six remaining communities in the park (Hinton, Meadow Creek, Backus, Highland, Prince/Quinnimont, Terry, and Thurmond) except when a property includes resources and values that are fundamental to the park that require protection or a property is needed to implement management actions in the GMP ▪ Make needed administrative or legislative changes to the park boundary ▪ Update the park's Land Protection Plan to ensure that its recommendations adequately protect the significant qualities of properties ▪ Focus land acquisition efforts on the highest priority properties still to be protected and on properties needed to implement the park's general management plan ▪ Seek to acquire railroad rights-of-way as soon as possible following their abandonment ▪ Coordinate with the state of West Virginia to explore the potential for transfer of Babcock State Park to the NPS ▪ Work collaboratively with local governments and landowners to protect scenic resources and important resource areas in and around the gorge ▪ Explore the feasibility of boundary expansion to encompass important resource areas in and around the gorge, particularly rare species habitats and high quality watersheds ▪ Develop access right-of-way agreements or easements for areas where traditional access routes jeopardize resource values

2.4.3 Visitor Experience and Visitor Orientation (Common to Alternatives 2 to 5)

- **Experiencing the Park**

Some management actions common to Alternatives 2 to 5 would enhance the important experiences that visitors would have in the park (see Table 2.10).

Alternatives 2 to 5 would each retain the classic park experiences at Sandstone Falls, the Sandstone Visitor Center, Grandview, Thurmond, Nuttallburg/Kaymoor, Endless Wall, Canyon Rim, and Fayette Station Road. Management actions common to the alternatives would affect only two of these sites – the Endless Wall and Fayette Station Road. These would be implemented to protect resources, to enhance the visitor experience, and to improve visitor safety (see Table 2.10).

- **Visitor Orientation**

In Alternatives 2 to 5 visitor centers at Canyon Rim and Sandstone would continue as the primary venues where visitor orientation would occur. Smaller visitor centers at Thurmond and Grandview would continue as secondary locations where visitors would be oriented to the park. How visitors are oriented to the park at the visitor centers would vary depending upon the underlying management concept for each alternative.

2.4.4 Resource Management

- **Maintaining Natural Processes and Restoring Natural Systems (Alternatives 2 to 5)**

Resource Stewardship Strategies. The management strategies shown in Table 2.8 are the actions that the NPS would implement to achieve and maintain over time desired natural resource conditions. The strategies address the management issues challenging the park relevant to maintaining natural processes and restoring natural systems. Implementation of these strategies would be common to Alternatives 2 to 5.

Unfragmented Forest Protection. The park's most intact and unfragmented forest areas would be protected through zoning of a core group of backcountry forest areas (see Table 2.9 and Figure 2.3). The management actions that could occur within a given backcountry forest area could differ from alternative to alternative. However, the underlying set of desired forest conditions would be the same in these areas would be the same. Regardless of the alternative management actions would seek to:

- maintain large contiguous tracts of intact forest with negligible site-specific forest fragmentation
- ensure that native plant species dominate the forest community

Table 2.9

New River Gorge National River
Backcountry Forest Management Zoning Common to Alternatives 2 to 5[1]
(see Figure 2.3)

- Fall Branch
- Meadow Creek North
- Glade Creek
- Garden Ground
- Stretcher Neck
- Claremont
- Above Thurmond
- Rush Run
- Sewell
- Endless Wall

[1] *While these zones are the same in terms of their location, what might actually happen in each zone could vary from alternative to alternative, reflecting the underlying primary ideas of each alternative concept.*

Table 2.10 Important Visitor Experiences (Common to Alternatives 2 to 5)

Important Park Experiences That Visitors Would Have *(underlined elements are additions common to Alternatives 2 to 5)*	
Appreciate life in the gorge – the human history story	**Throughout the park there are cultural resource sites where human history stories could be told.** Thurmond and Nuttallburg would be focal areas for telling stories of life in the gorge during its industrial period (as in Alternative 1). How other cultural resources would be treated, where stories would be told, and how visitors access sites where stories would be told, would differ in Alternatives 2 to 5, depending upon the overall management concept for each alternative.
Appreciate/ experience the wildness of the landscape	**A sense of wildness dominates the landscape setting in most areas of the park.** While paddling the river visitors would be transported to remote and wild areas in the upper, middle, and lower gorge, relying on the existing network of river accesses which make possible a variety of paddling experiences in a wild landscape setting. The park's most intact unfragmented forest blocks would be managed as backcountry forest preserving their wild character and enhancing the perception of the park's wildness as visitors experience the park. In Alternatives 2 to 5, the NPS would manage a minimum of 43 percent of the park as unfragmented blocks of backcountry forest. Visitors venturing into the park's forest would explore the park making their way along the park's existing network of trails at times near the water's edge and at times looking into the gorge. Exploration of the park by bicycle – pending adoption of a special regulation and subject to a development of a trail management plan – would occur on a variety of trail types in frontcountry zones and would occur only on singletrack trails in backcountry zones. Visitors camping in the forest would experience nature and the sense of solitude that comes from spending extended time in the outdoors at existing campsites and at a new developed campground in the middle of the park. Other actions taken to manage the park's forest and to enhance opportunities for visitors to appreciate and experience its wildness would differ in Alternatives 2 to 5, depending upon the overall management concept for each alternative.
Experience the power of the river	**Throughout the park the power of the river is evident wherever visitors can be on the river, be at the river's edge, or view the river from afar.** The New River would carry paddlers along its freeflowing course through the gorge cut by its waters deep in the Appalachian Plateau. Those who ride the river as it descends through the gorge would feel its power and experience the thrill of adventure and discovery as the water flows turbulently over and amidst massive boulders transported through time from the cliff walls above. River experiences would be available from the existing network of river accesses for paddlers of all skill levels during most spring, summer, and fall months. Addition of a new river access in the middle of the park (above Meadow Creek) would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips from. At the river's edge visitors could see, smell, and hear the river, feeling its power as they sense around them the scale of the gorge shaped by the flowing water. From the existing network of river accesses and day-use areas at the river's edge visitors would experience the river as it flows calmly yet powerfully on its course northward; elsewhere visitors would experience a wild river flowing turbulently around rocks and boulders. In the River Road corridor the river's edge experience would be enhanced by day-use area improvements included in the New River Parkway project (as in Alternative 1) as well as enhancements to the Brooks Falls river access. A new day-use area near provide visitor access to the river's edge near Meadow Creek. Elsewhere in the park, how visitors would access the river to experience its power would differ in Alternatives 2 to 5, depending upon the overall management concept for each alternative.

Table 2.10 Important Visitor Experiences (Common to Alternatives 2 to 5)

Important Park Experiences That Visitors Would Have (continued) *(underlined elements are additions common to Alternatives 2 to 5)*	
Experience scenic beauty	**Throughout the park its scenic beauty is evident from roads, trails, overlooks, and the river.** From existing roads visitors would have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. In the south end of the park, as visitors travel New River Parkway from Sandstone to Hinton the scenic beauty of the park would be evident in the dramatic landscape visible from the New River Bridge and along the parkway (as in Alternative 1). In the north end of the park, efforts would be made to enhance opportunities for scenic vistas along Fayette Station Road by working with WV DOH to add pull-outs (as in Alternative 1). Visitors traveling on existing trails would continue to have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. Elsewhere in the park, the emphasis on where visitors would have these experiences would differ in Alternatives 2 to 5, depending upon the overall management concept for each alternative.
Classic Park Experiences *(underlined elements are additions common to Alternatives 2 to 5)*	
Paddling the New River	Paddlers would continue to experience the power of the river and the park's wild character and natural beauty as they float the river, stopping to picnic, fish, visit natural and cultural sites of interest, and/or camp. Opportunities for paddlers of all skill levels would be enhanced by addition of a new river access in the middle of the park (above Meadow Creek) that would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips. Opportunities for disabled paddlers would be enhanced by addition of disabled boater access at the Cunard and McCreery (Terry Beach) river accesses. The condition of river recreation sites popular for river lunch stops, camping, and fishing would be enhanced by improving access and providing restroom facilities where practicable. More frequent river patrols would provide visitor education and, as needed, increased enforcement of existing regulations related to group size, trash removal, and human waste removal where restrooms are not available.
Sandstone Falls	The boardwalk and recreational facilities at Sandstone would continue to bring visitors to the water's edge where they can feel the power of the river, experience its beauty, and learn about the park's significant natural resources (as in Alternative 1).
Sandstone Falls Visitor Center	At the Sandstone Falls Visitor Center visitors would continue to be oriented to the park (as in Alternative 1); how visitors are oriented to the park at the visitor center would differ in Alternatives 2 to 5, reflecting the underlying management concept for each alternative.
Grandview	Social gatherings, cultural events, and recreational activities at Grandview would continue in a setting where visitors can experience the scenic beauty of the park, the wildness of its landscape, and the power of the river (as in Alternative 1). Park visitors would enjoy safer access to the Turkey Spur overlook (as in Alternative 1). Theatre goers would continue to enjoy productions at an updated Cliffside Amphitheatre (as in Alternative 1). Visitor safety and the quality of the visitor experience would be enhanced as a result of improvements to pedestrian and vehicular circulation.
Kaymoor and Nuttallburg	Trails would provide visitor access to historic mining areas at Kaymoor and Nuttallburg. Nationally significant mining resources at Nuttallburg would be interpreted for visitors and made more accessible through parking and trail improvements (as in Alternative 1).
Experiencing the Cliffs	The massive sandstone cliffs in the Endless Wall area and elsewhere would continue to attract visitors seeking to experience their beauty as well as the thrill of adventure, exploration, and solitude sensed of rock climbing (as in Alternative 1). Access to the Endless Wall would be made easier and safer by adding parking and by establishing designated and maintained trails to climbing routes. Climbing and other visitor activities in the Endless Wall area would also be limited to day use.

Table 2.10 Important Visitor Experiences (Common to Alternatives 2 to 5)

Classic Park Experiences (continued) *(underlined elements are additions common to Alternatives 2 to 5)*	
Canyon Rim	At Canyon Rim visitors would continue to be oriented to the park at the visitor center and to have opportunities to view the river and the gorge from existing overlooks (as in Alternative 1); how visitors are oriented to the park at the visitor center would differ in Alternatives 2 to 5, reflecting the underlying management concept for each alternative.
Fayette Station Road	Fayette Station Road would continue to be a major visitor attraction in the north end of the park where visitors would experience the historic travel route across the river, learn about the park's industrial heritage, view the river, and feel its power (as in Alternative 1). Improvements to Fayette Station Road and parking facilities, as well as implementation of shuttle service during periods of high visitor use, would result in a safer visitor experience with more opportunities to experience the park's scenic resources and with fewer opportunities for visitor conflicts.

- ensure that the habitat mosaic supports a diversity and abundance of rare and native plants communities and a high diversity of birds
- ensure that the effects on the park's unfragmented forest as a result of activities occurring within the park are negligible to minor

Riparian Corridor Protection. The park's riparian area would be protected through zoning of seven riparian corridor zones that would encompass riparian areas along most of the New River (see Figure 2.3). The seven zones would be common to Alternatives 2 to 5. The management actions that might occur within a given riparian corridor zone could differ from alternative to alternative. However, the underlying set of desired riparian conditions would be the same. Management actions – regardless of the alternative – would:

- ensure that a nearly continuous strip of natural riparian habitat occurs along the river
- ensure that natural processes support a high integrity sustainable aquatic and riparian ecosystem
- ensure that hydrologic features provide a mosaic of habitats that supports a full range of natural aquatic organisms experiencing natural ecological interactions
- ensure that the effects on the park's riparian resources as a result of activities occurring within the park are negligible to minor

- **Wildland Fire Management (Alternatives 2 to 5)**

Promotion of ecosystem health could be facilitated with the application of prescribed fire as a management action in fire dependent forest communities to promote native vegetation diversity. For example, the following vegetation community types could benefit from the use of prescribed fire:

- rim pine (Virginia pine, pitch pine) communities
- xeric oak forests

Wildland fire in the park would be managed to diminish risk and consequences of severe wildland fires and, to the extent possible, restore and protect the natural biological diversity and the natural disturbance regime of park ecosystems. To meet resource objectives, planned ignitions would also be considered as a method of restoring and maintaining cultural landscapes, such as historic farms, vistas, old fields, etc.

The NPS is responsible for providing primary wildland fire protection on federal lands. Local volunteer fire departments, in cooperation with the West Virginia Division of Forestry Fire, provide fire protection for private properties adjacent to federal lands.

A community-based approach to wildland fire issues would involve close collaboration and cooperation with neighboring agencies having a vested interest in areas of wildland fire issues.

- **Water Quality Management (Alternatives 2 to 5)**

Future management of the park would include an expanded water quality management effort by the NPS. This expanded water quality program – which would be common to Alternatives 2 to 5 – would be focused in five areas.

Ambient Water Quality Monitoring Program. NPS would continue to collect ambient water quality data. If funding permits, the park would seek to 1) increase the number of fecal coliform samples analyzed, 2) expand the network of sampling stations to include all tributaries to the New River, 3) increase monitoring during high flows associated with storm events and snowmelt, 4) make quality assurance and quality control a more visible component of the monitoring program, 5) maintain one water quality database at park headquarters, and 6) enter monitoring data into the EPA's STORET database.

Wastewater Management at Visitor Use Areas. NPS would seek 1) to expand availability of sanitation facilities at developed visitor facilities, and 2) to support remote activities in frontcountry and backcountry zones, such as river rafting, hiking, biking, horseback riding, backpacking, camping, trail maintenance, fire fighting, ranger stations, and similar activities. Highest priority for providing sanitation facilities would be high visitor use areas, including publicly-owned river rest stops heavily used as lunch stops by outfitted paddlers, heavily used trailheads, and heavily used backcountry campsites. NPS would also work cooperatively with the owners of heavily used lunch stops that remain in private ownership to provide and maintain adequate sanitation facilities. At Thurmond wastewater collection and

treatment would be provided to existing and new visitor use facilities, houses, and commercial uses.

Water Quality Management Planning Technical Assistance. NPS would expand its program of working cooperatively with WVDEP, the Plateau Action Network, Fayette County, Summers County, Raleigh County, local communities, public service districts, and other appropriate groups to protect and enhance the water quality of the New River and its tributaries in the park vicinity. Expanded technical assistance would include some or all of the following: 1) data collection, mapping, and analysis (such as GIS services), 2) assistance with securing grants for various water quality management studies and plans, 3) land use planning assistance to address point and non-point sources of pollution, 4) scoping and administering contracts for professional services, and 5) hosting special events or programs to assist local governments with watershed-based water quality management planning.

Public Education and Technical Assistance to Landowners. NPS would seek to implement a program to provide public education and technical assistance regarding the importance of maintaining on-site wastewater disposal systems (OSDSs). The program would target landowners in the park and in nearby communities along the New River and its tributaries where fecal coliform counts are high and the suspected source is malfunctioning OSDSs. As part of this program, the NPS would assist local communities with securing grants for funding for OSDS maintenance and system replacements.

Joint Use of NPS Wastewater Treatment Facilities. Where practicable the NPS would make excess capacity in park wastewater treatment facilities available for treatment of wastewater flows from private lands in adjoining neighborhoods. This may happen only where 1) excess capacity is not reasonably expected to be needed to support park operations or visitor use, 2) additional flows would enhance operational efficiency of NPS wastewater treatment facilities, and 3) costs for treatment of effluent originating outside the park would be reimbursed to the NPS. In addition, where practicable and where it would benefit plant efficiency and function, the NPS would plan new treatment facilities in the park so as to provide treatment capacity for wastewater flows from development on private lands within and adjoining the park.

- **Cultural Resource Management (Common to Alternatives 2 to 5)**

Parkwide Cultural Resource Management Strategies. The management strategies shown in Table 2.8 are the actions that the NPS would implement to achieve and maintain over time the park's desired cultural resource conditions. The strategies address the management issues challenging the park relevant to stabilizing and otherwise treating cultural resources. In addition to these specific strategies, resource conservation efforts would be implemented through public outreach and education to better inform the public of the threats to the park's

cultural resources and the efforts undertaken to protect them. Implementation of these strategies would be common to Alternatives 2 to 5.

Cultural Resource Treatment Contexts. In Alternatives 2 to 5, cultural resource treatment would occur in two contexts: historic resource zones and discovery sites.

- **Historic Resource Zones**. Seventeen cultural resource zones are identified in the park. These zones include the cultural resources that are fundamental or other important resources in the park. Management actions in these zones would preserve cultural resources while making them readily visible and accessible to visitors. While these zones would remain the same in Alternatives 2 to 5, the types of management actions would differ as a function of the overall alternative concept. In general the cultural resource management actions likely to be implemented in historic resource zones would involve a greater degree of restoration of historic structures and cultural landscapes when compared to the actions that would be taken to treat resources that are found in discovery sites.

- **Discovery Sites**. Cultural resources representative of the park's early settlement/agricultural and industrial era are abundant throughout the park and occur in all five of the park's management zones. Some would be managed and interpreted as discovery sites. Visitors would come upon and find discovery sites as they experience the park, primarily from trails and to a lesser extent from roads. Treatment actions at these sites would seek to balance natural and cultural resource management demands with the goal of maintaining ruins and mitigating degradation of cultural resources by natural resources and processes. Other management actions would be taken to protect cultural and natural resources from visitor impacts as well as to protect visitors from potential hazards. Interpretive waysides would be installed to tell the park's stories.

  Sites selected for treatment as discovery sites in each alternative would depend on the underlying concept of each alternative. Resources that have been nominated to or determined eligible for the National Register would be given priority as potential discovery sites.

- **Protecting Scenic Resources in and around the Gorge (Alternatives 2 to 5)**

Viewshed studies indicate extensive areas in the park vicinity where new development – if it should occur in the future – would be visible from the park and would potentially impact the park setting, the visitor experience, and important resource areas (see Appendix F). Addition of these areas to the park is impracticable because of potential community impacts and cost. In lieu of boundary adjustments and land acquisition the NPS would seek to protect scenic resources from impacts of new development on these lands by working cooperatively with

communities and private landowners. Actions would include some or all of the following:

- Coordination with owners of land possessing outstanding scenic values in and around the gorge
  - notify owners regarding the outstanding scenic value of their property and the public interest in protecting those values
  - provide information to owners regarding the use of conservation easements to protect scenic values
  - where owners are potentially contemplating sale or development of land with scenic values, provide information regarding sustainable design and construction that would avoid or minimize impacts to scenic values
- Coordination with local governments
  - share information identifying lands with outstanding scenic values in and around the gorge
  - seek to involve NPS early on in the development review process when lands with outstanding scenic values are proposed for development
  - provide technical assistance with changes to the land development review process that would emphasize early coordination and issue identification upfront in the review process, before landowners have invested funds for preliminary site planning and design
  - seek agreements in principle that rezonings would generally not be granted for development projects involving lands with outstanding scenic values
  - provide technical assistance with development of land development policies and regulations to promote sustainable design and construction practices on lands with outstanding scenic values (i.e., clearing, grading, landscaping, erosion control, stormwater management, lighting, materials, building massing and colors)
  - provide technical assistance with development of an overlay district for lands with outstanding scenic values which provides for land development while simultaneously better protecting scenic values
  - when future revisions are contemplated to existing zoning regulations and land use plans, provide technical assistance with development of revised regulations and plans that would reduce or transfer the by-right development potential of lands with outstanding scenic values to property where such values are not present

- Coordination with professional advisors to owners of lands with outstanding scenic values in and around the gorge (i.e., attorneys, accountants, realtors, appraisers, engineers, surveyors, architects, and landscape architects)
  - share information identifying the outstanding scenic value of properties in and around the gorge and the public interest in protecting those values
  - provide information regarding the use of conservation easements to protect scenic values as an alternative to land development
  - encourage use of sustainable design and construction practices on lands with outstanding scenic values that would avoid or minimize adverse impacts to those values
  - encourage early coordination with local regulatory entities before preparing preliminary development plans for owners of lands with outstanding scenic values

2.4.5 Visitor Use and Visitor Facilities (Alternatives 2 to 5)

- **Hunting (Alternatives 2 to 5)**

The full text of the newly amended hunting and fishing section of the New River Gorge National River legislation (codified at 16 United States Code Section 460m-20) now reads:

> *"The Secretary shall permit hunting and fishing on lands and waters under his jurisdiction within the boundaries of the New River Gorge National River in accordance with applicable Federal and State laws, and he may designate zones, and establish periods when, no hunting or fishing shall be permitted for reasons of public safety, administration, fish or wildlife management, or public use and enjoyment. Except in emergencies, any rules and regulations of the Secretary pursuant to this section shall be put into effect only after consultation with the appropriate State agency responsible for hunting and fishing activities. The Secretary shall permit the State of West Virginia to undertake fish stocking activities carried out by the state, in consultation with the Secretary, on waters within the boundaries of the national river. Nothing in this Act shall be construed as affecting the jurisdiction of the State of West Virginia with respect to fish and wildlife.*

This section means (as discussed in Section 2.9.1 Alternatives Considered but Dismissed below) that there must be hunting and fishing allowed within the park, but that the NPS is also directed to ensure that these activities are conducted consistently with other resource management and public safety concerns, etc.

Therefore, certain areas may be closed to hunting, or certain species may be restricted from harvest, or other limitations may be placed on hunting and fishing within the park. In all cases except emergencies, the park would consult with the West Virginia Department of Natural Resources prior to adopting regulations covering fishing and hunting. While hunting and fishing would generally be consistent with state laws, limits, permit requirements, etc. some differences could arise within the park. Therefore, recreational visitors interested in hunting or fishing with in the park are encouraged to review the park-specific regulations codified at 36 Code of Federal Regulations Part 7.89 and specific closures or limits which are contained in the Superintendent's Compendium (available on the web at http://www.nps.gov neri/parkmgmt/lawsandpolicies.htm).

The parkwide desired future conditions discussed in Table 2.8 provide the framework within which hunting would occur at New River Gorge. Some of these desired future conditions include:

- habitat mosaic is maintained and continues to support an abundance and diversity of rare and significant animal and plant species and communities
- visitors enjoy a safe and secure experience at the park
- conflicts among visitor user groups are minimized
- appropriate recreational use continues to be welcomed in places where it does not impact resources or interpretive activities

Strategies to achieve these desired future conditions include:

- work collaboratively with WV DNR to monitor hunted game harvest, population status, and long term viability of game species within the park
- evaluate park visitor use and development; establish no hunting areas and safety zones at and around high visitor use areas, residential areas, and administrative use areas
- adopt and enforce non-conflicting state hunting regulations on park lands that are open for hunting; publish park specific regulations and closures in the Superintendent's Compendium
- work with the WV DNR to include notice of park specific regulations it their annual Hunting and Trapping Regulations Summary
- inform park visitors, neighbors and cooperators of park lands that are open to hunting and those areas that have been identified as no hunting or safety zones
- provide information related to the state of West Virginia's General Hunting Regulations, especially as they relate to hunter and visitor safety

- continuously manage hunting in a manner to reduce or eliminate user conflicts

As in Alternative 1, in Alternatives 2 to 5 the NPS would continue to administer hunting within the park in accordance with the hunting and fishing regulations of the WV DNR. As part of a concerted effort to ensure the safety of visitors to the park, designated safety zones that are closed to hunting would continue to be identified and would be listed and mapped in the Superintendent's Compendium. Generally, safety zones would include public gathering locations such as parking lots, trailheads, campgrounds, visitor centers, and picnic areas and would radiate out from these sites in a concentric circle an additional 500 feet. The identification and designation of safety zones would continuously be evaluated based on visitor use patterns and when new visitor facilities are developed or expanded.

Additional efforts to ensure public safety would include but not be limited to specific law enforcement operations targeted at ensuring compliance with state hunting regulations. These operations may include special enforcement operations to target safety violations, vehicle checkpoints to identify unsafe practices such as the presence of loaded weapons carried within vehicles, and identification of potential alcohol use associated with hunting activities. Park rangers would conduct vehicle and foot patrols within high visitor use areas, including park roads and trails, to insure compliance with designated no hunting zones and safety zones. All no hunting zones and safety zones would be identified on maps made available to the public. Maps and related safety information would be posted on bulletin boards at trail heads, parking lots and hunting areas. Maps and related information would also be available at park headquarters and visitor centers. In addition, downloadable versions of the maps and related information would be posted on the park's internet web site.

The NPS would work with WV DNR to list all safety zone closures and other park specific safety and resource related regulations in the state's printed and on-line hunting regulations in an attempt to better inform the hunting public and visitors to the park. This information would also be made available at visitor centers within the park and at park headquarters. Additionally, the NPS would develop a hunting specific section on the official park website that would provide complete information on the hunting program of the park, all safety measures, wildlife conservation concerns, and relevant links to the WV DNR website.

The alternative approaches to hunting which follow all assume that hunting would continue, but they vary in their specifics, as to whether hunting would be continued as is, enhanced, or modified in various specifics. The alternatives that were laid out in the screening process and retained for further consideration include:

- **Continuation of Existing Hunting Program (in Alternatives 2 and 3)**

In this option hunting within the park would continue to be managed in accordance with the hunting and fishing regulations of the WV DNR. Hunting would generally be permitted throughout the park. A few areas would continue to be closed to hunting for safety reasons, including:

- areas designated as safety zones in the park compendium
- the areas within the historic boundaries of Grandview State Park and Sandstone Falls State Park
- the area within the boundary of Babcock State Park (which is managed by the State of West Virginia)

- **Enhanced Hunting Program (in Alternative 5)**

In this option, hunting would continue largely as it is today except for the following:

- the historic Grandview State Park would be opened to limited bow hunting via a permit/lottery system
- upland gamebird habitat would be increased by creating/restoring early successional habitat in historic resource zones (where such management is consistent with the park's cultural landscape restoration goals)
- the NPS and WV DNR would collaboratively monitor park specific game harvest levels and hunter use levels, using a hunter registration/permit process and designated hunt units; this process would include the distribution of information to hunters (hunt unit maps, regulations, etc.) and a mandatory end-of-season hunter questionnaire provided by the NPS
- a cooperative game management plan would be developed by NPS and WV DNR that would be specific to designated hunt units in the park and would identify management strategies to improve hunter satisfaction and to enhance outreach opportunities to both hunters and non-hunters

- **Modified Hunting Program (in Alternative 4)**

In this option hunting would continue largely as it is today. However, the following activities would be phased out over a five-year period:

- hunting of native "pest" species (raccoons, opossums, foxes, coyotes, bobcats, crows, skunks, woodchucks and weasels)
- use of hunting dogs outside of applicable seasons for training purposes

In addition, as in the Enhanced Hunting Program, the following actions would be implemented:

- the NPS and WV DNR would collaboratively monitor harvesting
- a cooperative game management plan would be developed by NPS and WV DNR

- **Hiking and Equestrian Use (Alternatives 2 to 5)**

Alternatives 2 to 5 would include expansions to existing informal trails in climbing areas to provide designated access that would protect rim rock pine vegetation and the Allegheny woodrat (a state-designated species of concern) including:

- in the Endless Wall area, a designated trail at the base of Endless Wall and a new trail to Ambassador Buttress (with trailhead facilities)
- in the Sunshine Buttress area, a designated trail at the base of Sunshine Buttress and a new trail to Sunshine Buttress (with trailhead facilities)
- in the Bubba City area, a designated trail at the base of the Bubba City climbing area and a new trail loop (with trailhead facilities in the Bubba City area)
- in the Junkyard area, trailhead facilities for existing climbing trails

The Laing Loop Nature Trail in the Burnwood area would be expanded. NPS would also provide technical assistance to the city of Hinton to help secure a trail connection from the city to the river.

NPS would also work collaboratively with its gateway community partners, state agencies, railroad companies, and private landowners to develop trail connections from the park to nearby communities and other visitor attractions, such as Hawks Nest State Park, Babcock State Park, the Gauley River National Recreation Area, Ansted, Oak Hill, Mount Hope, Beckley, and Meadow Bridge (see Figures 2.4, 2.6, 2.8 and 2.10).

- **Biking (Alternatives 2 to 5)**

In Alternatives 2 to 5 where new trails are developed in the park (as described in the previous section) they could be designed for joint use by hikers and bikers, depending on environmental and safety conditions. Existing hiking trails could also be considered for joint use, where practicable.

During development of the park's new trail management plan the NPS would determine where joint use trails would be developed (see Section 2.13.1 below). The following principles would generally guide their design:

- in frontcountry zones, river corridor zones, historic resource zones, and park development zones – biking could occur on a variety of trail types
- in backcountry zones – biking could occur only on singletrack trails

Table 2.11

New River Gorge National River
Backcountry, Frontcountry, and River Corridor Zones – Access Management Prescriptions
(common to Alternatives 2 to 5)

- **In Backcountry Zones**

Motorized Access. Very limited motorized access for visitors and administrative use (restricted to established state roads, administrative roads, and park roads); parking located along zone perimeters

Non-Motorized Access. Non-motorized access for visitors and administrative use via established trails and new singletrack trails (to be primarily located on existing unmaintained trails); bikes permitted only on singletrack trails; horses permitted in some upland areas in the Highland-Backus and Dowdy Creek areas; trailhead parking located along zone perimeters

- **In Frontcountry Zones**

Motorized Access. Motorized visitor and administrative access and parking in zone interiors (largely utilizing established state roads, administrative roads, and park roads); new road development to serve new visitor use areas

Non-Motorized Access. Non-motorized access via established trails and new trails of a variety of types (to be primarily located on existing unmaintained trails); bikes permitted on a variety of trail types; horses permitted in some upland areas in the Bucklick Branch and Craig Branch areas

- **In River Corridor Zones**

Motorized Access. Very limited motorized access (via established state roads, administrative roads, and park roads); new road development to serve new visitor use areas

Non-Motorized Access. Non-motorized access for hikers and bikers via existing and new trails of a variety of types (to be primarily located on existing unmaintained trails); horses not permitted

- **In Historic Resource Zones**

Motorized Access. Motorized access via state roads and park roads

Non-Motorized Access. Non-motorized access for hikers and bikers via existing and new trails of a variety of types (to be primarily located on existing unmaintained trails); horses not permitted

- **In Park Development Zones**

Motorized Access. Motorized access via state roads and park roads; motorized access via shuttle might occur in congested areas

Non-Motorized Access. Non-motorized access for hikers and bikers via existing and new trails of a variety of types (to be primarily located on existing unmaintained trails); horses not permitted

- in historic resource, river corridor, and park development zones – biking could occur on a limited basis on a variety of trail types

An exception to these assumptions would be that in Alternatives 2 to 5 no biking would be permitted on trails in the Endless Wall backcountry zone.

- **Pedestrian Access across Railroad Rights-of-Way (Alternatives 2 to 5)**

As in Alternative 1 the NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible. As in Alternative 1 priorities would be to secure legal crossings where visitors frequently illegally cross tracks at Hinton, Depot Beach, Apple Orchard, McKendree, Todd Beach, Southside Junction, Piney Creek, Dowdy Creek, Nuttallburg, Keeney Creek, Kaymoor, Short Creek, the Lower Railroad area, and Fayette Station.

- **Access and Parking (Alternatives 2 to 5)**

Park management zoning would provide the framework for decision-making as to where motorized and non-motorized access would be appropriate for visitors and administrative use (common to Alternatives 2 to 5) (see Table 2.11). The nature of permitted access would be common to Alternatives 2 to 5 in park development, historic resource, and river corridor zones because these zones are the same for each action alternative. Differences would occur in the remainder of the park where areas are allocated to either backcountry or frontcountry zones. When considering access to the park, areas of frontcountry would have greater potential access because roads and parking facilities would be permitted in interior areas of zones. In contrast, in backcountry areas roads and parking would be limited to the perimeter of the forest blocks defined by the park's subareas (see Figure 2.5).

A number of specific access and parking improvements would be common to Alternatives 2 to 5:

- At Grandview a number of pedestrian and vehicular circulation issues exist that pose potential visitor safety issues and that diminish the quality of the visitor experience on busy days. The NPS would address these issues by implementing a number of improvements to the main parking lot, to directional signage, to the main overlook trail, to bus drop-off facilities, and to the visitor contact station.

- Existing congestion on Fayette Station Road (WV SR 82) would be alleviated through implementation of an alternative transportation system (ATS) during peak visitation days. The ATS would be composed of a concession-based shuttle that would operate on the Fayette Station Road loop. It would primarily serve private paddlers and other visitors; outfitted paddlers would likely continue to ride from the take-out on outfitter-operated buses. The shuttle would likely pick-up and drop-off riders at a

satellite parking facility located on NPS property on the plateau near the Fayette Station Road/US 19 intersection. It would make frequent stops, such as at points of interests with interpretive waysides, river overlooks, climbing areas, trailheads, the old Fayette Station Bridge, the Fayette Station day-use area, and the Fayette Station river access.

- The NPS would work cooperatively with the WV DOH to design and construct improvements to WV SR 25 from Glen Jean to Southside Junction.
- The NPS would rehabilitate the existing visitor parking area above the CSX right-of-way on the Fayette Station Road. This would address parking needs for private paddlers on non-peak days.
- Parking facilities would be developed in locations where boundary adjustments are proposed to address visitor needs for parking in the Junkyard, Ambassador, Buttress, Fern Buttress, Keeney Creek, Dowdy Bluff, and Polls areas (see Section 2.4.1 above).
- New trailheads with parking would be provided for all new trails (see Hiking and Equestrian Trails and Biking Trails above). Where trailhead parking occurs in backcountry zones it would be located at the edge of zones so as to minimize forest fragmentation.
- At Cunard, Alternatives 2 to 5 all assume that existing problems with inadequate parking for private paddlers on peak visitation days would be alleviated by 1) expanding the existing private paddler parking area and 2) by adding new private paddler parking along the Fisherman's Trail access road

- **New River Bridge Tour (Alternatives 2 to 5)**

The park's 1982 GMP noted that, "Another opportunity to view the gorge could be from an existing maintenance catwalk underneath the U.S. 19 bridge near Canyon Rim." The GMP recommends that the NPS "investigate the feasibility of safe visitor access with the West Virginia Department of Transportation." The State of West Virginia has indicated that they would like to enter into an agreement with the NPS to provide such a bridge tour.

In Alternatives 2 to 5 the NPS would work with the WV DOT in developing the potential to enhance educational and recreational opportunities through use of the maintenance catwalk beneath the New River Bridge on U.S. Route 19. NPS would issue a Commercial Use Authorization or other permit of contract for this service. Guided tours on the walkway would require a safety system to be installed and maintained by a professional operator. The design and nature of the safety system coupled with the physical limitations of the catwalk would necessitate limiting a

commercial use authorization or other permitting method to a single operator (company). Therefore, NPS would use competition to select the tour operator.

- **Other Visitor Facilities (including disabled access) (Alternatives 2 to 5)**

In Alternatives 2 to 5 the conditions of the recreation sites currently used by visitors for picnicking, swimming, camping, and fishing would be enhanced and maintained in good condition. Recreation sites would be inventoried, monitored, and evaluated based on a variety of factors including size, amount of ground cover loss, damage to trees or to other resources, and amount of litter/human waste present. While most sites would remain largely undeveloped, others would have access improved and restrooms installed nearby. All sites would require visitors to pack out all trash and solid human waste. Some sites might require substantial visitor education efforts to reduce impacts to acceptable levels. The park might need to consider regulations restricting group size, designating or reserving sites, restricting fires to fire rings or fire pans, or eliminating use in areas with sensitive resources.

Additional visitor facilities associated with Alternatives 2 to 5 would include camping, picnicking, and river access facilities, as follows:

- at Stone Cliff, the existing primitive campground now located in the riparian zone, would be relocated to the bench level; the new facility would include a primitive campground, picnic facilities, and comfort stations
- at DunGlen, remove the group campsite located within the 100-year floodplain of the New River

Pending completion of a future camping management plan, camping would continue to be permitted at undesignated campsites anywhere in the park and at primitive campgrounds without fees or reservations. The camping management plan would evaluate the appropriateness of alternative parkwide camping management strategies including Continuation of Current Management (see Section 2.13.2 below).

NPS would continue to make accessibility improvements at existing and new facilities with the goal of making all visitor facilities at developed visitor use areas accessible to visitors and employees with disabilities (as in Alternative 1). Where practicable given river conditions, NPS would also seek to provide river access for disabled boaters that would enable them to experience safe river trips of different lengths and levels of difficulty (as in Alternative 1).

2.4.6 Working with Local Communities (Alternatives 2 to 5)

- **Sustaining Communities within the Park (Alternatives 2 to 5)**

Hinton. As the park's largest gateway community located partially in the park, Hinton would receive high priority in NPS's efforts to work cooperatively with its gateway community partners. Section 2.4.8 below identifies the general types of actions that the NPS would seek to implement to strengthen the connection between gateway communities, their residents, and the mission of the NPS at New River Gorge National River. In addition the NPS and the city of Hinton would work collaboratively on several specific initiatives, including but not limited to the following:

- identification and implementation of appropriate treatments for significant cultural resources within the park boundary
- development of safe and legal pedestrian access to the New River waterfront
- development of a hiking and biking trail on river right from Hinton to Camp Brookside
- development of a hiking and biking trail on river left from the Hinton Bridge to the New River Parkway (working cooperatively with the New River Parkway Authority and the WV DOH)
- continued support for existing successful special events – such as Hinton Railroad Days – as well as development of new special events that would attract visitors to the park and the city
- implementation of interpretive programs focused on Hinton's railroading history

In general the NPS would not seek to acquire private land within the park boundary in Hinton except where:

- a property includes resources and values that are fundamental or important to the park that require protection from pending private actions that would adversely impact those resources, or
- a property is needed to implement management actions in the GMP

More specifically, the NPS would be interested in acquiring land owned by the CSX at the Hinton Yard, if and when it is no longer required for railroad operations. Similarly, the NPS would be interested in acquiring historically significant railroad-related structures in the vicinity of the Hinton Depot and the Hinton Yard.

Thurmond. The small enclave of occupied private residences at Thurmond would remain as "a community within a park attraction". The nature of the "park attraction" would vary from alternative to alternative in terms of the extent to which visitors and park employees would be visiting and/or living in the community and

new commercial activity would be present. The NPS would continue to work cooperatively with residents to address issues associated with living in the historic town. As in Alternative 1, actions would be implemented by the NPS to provide safe drinking water and wastewater treatment via a community water system and a community wastewater collection and treatment system. In Alternatives 2 to 5 these services would be extended to all new occupied visitor facilities, houses, and commercial uses.

Other Communities in the Park. The NPS would work cooperatively with local leaders and landowners in the communities that remain within the park boundary to define shared goals and to implement strategies to accomplish shared goals. The remaining communities that are entirely within the park (other than Hinton and Thurmond discussed above) include Meadow Creek, Backus, Highland, Prince/Quinnimont, Terry, and Thayer (see Figure 2.3).

In general the NPS would not seek to acquire private land within these communities except where:

- a property includes resources and values that are fundamental or important to the park that require protection from pending private actions that would adversely impact those resources, or
- a property is needed to implement management actions in the GMP

In the future, collaboration between the NPS and these communities would generally seek to sustain community character, protect natural and cultural resources, and encourage, as appropriate, development of visitor amenities and interpretive media. The types of actions that could occur include the following:

- technical assistance with organization of a community partner group in each of the park's communities (if one does not already exist) that would represent residents in the collaborative effort with the NPS
- collaborative development of a community vision plan that provides a shared understanding among local residents and the NPS regarding the future of the community within the context of the surrounding park
- technical assistance with managing change in the community - such as redevelopment and new development – to reduce potentially adverse impacts on natural resources, cultural resources, local residents, and park visitors
- technical assistance with development of strategies and plans to address specific issues associated with visitor activities within or adjoining the community
- technical assistance with documenting the significance of cultural resources and for assessing and implementing treatment options for privately-owned

historically significant buildings, archeological sites, and other cultural resources

- technical assistance with obtaining grants for infrastructure improvements for water supply, wastewater management (including centralized treatment systems and/or individual on-site disposal systems), roads, and utilities
- technical assistance with control of invasive plant and animal species
- technical assistance with private sector development of appropriate visitor services
- provision of NPS visitor facilities that enhance visitor experience and help to reduce potential conflicts between visitors and local residents, such wayfinding signage, information kiosks, comfort stations, parking facilities, and trail connections to adjoining park attractions, as appropriate

Some or all of these activities would be priorities in the eight communities within the park. Priorities would be dependent upon the context of each community within the different alternatives (see Sections 2.5.5, 2.6.5, 2.7.5, and 2.8.5 below).

2.4.7 Land Protection (Alternatives 2 to 5)

- **Park Boundary Adjustment**

The NPS has completed a boundary study to identify the need for a park boundary adjustment and to consider all alternatives in lieu of a boundary adjustment that would protect the park's resources and/or address management issues (see Appendix F). Findings of the Boundary Study have concluded that seven boundary adjustments are needed to enhance the visitor experience and to address operational issues (see Table 1.5 and Appendix E). Collectively the seven proposed boundary adjustments would add approximately 222.2 acres to the park.

Findings of the Boundary Study have also indicated that there are three areas where it would be appropriate to delete certain privately-owned lands from the park (see Table 1.6 and Appendix E). Collectively the three proposed boundary adjustments would delete approximately 75.4 acres from the park.

- **Land Protection Priorities (Alternatives 2 to 5)**

Land protection would continue as funding permits until most land remaining within the park boundary is protected through voluntary sale of property to the NPS or through voluntary conveyance of conservation easements to the NPS or to a qualified non-profit land trust. The exception would be that the NPS would generally no longer seek to acquire private property within the six communities remaining inside the park (see Sustaining Communities within the Park above).

In the future the land protection program would focus efforts on the highest priority properties still to be protected. High priority would also be placed on working with

willing sellers of private property that has one or more of the following characteristics:

- the property includes significant resources and values that are fundamental or important to the park
- the property is needed to implement the recommendations of the general management plan
- the property would provide safe and legal access to the New River
- the property is needed to enhance park operations and management
- the property is within the six proposed boundary adjustments (see Table 2.7 and Appendix F)
- the property is in imminent threat of change to non-park uses as a result of pending private investment, and/or
- the property is a large property whose acquisition would contribute significantly to federal ownership within the park boundary

Priorities for working with willing sellers would be further refined to focus on acquiring properties that are important to addressing specific park issues, such as:

- Babcock State Park (if and when the state of West Virginia no longer desires to own and manage the property, as previously occurred at Grandview and Sandstone Falls State Parks)
- the Prince Amtrak Station
- abandoned railroad rights-of-way

- **Stewardship of Private Land Remaining within the Park Boundary (Alternatives 2 to 5)**

Approximately 17,000 acres within the park boundary remain in private ownership. In the future the NPS would seek to acquire these lands where they are outside of the six existing communities that remain in the park (see Sustaining Communities within the Park above). Until such time as these lands can be acquired from willing sellers the NPS would work cooperatively with landowners to promote sensitive stewardship of the privately-owned resources and values that are fundamental or important to New River Gorge National River. The program would focus on:

- private lands with significant fundamental and other important resources and values
- private lands that are highly susceptible to change, such as tracts with commercially viable mineral or timber resources or developable lands in proximity to the park's gateway communities where there is a strong market for residential or commercial development

- private lands with a history of prior disturbance, such as surface mining and recent clearcutting

While taking all necessary steps to ensure that the NPS would not interfere with private property rights, the goals of this program would be as follows:

- to improve communications with private landowners in order to promote their understanding of the NPS mission, polices and plans for the park
- to enable the NPS to better understand and address landowner concerns
- to respond to requests of individual landowners in dealing with park-related issues
- to work with landowners, as requested, in assessing conditions and resources on their properties and in helping them to evaluate their options for future uses
- to help facilitate strategies used by landowners that would result in protecting fundamental and other important resources and values on their lands while achieving reasonable economic and other goals, as appropriate
- to explore opportunities for cooperative agreements between the NPS and private landowners that would help achieve management goals for the park
- to organize and maintain a working group composed of outfitters and other commercial operations owning land within or near the park in order to promote dialogue and resolution of issues related to resource protection, visitor activities, and recreation development

A number of approaches would be considered for developing this program, such as management entirely by NPS staff in coordination with the NPS Lands Office, management in cooperation with a charitable non-profit organization, or management entirely by a non-profit organization.

The program described above is designed to foster sensitive stewardship of the special natural resources and unique features within the park that remain in private ownership. As the enabling legislation provides, timber harvest, mining, and development incompatible with the purposes of the park are prohibited. Since the NPS is directed to protect park resources and federal lands from damage or harm, including threats arising from adjacent lands, it will utilize available legal and constitutional approaches to address land protection matters, should the collaborative programs described above not resolve an issue.

2.4.8 Partnerships (Alternatives 2 to 5)

- **Relevance of the Park to Local Visitors (Alternatives 2 to 5)**

In the future the NPS would take a number of actions intended to make the park more relevant to its local and regional users by strengthening the connection

between the public and the mission of the NPS at New River Gorge National River. By strengthening this connection, the public's sense of ownership and pride in the park should increase as should its commitment to the stewardship of the park and its resources and values. Management actions aimed at communicating the NPS mission would generally include expansion of programs already underway at the park, although some actions would be new. The general types of actions would include:

- **Friends of New River Gorge**. The NPS would aggressively build the capacity of the recently created Friends of New River Gorge group by identifying, recruiting, and providing technical support to energetic and talented local leaders with the capacity to grow the organization. The Friends of New River Gorge could assist with many activities important to strengthening the park's connection to the community, such as 1) recruiting and managing volunteers, 2) reaching out to local communities and park user groups, 3) informing elected officials of park issues, 4) supplementing NPS staff capability, 5) conducting market research and awareness building, 6) delivering programs and staging events, 7) procuring equipment and services, 8) leveraging community support and talents to develop facilities (with NPS oversight), and 9) raising funds for programs, projects, capital needs, operations, and land acquisition from external sources.

- **Experience New River Gorge Program**. The NPS would implement a new program designed to provide community leaders, businesses owners, and leaders of major stakeholder groups an inside look and greater understanding of how the park is operated, how its resources are managed, and the issues facing the park. This would be accomplished through a sequence of immersion experiences during which local leaders would have behind the scenes, hands-on experiences in management of park resources and visitor activities. "Graduates" of the program would become ambassadors of the park and help to communicate to the broader public an understanding of the park and its issues.

- **Educational Programs**. The NPS would expand the scope and frequency of its environmental education programs to reach the local youth who will be the future stewards of the park. The curricula would be expanded to enhance student awareness of the national park system as a whole, the significance of New River Gorge National River as a unit of the national park system, and the ways in which youth could contribute to its stewardship.

- **Special Events**. The NPS would seek to sponsor or cosponsor special events in communities within the park and within its gateway communities on an annual or more frequent basis. The focus or attraction of these

events would differ from community to community and could be organized around historic themes, natural resource themes, recreational activities, or the need to address specific issues.

- **Informational Materials**. The NPS would expand public awareness of the park by 1) producing a greater variety of informational materials describing the park's significance, resources and opportunities, 2) by making sure that these materials include language that relates the park to the overall national park system, and 3) by more widely distributing these materials throughout southern West Virginia.
- **Media Relations**. The NPS would seek to expand coverage of park events and issues in newspapers and on television by developing relationships with editors and managers of local media outlets and by providing stories of interest.
- **Information Kiosks in Local Communities**. The NPS would seek to establish information kiosks at prominent locations in communities within the park and in its gateway communities. These kiosks would provide information about the park, including an overview of its significance as a unit of the national park system, its resources, stewardship guidance, visitor opportunities, and ways to become a park volunteer.

- **Gateway Community Partnerships (Alternatives 2 to 5)**

Community neighbor partners at New River Gorge National River include Summers, Raleigh, and Fayette Counties, as well as the six nearby incorporated communities that are the park's gateways – Hinton, Sandstone, Meadow Bridge, Beckley, Mount Hope, Glen Jean, Oak Hill, Minden, Cunard, Fayetteville, Winona, and Ansted. In the future the NPS would expand efforts to work cooperatively with these entities to define and accomplish shared goals. In the broad sense these goals would be:

- to address mutual interests in the quality of life of community residents, including matters such as compatible economic development and resource and environmental protection to anticipate, avoid, and resolve potential conflicts
- to protect park resources and values
- to provide for visitor enjoyment

NPS would take a leadership role in enhancing civic engagement to promote better understanding and communication between the NPS and its neighbors. Various civic engagement techniques would be utilized to enable members of the public to express concerns when they are affected by the park's actions and for the NPS to document its concerns and share them with all who are interested or involved.

NPS would encourage gateway communities to undertake measures to increase their sustainability and to address the threat of climate change. Through supportive partnerships with the parks, communities would be encouraged to reduce their emissions of greenhouse gases and criteria air pollutants and to improve the resource use efficiency of their public and private buildings and facilities.

NPS would also make available technical assistance to the three counties and the park's gateway communities, as appropriate, to address issues of mutual concern. This could include the following types of technical assistance:

- innovative community planning aimed at 1) sustaining and enhancing the character of gateway communities, 2) providing for visitor services in gateway communities, and 3) avoiding potential adverse impacts of development in the counties and gateway communities on park resources and values (particularly avoiding impacts on scenic resources in and around the gorge, as identified in the Boundary Study (see Appendix F))
- computer mapping and database management using ArcGIS software (in support of community planning efforts)
- regional planning designed to provide a seamless network of parks (see Regional Tourism Partnerships below)
- watershed-based water quality management planning
- transportation system planning, including assistance with enhancement of road and trail connections between gateway communities and the park and design of alternative transportation systems where they would enhance park access
- potential improvements in energy efficiency and resource-use efficiency and in implementing aspects of sustainable design, using strategies that the parks themselves have already implemented successfully
- documenting the significance of related cultural resources adjoining or outside the park, as well as assessing/implementing treatment options for those properties found to be significant
- securing grants for projects and/or programs that would jointly benefit the park's neighboring communities and the park itself

- **Regional Tourism Partnerships (Alternatives 2 to 5)**

The NPS recognizes that New River Gorge National River (and the other two national park units) in southern West Virginia is a major attraction within the region's growing tourism industry and that the health of the tourism industry is vital to the economic welfare of the region. The NPS would continue to seek to expand visitor opportunities at New River Gorge National River for appropriate types and levels of visitor use, including development of quality visitor facilities. The NPS anticipates

that over time visitation to the park would increase, helping to sustain and further contribute to the region's attraction as a multi-day tourist destination.

In the future the NPS would expand its participation in regional economic development planning efforts underway by the various regional planning agencies and organizations in southern West Virginia. The NPS would 1) take a leadership role in convening partner groups having common and/or overlapping interests in the region, 2) would work to help facilitate collaborative goal setting, decision-making, and development of an overall vision for the region as a tourist destination (and how it would be marketed), and 3) would provide technical assistance to these groups with communications, seeking grants, and training, as appropriate.

NPS would strengthen and enhance the connections between the park and the National Coal Heritage Area (NCHA). The NCHA and the park would cooperate to preserve and interpret coal heritage sites both within the park and in adjacent communities. The NCHA would undertake actions to provide for appropriate economic development in gateway communities, and to link them to the national and state park via trails, driving tours, and other mechanisms. Working in partnership with the NCHA, the park would focus on educational activities for children and adults.

NPS would also work collaboratively with its gateway community partners, state agencies, railroad companies, and private landowners to develop trail connections from the park to nearby communities and other visitor attractions, such as Hawks Nest State Park, Babcock State Park, the Gauley River National Recreation Area, Ansted, Oak Hill, Mount Hope, Beckley, and Meadow Bridge (see Figures 2.4, 2.6, 2.8 and 2.10).

The primary goal of the NPS in these efforts will be to assist with development of a seamless network of regional parks, open spaces, trails, and heritage sites within southern West Virginia that would increase protection and enhancement of biodiversity and create a greater array of educational and appropriate recreational opportunities. Other goals of the NPS would be to generally promote sustainable and informed tourism that incorporates socioeconomic and ecological concerns and to encourage and showcase environmental leadership by the NPS and the tourism industry.

- **Other Partnerships (Alternatives 2 to 5)**

Hawks Nest and Babcock State Parks. In the future the NPS would expand its collaboration with Hawks Nest State Park and Babcock State Park. Collaboration would focus on:

- developing shared strategies for dealing with common resource management issues (e.g., invasive species control, wildfire management, water quality management, etc.)

- providing official trail connections between park units
- providing complementary visitor experiences and interpretive programs
- making information about all parks in the region available to visitors
- avoiding redundancy in visitor services and facilities

State and County Agencies. The NPS would expand its collaboration with state and county resource management and regulatory agencies. Collaboration would focus on resource management programs, such as those pertaining to water quality management, wildlife management, air quality management, and cultural resource management. Collaboration would also focus on making state resource management programs and assistance available to owners of private land in the park. It would also focus on local enforcement of state and county environmental regulations. Of particular concern to the NPS would be collaboration focused on county enforcement of public health regulations pertaining to design and maintenance of on-site wastewater water disposal systems within the park as well as within the upstream watersheds of tributaries flowing into the New River within the park. Other concerns would be implementation of management and regulatory programs related to erosion and sedimentation control, stormwater management, timber harvesting, abandoned mine land reclamation, protection of cultural resources, protection of rare and endangered species habitat, and hunting.

Non-Profit and Private Partners for Special Projects. Collaborative partnerships with non-profit and private partners would expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences. Opportunities exist associated with restoration/rehabilitation of cultural resources where there is a potential for commercial adaptive reuse that would generate funds to support long-term sustainability of resources. For example, partnerships could assist the NPS with accomplishing desired conditions at Camp Brookside, Thurmond, Prince Brothers General Store, and early settlement/agricultural sites in the New River Parkway corridor (now River Road corridor).

Organized Stakeholder Groups. In the future the NPS would expand its collaboration with organized park stakeholder groups – particularly those that are representative of major park visitor groups and that have expertise and resources to assist the NPS with providing appropriate visitor facilities, with protecting resources from adverse visitor use impacts, and with enhancing visitor safety. These would include but not be limited to the West Virginia Professional River Outfitters (WVPRO), the West Virginia Wildwater Association, the International Mountain Biking Association (IMBA), and members of the local professional rock climbing community.

2.4.9 Area-Specific Desired Conditions and Needed Changes (Alternatives 2 to 5)

Table 2.12 identifies the desired resource conditions and desired visitor experiences for specific areas of the park that are common to Alternatives 2 to 5. The area-specific desired conditions focus on fundamental and other important resources and values and the visitor experience opportunities associated with them that would be appropriate in particular locations based on proposed management zoning..

Table 2.12 identifies the general types of actions in specific areas of the park that would be needed and allowable to achieve desired conditions common to Alternatives 2 to 5. These are examples of the actions needed to move from existing conditions to desired conditions. Identifying the types of needed and allowable changes helps 1) to provide a sense of what management actions might occur and what development might look like, 2) to identify the impacts of these actions, and 3) to estimate the general costs of implementing the action.

Table 2.12 Alternatives 2 to 5 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Development Areas			
Grandview	▪ day-use facilities (picnicking facilities, recreational facilities, playground, trails, overlooks, restrooms) (high use – demand for picnic shelters exceeds capacity) ▪ amphitheatre (used for Theatre West Virginia productions) (needs rehabilitation) ▪ visitor contact station (functionally obsolete) ▪ main overlook not ADA accessible ▪ road system and parking (pedestrian and vehicular circulation issues occur during peak visitation periods) ▪ public water supply and wastewater treatment facilities ▪ NPS operations facilities	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ traffic circulation and parking is managed to reduce impacts on park resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience ▪ visitors enjoy a safe and secure experience at the park ▪ accessible facilities enable disabled visitors to experience the park	▪ make improvements to address existing pedestrian and vehicular issues, possibly including: - relocate visitor contact station - redesign and upgrade trail to main overlook (including making the trail ADA accessible) - redesign main visitor parking lot - install vehicular directional signage - add a bus drop-off lane at Cliffside Amphitheatre
Cunard	▪ river access (high use) ▪ crowded conditions during most summer weekends, especially when river levels are low ▪ inadequate private paddler ▪ parking inadequate boat slide capacity ▪ limited river access for disabled boaters ▪ visitor conflicts	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ traffic circulation and parking is managed to reduce impacts on park resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience ▪ conflicts among visitor user groups are minimized ▪ accessible facilities enable disabled visitors to experience the park	▪ acquire property adjacent to the existing Cunard River Access and provide an additional boat launch facility ▪ provide additional private paddler parking along the Fisherman's Trail access road ▪ provide facilities for disabled boaters to access the river at Cunard ▪ block ATV access to Cunard via the New River railroad bridge
Fayette Station	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ river access (high use) ▪ day-use facilities (parking, picnicking, public restrooms) ▪ CSX Main Line (active) ▪ visitors (primarily private paddlers) frequently illegally cross the CSX Main Line to reach the river access	▪ traffic circulation and parking is managed to reduce impacts on park resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience ▪ visitors use a variety of travel modes to access the park and specific visitor use sites ▪ visitors enjoy a safe and secure experience at the park	▪ during periods of high visitor use provide a concession-based shuttle from satellite parking areas to the river access site ▪ rehabilitate the existing parking area above CSX right-of-way
Burnwood	▪ environmental education based at picnic pavilions (functionally obsolete) ▪ Laing Loop Nature Trail ▪ park operations facilities (functionally obsolete) ▪ public water supply and wastewater treatment facility (serving Burnwood and the Canyon Rim Visitor Center) (excess capacity)	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ expand the existing Laing Loop Nature Trail
River Corridor Areas			
Hinton to Meadow Creek	▪ New River fishing (high use) ▪ Akers river access and day-use facilities (low use) ▪ Tug Creek river access (low use) ▪ Brooks Falls river access, day-use facilities, undesignated camping (in floodplain) (poor condition) (high use) ▪ Hellems Beach river access, day-use facilities, and campground (campsites in floodplain – use over capacity during peak visitation periods) (high use) ▪ Sandstone Falls river take-out (moderate use) ▪ Meadow Creek private river access (low use) ▪ future WV DOH-funded reconstruction of	▪ a nearly continuous strip of natural riparian habitat occurs along the New River	▪ at Hellems Beach, remove the existing campsites and restore site

Table 2.12 Alternatives 2 to 5 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	River Road as New River Parkway, including a bridge across the New River ▪ CSX Main Line on river right (active)		
Army Camp to Stone Cliff	▪ Thayer - river access (low use) - day-use area and campground (undesignated sites) (demand frequently exceeds capacity)(no public restrooms) ▪ CSX Main Line on river right (active) ▪ visitors frequently illegally cross CSX Main Line to reach Depot Beach, Apple Orchard, McKendree, and Todd Beach (for camping) ▪ river rest stop at Dowdy Creek where paddlers frequently illegally cross under CSX Main Line to reach Dowdy Falls	▪ visitors enjoy a safe and secure experience at the park	▪ work cooperatively with the CSX Corporation to secure safe legal public access to the river across the CSX right-of-way at Dowdy Creek, Depot Beach, Apple Orchard, McKendree, and Todd Beach
Stone Cliff to Arbuckle Creek	▪ Stone Cliff - river access (high use) - campground and day-use area (in floodplain) (high use) - Stone Cliff Trail and trailhead (low use) ▪ CSX Main Line on river right (active)	▪ a nearly continuous strip of natural riparian habitat occurs along the New River ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of camping experiences are available for different types of visitors	▪ at Stone Cliff: - close the existing campground and restore riparian habitat - provide a campground on the bench level - provide a picnic area
Brooklyn to Hawks Nest	▪ Brooklyn - undesignated camping (moderate use) - river fishing (no day-use facilities) (moderate use) ▪ Teays Landing river access (private) ▪ CSX Main Line on river right upstream of Cunard and on river right and river left downstream of Cunard (active) ▪ visitors frequently illegally cross over CSX Main Line - to reach the lower railroad area (for fishing and boating) - to reach Short Creek (for camping and fishing) - to reach Kaymoor via the tunnel under the tracks (for hiking)	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ visitors enjoy a safe and secure experience at the park	▪ work cooperatively with the CSX Corporation to secure safe legal public access to the river across the CSX right-of-way in the lower railroad area, at Short Creek, and at Kaymoor ▪ work cooperatively with the WV DOT to provide tours of the New River Bridge using the bridge's maintenance catwalk
Forest Areas			
Rush Run	▪ Brooklyn Mine Trail (high use) ▪ Southside Trail (high use) ▪ Cunard Access Road ▪ Cunard Trailhead parking area ▪ provides critical habitat for rare mammals	▪ rare animals are protected	▪ limit visitor use to day use only
Sewell	▪ hunting area (plateau above Fire Creek, Ephraim Creek, Mann Creek, and Keeney Creek) ▪ no NPS facilities ▪ partially included within Babcock State Park (facilities include trails) ▪ fish stocking in Glade Creek and Mann Creek by WV DNR (moderate use) ▪ provides critical habitat for rare mammals ▪ rare pine communities occur on cliffs	▪ rare animals are protected	▪ limit visitor use to day use only
Beauty Mountain	▪ Beauty Mountain climbing area ▪ Beauty Mountain overlook (no designated trail) ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ rare animals are protected	▪ limit visitor use to day use only

Table 2.12 Alternatives 2 to 5 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Endless Wall	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ Ambassador Buttress climbing area (low use) ▪ Diamond Foot/Cirque climbing area (moderate use) ▪ Endless Wall climbing area (high use) ▪ Endless Wall Trail and Nuttall Trailhead (high use) ▪ Fern Creek Trail and Trailhead (high use) ▪ proliferation of undesignated trails accessing Ambassador Buttress and at the base of the Endless Wall ▪ provides critical habitat for rare mammals ▪ rare pine communities occur on cliffs	▪ rare animals are protected ▪ cliff communities are maintained and sustain populations of rare and significant species ▪ rimrock pine communities are maintained ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ limit visitor use to day use only ▪ prohibit bike use ▪ designate a trail at the base of Endless Wall ▪ provide a trail to Ambassador Buttress (with trailhead facilities)
Sunshine Buttress	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ New River Bridge Trail (low use) ▪ Sunshine Buttress climbing area (low use) ▪ no designated trails to climbing routes at the top or base of Sunshine Buttress ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ rare animals are protected ▪ cliff communities are maintained and sustain populations of rare and significant species ▪ rimrock pine communities are maintained ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ limit visitor use to day use only ▪ designate a trail at the base of Sunshine Buttress ▪ provide a trail to Sunshine Buttress (with trailhead facilities)
Ames	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ Bridge Buttress climbing area (high use) ▪ Bridge Buttress parking area ▪ Bubba City climbing area (mod use) ▪ Junkyard climbing area (moderate use) ▪ no designated trails to climbing routes at Bubba City or Junkyard ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ rare animals are protected ▪ cliff communities are maintained and sustain populations of rare and significant species ▪ rimrock pine communities are maintained ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ limit visitor use to day use only ▪ provide a trail to the Junkyard climbing area (with trailhead facilities) ▪ designate a trail at the base of the Bubba City climbing area

2.5 Alternative 2 – Themed Gorge Segments

2.5.1 Overall Management Concept (Alternative 2)

Alternative 2 emphasizes the substantial differences among subareas of the gorge, improving them to reflect their differing character, resources, and visitor experiences (see Figure 2.4).[1] Management actions would build upon the cultural resources, interpretive potential, and significant recreational opportunities of the north and south ends of the park, while retaining a primitive and remote feeling in the middle of the park.

2.5.2 Visitor Experience and Visitor Orientation(Alternative 2)

- **Experiencing the Park (Alternative 2)**

Alternative 2 would emphasize opportunities for different visitor experiences in three areas of the park (see Figure 2.4):

- the **Early Settlement and Farming Themed Area** in the south where significant cultural resources would tell the stories of early settlement and farming in the Appalachians
- the **Primitive Outdoor Experience Area** in the middle of the park where the expanse of backcountry forest would remain wild and largely unfragmented
- the **Industrial Gorge Themed Area** in the north where significant cultural resources would tell the stories of America's industrialization related to coal mining, lumbering, and railroading in the late 19th and early 20th centuries

Table 2.13 provides an overview of potential visitor experiences in the three themed areas. Table 2.13 also summarizes management actions in Alternative 2 that would define where and how visitors would enjoy the important experiences that they may have at New River Gorge National River, including:

- appreciating life in the gorge – the human history story
- appreciating/experiencing the wildness of the landscape
- experiencing the power of the river
- experiencing scenic beauty

In Alternative 2 visitors would also continue to enjoy the classic park experiences at Sandstone Falls, Grandview, Thurmond, Endless Wall, Canyon Rim, and Fayette Station Road; new management actions consistent with the overall management concept for Alternative 2 would enhance the visitor experience at Sandstone Falls in the south and at Thurmond in the north.

[1] *See Tables 2.2 and 2.3 above for a general comparison of the alternative concepts and a summary of the broad organizing principles for each alternative*

Table 2.13 Important Visitor Experiences (Alternative 2)

Places Where Visitors Would Generally Experience the Park	
Early Settlement and Farming Themed Area	The Early Settlement and Farming Themed Area would encompass the southern end of the park from Hinton to Meadow Creek. Visitors would learn about early settlement and farming history at several representative restored farmhouses in the New River Parkway corridor. From New River Parkway and from improved recreation sites along the parkway and at Sandstone Falls, visitors would have opportunities to view the river, learn about the park's natural resources, and picnic. New hiking and biking trails would enable visitors to explore the park's forest and to visit the restored farmsteads on foot or by bicycle. Opportunities for camping would be available at a new developed campground.
Primitive Outdoor Experience Area	The Primitive Outdoor Experience Area would encompass the middle of the park from Meadow Creek to Thurmond. Visitors would have a backcountry experience where they would be immersed in nature, away from modern conveniences. Opportunities would be present to experience a sense of wildness, solitude, adventure, exploration, and discovery. Recreation would be unstructured and trail-based. Addition of a new river access at Meadow Creek West would enhance the river experience by offering new float trip options for families, fishermen, and beginning paddlers.
Industrial Gorge Themed Area	The Industrial Gorge Themed Area would encompass the northern end of the park from Thurmond to Hawks Nest State Park. Visitors would learn about the gorge's industrial history related to mining, lumbering, and railroading. An expanded network of trails would enhance access to cultural resource sites in remote forested areas.
Important Park Experiences That Visitors Would Have *(underlined elements are additions included in Alternative 2)*	
Appreciate life in the gorge – the human history story	**Throughout the park there are cultural resource sites where human history stories could be told.** In the Early Settlement and Farming Themed Area, visitors would learn about early Appalachian settlement by visiting historic farms where interpretive programs and exhibits would be available. The farmhouses would be restored to period condition and set within restored cultural landscapes. In the Industrial Gorge Themed Area visitors would learn about the park's industrial history related to mining, railroading, and lumbering: - rehabilitated, restored, and stabilized commercial and residential structures at Thurmond would enable visitors to learn about life in the gorge's historic railroading towns (see Classic Experiences above) - stabilized mining structures and town ruins at Nuttallburg Mining Complex and the Nuttallburg town site would tell stories about life in the gorge's historic coal mining towns (as in Alternative 1) - new trails would provide visitors with access to mining resource areas where they would learn about the park's mining history - visitors would also learn about the history of life in the gorge when they come upon and find cultural resource discovery sites along trails (approximately 10 sites)
Appreciate / experience the wildness of the landscape	**A sense of wildness dominates the landscape setting in most areas of the park.** The Primitive Outdoor Experience Area composing most of the middle of the park would be managed as backcountry forest, preserving its wild character and enhancing the perception of the park's wildness as visitors experience the park. Overall, backcountry forest blocks would compose approximately 68.5 percent of the park. While paddling the river visitors would be transported to remote and wild areas in the upper, middle, and lower gorge, relying on the existing network of river accesses which make possible a variety of paddling experiences in a wild landscape setting. Visitors venturing into the park's forest would explore the park making their way along an expanded network of trails at times near the water's edge and at times looking into the gorge. New trails would provide access to cultural resources, including industrial and

Table 2.13 Important Visitor Experiences (Alternative 2)

Important Park Experiences That Visitors Would Have (continued) *(underlined elements are additions included in Alternative 2)*	
Appreciate / experience the wildness of the landscape (continued)	mining town ruins in the Industrial Gorge Themed Area and to restored farmsteads in the Early Settlement and Farming Themed Area. Exploration of the park by bicycle – pending adoption of a special regulation and subject to a development of a trail management plan – would occur on a variety of trail types in frontcountry zones and would occur only on singletrack trails in backcountry zones. Visitors camping in the forest would experience nature and the sense of solitude that comes from spending extended time in the outdoors at existing campsites and on the plateau in the Industrial Gorge. From existing developed overlooks and a new developed overlook at Brooks Falls expansive vistas of rugged terrain, dense forest, and the turbulent river in the gorge below would evoke appreciation of the wild landscape (as in Alternative 1). New opportunities for views evoking a sense of wildness would be added along existing and new trails that in the Industrial Gorge Themed Area and in the Early Settlement and Farming Area Themed Area.
Experience the power of the river	**Throughout the park the power of the river is evident wherever visitors can be on the river, be at the river's edge, or view the river from afar.** The New River would carry paddlers along its freeflowing course through the gorge cut by its waters deep in the Appalachian Plateau. Those who ride the river as it descends through the gorge would feel its power and experience the thrill of adventure and discovery as the water flows turbulently over and amidst massive boulders transported through time from the cliff walls above. River experiences would be available from the existing network of river accesses for paddlers. Improvements to river accesses in upper gorge in the Early Settlement and Farming Themed Area would enable visitors to more safely and easily access the New River above Sandstone Falls. At the river's edge visitors could see, smell, and hear the river, feeling its power as they sense around them the scale of the gorge shaped by the flowing water. From the existing network of river accesses and day-use areas at the river's edge visitors would experience the river as it flows calmly yet powerfully on its course northward; elsewhere visitors would experience a wild river flowing turbulently around rocks and boulders. In the Early Settlement and Farming Themed Area the river's edge experience would be enhanced by day-use area improvements included in the New River Parkway project (as in Alternative 1) as well as enhancements at other river accesses and day use areas. In the Lower Gorge Themed Area the visitor experience at the river at Dun Glen would be enhanced by restoration and expansion of existing day-use facilities. From existing developed overlooks and a new developed overlook at Brooks Falls the depth of the gorge, the exposed cliff walls, and the massive boulders in the river below, would evidence the river's power to shape the landscape (as in Alternative 1). New opportunities for views evidencing the river's power to shape the landscape would be added along existing and new trails in the Industrial Gorge Themed Area and in the Early Settlement and Farming Area Themed Area.
Experience scenic beauty	**Throughout the park its scenic beauty is evident from roads, trails, overlooks, and the river.** From existing roads visitors would have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. In the south end of the park as visitors travel New River Parkway from Sandstone to Hinton the scenic beauty of the park would be evident in the dramatic landscape visible from the New River Bridge and along the parkway (as in Alternative 1). In the north end of the park, efforts would be made to enhance opportunities for scenic vistas along Fayette Station Road by working with WV DOH to add pull-outs (as in Alternative 1). Visitors traveling on existing trails would continue to have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. Visitors would also enjoy the park's scenic resources from new trails providing access to cultural resources in the Industrial Gorge Themed Area and to restored farmsteads in the Early Settlement and Farming Themed Area.

Table 2.13 Important Visitor Experiences (Alternative 2)

Important Park Experiences That Visitors Would Have (continued) *(underlined elements are additions included Alternative 2)*	
Experience scenic beauty (continued)	Visitors would continue to have panoramic scenic views of the park's landscape from existing developed overlooks and from a new developed overlook at Brooks Falls (as in Alternative 1). New opportunities for panoramic scenic views would be added along existing and new trails that in the Industrial Gorge Themed Area and in the Early Settlement and Farming Area Themed Area.
Classic Park Experiences *(underlined elements are additions included Alternative 2)*	
Paddling the New River	Paddlers would continue to experience the power of the river and the park's wild character and natural beauty as they float the river, stopping to picnic, fish, visit natural and cultural sites of interest, and/or camp. Opportunities for disabled paddlers would be enhanced by addition of disabled boater access at the Cunard and McCreery (Terry Beach) river accesses (in Alternatives 2 to 5). The condition of river recreation sites popular for river lunch stops, camping, and fishing would be enhanced by improving access and providing restroom facilities where practicable (in Alternatives 2 to 5). More frequent river patrols would provide visitor education and, as needed, increased enforcement of existing regulations related to group size, trash removal, and human waste removal where restrooms are not available (in Alternatives 2 to 5).
Sandstone Falls	The boardwalk and recreational facilities at Sandstone would continue to bring visitors to the water's edge where they can feel the power of the river, experience its beauty, and learn about the park's significant natural resources (as in Alternative 1). The visitor experience would be enhanced by expansion of the boardwalk and parking facilities, addition of interpretive media, and replacement of restroom facilities.
Sandstone Falls Visitor Center	At the Sandstone Falls Visitor Center visitors would continue to be oriented to the park with an emphasis on different experiences in three parts of the park (see Section 2.5.2 above).
Grandview	Social gatherings, cultural events, and recreational activities at Grandview would continue in a setting where visitors can experience the scenic beauty of the park, the wildness of its landscape, and the power of the river (as in Alternative 1). Park visitors would enjoy safer access to the Turkey Spur overlook (as in Alternative 1). Theatre goers would continue to enjoy productions at an updated Cliffside Amphitheatre (as in Alternative 1).
Thurmond	Thurmond would become a major visitor attraction in the north end of the park where the railroading story would be told. Contamination at Commercial Row structures would be remediated (as in Alternative 1) and the buildings rehabilitated so that commercial activities can return to the town (through the park's leasing program). At restored historic houses the stories of town life would be told. The town would also be home to some NPS staff that would live in rehabilitated historic houses. Visitors might also be able to stay in the town in lodging made available in rehabilitated historic houses. Historic buildings that are not rehabilitated would be stabilized and restored on the exterior only.
Kaymoor and Nuttallburg	Kaymoor and Nuttallburg would be highlighted as places in the north end of the park where the park's industrial story would be told. Trails would provide visitor access to historic mining areas at Kaymoor and Nuttallburg (as in Alternative 1). Nationally significant mining resources at Nuttallburg would be interpreted for visitors and made more accessible through parking and trail improvements (as in Alternative 1).
Experiencing the Cliffs	The massive sandstone cliffs in the Endless Wall area and elsewhere would continue to attract visitors seeking to experience their beauty as well as the thrill of adventure, exploration, and solitude of rock climbing (as in Alternative 1). Access to the Endless Wall would be made easier and safer by adding parking and by establishing designated and maintained trails to climbing routes (in Alternatives 2 to 5). Climbing and other visitor activities in the Endless Wall area would also be limited to day use (in Alternatives 2 to 5).
Canyon Rim	At Canyon Rim visitors would continue to be oriented to the park at the visitor center with an emphasis on different experiences in three parts of the park (see Section 2.5.2 above). Visitors would continue to have opportunities to view the river and the gorge from existing overlooks (as in Alternative 1).

Table 2.13 Important Visitor Experiences (Alternative 2)

Classic Park Experiences (continued) *(underlined elements are additions included in Alternative 2)*	
Fayette Station Road	Fayette Station Road would continue to be a major visitor attraction in the north end of the park where visitors would experience the historic travel route across the river, learn about the park's industrial heritage, view the river, and feel its power (as in Alternative 1). Improvements to Fayette Station Road and parking facilities, as well as implementation of shuttle service during periods of high visitor use, would make for a safer visitor experience with more opportunities to experience the park's scenic resources and with fewer opportunities for visitor conflicts (in Alternatives 2 to 5).

- **Visitor Orientation**

Visitor centers at Canyon Rim and Sandstone would continue to as primary venues where visitor orientation would occur. From these locations visitors interested in park history would be directed to the New River Parkway corridor (existing River Road corridor) in the south end of the park and to the major industrial sites – Fayette Station, Nuttallburg, Kaymoor, and Thurmond – in the north end of the park. More adventurous visitors would be directed to trailheads from which to access cultural resources in remote areas of the frontcountry and the backcountry in these two areas. Visitor orientation would also emphasize the variety of recreation opportunities for exploration, adventure, and solitude available throughout the park on the river and within the preserved backcountry forest in the middle gorge.

New park brochures and informational materials would describe the park's resources and opportunities in the three areas of the gorge – the historic areas in the south and north and the primitive area in the middle. Working collaboratively with WV DOH, the park would seek to place signage along public roads directing visitors to park attractions in the upper gorge and the lower gorge as they leave visitor centers and as they approach the park from US 19, US 60, I-64, and WV SR 41.

Table 2.14

New River Gorge National River
Alternative 2 – Management Zoning Summary

Management Zone	Area (acres)
Backcountry	49,029 (68.5%)
Frontcountry	15,950 (22.3%)
River Corridor	5,525 (7.7%)
Historic Resource	599 (0.9%)
Park Development	443 (0.6%)

2.5.3 Resource Management (Alternative 2)

- **Maintaining Natural Processes and Restoring Natural Systems (Alternative 2)**

Resource Stewardship Strategies. The management strategies shown in Table 2.12 are the actions that the NPS would implement to achieve and maintain over time desired natural resource conditions. The strategies address the management issues challenging the park relevant to maintaining natural processes and restoring natural systems. Implementation of these strategies would be common to Alternatives 2 to 5.

Unfragmented Forest. In Alternative 2 blocks of intact and unfragmented forest in the middle of the park would be managed as backcountry forest. Backcountry forest would include the ten forest blocks zoned backcountry in Alternatives 2 to 5, as well as six additional blocks in the middle of the park (see Table 2.15 and Figure

Table 2.15
New River Gorge National River
Backcountry Forest Management Zoning in Alternative 2 (see Figure 2.5)

Backcountry Zones Common to Alternatives 2 to 5

- Fall Branch
- Meadow Creek North
- Glade Creek
- Garden Ground
- Stretcher Neck
- Claremont
- Above Thurmond
- Rush Run
- Sewell
- Endless Wall

Additional Areas Zoned Backcountry in Alternative 2

- Terry-Batoff Creek
- Dunloup Creek
- Bucklick Branch
- Highland-Backus
- Dowdy Creek
- Substation

2.5). Backcountry forest zoning would extend from I-64 on river left (Meadow Creek on river right) to Cunard. It would also apply to the Fall Branch area (adjacent to River Road – the future New River Parkway) and to the Endless Wall area (as in all the action alternatives). The backcountry zones would be managed to protect and restore unfragmented forest blocks largely free of human disturbance and to offer opportunities for visitors to be immersed in nature, relying on non-motorized access.

In Alternative 2 frontcountry forest zoning would apply to most of the north and south ends of the park, as well as to the Babcock State Park, the Arbuckle Creek, and the Below Thurmond areas (see Figure 2.5). Within these areas large contiguous forest blocks would generally be maintained, although some development for visitor use facilities might occur that would cause some forest fragmentation. Visitors would access the frontcountry forest in the north and south ends of the park by roads and by trails.

Riparian Corridor. No additional areas would be managed as riparian zones in Alternative 2 beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

- **Water Quality Management (Alternative 2)**

No additional actions would be implemented in Alternative 2 related to water quality management beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

- **Cultural Resource Management (Alternative 2)**

In Alternative 2 cultural resource management actions would focus on treatment and interpretation of:

- representative early settlement/agricultural resources in the south end of the park
- representative industrial resources and discovery sites in the north end of the park
- representative discovery sites along trails in the middle of the park (approximately 10 sites)

Early Settlement/Agricultural Resources. Cultural resources in the southern end of the park would generally be managed to tell the park's early settlement/ agricultural stories. The following actions would be implemented:

- representative farmhouses and outbuildings would be restored
- the cultural landscapes associated with restored farmhouses (including farm fields, fence lines, and orchards) would be restored
- interpretative media would be installed

KEY

- Industrial Gorge Themed Area
- Early Settlement and Farming Themed Area
- Primitive Outdoor Experience Area
- Future Connector Trail
- NPS land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

PROSPERITY
BRADLEY
BECKLEY
MOUNT HOPE
PINEY VIEW
STANAFORD
Glen Jean
OAK HILL
FAYETTEVILLE
ANSTED
McCreery
Army Camp
Grandview
Prince
McKendree
Quinnimont
Highland
Thayer
Glade Creek
Backus
Meadow Creek
Stone Cliff
Thurmond
Fayette Station
Canyon Rim Visitor Center
Kaymoor
Cunard
Nuttalburg
Babcock State Park
Sandstone Visitor Center
HINTON
MEADOW BRIDGE

Future Connector Trail from Prince to Beckley
Future Connector Trail from Grandview to Beckley
Future Connector Trail from Southside Junction to Mount Hope
Future Connector Trail from Southside Junction to Oak Hill
Future Connector Trail from Hawks Nest State Park to Gauley River National Recreation Area
Future Connector Trail from Sewell to Gauley River National Recreation Area
Future Connector Trail from Meadow Creek to Meadow Bridge
State Route 20
Future New River Parkway

EARLY SETTLEMENT AND FARMING
Tell the story of farmsteads and related landscapes

PRIMITIVE OUTDOOR EXPERIENCES
Offer opportunities for primitive outdoor experience (with limited support facilities)

INDUSTRIAL GORGE
Tell the story of coal and railroading

3 64 41 19 60

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Figure 2.4

ALTERNATIVE 2 CONCEPT: THEMED GORGE SEGMENTS

New River Gorge National River
WEST VIRGINIA
National Park Service US Department of the Interior

KEY

- Backcountry Zone
- Frontcountry Zone
- River Corridor Zone
- Historic Resource Zone
- Park Development Zone
- Community

PROSPERITY
BRADLEY
BECKLEY
PINEY VIEW
MOUNT HOPE
STANAFORD
OAK HILL
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE

Glen Jean (Park Headquarters)
Stone Cliff to Arbuckle Creek
Thurmond
Church Dun Glen
Terry Beach
Terry
Terry-Batoff Creek
Stretcher Neck
Quinnimont to Army Camp
Royal
Grandview
Carper Farm
Harrah Homestead
Army Camp to Stone Cliff
Garden Ground
Dunloup Creek
Arbuckle Creek
Dun Glen
Below Thurmond
Above Thurmond
Substation
Rush Run
Cunard
Sewell
Arbuckle Creek to Brooklyn
Sunshine Buttress
Marr Branch
Ames
Fayette Station
Burnwood
Canyon Rim Visitor Center
Kaymoor
Endless Wall
Brooklyn to Hawks Nest
Craig Branch
Nuttallburg
Beauty Mountain
Babcock State Park
Prince Quinnimont
Quinnimont Church
Dowdy Creek
Glade Creek
Highland-Backus
Highland
Claremont
Thayer
Thayer Church
Meadow Creek to Quinnimont
Backus
Bucklick Branch
Meadow Creek North
Richmond Farm
Sandstone Falls Island
Westall Farm
Phillips Farm
Trump/Lilly Farm
Fall Branch
Irish Mountain
Richmond Campground
Sewell Mountain
Richmond Bottom
Chestnut Mountain
Meadow Creek West
Meadow Creek
Meadow Creek South
Sandstone Visitor Center
Brooks Island
Bass Lake
Camp Brookside
Hinton Depot
Hinton to Meadow Creek

N

0 mi. | 1.5 mi. | 3 mi. | 6 mi. | 9 mi. | 12 mi. | 15 mi.

Figure 2.5

ALTERNATIVE 2: MANAGEMENT ZONES

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

- restored farm fields (exclusive of those at Phillips Farm) would be leased for agriculture

Also in the southern end of the park, at Camp Brookside the NPS would work in partnership with an educational institution to rehabilitate camp buildings for adaptive reuse for education purposes.

Industrial Resources. Industrial resources in the northern end of the park would be treated and interpreted to tell the park's mining, lumbering, and railroading stories. Many of these sites would only be accessible by foot on existing or new park trails.

At Nuttallburg (as in Alternative 1), a variety of management actions would be implemented to treat resources, to tell the story of mining in the gorge, and to provide safe visitor access facilities.

At Thurmond, a variety of management actions would be implemented to treat resources, to provide a focal point for telling the story of railroading in the gorge, and to provide safe visitor access. As in Alternative 1, contamination would be remediated in the Commercial Row buildings. In Alternative 2 the buildings would also be rehabilitated and leased through the NPS historic leasing program. Representative historic houses would be restored to period condition for a period exhibit. Other viable historic houses would also be rehabilitated for reuse as park housing or visitor lodging through the NPS historic leasing program. Remaining historic structures would be stabilized (maintaining exteriors only). Partners would be sought to assist with rehabilitation.

A few additional industrial sites in the northern end of the park would be managed as discovery sites (see Section 2.4.5 Cultural Resource Management above) located along new or existing park trails. Representative coal mining discovery sites could include: Fayette Mine, Caperton, Sewell, Pennbrook, Fire Creek, Beury, the Brooklyn Coke Ovens, Stone Cliff Mine, and the Stone Cliff coke ovens.

Discovery Sites in the Middle of the Park. Where cultural resources in the middle of the park are accessible from roads or adjoin visitor use areas or trails, some would be managed as discovery sites. A few representative railroading-related discovery sites could include Prince Brothers General Store, the Prince Train Station, Quinnimont Church, former town sites at Hamlet and McCreery, and Harrah Homestead. At Harrah Homestead treatment actions would also include rehabilitation of the cultural landscape.

- **Protecting Scenic Resources in and around the Gorge (Alternative 2)**

No additional actions would be implemented in Alternative 2 to protect scenic resources in and around the gorge beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

Visitors would have new opportunities to experience the park's scenic resources in the north and south ends of the park along several new trails (see Section 2.5.4 below). In the south, a new farm loop trail would provide scenic views of the upper river gorge, the pastoral landscape, and cultural landscapes at the park's early settlement farms. In the north, new trails to industrial sites would provide scenic views of the lower gorge and cultural landscapes illustrative of the park's industrial heritage.

2.5.4 Visitor Use and Visitor Facilities (Alternative 2)

- **Hiking and Equestrian Use (Alternative 2)**

In addition to the trail system expansion common to Alternatives 2 to 5 and the trail improvements at Nuttallburg (as in Alternative 1), Alternative 2 would make available new trails providing access to cultural resources, including industrial and mining town ruins in the north and early settlement/agricultural resources in the south. All new trails would generally use existing unmaintained trails. Possible new trails would include:

- a trail to Fayette Mine
- a trail to Stone Cliff Mine
- a trail from the Stone Cliff Coke Ovens to Stone Cliff Mine
- a rail trail from Thurmond to Sewell
- a farm loop trail connecting Richmond-Hamilton Farm, Vallandingham Farm, Trump-Lilly Farm, and Phillips Farm

Alternative 2 would address the need for additional equestrian trails by providing a new equestrian loop trail in the Craig Branch area. The boardwalks at Sandstone Falls would also be expanded.

Trailhead facilities would be provided for all new trails.

- **Biking (Alternative 2)**

Alternative 2 would include potential joint hiking and biking use of existing and new trails listed in the preceding section subject to the general design principles identified for biking trails in Section 2.4.6 above. In addition, in Alternative 2 a possible new trail with biking access would be developed parallel to the CSX Main Line from Thurmond to Sewell.

- **Hunting (Alternative 2) (Continuation of Existing Hunting Program)**

In Alternative 2 hunting within the park would continue in accordance with the hunting and fishing regulations of the WV DNR (as in Alternatives 1 and 3). Hunting would generally be permitted throughout the park. A few areas would remain closed to hunting for safety reasons, including

- areas designated as safety zones in the park compendium (NPS 2007)
- areas within the historic boundaries of Grandview State Park and Sandstone Falls State Park
- the area within the boundary of Babcock State Park (which is managed by the state of West Virginia)

- **Pedestrian Access across Railroad Rights-of-Way (Alternative 2)**

In Alternative 2 the NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible. As in Alternative 1 priorities would be to secure legal crossings at locations where visitors currently frequently cross tracks illegally.

- **Access and Parking (Alternative 2)**

In Alternative 2 management actions would generally maintain existing patterns of motorized access within the park, while permitting expansion of motorized access for visitors and/or administrative use in park development zones, historic resource zones, river corridor zones, and frontcountry zones. Approximately two-thirds (68.5%) of the park would be zoned backcountry where roads and parking would be limited to zone perimeters (see Figure 2.5) and where only non-motorized access could occur in the zone interior.

In Alternative 2 in the south end of the park visitor access and parking facilities would be provided at Trump-Lilly Farm and the existing parking area at Sandstone Falls would be expanded. In the north end of the park new trails that provide access to industrial and mining town ruins would have trailheads with adequate parking for visitors.

At Cunard existing problems with inadequate parking for private paddlers on peak visitation days would be alleviated by:

- adding parking for private paddlers at Cunard (common to Alternatives 2 to 5)
- adding new private paddler parking along the Fisherman's Trail access road (common to Alternatives 2 to 5)

- **Other Visitor Facilities (including disabled access) (Alternative 2)**

Additional visitor facilities that would be developed as part of Alternative 2 would include camping, picnicking, and river access facilities – primarily in the north and south ends of the park. All practicable efforts would be made to provide access for the disabled at new facilities (common to Alternatives 2 to 5).

In the south end of the park, new visitor facilities or improvements to visitor facilities would occur at Brooks Falls, Sandstone Falls, and at Camp Brookside:

- at Brooks Falls existing facilities would be improved, including enhancements to river access facilities, installation of comfort stations, and expansion of picnic facilities
- at Sandstone Falls a new comfort station would be added
- at Camp Brookside the NPS would work in partnership with an educational institution to rehabilitate camp buildings for adaptive reuse for education purposes

In the north end of the park a new developed campground would be developed at the existing NPS Burnwood day-use/operations area. This campground would address the need for camping facilities in proximity to rock climbing areas and cultural resource attractions in the lower gorge.

In the middle of the park day-use facilities at Dun Glen would be rehabilitated.

River access improvements associated with Alternative 2 would include:

- at Cunard expansion of existing parking for private paddlers and addition of new private paddler parking along the Fisherman's Trail access road (common to Alternatives 2 to 5)
- enhancements to the Brooks Falls river access (see preceding section on Access and Parking)

2.5.5 Working with Local Communities (Alternative 2)

- **Sustaining Communities within the Park (Alternative 2)**

Hinton. No additional actions would be implemented in Alternative 2 to strengthen the connection between the city, its residents, and the mission of the NPS at the park beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.7 above).

Thurmond. Thurmond would become a major visitor attraction in the north end of the park where the railroading story would be told (see Table 2.13). Visitation levels would dramatically increase. Visitor lodging would also likely be made available in restored houses. Visitors would be more likely to explore areas of the town where private residents live. The permanent residential population would increase as a result of NPS staff living in some restored houses. The NPS would continue to work cooperatively with residents – including NPS staff residents – to address issues associated with living in the historic town.

Other Communities within the Park. Collaborative priorities for the other communities within the park in Alternative 2 are summarized in Table 2.16 below. The collaboration actions referenced in Table 2.16 are described above in the discussion of actions common to Alternatives 2 to 5 (see Section 2.4.7).

Table 2.16 Alternative 2 – Collaborative Priorities for Communities within the Park*

		Collaborative Actions by the NPS and Local Communities within the Park									
				Provide Technical Assistance to Communities for							
Community	Alternative 2 Setting	Collaboration Priority	Form Community Partner Group	Developing a Community Vision Plan	Managing Change	Managing Visitor Impacts	Documenting Resources	Obtaining Grants	Managing Invasive Species	Providing Private Sector Visitor Services	Develop NPS Facilities, as Needed
Hinton	a major gateway community partly within the park at its southern end; no major existing or new visitor use facilities	1	✓			✓	✓	✓		✓	
Meadow Creek	a community at the edge of the primitive outdoor experience area in the middle of the park (minimum visitor through traffic); Sandstone Visitor Center	2	✓	✓	✓	✓	✓	✓	✓	✓	✓
Prince/ Quinni-mont	a community surrounded by the primitive outdoor experience area in the middle of the park (visitor and public through traffic on WV SR 41); a few existing visitor facilities in vicinity	2	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terry	a community surrounded by the outdoor primitive experience area in the middle of the park; a few existing visitor facilities in vicinity	2	✓	✓		✓	✓		✓		
Thayer	a remote community surrounded by the outdoor primitive experience area in the middle of the park; a few existing visitor facilities in vicinity	2	✓	✓	✓	✓	✓	✓	✓	✓	✓
Backus	on plateau surrounded by primitive outdoor experience area; no existing or new visitor facilities in vicinity	3	✓	✓			✓				
Highland	on plateau surrounded by primitive outdoor experience area; no existing or new visitor facilities in vicinity	3	✓	✓			✓				
Thurmond	a major attraction in the Industrial Gorge Themed Area; restoration and rehabilitation of historic structures would dramatically increase visitation and the number of residents living in the town	1				✓	✓	✓	✓	✓	✓

1 – High Priority 2 – Medium Priority 3 – Low Priority ✓ - action recommended, as funding allows

2.5.6 Land Protection (Alternative 2)

- **Land Protection Priorities (Alternative 2)**

In the future the NPS land protection program would focus efforts on the highest priority properties still to be protected in the park (see Section 2.4.8 above). For Alternative 2 the priorities for working with willing sellers of private property would be further refined to focus on acquiring properties that are important to accomplishing the overall concept for the alternative, such as properties that:

- include early settlement/agricultural cultural resources in the southern end of the park
- include industrial and mining town ruins in the northern end of the park
- include sites needed for trailheads, trail connections, or recreational sites in the middle of the park
- include a site for a developed campground on the plateau in the northern end of the park

- **Stewardship of Private Land Remaining within the Park Boundary (Alternative 2)**

In the future the NPS would work cooperatively with the owners of private lands remaining within the park boundary to promote sensitive stewardship of privately-owned resources and values that are fundamental to the park (see Section 2.4.8 above). In Alternative 2 NPS would further focus the stewardship program on the private lands that are of high priority for protection as noted in Section 2.4.8 above and in the preceding section (Land Protection Priorities).

2.5.7 Partnerships (Alternative 2)

- **Relevance of the Park to Local Visitors (Alternative 2)**

In the future the NPS would take a number of actions aimed at strengthening the connection between the public and the mission of the NPS at New River Gorge National River (see Section 2.4.9 above). No additional actions would be implemented in Alternative 2 to enhance relevance of the park to local visitors beyond those identified in Section 2.4.9.

- **Gateway Community Partnerships (Alternative 2)**

In the future the NPS would expand efforts to work cooperatively with its gateway communities to define and accomplish shared goals (see Section 2.4.9 above). No additional actions would be implemented in Alternative 2 to enhance partnerships with the park's gateway communities beyond those identified in Section 2.4.9.

- **Regional Tourism Partnerships (Alternative 2)**

In the future the NPS would expand its participation in regional economic development planning efforts underway by the various regional planning agencies and organizations in southern West Virginia (see Section 2.4.9 above). No additional actions would be implemented in Alternative 2 related to NPS participation in these efforts beyond those identified in Section 2.4.9.

- **Other Partnerships (Alternative 2)**

In the future the NPS would expand its collaboration with other public agencies and groups – including Babcock and Hawks Nest State Parks, state and county agencies, and organized stakeholder groups (see Section 2.4.9 above). No additional actions

would be implemented in Alternative 2 related to NPS partnerships with these entities beyond those identified in Section 2.4.9.

2.5.8 Area-Specific Desired Conditions and Needed Changes (Alternative 2)

Table 2.17 identifies the desired resource conditions and desired visitor experiences for specific areas of the park in Alternative 2. The area-specific desired conditions focus on fundamental and other important resources and values and the visitor experience opportunities associated with them that would be appropriate in particular locations based on proposed management zoning.

Table 2.17 also identifies the general types of actions in specific areas of the park that would be needed and allowable to achieve desired conditions in Alternative 2. These are examples of the actions needed to move from existing conditions to desired conditions. Identifying the types of needed and allowable changes helps 1) to provide a sense of what management actions might occur and what development might look like in Alternative 2, 2) to identify the impacts of these actions, and 3) to estimate the general costs of implementing the actions.

2.5.9 Costs (Alternative 2)

The NPS has prepared estimates of annual operating costs and one-time costs associated with Alternative 2 using NPS and industry cost estimating guidelines (see Table 2.37 in Section 2.14 below). Annual recurring costs include personnel and non-labor costs, such as utilities, vehicles, travel, and supplies. One-time capital investments include construction, exhibits, research and planning. These costs are presented for comparative purposes only and will be refined at a later date based upon final design of facilities and other considerations. Some projects have the potential to be funded through partnerships and volunteers, or through shared funding with other agencies. Therefore, actual costs would vary depending on when specific actions are implemented and on contributions by partners and volunteers.

- **NPS Annual Operating Costs and Staffing Requirements (Alternative 2)**

NPS annual operating costs associated with Alternative 2 are estimated to be $15,570,000 (2009 dollars). This includes the anticipated cost for staff salaries and benefits for 186 full-time equivalent staff, utilities, supplies, leasing (including leased park offices, as in Alternative 2), and other materials needed for park maintenance and operations.

Operating costs for Alternative 2 include the addition of 26 new FTE. The new positions include one new FTE to help develop and manage partnerships with the gateway communities, additional protection rangers to cover new cultural and backcountry facilities, additional interpretive staff to help visitors understand the focal areas, and additional staff to maintain new park facilities.

- **NPS One-Time Costs (Alternative 2)**

NPS one-time costs associated with Alternative 2 are estimated to be $27,350,000 (2009 dollars) including one-time facilities costs and non-facilities costs.

Facility costs include projects such as the following:

- restore Richmond-Hamilton Farm for interpretation
- restore the Trump-Lilly and Vallandingham farmhouses for interpretation
- rehabilitate Camp Brookside for adaptive reuse for educational purposes
- rehabilitate two Thurmond Houses for temporary housing and 18 houses for interpretation
- rehabilitate Thurmond's Commercial Row for lease
- provide new trails for rock climber access
- provide two new equestrian trails
- add new hiking trails and trailheads to historic resources
- provide new improvements to Turkey Spur at Grandview
- improve Cunard and Fayette Station river access areas to relieve congestion
- relocate Stone Cliff campground from riparian area
- improve day use areas at Brooks Falls, Sandstone Falls, Dun Glen, McCreery and Mill Creek

Non-facility costs include projects such as the following:

- restore farm fields, fence lines and orchards on historic farms
- develop 15 cultural resources as discovery sites
- pedestrian access across CSX right-of-way at new campgrounds
- develop new scenic vistas
- install and maintain information kiosks at gateway communities

2.17 Alternative 2 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Development Areas			
Terry Beach	▪ McCreery: - river access (high use) - demand exceeds capacity during peak visitation periods leading to safety issues and visitor conflicts - private paddler safety issues due to pedestrian crossing of WV SR 41) - NPS unable to acquire property needed to relocate parking and address safety issues ▪ Terry Beach - private river access (low use) - undesignated camping (low use) ▪ no park facilities	▪ visitors enjoy a safe and secure experience at the park ▪ conflicts among visitor user groups are minimized ▪ accessible facilities enable disabled visitors to experience the park	▪ on peak visitation days, eliminate safety concerns at McCreery river access by prohibiting commercial use of the river access ▪ provide facilities for disabled boaters to access the river
Dun Glen	▪ McKendree Road (WV SR 25) parallels the New River just above the river level ▪ Dun Glen - day use facilities (picnicking, parking, restrooms) - group campground(in floodplain) - park operations facility (in remnants of Dun Glen Hotel) (block access to river – functionally obsolete) - park housing (dorms) (functionally obsolete) ▪ visitors illegally cross over CSX Corman Spur Line at Southside Junction	▪ a nearly continuous strip of natural riparian habitat occurs along the river ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ park staff, volunteers, interns, contractors, and partners work in a safe and secure environment	▪ close the existing campground and restore the riparian habitat ▪ relocate existing park housing elsewhere in the park ▪ rehabilitate day-use facilities (restrooms, picnic shelter, parking, access road) ▪ as park operations buildings become functionally obsolete, consider relocating existing park operations functions to Burnwood and demolishing buildings
Fayette Station	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ river access (high use) ▪ day-use facilities (parking, picnicking, public restrooms) ▪ CSX Main Line (active) ▪ visitors (primarily private paddlers) frequently illegally cross the CSX Main Line to reach the river access	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a trail (with trailhead facilities) to Fayette Mine ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.14))
Burnwood	▪ environmental education based at picnic pavilions (functionally obsolete) ▪ Laing Loop Nature Trail ▪ park operations facilities (functionally obsolete) ▪ public water supply and wastewater treatment facility (serving Burnwood and the Canyon Rim Visitor Center) (excess capacity)	▪ a variety of camping experiences are available for different types of visitors	▪ provide a developed campground (with connection to existing Burnwood water and wastewater systems) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Historic Resource Areas			
Richmond Bottom	▪ Richmond-Hamilton Farm: - farmhouse (habitable condition), split-log barns (period condition), other outbuildings (period condition) - fields not leased for agriculture - no park facilities - no interpretive programs ▪ Vallandingham Farm - log cabin (not habitable), log smokehouse, other outbuildings - vegetation impacting site - no park facilities	▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences ▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ a variety of trails enable visitors with different capabilities to explore the park ▪ visitor services and facilities are	▪ at Richmond-Hamilton Farm: - restore farm fields, fence lines, and orchards - restore the farmhouse and barns to period condition - provide access and parking for visitors - interpret the cultural landscape - provide a farm loop trail ▪ at Vallandingham Farm: - restore farm fields, fence lines, and orchards - restore the farmhouse to period condition - provide access and parking for visitors - interpret the cultural landscape - provide a farm loop trail ▪ lease all restored farm fields for agricultural use ▪ provide trailhead facilities at farmstead destinations on the farm loop trail

2.17 Alternative 2 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
		appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	
Trump-Lilly Farm	▪ farm, outbuildings, farm fields, and orchard ▪ excellent example of post-bellum subsistence farmstead in uplands of the New River ▪ listed on National Register ▪ farmhouse not habitable ▪ approximately 10 percent of historic fields are presently open ▪ no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of trails enable visitors with different capabilities to explore the park	▪ restore the farmhouse and outbuildings to period condition ▪ restore farm fields, fence lines, and orchards ▪ lease restored farm fields for agricultural use ▪ interpret the cultural landscape ▪ provide a farm loop trail
Camp Brookside	▪ site retains original camp structures, generally in good condition ▪ landscape features are indicative of a typical recreational camp ▪ good example of post-World War II social welfare programs established by American companies ▪ potentially eligible for the National Register ▪ NPS ranger station and maintenance storage building ▪ no interpretive programs	▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences ▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ cobble and flatrock communities persist	▪ in partnership with an educational institution, rehabilitate buildings for adaptive reuse for environmental education purposes; potential uses include, but are not limited to, conference facilities, classrooms, and student overnight accommodations
Westfall Farm	▪ privately-owned; recently subdivided and some new homes constructed ▪ no park facilities ▪ Cochran Farm: - outbuildings, cemetery, small pond (filling in) - most of site is an open field with - no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park	▪ at Cochran Farm - restore farm fields, fence lines, and orchards - interpret the cultural landscape - provide access and parking for visitors ▪ rehabilitate farm fields, fence lines, and orchards ▪ lease rehabilitated farm fields for agricultural use
Phillips Farm	▪ log cabin and log outbuilding (fairly intact) ▪ timber-frame outbuilding (badly deteriorated) ▪ no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ a variety of trails enable visitors with different capabilities to explore the park	▪ restore the farmhouse and outbuildings to period condition ▪ restore farm fields, fence lines, and orchards ▪ interpret the cultural landscape ▪ provide a farm loop trail

2.17 Alternative 2 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Sandstone Falls Island	▪ most visited site in upper gorge ▪ day-use facility with parking & picnicking ▪ boardwalk and interpretive trail takes visitors through rare Appalachian flatrock community and provides vistas of Sandstone Falls ▪ river access below falls ▪ restrooms functionally obsolete ▪ lack of visitor control leads to riparian zone impacts ▪ parking inadequate during periods of high visitor use and other times	▪ cobble and flatrock communities persist ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide additional parking ▪ expand boardwalk trails ▪ replace and expand restroom facilities
Harrah Homestead	▪ wood-frame house, wood-frame outbuildings, log smokehouse (all in very poor condition) ▪ vegetation impacting site ▪ no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors	▪ rehabilitate farm fields, fence lines, and orchards
Thurmond	▪ town mostly owned by the NPS, although some houses remain in private ownership and are occupied year-round ▪ entire town site included within the Thurmond Historic District (listed on National Register) ▪ restored Thurmond Depot (used as NPS visitor center) (listed individually on National Register) ▪ Commercial Row (stabilized on exterior) (listed individually on National Register) ▪ remnants of C&O train yard and passenger depot ▪ various frame houses (variable condition – some in poor condition, some recently stabilized on exterior only) ▪ kudzu negatively impacted site ▪ structures at Commercial row have lead and asbestos contamination ▪ inadequate water supply and wastewater treatment systems	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ rehabilitate commercial row buildings and lease them through the NPS historic leasing program ▪ restore representative historic houses to period condition for a period exhibit ▪ rehabilitate other viable historic houses for reuse for park housing, park dormitory housing, or visitor lodging through the NPS historic leasing program ▪ restore other remaining historic structures (maintaining the exteriors only) ▪ provide trailhead parking for the Thurmond to Sewell Trail
River Corridor Areas			
Hinton to Meadow Creek	▪ New River fishing (high use) ▪ Akers river access (low use) ▪ Tug Creek river access (low use) ▪ Brooks Falls river access, day-use facilities, undesignated camping (in floodplain) (poor condition) (high use) ▪ Hellems Beach river access, day-use facilities, and campground (campsites in floodplain – use over capacity during peak visitation periods) (high use) ▪ Sandstone Falls river take-out (moderate use) ▪ Meadow Cr private river access (low use) ▪ future WV DOH-funded reconstruction of River Road as New River Parkway, including a bridge across the New River and recreation site enhancements ▪ CSX Main Line on river right (active)	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ at Brooks Falls: - improve existing river access facilities - provide new restroom facilities - expand picnicking facilities ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.14))
Meadow Creek to Quinnimont	▪ Glade Creek Road Scenic Backway ▪ Glade Creek - river access (moderate use) - Glade Creek campground and day-use area (high use) (demand for camping typically exceeds capacity) - Glade Creek Trail high use) ▪ Mill Creek - river access (low use) - undesignated camping in floodplain - no restrooms ▪ Walk-in camping at Grassy Shoals, Mill Creek, and Royal Pull-Out	▪ accessible facilities enable disabled visitors to experience the park	▪ at Glade Creek: - provide facilities for disabled boaters to access the river

2.17 Alternative 2 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	▪ CSX Main Line on river right (active)		
Forest Areas			
Sewell Mountain (Frontcountry Zone)	▪ Big Branch Trail and Trailhead (moderate use)	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a farm loop trail
Glade Creek (Backcountry Zone)	▪ popular hunting and fishing area (moderate fishing use) ▪ fish stocking in Glade Creek by WV DNR and Glade-Pinch Trout Association ▪ fish stocking in Mill Creek by WV DNR ▪ Glade Creek Trail provides fishing access and a connection from the rim to the river (admin vehicles permitted on upper section) ▪ Polls Plateau Trail, Kates Plateau Trail and Kates Falls Trail provide access for primitive camping and hunting ▪ Lower Glade Creek Trailhead ▪ Upper Glade Creek Trailhead (demand exceeds capacity) ▪ Cloverdale Road area used for access to Kates Plateau Trail although no trailhead facilities are available	▪ hydrologic features provide a mosaic of habitats that supports a full range of natural aquatic organisms	▪ complete studies to understand impacts of stocking on native trout fish stocking; continue to support stocking by WV DNR and park partners, if deemed appropriate
Above Thurmond (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River near the river level ▪ hunting area (on plateau) ▪ no designated trailheads – one site with no developed facilities are heavily used for parking ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a trail from the Stone Cliff coke ovens to Stone Cliff Mine
Below Thurmond (Frontcountry Zone)	▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a rail/trail from Thurmond to Sewell ▪ provide a trail to Stone Cliff Mine
Sewell (Backcountry Zone)	▪ hunting area (plateau above Fire Creek, Ephraim Creek, Mann Creek, and Keeney Creek) ▪ no NPS facilities ▪ partially included within Babcock State Park (facilities include trails) ▪ fish stocking in Glade Creek and Mann Creek by WV DNR (moderate use) ▪ provides critical habitat for rare mammals ▪ rare pine communities occur in cliff areas	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ views of cultural landscapes are protected ▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ stabilize ruins at the Sewell town site ▪ provide a rail/trail from Thurmond to Sewell ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12)
Craig Branch (Frontcountry Zone)	▪ Fayette Station Road “classic park experience” (high use) ▪ numerous park trails (high use) ▪ South Nuttall climbing area (low use) ▪ Kaymoor climbing area (moderate use) ▪ Butcher Branch climbing area (high use) ▪ Longmont Trailhead ▪ Bridge Trailhead ▪ Wolf Creek Trailhead (demand frequently exceeds capacity)	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide an equestrian loop trail (with trailhead facilities)
Endless Wall (Backcountry Zone)	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway’s design capacity) ▪ Ambassador Buttress climbing area (low use) ▪ Diamond Foot/Cirque climbing area (moderate use) ▪ Endless Wall climbing area (high use) ▪ Endless Wall Trail and Nuttall Trailhead (high use) ▪ Fern Creek Trail & Trailhead (high use) ▪ proliferation of undesignated trails accessing Ambassador Buttress and at the base of the Endless Wall ▪ provides critical habitat for rare mammals ▪ rare pine communities occur in cliff areas	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a trail to Fayette Mine ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))

2.6 Alternative 3 – Through Park Trail

2.6.1 Overall Management Concept (Alternative 3)

Alternative 3 would unify the park by providing a north-south through park hike and bike trail that enables visitors to travel the park on singletrack trails at or near the river (see Figure 2.6).[1] Existing scenic roads would be enhanced. New access and facilities in the middle of the park would balance opportunities for visitors throughout the park.

2.6.2 Visitor Experience and Visitor Orientation (Alternative 3)

- **Experiencing the Park (Alternative 3)**

Alternative 3 would emphasize diverse opportunities for visitor experiences throughout the park (see Figure 2.6). A new through park trail would enable visitors to explore the park from end-to-end, providing expanded access to cultural resource sites, scenic vistas, and natural features. Opportunities for recreation, scenic resource, and interpretive experiences would be expanded in the middle of the park – where few visitor facilities now exist – by addition of new trails and camping facilities at the river level and on the plateau. In cooperation with the WV Division of Highways, improvements to the McKendree Road – along with its designation as a state scenic backway – would dramatically enhance access in the middle of the park making possible a variety of new visitor experiences, including those for visitors not physically able to explore the park by foot, bicycle, or boat. Throughout the park visitors would learn about the park's history as they explore the park on an expanded trail network and come upon cultural resource "discovery sites" where interpretive media would tell the park's stories.

Table 2.18 provides an overview of potential visitor experiences in various places in the park. Table 2.18 also summarizes management actions in Alternative 3 that would define where and how visitors would enjoy the important experiences that they may have at New River Gorge National River, including:

- appreciating life in the gorge – the human history story
- appreciating/experiencing the wildness of the landscape
- experiencing the power of the river
- experiencing scenic beauty

Visitors would also continue to enjoy the classic New River Gorge experiences at Sandstone Falls, Grandview, Thurmond, Endless Wall, Canyon Rim, and Fayette Station Road; new management actions consistent with the overall concept for Alternative 3 would enhance the visitor experience only at Thurmond.

[1] *See Tables 2.2 and 2.3 above for a general comparison of the alternative concepts and a summary of the broad organizing principles for each alternative*

2.18 Important Visitor Experiences (Alternative 3)

Places Where Visitors Would Generally Experience the Park in Alternative 3	
Through Park Trail	The through park trail would unify the park, providing visitors the opportunity to explore the park from one end to the other as a multi-day backpacking or biking trip. Alternatively visitors could explore the park on the through park trail in a series of day trips originating from trailheads throughout the park.
New Recreation Nodes in the Middle of the Park	New visitor uses facilities would enhance opportunities for a variety of visitor experiences in the middle of the park. These would be concentrated along the new through park trail, in the Glade Creek watershed, along a new trail from Sandstone Visitor Center to Prince, along the McKendree Road (WV SR 25), and in the Highland-Backus Plateau area.
Existing Recreation Nodes	Visitors would have access to a variety of recreation experiences at existing recreation nodes. Minor improvements to facilities would be focused primarily in existing recreation nodes that are located along the through park trail in the New River Parkway corridor (existing River Road corridor), as well as at Glade Creek, Grandview, McCreery, Terry, Stone Cliff, Dun Glen, Cunard, and Fayette Station.
Discovery Sites	Visitors would come upon and find cultural resources sites (from 30 to 35 sites) as they travel the park's trails. Interpretive media would tell the park's early settlement and industrial heritage stories.
Important Park Experiences That Visitors Would Have *(underlined elements are additions included in Alternative 3)*	
Appreciate life in the gorge – the human history story	**Throughout the park there are cultural resource sites where human history stories could be told.** Visitors would learn about the history of life in the gorge when they come upon and find cultural resource discovery sites located along the through park trail, other new and existing trails, and to a lesser extent along roads (approximately 30 to 35 sites). Life in a railroading town during the park's industrial era would continue to be exemplified at Thurmond (see Classic Experiences above). Stabilized mining structures and town ruins at Nuttallburg Mining Complex and the Nuttallburg town site would tell stories about life in the gorge's historic coal mining towns (as in Alternative 1).
Appreciate / experience the wildness of the landscape (continued)	Visitors camping in the forest would experience nature and the sense of solitude that comes from spending extended time in the outdoors at existing campsites and at new camping facilities, including: - in the south end of the park, a developed campground at the river's edge - in the middle of the park on river left along the new through park trail: 1) designated backcountry campsites that would enable a multi-day primitive hiking experience, 2) a new developed campground at Terry Beach, and 3) expansions to existing campgrounds - in the middle of the park on river right: 1) designated backcountry campsites along a new trail from Prince to the Sandstone Visitor Center that would enable a multi-day primitive hiking experience, 2) a new developed campground on the plateau in the Highland-Backus area, 3) a new developed campground at Meadow Creek West, and 4) expansions to existing campgrounds - in the north end of the park, a developed campground on the plateau From existing developed overlooks and a new developed overlook at Brooks Falls expansive vistas of rugged terrain, dense forest, and the turbulent river in the gorge below would evoke appreciation of the wild landscape (as in Alternative 1). New opportunities for views evoking a sense of wildness would be added along the new through park trail.
Experience the power of the river	**Throughout the park the power of the river is evident wherever visitors can be on the river, be at the river's edge, or view the river from afar.** The New River would carry paddlers along its freeflowing course through the gorge cut by its waters deep in the Appalachian Plateau. Those who ride the river as it descends

2.18 Important Visitor Experiences (Alternative 3)

Important Park Experiences That Visitors Would Have (continued) *(underlined elements are additions included in Alternative 3)*	
	through the gorge would feel its power and experience the thrill of adventure and discovery as the water flows turbulently over and amidst massive boulders transported through time from the cliff walls above. River experiences would be available from the existing network of river accesses for paddlers of all skill levels during most spring, summer, and fall months. Addition of a new river access in the south end (on river right) would provide an opportunity to access the New River above Sandstone Falls. Addition of a new river access in the middle of the park (at Meadow Creek West) would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips in the middle gorge. Addition of a new river access in the north end of the park (at Surprise) would enable improved lower gorge river trip experiences during summer low flows. At the river's edge visitors could see, smell, and hear the river, feeling its power as they sense around them the scale of the gorge shaped by the flowing water. From the existing network of river accesses and day-use areas at the river's edge visitors would experience the river as it flows calmly yet powerfully on its course northward; elsewhere visitors would experience a wild river flowing turbulently around rocks and boulders. In the south end of the park in the River Road corridor the river's edge experience would be enhanced by day-use area improvements included in the New River Parkway project (as in Alternative 1). A new day-use area would also provide visitor access to the river's edge in the middle of the park, in the south end of the park, and in the north end of the park (at Surprise). From existing developed overlooks and a new developed overlook at Brooks Falls the depth of the gorge, the exposed cliff walls, and the massive boulders in the river below, would evidence the river's power to shape the landscape (as in Alternative 1). New opportunities for views evidencing the river's power to shape the landscape would be added along the new through park trail.
Experience scenic beauty	**Throughout the park its scenic beauty is evident from roads, trails, overlooks, and the river.** From existing roads visitors would have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. In the middle of the park opportunities to experience the scenic quality of the park's landscape would be enhanced
Experience scenic beauty (continued)	Through cooperation with the WV DOH aimed at making improvements to McKendree Road and designating the road as a state scenic backway. Also, in the south end of the park, as visitors travel New River Parkway from Sandstone to Hinton the scenic beauty of the park would be evident in the dramatic landscape visible from the New River Bridge and along the parkway (as in Alternative 1). Also, in the north end of the park, efforts would be made to enhance opportunities for scenic vistas along Fayette Station Road by working with WV DOH to add pull-outs (as in Alternative 1). Visitors traveling on existing trails would continue to have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. Visitors would also enjoy the park's scenic resources from the new through park trail and a network of new trails in the middle of the park, including a trail from the Sandstone Visitor Center to Prince and several trails in the Highland-Backus area. Visitors would continue to have panoramic scenic views of the park's landscape from existing developed overlooks and from a new developed overlook at Brooks Falls (as in Alternative 1). New opportunities for panoramic scenic views would be added along the new through park trail.
Classic Park Experiences *(underlined elements are additions included in Alternative 3)*	
Paddling the New River	Paddlers would continue to experience the power of the river and the park's wild character and natural beauty as they float the river, stopping to picnic, fish, visit natural and cultural sites of interest, and/or camp. Opportunities for paddlers of all skill levels would be enhanced by addition of a new river access in the middle of the park (at Meadow Creek West) that would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips. Addition of a new river access at Bass Lake would enhance

2.18 Important Visitor Experiences (Alternative 3)

Classic Park Experiences (continued) *(underlined elements are additions included in Alternative 3)*	
	experience in the lower gorge on peak visitation days and during low flow periods by reducing congestion on the river and by extending the length of full-day outfitted paddler access to the river in the upper gorge for paddling and fishing. Addition of a new river access at Surprise would enhance outfitted paddler trip logistics and the overall river trips. Addition of a new river access at Surprise would also increase visitor access along that road for camping and fishing and allow the improvement of several recreation sites upstream of Brooklyn by providing restrooms and formalized trail access. Several recreation sites along Glade Creek Road (Royal Pullout, Mill Creek, Grassy Shoals) would be enhanced by adding vehicle parking, formalized trail access and restrooms. Opportunities for disabled paddlers would be enhanced by addition of disabled boater access at the Cunard and McCreery (Terry Beach) river accesses (in Alternatives 2 to 5). The condition of river recreation sites popular for river lunch stops, camping, and fishing would be enhanced by improving access and providing restroom facilities where practicable (in Alternatives 2 to 5). More frequent river patrols would provide visitor education and, as needed, increased enforcement of existing regulations related to group size, trash removal, and human waste removal where restrooms are not available (in Alternatives 2 to 5).
Sandstone Falls	The boardwalk and recreational facilities at Sandstone would continue to bring visitors to the water's edge where they can feel the power of the river, experience its beauty, and learn about the park's significant natural resources (as in Alternative 1).
Sandstone Falls Visitor Center	At the Sandstone Falls Visitor Center visitors would continue to be oriented to the park with an emphasis on diverse visitor experiences throughout the park (see Section 2.6.2 above).
Grandview	Social gatherings, cultural events, and recreational activities at Grandview would continue in a setting where visitors can experience the scenic beauty of the park, the wildness of its landscape, and the power of the river (as in Alternative 1). Park visitors would enjoy safer access to the Turkey Spur overlook (as in Alternative 1). Theatre goers would continue to enjoy productions at an updated Cliffside Amphitheatre (as in Alternative 1).
Thurmond	Life in a railroading town during the park's industrial era would continue to be exemplified at Thurmond. All remaining historic structures would be stabilized. Visitors could walk or drive town roads, looking at remaining structures, and learning about life in the gorge. Visitors would be able to access historic buildings at Commercial Row once they are stabilized and contamination is remediated (as in Alternative 1).
Kaymoor and Nuttallburg	Trails would provide visitor access to historic mining areas at Kaymoor and Nuttallburg (as in Alternative 1). Nationally significant mining resources at Nuttallburg would be interpreted for visitors and made more accessible through parking and trail improvements (as in Alternative 1).
Experiencing the Cliffs	The massive sandstone cliffs in the Endless Wall area and elsewhere would continue to attract visitors seeking to experience their beauty as well as the thrill of adventure, exploration, and solitude of rock climbing (as in Alternative 1). Access to the Endless Wall would be made easier and safer by adding parking and by establishing designated and maintained trails to climbing routes (in Alternatives 2 to 5). Climbing and other visitor activities in the Endless Wall area would also be limited to day use (in Alternatives 2 to 5).
Canyon Rim	At Canyon Rim visitors would continue to be oriented to the park at the visitor center with an emphasis on diverse visitor experiences throughout the park (see Section 2.6.2 above). Visitors would continue to have opportunities to view the river and the gorge from existing overlooks (as in Alternative 1).
Fayette Station Road	Fayette Station Road would continue to be a major visitor attraction in the north end of the park where visitors would experience the historic travel route across the river, learn about the park's industrial heritage, view the river, and feel its power (as in Alternative 1). Improvements to Fayette Station Road and parking facilities, as well as implementation of shuttle service during periods of high visitor use, would make for a safer visitor experience with more opportunities to experience the park's scenic resources and with fewer opportunities for visitor conflicts (in Alternatives 2 to 5).

KEY

- Through Park Trail
- Existing Road / Improved Existing Road
- New Road
- Existing Trail / Improved Existing Trail
- New Trail
- Existing Recreation Node / Improved Existing Recreation Node
- New Recreation Node / Discovery Sites (conceptual)
- Future Connector Trail
- NPS land within National River Limits
- State Park Land within National River Limits
- Private Land within National River Limits
- Scenic Easement

IMPROVED ACCESS AND ADDITION OF NEW FACILITIES
increases visitor use in the middle of the park

MINOR IMPROVEMENTS
to facilities and services
in the south end of the park

MINOR IMPROVEMENTS
to facilities and services
in the north end of the park

PROSPERITY
BRADLEY
BECKLEY
PINEY VIEW
STANAFORD
OAK HILL
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE

Future Connector Trail from Prince to Beckley
Future Connector Trail from Glade Creek to Beckley
Future Connector Trail from Southside Junction to Mount Hope
Future Connector Trail from Southside Junction to Oak Hill
Future Connector Trail from Hawks Nest State Park to Gauley River National Recreation Area
Future Connector Trail from Hinton to Bluestone National Scenic River
Future Connector Trail from Meadow Creek to Meadow Bridge
Future Connector Trail from Sewell to Gauley River National Recreation Area
Future New River Parkway

McCreery
Army Camp
Prince
Grandview
McKendree
Stone Cliff
Thurmond
Quinnimont
Highland
Thayer
Glade Creek
Backus
Meadow Creek
Sandstone Visitor Center
Fayette Station
Canyon Rim Visitor Center
Cunard
Nuttalburg
Brooock State Park

State Route 41
McKendree Road
State Route 20

3
64
19
41

Figure 2.6
ALTERNATIVE 3 CONCEPT:
THROUGH PARK TRAIL

New River Gorge National River
WEST VIRGINIA
National Park Service US Department of the Interior

N
0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

- **Visitor Orientation (Alternative 3)**

Visitor orientation would focus on describing opportunities for exploring the park from the network of expanded trails, scenic roads, and river accesses. Visitors would learn about recreation opportunities, places where they can discover the park's significant natural and cultural resources, and the areas where different recreation activities are possible.

New park brochures and informational materials would describe the park's recreation activities, highlighting opportunities for paddling throughout the park and for hiking, biking, and camping in the middle of the park and along park trails, particularly the through park trail. Additional scenic drive brochures would describe vistas and other opportunities along McKendree Road and New River Parkway (existing River Road). Information materials would also describe the network of discovery sites found throughout the park, providing visitors an overview of the stories told and how discovery sites can be accessed.

Visitor centers at Canyon Rim and Sandstone would continue as the primary venues where visitor orientation would occur. From these locations visitors would be directed to trails and trailheads, river accesses, and places in the park. Working collaboratively with WV DOH, the park would seek to place signage along public roads directing visitors to recreation sites and visitor use facilities as they leave visitor centers and as they approach the park from US 19, US 60, I-64, and WV SR 41.

2.6.3 Resource Management (Alternative 3)

- **Maintaining Natural Processes and Restoring Natural Systems (Alternative 3)**

Resource Stewardship Strategies. The management strategies shown in Table 2.12 are the actions that the NPS would implement to achieve and maintain over time desired natural resource conditions. The strategies address the management issues challenging the park relevant to maintaining natural processes and restoring natural systems. Implementation of these strategies would be common to Alternatives 2 to 5.

Unfragmented Forest. In Alternative 3 backcountry forest would be dispersed throughout the park. Only the park's ten most intact and unfragmented forest blocks (common to the action alternatives) would be managed as backcountry forest (see Table 2.19 and Figure 2.7). The backcountry zones would be managed to protect and restore unfragmented forest blocks largely free of human disturbance and to offer opportunities for visitors to be immersed in nature, relying on non-motorized access.

Table 2.19

New River Gorge National River
Alternative 3 – Management Zoning Summary

Management Zone	Area (acres)
Backcountry	30,748 (43.0%)
Frontcountry	34,231 (47.8%)
River Corridor	5,525 (7.7%)
Historic Resource	599 (0.9%)
Park Development	443 (0.6%)

Table 2.20
New River Gorge National River
Backcountry Forest Management Zoning in Alternative 3 (see Figure 2.7)

Backcountry Zones Common to Alternatives 2 to 5

- Fall Branch
- Meadow Creek North
- Glade Creek
- Garden Ground
- Stretcher Neck
- Claremont
- Above Thurmond
- Rush Run
- Sewell
- Endless Wall

Additional Areas Zoned Backcountry in Alternative 3

(none)

Frontcountry forest zoning would apply to the remaining forest in the park, spread throughout the north and south ends and encompassing the extensive Bucklick Branch, Highland-Backus, and Dowdy Creek areas on river right in the middle of the park (see Table 2.20 and Figure 2.6). Within these areas large contiguous forest blocks would generally be maintained, although development for visitor use facilities might occur that would cause some forest fragmentation. Visitors would access the frontcountry forest by roads and by trails.

Riparian Corridor. No additional areas would be managed as riparian zones in Alternative 3 beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

- **Water Quality Management (Alternative 3)**

No additional actions would be implemented in Alternative 3 related to water quality management beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

- **Cultural Resource Management (Alternative 3)**

In Alternative 3 the park's early settlement/agricultural and industrial heritage stories would be told largely at discovery sites throughout the park. Cultural resource management actions would focus on stabilization and interpretation of cultural resources as discovery sites (from 30 – 35 sites) (see Section 2.4.5 Cultural Resource Management above). Visitors would come upon and find these sites as they experience the park, from the through park trail, from other new and existing park trails, and to a lesser extent from roads. Discovery sites would include a variety of cultural resources representative of the different archeological resources, cultural landscapes, historic structures, and ethnographic resources that tell the park's stories.

Other cultural resource management actions would include:

- in the southern end of the park, rehabilitation and adaptive reuse of early settlement farmhouses
- at Thurmond, stabilization of remaining historic structures (maintaining the exteriors only) (in addition to only the Commercial Row structures as is Alternative 1)
- at Nuttallburg (as in Alternative 1), a variety of management actions would be implemented to treat resources, to tell the story of mining in the gorge, and to provide safe visitor access facilities

- **Protecting Scenic Resources in and around the Gorge (Alternative 3)**

No additional actions would be implemented in Alternative 3 to protect scenic resources in and around the gorge beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

KEY

- Backcountry Zone
- Frontcountry Zone
- River Corridor Zone
- Historic Resource Zone
- Park Development Zone
- Community

PROSPERITY
BRADLEY
BECKLEY
PINEY VIEW
MOUNT HOPE
STANAFORD
OAK HILL
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE
Babcock State Park

Glen Jean (Park Headquarters)
Terry Beach
Terry
Terry-Batoff Creek
Stretcher Neck
Quinnimont to Army Camp
Royal
Grandview
Carper Farm
Harrah Homestead
Prince Quinnimont
Prince Brothers General Store and Estate
Quinnimont Church
Garden Ground
Army Camp to Stone Cliff
Dowdy Creek
Glade Creek
Highland-Backus
Highland
Claremont
Thayer
Thayer Church
Meadow Creek to Quinnimont
Backus
Bucklick Branch
Meadow Creek North
Meadow Creek South
Meadow Creek
Meadow Creek West
Sandstone Visitor Center
Richmond Farm
Sandstone Falls Island
Westall Farm
Phillips Farm
Trump/Lilly Farm
Fall Branch
Irish Mountain
Richmond Campground
Richmond Bottom
Sewell Mountain
Chestnut Mountain
Brooks Island
Bass Lake
Camp Brookside
Hinton Depot
Hinton to Meadow Creek
Stone Cliff to Arbuckle Creek
Thurmond
Church Dun Glen
Dunloup Creek
Arbuckle Creek
Dun Glen
Above Thurmond
Below Thurmond
Substation
Rush Run
Cunard
Arbuckle Creek to Brooklyn
Sewell
Sunshine Buttress
Marr Branch
Ames
Fayette Station
Burnwood
Kaymoor
Endless Wall
Canyon Rim Visitor Center
Brooklyn to Hawks Nest
Craig Branch
Nuttalburg
Beauty Mountain
Babcock State Park

19
25
64

Figure 2.7

ALTERNATIVE 3:

MANAGEMENT ZONES

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Visitors would have new opportunities to experience the park's scenic resources from the new through park trail as well as from a number of new shorter trails in the middle of the park (see Section 2.6.4 below).

2.6.4 Visitor Use and Visitor Facilities (Alternative 3)

- **Hiking and Equestrian Use (Alternative 3)**

In addition to the trail system expansion common to Alternatives 2 to 5 and the trail improvements at Nuttallburg (as in Alternative 1), Alternative 3 would include a new through park trail along river left from Hinton to Fayette Station Bridge and continuing on along river right from Fayette Station Bridge to Hawks Nest. Designed to accommodate hikers and bikers, the through park trail would generally be composed of the following sections (see Figure 2.6):

- a new trail from Brooklyn (near Hinton) to Glade Creek Road at WV SR 41
- existing WV SR 41 and WV SR 41/8 from Glade Creek Road to Terry Beach
- a new trail from Terry Beach to Stone Cliff
- existing McKendree Road from Stone Cliff to Southside Junction
- existing trails and administrative roads from Southside Junction to the Bridge Trailhead (at Fayette Station Road)
- existing Fayette Station Road from the Bridge Street Trailhead to a new trailhead at Teays Landing
- a new trail from a new trailhead at Teays Landing to Hawks Nest State Park

In the New River Parkway corridor (existing River Road corridor) the new through park trail would be located at the toe of slope. Connector trails (with trailheads at or near the parkway) would provide access from New River Parkway (existing River Road) to the through park trail.

Expansions to the park trail system in the middle of the park to provide better access for visitors by adding several new trails. All new trails would generally use existing unmaintained trails. Possible new trails would include:

- a trail from Sandstone Visitor Center to Prince (on river right)
- a trail along Davis Branch (in the Meadow Creek North area) (with trailhead facilities)
- trails in the Highland-Backus area (with trailhead facilities)
- a trail from Dowdy Creek to Highland Mountain

Trailhead facilities would be provided for all new trails. Improvements would also be made to the Wolf Creek trailhead.

Alternative 3 would address the need for additional equestrian trails by providing a new equestrian loop trail in the Bucklick Branch area (with trailhead facilities).

- **Biking (Alternative 3)**

Alternative 3 would include potential joint hiking and biking use of existing and new trails as listed in the preceding section subject to the general design principles identified for biking trails in Section 2.4.6 above. In addition, in Alternative 3 possible new biking opportunities would include:

- a continuous trail open to biking from end to end of the park (the through park trail) composed of a combination of trail types (see preceding section)
- development of a new biking trail in the Highland-Backus frontcountry zone

- **Hunting (Alternative 3) (Continuation of Existing Hunting Program)**

In Alternative 3 hunting within the park would continue in accordance with the hunting and fishing regulations of the WV DNR (as in Alternatives 1 and 2). Hunting would generally be permitted throughout the park. A few areas would remain closed to hunting for safety reasons, including

- areas designated as safety zones in the park compendium (NPS 2007)
- areas within the historic boundaries of Grandview State Park and Sandstone Falls State Park
- the area within the boundary of Babcock State Park (which is managed by the state of West Virginia)

- **Pedestrian Access across Railroad Rights-of-Way (Alternative 3)**

In Alternative 3 the NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible. As in Alternative 1 priorities would be to secure legal crossings at locations where visitors currently frequently cross tracks illegally. In addition effort would be focused on securing legal crossings needed for development of the new through park trail and the new developed campground at Terry Beach.

- **Access and Parking (Alternative 3)**

In Alternative 3 management actions would generally maintain existing patterns of motorized access within the park, while permitting expansion of motorized access for visitors and/or administrative use in park development zones, historic resource zones, river corridor zones, and frontcountry zones. Almost one-half (43.0%) of the park would be zoned backcountry where roads and parking would be limited to zone perimeters (see Figure 2.7) and where only non-motorized access could occur in the zone interior.

In Alternative 3 access and parking improvements would focus on enhancing facilities in the middle part of the park, as follows:

- existing problems with inadequate parking at visitor facilities in the middle of the park would be addressed by expanding parking areas at the Glade Creek trailhead, the McCreery river access, and the Thayer campground and river access
- trailheads would provide adequate parking for visitors at new trails to be developed in the middle of the park (see Hiking and Equestrian Use above)
- trailheads with adequate parking would be provided along the length of the new through park trail (see Hiking and Equestrian Use above)
- a new park road would be built in the Highland-Backus area providing access to new trails in the plateau area and to a new developed campground
- the NPS would work cooperatively with WV DOH to improve McKendree Road and designate it a state scenic backway

In addition, at Cunard existing problems with inadequate parking for private paddlers on peak visitation days would be alleviated by:

- adding parking for private paddlers at Cunard (common to Alternatives 2 to 5)
- adding new private paddler parking along the Fisherman's Trail access road (common to Alternatives 2 to 5)
- adding a new river access at Surprise, including – as appropriate and as practicable – extension of Cunard Road and electrical service beyond Brooklyn and development of a river launch, drop-off areas and parking facilities (for outfitted paddlers and private paddlers), comfort/changing stations, picnicking facilities, and water supply

- **Other Visitor Facilities (including disabled access) (Alternative 3)**

Additional visitor facilities associated with Alternative 3 would include camping, picnicking, and river access facilities – primarily in the middle part of the park. All practicable efforts would be made to provide access for the disabled at new facilities (common to Alternatives 2 to 5).

In the middle of the park new visitor facilities or improvements to visitor facilities would occur on both sides of the river:

- on river left camping opportunities would be provided along the through park trail, including 1) expanded primitive campgrounds at Glade Creek, Grandview Sandbar, and Mill Creek, 2) several groups of designated backcountry campsites distributed along the through park trail, and 3) a

developed campground at Terry Beach (if and when the required property could be acquired by the NPS from a willing seller)

- on river right new camping facilities would be developed, including 1) a new developed campground in the Highland-Backus plateau area, 2) several groups of designated backcountry campsites distributed along new trails and in the Highland-Backus plateau area, and 3) expanded or enhanced primitive campgrounds at Army Camp and Thayer

In addition in the south end of the park new developed campgrounds would be provided:

- in the south a new developed campground would be developed either at the Bass Lake site (if and when it could be acquired by the NPS from a willing seller) or at a park development zone in the New River Parkway corridor (existing River Road corridor), such as at Richmond Bottom
- in the south near the Sandstone Visitor Center, a new developed public campground would be developed at Meadow Creek West; in conjunction with this facility there would be an amphitheatre, picnic facilities, and a public river access site, including a river launch (with disabled boater access), parking, comfort/changing stations, and utilities

River access improvements associated with Alternative 3 would include:

- a new access at Meadow Creek West near the Sandstone Visitor Center
- a new river access at Bass Lake – generally serving fishermen and other day-use activities with limited outfitted paddler use – that would be built in conjunction with the new developed campground
- enhancements to improve safety and the visitor experience for private paddlers at the existing McCreery river access
- addition of disabled boater at McCreery and Glade Creek
- a new river access at Surprise (see Access and Parking above)
- at Cunard expansion of existing parking for private paddlers and addition of new private paddler parking along the Fisherman's Trail access road (common to Alternatives 2 to 5)

2.6.5 Working with Local Communities (Alternative 3)

- **Sustaining Communities within the Park (Alternative 3)**

Hinton. No additional actions would be implemented in Alternative 3 to strengthen the connection between the city, its residents, and the mission of the NPS at the park beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.7 above).

Thurmond. Life in a railroading town during the park's industrial era would continue to be exemplified at Thurmond (see Table 2.18). Remaining historic structures would be stabilized. Visitors could explore the town looking at remaining structures and learning about life in the gorge. Visitation levels would increase slightly. The permanent residential population would remain at existing levels. The NPS would continue to work cooperatively with residents – including NPS staff residents – to address issues associated with living in the historic town.

Other Communities within the Park. Collaborative priorities for communities within the park in Alternative 3 are summarized in Table 2.21 below. The collaboration actions referenced in Table 2.21 are described above in the discussion of actions common to Alternatives 2 to 5 (see Section 2.4.7).

2.6.6 Land Protection Priorities (Alternative 3)

- **Land Protection (Alternative 3)**

In the future the NPS land protection program would focus efforts on the highest priority properties still to be protected in the park (see Section 2.4.8 above). For Alternative 3 the priorities for working with willing sellers of private property would be further refined to focus on acquiring properties that are important to accomplishing the overall concept for the alternative, such as properties that:

- include a site for a developed campground near the river in the southern end of the park
- include sites needed for trailheads, trail connections, or recreational sites along the through park trail and along other new trails

- **Stewardship of Private Land Remaining within the Park Boundary (Alternative 3)**

In the future the NPS would work cooperatively with the owners of private lands remaining within the park boundary to promote sensitive stewardship of privately-owned resources and values that are fundamental to the park (see Section 2.4.8 above). In Alternative 3 NPS would further focus the stewardship program on the private lands that are of high priority for protection as noted in Section 2.4.8 above and in the preceding section (Land Protection Priorities).

2.6.7 Partnerships (Alternative 3)

- **Relevance of the Park to Local Visitors (Alternative 3)**

In the future the NPS would take a number of actions aimed at strengthening the connection between the public and the mission of the NPS at New River Gorge National River (see Section 2.4.9 above). No additional actions would be implemented in Alternative 3 to enhance local appreciation and understanding of the park beyond those identified in Section 2.4.9.

Table 2.21 Alternative 3 – Collaborative Priorities for Communities within the Park*

		Collaborative Actions by the NPS and Local Communities within the Park									
				Provide Technical Assistance to Communities for							
Community	Alternative 3 Setting	Collaboration Priority	Form Community Partner Group	Developing a Community Vision Plan	Managing Change	Managing Visitor Impacts	Documenting Resources	Obtaining Grants	Managing Invasive Species	Providing Private Sector Visitor Services	Develop NPS Facilities, as Needed
Hinton	a major gateway community partly within the park at its southern end; no major existing or new visitor use facilities	1	✓			✓	✓	✓		✓	
Meadow Creek	a community in the middle of the park where visitor access would be enhanced (minimum visitor through traffic); Sandstone Visitor Center and a few new visitor facilities in vicinity	1	✓	✓	✓	✓	✓	✓	✓	✓	✓
Prince/ Quinnimont	a "recreation node" in the middle of the park where visitor access would be enhanced (visitor and public through traffic on WV SR 41); a few existing and new visitor facilities in vicinity; Prince Brothers General Store, the Prince Depot, and the Prince Estate would be interpreted as discovery sites	2	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terry	a community adjoining a new recreation node in the middle of the park where visitor access would be enhanced (no visitor through traffic, although it would be near the through park trail); a few existing and new visitor facilities in vicinity	1	✓	✓	✓	✓	✓	✓	✓		
Thayer	a community along the McKendree Road Scenic Backway; a few existing and new visitor facilities in vicinity	2	✓	✓	✓	✓	✓	✓	✓	✓	✓
Backus	a community on plateau in the middle of the park where visitor access would be enhanced; numerous new visitor facilities in vicinity	1	✓	✓	✓	✓	✓	✓	✓	✓	✓
Highland	a community on plateau in the middle of the park where visitor access would be enhanced; numerous new visitor facilities in vicinity	1	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thurmond	an attraction in the middle of the park along the through park trail; historic structures would be stabilized; visitation would increase slightly; residential population would remain stable	1				✓	✓	✓	✓	✓	✓

1 – High Priority 2 – Medium Priority 3 – Low Priority ✓ - action recommended, as funding allows

Gateway Community Partnerships (Alternative 3)

In the future the NPS would expand efforts to work cooperatively with its gateway communities to define and accomplish shared goals (see Section 2.4.9 above). No additional actions would be implemented in Alternative 3 to enhance partnerships with the park's gateway communities beyond those identified in Section 2.4.9.

- **Regional Tourism Partnerships (Alternative 3)**

In the future the NPS would expand its participation in regional economic development planning efforts underway by the various regional planning agencies and organizations in southern West Virginia (see Section 2.4.9 above). No additional actions would be implemented in Alternative 2 related to NPS participation in these efforts beyond those identified in Section 2.4.9.

- **Other Partnerships (Alternative 3)**

In the future the NPS would expand its collaboration with other public agencies and groups – including Babcock and Hawks Nest State Parks, state and county agencies, and organized stakeholder groups (see Section 2.4.9 above). No additional actions would be implemented in Alternative 3 related to NPS partnerships with these entities beyond those identified in Section 2.4.9.

2.6.8 Area-Specific Desired Conditions and Needed Changes (Alternative 3)

Table 2.22 identifies the desired resource conditions and desired visitor experiences for specific areas of the park in Alternative 3. The area-specific desired conditions focus on fundamental and other important resources and values and the visitor experience opportunities associated with them that would be appropriate in particular locations based on proposed management zoning.

Table 2.22 also identifies the general types of actions in specific areas of the park that would be needed and allowable to achieve desired conditions in Alternative 3. These are examples of the actions needed to move from existing conditions to desired conditions. Identifying the types of needed and allowable changes helps 1) to provide a sense of what management actions might occur and what development might look like in Alternative 3, 2) to identify the impacts of these actions, and 3) to estimate the general costs of implementing the actions.

2.6.9 Costs (Alternative 3)

The NPS has prepared estimates of annual operating costs and one-time costs associated with Alternative 3 using NPS and industry cost estimating guidelines (see Table 2.37 in Section 2.14 below). Annual recurring costs include personnel and non-labor costs, such as utilities, vehicles, travel, and supplies. One-time capital investments include construction, exhibits, research and planning. These costs are presented for comparative purposes only and will be refined at a later date based

upon final design of facilities and other considerations. Some projects have the potential to be funded through partnerships and volunteers, or through shared funding with other agencies. Therefore, actual costs would vary depending on when specific actions are implemented and on contributions by partners and volunteers.

- **NPS Annual Operating Costs and Staffing Requirements (Alternative 3)**

NPS annual operating costs associated with Alternative 3 are estimated to be $15,740,000 (2009 dollars). This includes the anticipated cost for staff salaries and benefits for 188 full-time equivalent staff, utilities, supplies, leasing (including leased park offices, as in Alternative 3), and other materials needed for park maintenance and operations.

Operating costs for Alternative 3 include the addition of 28 new FTE. The new positions include one new FTE to help develop and manage partnerships with the gateway communities, additional protection rangers to manage and cover new campgrounds and the Through the Park Trail, new maintenance staff to maintain and service the new campgrounds, trails and an all new river access facility in addition to improvements to existing day use facilities and new interpretive staff to expand interpretive programs and service increased visitation as the result of new facilities.

- **NPS One-Time Costs (Alternative 3)**

NPS one-time costs associated with Alternative 3 are estimated to be $28,700,000 (2009 dollars) including one-time facilities costs and non-facilities costs.

Facility costs include projects such as the following:

- rehabilitate the Richmond-Hamilton, Trump-Lilly and Vallandingham farmhouses for lease
- stabilize exterior only of 20 historic houses in Thurmond
- rehabilitate Thurmond's commercial row through partnership
- provide new trails for rock climber access
- provide a new through the park trail with multiple trailheads
- provide two new equestrian trails
- provide new hiking trails and trailheads at Davis Branch, in the Dowdy Creek and Highland/Backus areas
- provide a new stacked loop biking trail in front country area
- provide new improvements to turkey spur at Grandview
- improve Cunard and Fayette Station river access areas to relieve congestion
- provide new river access facility at Surprise

- expand parking at middle gorge areas (Glade Creek, McCreery and Thayer)
- provide new roads to access Highland Backus plateau areas and develop new campground
- relocate Stone Cliff campground from riparian area
- develop a new camping facility at Meadow Creek West
- expand existing primitive campgrounds at Glade Creek, Grandview Sandbar, and Army Camp
- develop new designated backcountry campsites
- develop disabled boater access and other improvements at McCreery
- develop new campground with river access at Terry Beach

Non-facility costs include projects such as the following:

- develop 30 discovery sites accessible from the through park trail
- pedestrian access across CSX right-of-way at new campgrounds
- develop new scenic vistas
- install and maintain information kiosks at gateway communities

Table 2.22 Alternative 3 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Development Areas			
Richmond Campground	▪ newly acquired area with limited infrastructure ▪ no park facilities	▪ a variety of camping experiences are available for different types of visitors	▪ provide a developed campground (one campground would be developed south of I-64 in a park development zone on river left, such as Richmond Bottom, OR at Bass Lake on river right)
Bass Lake	▪ Bass Lake Campground (private) ▪ no park facilities	▪ a variety of camping experiences are available for different types of visitors ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ river access facilities enable paddlers of all skill levels to experience the river	▪ provide a developed campground (one campground would be developed south of I-64 in a park development zone on river left, such as Richmond Bottom, OR at Bass Lake on river right) ▪ provide a public river access (including facilities for disabled boaters) ▪ provide picnicking and hiking facilities near the river
Sandstone Visitor Center	▪ Sandstone Visitor Center ▪ parking, picnicking facilities, and public restrooms ▪ NPS operations facility	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a through park trail segment
Meadow Creek West	▪ no park facilities	▪ a variety of camping experiences are available for different types of visitors ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ river access facilities enable paddlers of all skill levels to experience the park ▪ accessible facilities enable disabled visitors to experience the park	▪ provide a developed campground ▪ offer amphitheatre-based interpretive programs ▪ provide a public river access facility including a river launch, parking, road improvements, comfort/changing station, utilities, picnicking facilities, and disabled boater access ▪ provide a through park trail segment (with trailhead facilities) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Terry Beach	▪ McCreery: - river access (high use) - demand exceeds capacity during peak visitation periods leading to safety issues and visitor conflicts - private paddler safety issues due to pedestrian crossing of WV SR 41) - NPS unable to acquire property needed to relocate parking and address safety issues ▪ Terry Beach - private river access (low use) - undesignated camping (low use) ▪ no park facilities	▪ conflicts among visitor user groups are minimized ▪ visitors enjoy a safe and secure experience at the park ▪ accessible facilities enable disabled visitors to experience the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of camping experiences are available for different types of visitors	▪ on peak visitation days, eliminate safety concerns at McCreery river access by prohibiting commercial use of the river access ▪ provide facilities for disabled boaters to access the river at McCreery ▪ provide picnicking facilities with parking and pedestrian access at McCreery ▪ provide opportunities for the public to camp at a developed campground at Terry Beach ▪ provide trailhead parking for the through park trail
Dun Glen	▪ McKendree Road (WV SR 25) parallels the New River just above the river level ▪ Dun Glen - day use facilities (picnicking, parking, restrooms) - group campground(in floodplain) - park operations facility (in remnants of Dun Glen Hotel) (block access to river – functionally obsolete) - park housing (dorms) (functionally obsolete) ▪ visitors frequently illegally cross over CSX Corman Spur Line at Southside Junction	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ designate McKendree Road as a through park trail segment
Cunard	▪ river access (high use) ▪ crowded conditions during most summer weekends, especially when river levels are low ▪ inadequate private paddler ▪ parking inadequate boat slide capacity ▪	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ traffic circulation and parking is managed to reduce impacts on park ▪	▪ develop a new river access at Surprise *(see Arbuckle Creek to Brooklyn River Corridor Zone below)* ▪ interpret the Cunard tipple and coke ovens ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))

Table 2.22 Alternative 3 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	▪ limited river access for disabled boaters ▪ visitor conflicts	resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪
Fayette Station	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ river access (high use) ▪ day-use facilities (parking, picnicking, public restrooms) ▪ CSX Main Line (active) ▪ visitors (primarily private paddlers) frequently illegally cross the CSX Main Line to reach the river access	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ designate WV SR 82 as a segment of the through park trail ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Historic Resource Areas			
Richmond Bottom	▪ Richmond-Hamilton Farm: - farmhouse (habitable condition), split-log barns (period condition), other outbuildings (period condition) - fields not leased for agriculture - no park facilities - no interpretive programs ▪ Vallandingham Farm - log cabin (not habitable), log smokehouse, other outbuildings - vegetation impacting site - no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ at Richmond-Hamilton Farm: - rehabilitate the farmhouse (for reuse through the NPS historic leasing program) - interpret the Richmond-Hamilton Farm site - provide a connector trail to the through park trail (with trailhead facilities) ▪ at Vallandingham Farm: - rehabilitate the farmhouse (for reuse through the NPS historic leasing program) - interpret the Vallandingham Farm site
Trump-Lilly Farm	▪ farm, outbuildings, farm fields, and orchard ▪ excellent example of post-bellum subsistence farmstead in uplands of the New River ▪ listed on National Register ▪ farmhouse not habitable ▪ approximately 10 percent of historic fields are presently open ▪ no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected	▪ rehabilitate the farmhouse (for reuse through the NPS historic leasing program)
Westfall Farm	▪ privately-owned; recently subdivided and some new homes constructed ▪ no park facilities ▪ Cochran Farm: - outbuildings, cemetery, small pond (filling in) - most of site is an open field with - no park facilities	▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park	▪ at Cochran Farm: - provide a connector trail to the through park trail (with trailhead facilities)
Phillips Farm	▪ log cabin and log outbuilding (fairly intact) ▪ timber-frame outbuilding (badly deteriorated) ▪ no park facilities	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ interpret the stabilized Phillips Farm site
Harrah Homestead	▪ wood-frame house, wood-frame outbuildings, log smokehouse (all in very poor condition) ▪ vegetation impacting site ▪ no park facilities	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ interpret the stabilized Harrah Homestead site

Table 2.22 Alternative 3 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Prince Brothers General Store	▪ wood-frame store (recently stabilized on exterior) ▪ last surviving commercial building of its type along the New River ▪ listed on National Register (for its architectural design) ▪ no park facilities	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ interpret the stabilized Prince Brothers General Store
Thurmond	▪ town mostly owned by the NPS, although some houses remain in private ownership and are occupied year-round ▪ entire town site included within the Thurmond Historic District (listed on National Register) ▪ restored Thurmond Depot (used as NPS visitor center) (listed individually on National Register) ▪ Commercial Row (stabilized on exterior) (listed individually on National Register) ▪ remnants of C&O train yard and passenger depot ▪ various frame houses (variable condition – some in poor condition, some recently stabilized on exterior only) ▪ vegetation (kudzu) negatively impacted site ▪ structures at Commercial row have lead and asbestos contamination ▪ inadequate water supply and wastewater treatment systems	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected ▪ views of cultural landscapes are protected	▪ stabilize remaining historic structures (on the exterior only) (in addition to Commercial Row structures, as in Alternative 1)
River Corridor Areas			
Meadow Creek to Quinnimont	▪ Glade Creek Road Scenic Backway ▪ Glade Creek - river access (moderate use) - Glade Creek campground and day-use area (high use) (demand for camping typically exceeds capacity) - Glade Creek Trail and Trailhead (high use) ▪ Mill Creek - river access (low use) - undesignated camping occurs in floodplain) - no restrooms ▪ walk-in camping at Grassy Shoals, Mill Creek, and Royal Pull-Out ▪ CSX Main Line on river right (active)	▪ a variety of camping experiences are available for different types of visitors ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ at Glade Creek: - expand the existing campground - provide facilities for disabled boaters to access the river ▪ at Mill Creek, provide a vault toilet ▪ at Bennett Farm, interpret the site
Quinnimont to Army Camp	▪ Glade Creek Road Scenic Backway ▪ Grandview Sandbar - river access (moderate use) - day-use facilities (low use) - campground (high use) (demand frequently exceeds capacity) ▪ Army Camp - river access (moderate use) - day-use facilities (low use) - campground (demand for camping typically exceeds capacity) ▪ CSX Main Line on river right (active) ▪ CSX Piney Creek spur line on river left (active)	▪ a variety of camping experiences are available for different types of visitors	▪ at Army Camp, expand the existing campground ▪ at Grandview Sandbar, expand the existing campground
Army Camp to Stone Cliff	▪ Thayer - river access (low use) - day-use area and campground (undesignated sites) (demand frequently exceeds capacity)(no public restrooms) ▪ CSX Main Line on river right (active) ▪ visitors frequently illegally cross CSX Main Line to reach Depot Beach, Apple Orchard, McKendree, and Todd Beach (for camping)	▪ a variety of camping experiences are available for different types of visitors ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ river access facilities enable paddlers of all skill levels to experience the river ▪ visitors enjoy a safe and secure experience at the park	▪ at Thayer: - designate campsites in the area now used for primitive camping - provide a vault toilet - improve existing river access, parking, and picnicking facilities ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12)) ▪ work cooperatively with the CSX Corporation to secure safe legal public

Table 2.22 Alternative 3 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	▪ river rest stop at Dowdy Creek where paddlers frequently illegally cross under CSX Main Line to reach Dowdy Falls	▪	access to the river across the CSX right-of-way at Depot Beach, Apple Orchard, McKendree, and Todd Beach
Stone Cliff to Arbuckle Creek	▪ Stone Cliff - river access (high use) - campground and day-use area (in floodplain) (high use) - Stone Cliff Trail and trailhead (low use) ▪ CSX Main Line on river right (active)	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ at Stone Cliff, provide a through park trail segment (with trailhead facilities) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Arbuckle Creek to Brooklyn	▪ ACE river access (private) ▪ Brooklyn to Southside Junction Administrative Road ▪ CSX Main Line on river right (active)	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ traffic circulation and parking is managed to reduce impacts on park resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads ▪ a nearly continuous strip of natural riparian habitat occurs along the river	▪ provide a public river access facility at Surprise, including as appropriate and as practicable, a river launch, parking, road improvements, comfort/changing station, utilities, picnicking facilities, and disabled boater access
Brooklyn to Hawks Nest	▪ Brooklyn - undesignated camping (moderate use) - river fishing (no day-use facilities) (moderate use) ▪ Teays Landing river access (private) ▪ CSX Main Line on river right upstream of Cunard and on river right and river left downstream of Cunard (active) ▪ visitors frequently illegally cross over CSX Main Line - to reach the lower railroad area (for fishing and boating) - to reach Short Creek (for camping and fishing) - to reach Kaymoor via the tunnel under the tracks (for hiking)	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ at Teays Landing, provide a through park trail segment (with trailhead facilities) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12)) ▪ work cooperatively with the CSX Corporation to secure safe legal public access to the river across the CSX right-of-way in the lower railroad area, at Short Creek, and at Kaymoor
Forest Areas			
Sewell Mountain (Frontcountry Zone)	▪ Big Branch Trail and Trailhead (moderate use)	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a through park trail segment along the toe of slope ▪ provide a trailhead for the through park trail
Fall Branch (Backcountry Zone)	▪ Fall Branch Trail and Trailhead (moderate use)	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a through park trail segment along the toe of slope
Irish Mountain (Frontcountry Zone)	▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of camping experiences are available for different types of visitors	▪ provide a trail segment of the through park trail from New River Parkway (existing River Road) to the Glade Creek drainage ▪ provide a trailhead for the through park trail ▪ provide a designated backcountry campsite group
Meadow Creek South (Frontcountry Zone)	▪ Meadow Creek – water quality impaired ▪ fish stocking in Meadow Creek (moderate fishing use) ▪ hunting area (on plateau) ▪ CSX Meadow Creek rail line (active) ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ a variety of camping experiences are available for different types of visitors	▪ provide a segment of a trail from Sandstone Visitor Center to Prince ▪ provide a designated backcountry campsite group

Table 2.22 Alternative 3 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Meadow Creek North (Backcountry Zone)	▪ hunting area (on plateau) ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide trails: - along Davis Branch - a segment of a trail from Prince to Sandstone Visitor Center ▪ provide a trailhead for the Davis Branch Trail
Bucklick Branch	▪ hunting area ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide an equestrian loop trail (with trailhead facilities)
Highland-Backus (Frontcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River on the gorge wall ▪ hunting area ▪ no designated trailheads – one site with no developed facilities is heavily used for parking by hunters ▪ no park facilities	▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of camping experiences are available for different types of visitors ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ provide a park access road ▪ provide trails: - generally in the Highland-Backus area - a segment of a trail from Dowdy Creek to Highland Mountain - Highland Mountain Biking Trail - a segment of a trail from Prince to Sandstone Visitor Center ▪ provide trailheads: - to access new hiking trails - to access new biking trails ▪ provide a developed campground in the plateau area ▪ provide a designated backcountry campsite group ▪ work cooperatively with WV DOH to improve McKendree Road and designate it a state scenic backway
Dowdy Creek (Frontcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River on the gorge wall ▪ hunting area ▪ no designated trailheads – two sites with no developed facilities are heavily used for parking by hunters ▪ no park facilities	▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads ▪ a variety of camping experiences are available for different types of visitors ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a park access road to the plateau area ▪ provide several designated backcountry campsite groups along the Dowdy Creek Highland Mountain Trail ▪ provide trails: - from Sandstone Visitor Center to Prince - from Dowdy Creek to Highland Mountain ▪ provide a trailhead for the Dowdy Creek to Highland Mountain Trail ▪ provide a trailhead for the Sandstone Visitor Center to Prince Trail ▪ work cooperatively with WV DOH to improve McKendree Road and designate it a state scenic backway
Claremont (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River just above the river level ▪ fishing – Buffalo Creek (low use) ▪ no designated trailheads – two sites with no developed facilities are heavily used for parking by hunters ▪ no park facilities	▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ work cooperatively with WV DOH to improve McKendree Road and designate it a state scenic backway
Substation (Frontcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River just above the river level ▪ no park facilities	▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ work cooperatively with WV DOH to improve McKendree Road and designate it a state scenic backway
Glade Creek (Backcountry Zone)	▪ popular hunting and fishing area (moderate fishing use) ▪ fish stocking in Glade Creek by WV DNR and Glade-Pinch Trout Association ▪ fish stocking in Mill Creek by WV DNR ▪ Glade Creek Trail provides fishing access and a connection from the rim to the river (admin vehicles permitted on upper section) ▪ Polls Plateau Trail, Kates Plateau Trail and Kates Falls Trail provide access for primitive camping and hunting ▪ Lower Glade Creek Trailhead ▪ Upper Glade Creek Trailhead (demand exceeds capacity) ▪ Cloverdale Road area used for access to Kates Plateau Trail although no trailhead facilities are available	▪ a variety of camping experiences are available for different types of visitors ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ hydrologic features provide a mosaic of habitats that supports a full range of natural aquatic organisms	▪ provide several designated backcountry campsite groups ▪ complete studies to understand impacts of stocking on native trout fish stocking; continue to support stocking by WV DNR and park partners, if deemed appropriate ▪ provide a through park trail segment ▪ provide trailheads: - expand parking capacity at Glade Creek Trailhead - provide a trailhead at Cloverdale Road - provide a trailhead for the through park trail

Table 2.22 Alternative 3 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Royal (Frontcountry Zone)	▪ CSX Piney Creek spur line (active) ▪ Piney Creek - water quality impaired ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a through park trail segment
Terry / Batoff Creek (Frontcountry Zone)	▪ CSX Piney Creek spur line (active) ▪ Piney Creek - water quality impaired ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a through park trail segment
Garden Ground (Backcountry Zone)	▪ Stone Cliff Trail (low use) ▪ no designated trailheads – one plateau site with no developed facilities heavily used for parking	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ a variety of camping experiences are available for different types of visitors	▪ provide a through park trail segment ▪ provide a designated backcountry campsite group
Dunloup Creek (Frontcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River at the river level ▪ Thurmond-Minden Trail and Trailhead (high use) ▪ Southside Trail (high use) ▪ fish stocking in Dunloup Creek by WV DNR (moderate fishing use) ▪ CSX Corman spur line (active) ▪ recurring flooding along Dunloup Creek	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ designate an existing trail as a segment of the through park trail ▪ work cooperatively with WV DOH to improve McKendree Road and designate it a state scenic backway
Arbuckle Creek (Frontcountry Zone)	▪ Thurmond-Minden Trail and Trailhead (high use) ▪ Southside Trail (high use) ▪ Arbuckle Creek – impaired	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ a variety of camping experiences are available for different types of visitors	▪ designate an existing trail as a segment of the through park trail ▪ provide a designated backcountry campsite group
Rush Run (Backcountry Zone)	▪ Brooklyn Mine Trail and Trailhead (high use) ▪ Southside Trail (high use) ▪ Cunard Access Road ▪ Cunard Trailhead parking area ▪ provides critical habitat for rare mammals	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ designate an existing trail as a segment of the through park trail ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Craig Branch (Frontcountry Zone)	▪ Fayette Station Road "classic park experience" (high use) ▪ numerous park trails (high use) ▪ South Nuttall climbing area (low use) ▪ Kaymoor climbing area (moderate use) ▪ Butcher Branch climbing area (high use) ▪ Longmont Trailhead ▪ Bridge Trailhead ▪ Wolf Creek Trailhead (demand frequently exceeds capacity)	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ designate an existing trail as a segment of the through park trail ▪ improve the existing Wolf Creek Trailhead
Above Thurmond (Backcountry Areas)	▪ McKendree Road (WV SR 25) parallels the New River near the river level ▪ hunting area (on plateau) ▪ no designated trailheads – one site with no developed facilities are heavily used for parking ▪ no park facilities	▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ work cooperatively with WV DOH to improve McKendree Road and designate it a state scenic backway
Ames (Frontcountry Zone)	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ Bridge Buttress climbing area (high use) ▪ Bridge Buttress parking area ▪ Bubba City climbing area (moderate use) ▪ Junkyard climbing area (moderate use) ▪ no designated trails to climbing routes at Bubba City or Junkyard ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ mutual park management goals are effectively realized through collaboration among the NPS, Hawks Nest State Park, and Babcock State Park	▪ provide a through park trail segment ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))

2.7 Alternative 4 – River Gateways and Rim to River Experiences

2.7.1 Overall Management Concept (Alternative 4)

Alternative 4 recognizes river gateways and the rim to river experiences that take visitors to them as the primary access points and orientation venues in the park (see Figure 2.8).[1] River gateways would be enhanced to tell gorge stories while providing improved river, trail, and recreational access. The NPS and gateway communities would work cooperatively to enhance rim to river experiences.

2.7.2 Visitor Experience and Visitor Orientation (Alternative 4)

- **Experiencing the Park (Alternative 4)**

Alternative 4 would connect visitors to the park through experiences that take them on roads and trails from gateway communities and other places on the plateau, over the rim, into the gorge, and down to the New River. As they near the river, visitors would arrive at river gateways – located either within the park or at its edge – where they would learn about nearby park resources and recreation opportunities. Visitor use facilities would be clustered within or near river gateways offering a variety of interpretive and recreation experiences. From river gateways visitors would move out into the park on the water by boat, on trails by foot or bicycle, or on scenic roads. The park's stories would be told at rehabilitated cultural resources in river gateways – such as Hinton, Prince, and Thurmond – and at cultural resource "discovery sites" along rim to river trails and roads. Partnerships between the NPS and the park's gateway communities would seek to enhance the park experience by providing better visitor orientation, by promoting services needed by visitors in gateway communities, by fostering improved wayfinding signage, and by promoting complementary interpretive and recreational experiences at other attractions in southern West Virginia.

Table 2.23 provides an overview of potential visitor experiences in various places in the park. Table 2.23 also summarizes management actions in Alternative 4 that would define where and how visitors would enjoy the important experiences that they may have at New River Gorge National River, including:

- appreciating life in the gorge – the human history story
- appreciating/experiencing the wildness of the landscape
- experiencing the power of the river
- experiencing scenic beauty

Visitors would also continue to enjoy the classic park experiences at Sandstone Falls, Grandview, Thurmond, Endless Wall, Canyon Rim, and Fayette Station Road; new

[1] *See Tables 2.2 and 2.3 above for a general comparison of the alternative concepts and a summary of the broad organizing principles for each alternative*

KEY

- River Gateway
- Partner Gateway Community at Park Edge
- Park Entrance Corridor (Rim to River)
- Future Connector Trail
- NPS land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

PROSPERITY
BRADLEY
PINEY VIEW
STANAFORD
NEW RIVER

Beckley
Mount Hope
Glen Jean
Oak Hill
Minden
Fayetteville
Hawks Nest
Canyon Rim / Fayette Station
Ansted
Prince/McCreery
Thurmond
Cunard
Nuttalburg
Cunard Access
Winona
Babcock State Park
Hinton
Hinton
Sandstone
Sandstone
Meadow Creek
Meadow Bridge

Future Connector Trail from Prince to Beckley
Future Connector Trail from Grandview to Beckley
Future Connector Trail from Southside Junction to Mount Hope
Future Connector Trail from Southside Junction to Oak Hill
Future Connector Trail from Hawks Nest State Park to Gauley River National Recreation Area
Future New River Parkway
Future Connector Trail from Meadow Creek to Meadow Bridge
Future Connector Trail from Sewell to Gauley River National Recreation Area

3
64
19
41
60

Figure 2.8

ALTERNATIVE 4 CONCEPT: RIVER GATEWAYS AND RIM TO RIVER EXPERIENCES

New River Gorge National River
WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Table 2.23 Important Visitor Experiences (Alternative 4)

Places Where Visitors Would Generally Experience the Park in Alternative 4	
River Gateways	River gateways would be places at the river level – within the park or at its edge – where visitors would be oriented to the local park area, and from which they would move out into the park via trails, roads, and/or the river. At river gateways visitors would learn about recreation activities and the opportunities in the vicinity to explore the park and to experience its resources and history. Visitor facilities – such as river accesses, trailheads, day-use areas, scenic vistas, and campgrounds – would be clustered in or very near river gateways. Historic resources would be rehabilitated for visitor use. Some river gateways would offer commercial services for visitors, such as lodging, food service, grocery stores, sport shops, and guide service.
Partner Gateway Communities	Partner gateway communities would include the communities adjoining or near the park where visitors arrive from outside the region, where many stay while visiting the park, and where many receive initial orientation to the area. Small visitor contact facilities and/or information kiosks would provide information on recreation activities, visitor facilities, and interpretive programs at New River Gorge as well as at other attractions in the region. Gateway communities would typically offer commercial services for visitors – varying from a full range of services in larger gateways to very limited services in smaller gateways. Gateway communities and the NPS would enter into cooperative partnerships to ensure that both parties would benefit from one another's actions to protect park resources, to enhance the visitor experience, and to generally contribute to the park's position as a major tourist attraction in the region.
Rim to River Trails and Roads	Rim to river experiences would occur along roads and trails that connect plateau areas above the rim to the river below. Traveling these routes by vehicle, foot, or bicycle, visitors could appreciate the wildness of the park, its beauty, and the power of the river evidenced by the rugged terrain and the depth of the gorge. Waysides along rim to river trails and cultural resource "discovery sites" would tell the park's stories. Many rim to river roads and trails would begin at the park's gateway communities and would end at its river gateways.
Important Park Experiences That Visitors Would Have *(underlined elements are additions included in Alternative 4)*	
Appreciate life in the gorge – the human history story	**Throughout the park there are cultural resource sites where human history stories could be told.** Visitors to the park's river gateways and to the New River Parkway corridor (existing New River Parkway corridor) in the south end of the park would have opportunities to learn about life in the gorge by visiting rehabilitated cultural resources that are leased through the NPS historic leasing program. Life in a railroading town during the park's industrial era would continue to be exemplified at the Thurmond River Gateway (see Classic Experiences above). It would also be represented at Prince/McCreery River Gateway where various sites would be rehabilitated and interpreted. Visitors would also learn about the history of life in the gorge when they come upon and find cultural resource discovery sites along trails at or near river gateways and along rim to river trails (approximately 20 to 25 sites). Stabilized mining structures and town ruins at Nuttallburg Mining Complex and the Nuttallburg town site would tell stories about life in the gorge's historic coal mining towns (as in Alternative 1).
Appreciate/experience the wildness of the landscape	**A sense of wildness dominates the landscape setting in most areas of the park.** Blocks of intact and unfragmented forest that are removed from river gateways and primary rim to river travel routes would be managed as backcountry forest, preserving their wild character and enhancing the perception of the park's wildness as visitors experience the park. Overall, backcountry forest blocks would compose approximately 60.8 percent of the park. When paddling the river visitors would be transported to remote and wild areas in the upper, middle, and lower gorge, relying on the existing network of river accesses which

Table 2.23 Important Visitor Experiences (Alternative 4)

Important Park Experiences That Visitors Would Have (continued) *(underlined elements are additions included in Alternative 4)*	
Appreciate/experience the wildness of the landscape (continued)	make possible a variety of paddling experiences in a wild landscape setting. Addition of a new river access in the south end (on river right) would provide a opportunity to access the New River above Sandstone Falls. Addition of a new river access in the middle of the park (at Meadow Creek West) would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips in the middle gorge. Replacement of the McCreery river access with a new river access at Terry Beach would facilitate private paddlers safely accessing the river for trips in the middle gorge. Visitors venturing into the park's forest would explore the park making their way along a greatly expanded network of trails at times near the water's edge and at times looking into the gorge. New trails would offer visitors rim to river hiking experiences at numerous locations throughout the park. New trails would also offer visitors hiking experiences at numerous locations in and around river gateways. Exploration of the park by bicycle – pending adoption of a special regulation and subject to a development of a trail management plan – would occur on a variety of trail types in frontcountry zones and would occur only on singletrack trails in backcountry zones. Bikers could also explore the park on a new biking trail in the Highland-Backus frontcountry zone. Visitors could also explore the park by horseback in the Bucklick Branch area of the park. Visitors camping in the forest would experience nature and the sense of solitude that comes from spending extended time in the outdoors at existing campsites and at new camping facilities, including: - near the Meadow Creek River Gateway, a new developed campground at the river's edge - in the Prince/McCreery River Gateway area, 1) a new developed campground at Terry Beach, and 2) expansions to existing campgrounds - on the plateau near the Prince/McCreery River Gateway, a new developed campground on the plateau - in the Canyon Rim/Fayette Station River Gateway, a new developed campground on the plateau From existing developed overlooks and a new developed overlook at Brooks Falls expansive vistas of rugged terrain, dense forest, and the turbulent river in the gorge below would evoke appreciation of the wild landscape (as in Alternative 1). New opportunities for views evoking a sense of wildness would be added along rim to river trails.
Experience the power of the river	**Throughout the park the power of the river is evident wherever visitors can be on the river, be at the river's edge, or view the river from afar.** The New River would carry paddlers along its freeflowing course through the gorge cut by its waters deep in the Appalachian Plateau. Those who ride the river as it descends through the gorge would feel its power and experience the thrill of adventure and discovery as the water flows turbulently over and amidst massive boulders transported through time from the cliff walls above. River experiences would be available from the existing network of river accesses for paddlers of all skill levels during most spring, summer, and fall months. Addition of a new river access in the south end (on river right) would provide a opportunity to access the New River above Sandstone Falls. Addition of a new river access in the middle of the park (at Meadow Creek West) would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips in the middle gorge. Replacement of the McCreery river access with a new river access at Terry Beach would facilitate private paddlers safely accessing the river for trips in the middle gorge. At the river's edge visitors could see, smell, and hear the river, feeling its power as they sense around them the scale of the gorge shaped by the flowing water. From the existing network of river accesses and day-use areas at the river's edge visitors would experience the river as it flows calmly yet powerfully on its course northward; elsewhere visitors would experience a wild river flowing turbulently around rocks and boulders. In the south end of the park in the River Road corridor the river's edge experience would be enhanced by day-use area improvements included in the New River Parkway project (as in Alternative 1). A new day-use area would also provide visitor access to the river's edge near the Meadow

Table 2.23 Important Visitor Experiences (Alternative 4)

Important Park Experiences That Visitors Would Have (continued) *(underlined elements are additions included in Alternative 4)*	
Experience the power of the river (continued)	Creek River Gateway, in the south end of the park, and in the north end of the park near the Cunard River Gateway (at Surprise). From existing developed overlooks and a new developed overlook at Brooks Falls the depth of the gorge, the exposed cliff walls, and the massive boulders in the river below, would evidence the river's power to shape the landscape (as in Alternative 1). New opportunities for views evidencing the river's power to shape the landscape would be added along rim to river trails and along new trails in and around river gateways.
Experience scenic beauty	**Throughout the park its scenic beauty is evident from roads, trails, overlooks, and the river.** From existing roads visitors would have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. In the south end of the park, as visitors travel New River Parkway (existing River Road) from Sandstone to Hinton the scenic beauty of the park would be evident in the dramatic landscape visible from the New River Bridge and along the parkway (as in Alternative 1). A new park road would provide access to scenic areas on the plateau in the Highland-Backus area. In the north end of the park, efforts would be made to enhance opportunities for scenic vistas along Fayette Station Road by working with WV DOH to add pull-outs (as in Alternative 1). Visitors traveling on existing trails would continue to have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. Visitors would also enjoy the park's scenic resources from the rim to river trails and new trails in and around river gateways. Visitors would continue to have panoramic scenic views of the park's landscape from existing developed overlooks and from a new developed overlook at Brooks Falls (as in Alternative 1). New opportunities for panoramic scenic views would be added along rim to river trails and along new trails in and around river gateways.
Classic Park Experiences *(underlined elements are additions included in Alternative 4)*	
Paddling the New River	Paddlers would continue to experience the power of the river and the park's wild character and natural beauty as they float the river, stopping to picnic, fish, visit natural and cultural sites of interest, and/or camp. Opportunities for paddlers of all skill levels would be enhanced by addition of a new river access in the middle of the park (at Meadow Creek West) that would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips. Opportunities for disabled boaters would be enhanced by addition of disabled boater access at the Cunard and McCreery (Terry Beach) river accesses (in Alternatives 2 to 5). The condition of river recreation sites popular for river lunch stops, camping, and fishing would be enhanced by improving access and providing restroom facilities where practicable (in Alternatives 2 to 5). More frequent river patrols would provide visitor education and, as needed, increased enforcement of existing regulations related to group size, trash removal, and human waste removal where restrooms are not available (in Alternatives 2 to 5).
Sandstone Falls	The boardwalk and recreational facilities at Sandstone would continue to bring visitors to the water's edge where they can feel the power of the river, experience its beauty, and learn about the park's significant natural resources (as in Alternative 1).
Sandstone Falls Visitor Center	At the Sandstone Falls Visitor Center visitors would continue to be oriented to the park with an emphasis on connecting visitors to the park through experiences that take them on roads and trails from gateway communities and other places on the plateau, over the rim, into the gorge, and down to the New River (see Section 2.7.2 above).
Grandview	Social gatherings, cultural events, and recreational activities at Grandview would continue in a setting where visitors can experience the scenic beauty of the park, the wildness of its landscape, and the power of the river (as in Alternative 1). Park visitors would enjoy safer access to the Turkey Spur overlook (as in Alternative 1). Theatre goers would continue to enjoy productions at an updated Cliffside Amphitheatre (as in Alternative 1).

Table 2.23 Important Visitor Experiences (Alternative 4)

Classic Park Experiences (continued) *(underlined elements are additions included in Alternative 4)*	
Thurmond	Thurmond – a river gateway in the north end of the park – would become a major visitor attraction where the railroading story would be told. Contamination at Commercial Row structures would be remediated (as in Alternative 1) and the buildings rehabilitated so that commercial activities can return to the town (through the park's leasing program). The town would be home to some NPS staff that would live in rehabilitated historic houses. Visitors might also be able to stay in the town in lodging made available in rehabilitated historic houses. Historic buildings that are not rehabilitated would be stabilized and restored on the exterior only.
Kaymoor and Nuttallburg	Nuttallburg would be highlighted as a river gateway in the north end of the park where the park's industrial story would be told. Trails would provide visitor access to historic mining areas at Kaymoor and Nuttallburg (as in Alternative 1). Nationally significant mining resources at Nuttallburg would be interpreted for visitors and made more accessible through parking and trail improvements (as in Alternative 1).
Experiencing the Cliffs	The massive sandstone cliffs in the Endless Wall area and elsewhere would continue to attract visitors seeking to experience their beauty as well as the thrill of adventure, exploration, and solitude of rock climbing (as in Alternative 1). Access to the Endless Wall would be made easier and safer by adding parking and by establishing designated and maintained trails to climbing routes (in Alternatives 2 to 5). Climbing and other visitor activities in the Endless Wall area would also be limited to day use (in Alternatives 2 to 5).
Canyon Rim	At Canyon Rim visitors would continue to be oriented to the park at the visitor center with an emphasis on connecting visitors to the park through experiences that take them on roads and trails from gateway communities and other places on the plateau, over the rim, into the gorge, and down to the New River (see Section 2.7.2 above). Visitors would continue to have opportunities to view the river and the gorge from existing overlooks (as in Alternative 1).
Fayette Station Road	Fayette Station Road would continue to be a major visitor attraction in the north end of the park where visitors would experience the historic travel route across the river, learn about the park's industrial heritage, view the river, and feel its power (as in Alternative 1). Improvements to Fayette Station Road and parking facilities, as well as implementation of shuttle service during periods of high visitor use, would make for a safer visitor experience with more opportunities to experience the park's scenic resources and with fewer opportunities for visitor conflicts (in Alternatives 2 to 5). A new pedestrian walkway would enhance access from parking above the CSX right-of-way to the river.

management actions consistent with the overall concept for Alternative 4 would enhance the visitor experience at Thurmond and at Fayette Station Road.

- **Visitor Orientation (Alternative 4)**

Visitor orientation would focus on describing opportunities for exploring the park along rim to river trails, within and near river gateways, and along new trails emanating from river gateways. Visitors would learn about recreation opportunities, places where they can discover the park's significant natural and cultural resources, and the areas where different recreation activities are possible.

New park brochures and informational materials would describe the park's rim to river experiences and its river gateways.

Visitor centers at Canyon Rim and Sandstone would continue as the primary venues where visitor orientation would occur. From these locations visitors would be directed to rim to river trails and to river gateways. Working collaboratively with WV DOH, the park would seek to place signage along public roads directing visitors to rim to river trails and river gateways as they leave visitor centers and as they approach the park from US 19, US 60, I-64, and WV SR 41.

Visitor orientation would also occur at partner gateway communities and in river gateways. Information about the park would be available at small visitor contact facilities and/or kiosks.

Table 2.24

New River Gorge National River
Alternative 4 – Management Zoning Summary

Management Zone	Area (acres)
Backcountry	43,509 (60.8%)
Frontcountry	21,470 (30.0%)
River Corridor	5,525 (7.7%)
Historic Resource	599 (0.9%)
Park Development	443 (0.6%)

2.7.3 Resource Management (Alternative 4)

- **Maintaining Natural Processes and Restoring Natural Systems (Alternative 4)**

Resource Stewardship Strategies. The management strategies shown in Table 2.12 are the actions that the NPS would implement to achieve and maintain over time desired natural resource conditions. The strategies address the management issues challenging the park relevant to maintaining natural processes and restoring natural systems. Implementation of these strategies would be common to Alternatives 2 to 5.

Unfragmented Forest. In Alternative 4 blocks of unfragmented forest that are removed from river gateways and primary rim to river travel routes would be managed as backcountry forest (see Table 2.24 and Figure 2.9). The backcountry zones would be managed to protect and restore unfragmented forest blocks largely free of human disturbance and to offer opportunities for visitors to be immersed in nature, relying on non-motorized access.

Frontcountry forest zoning would apply to the remaining forest in the park in the vicinity of river gateways and along primary rim to river travel routes (see Table 2.25 and Figure 2.9). Within these areas large contiguous forest blocks would generally be maintained, although development for visitor use facilities might occur that would cause some forest fragmentation. Visitors would access the frontcountry forest by roads and by trails.

Riparian Corridor. No additional areas would be managed as riparian zones in Alternative 4 beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

Table 2.25
New River Gorge National River
Backcountry Forest Management Zoning in Alternative 4 (see Figure 2.9)

Backcountry Zones Common to Alternatives 2 to 5

- Fall Branch
- Meadow Creek North
- Glade Creek
- Garden Ground
- Stretcher Neck
- Claremont
- Above Thurmond
- Rush Run
- Sewell
- Endless Wall

Additional Areas Zoned Backcountry in Alternative 4

- Chestnut Mountain
- Irish Mountain
- Bucklick Branch
- Dowdy Creek
- Terry-Batoff
- Ames
- Marr Branch

- **Water Quality Management (Alternative 4)**

No additional actions would be implemented in Alternative 4 related to water quality management beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

- **Cultural Resource Management (Alternative 4)**

In Alternative 4 cultural resource management actions would focus on treatment and interpretation of:

- representative coal mining, timbering, and railroading resources at or near river gateways at Hinton, Prince, and Thurmond
- representative early settlement/agricultural resources in the southern end of the park
- representative discovery sites along trails at or near river gateways and along rim to river trails (approximately 20 to 25 sites)

Resources in River Gateways and Early Settlement/Agricultural Resources. In general, historic structures in river gateways and at the southern end of the park would be rehabilitated and adaptively reused through the NPS historic leasing program for commercial and/or residential uses. Representative structures to be rehabilitated and reused would include farmhouses in the southern end of the park, Prince Brothers General Store, Commercial Row in Thurmond, and houses in Thurmond that remain in good condition. Partners would be sought to assist with rehabilitation. At Nuttallburg (as in Alternative 1), a variety of management actions would be implemented to treat resources, to tell the story of mining in the gorge, and to provide safe visitor access facilities.

Discovery Sites. In Alternative 4 cultural resource management actions would also include stabilization and interpretation of cultural resources as discovery sites (from 20 to 25 sites) (see Section 2.4.5 Cultural Resource Management above). Visitors would come upon and find these sites as they experience the park from trails at or near river gateways and from rim to river trails. Discovery sites would include a variety of cultural resources representative of the different archeological resources, cultural landscapes, historic structures, and ethnographic resources that tell the park's stories.

- **Protecting Scenic Resources in and around the Gorge (Alternative 4)**

No additional actions would be implemented in Alternative 4 to protect scenic resources in and around the gorge beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

Visitors would have new opportunities to experience the park's scenic resources throughout the park from numerous new rim to river trails and from numerous new trails in the vicinity of river gateways (see Section 2.7.4 below).

KEY

- Backcountry Zone
- Frontcountry Zone
- River Corridor Zone
- Historic Resource Zone
- Park Development Zone
- Community

PROSPERITY
BRADLEY
BECKLEY
PINEY VIEW
MOUNT HOPE
STANAFORD
OAK HILL
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE
Babcock State Park

Glen Jean (Park Headquarters)
Terry Beach
Terry
Terry-Batoff Creek
Stretcher Neck
Quinnimont to Army Camp
Royal
Grandview
Carper Farm
Harrah Homestead
Prince Quinnimont
Prince Brothers General Store and Estate
Quinnimont Church
Army Camp to Stone Cliff
Garden Ground
Dowdy Creek
Glade Creek
Highland-Backus
Highland
Claremont
Thayer
Thayer Church
Substation
Stone Cliff to Arbuckle Creek
Thurmond
Church Dun Glen
Dunloup Creek
Dun Glen
Above Thurmond
Arbuckle Creek
Below Thurmond
Rush Run
Cunard
Sewell
Arbuckle Creek to Brooklyn
Sunshine Buttress
Marr Branch
Ames
Fayette Station
Burnwood
Canyon Rim Visitor Center
Kaymoor
Endless Wall
Brooklyn to Hawks Nest
Craig Branch
Nuttalburg
Beauty Mountain
Meadow Creek to Quinnimont
Backus
Bucklick Branch
Meadow Creek North
Meadow Creek West
Meadow Creek
Meadow Creek South
Sandstone Visitor Center
Richmond Farm
Sandstone Falls Island
Westall Farm
Phillips Farm
Trump/Lilly Farm
Fall Branch
Irish Mountain
Sewell Mountain
Richmond Campground
Richmond Bottom
Chestnut Mountain
Brooks Island
Bass Lake
Camp Brookside
Hinton Depot
Hinton to Meadow Creek

Figure 2.9

ALTERNATIVE 4: MANAGEMENT ZONES

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

2.7.4 Visitor Use and Visitor Facilities (Alternative 4)

- **Hiking and Equestrian Use (Alternative 4)**

In addition to the trail system expansion common to Alternatives 2 to 5 and the trail improvements at Nuttallburg (as in Alternative 1), Alternative 4 would include new park trails to provide rim to river experiences and experiences in and around river gateways. All new trails would generally use existing unmaintained trails.

Possible new trails offering visitors rim to river experiences would include:

- a trail from the Sandstone Visitor Center to Hump Mountain
- a trail from Grandview to Mill Creek
- a trail from Army Camp to Pinnacle Rock
- a trail from Trump-Lilly Farm to Richmond-Hamilton Farm
- a trail from Cloverdale Road to the Upper Glade Creek Trail
- a trail from Garden Ground to the New River
- a trail from Mt. Hope to Southside Junction (if and when the CSX Corman Line right-of-way is abandoned and acquired by the NPS)
- a trail from GW Carver (via Babcock State Park) to Sewell to Caperton to Keeney Creek (in cooperation with Babcock State Park)
- a trail from the rim to the river along Fire Creek

Possible new trails offering visitors experiences in and around river gateways would include:

- a trail from Terry Beach to Stone Cliff
- a trail from Thurmond to Sewell
- trails in the Highland-Backus area
- a trail from Dowdy Creek to Highland Mountain
- a trail to the New River Bridge staging area
- a trail from the Stone Cliff Coke Ovens to Stone Cliff Mine
- a trail to the Beauty Mountain Overlook
- a trail from Keeney Creek Road to Keeney Creek Beach

Trailhead facilities would be provided for all new trails.

Alternative 4 would address the need for additional equestrian trails by providing a new equestrian loop trail in the Bucklick Branch area (with trailhead facilities).

- **Biking (Alternative 4)**

Alternative 4 would include potential joint hiking and biking use of existing and new trails listed in the preceding section subject to the general design principles identified for biking trails in Section 2.4.6 above. In addition, in Alternative 4 possible new biking opportunities would include:

- a new rail trail with biking access from Thurmond to Sewell
- development of a new biking trail in the Highland-Backus frontcountry zone
- development of a new rail trail with biking access from Mt. Hope to Southside Junction (if and when the CSX Corman Line right-of-way is abandoned and acquired by the NPS)

- **Hunting (Alternative 4) (Modified Hunting Program)**

In Alternative 4 hunting would continue largely as it is today. However, the following activities would be phased out over a five-year period:

- hunting of native "pest" species (raccoons, opossums, foxes, coyotes, bobcats, crows, skunks, woodchucks, and weasels)
- use of hunting dogs outside of applicable season for training purposes

In addition the following actions would be implemented:

- the NPS and WV DNR would collaboratively monitor park-specific game harvest and hunter use levels using a voluntary hunter registration/permit process and designated hunt units; this process would include distribution of information to hunters (hunt unit maps, regulations, etc.) and a voluntary end-of-season hunter questionnaire provided by the NPS
- NPS and WV DNR would develop a cooperative game management plan specific to designated hunt units in the park that would also identify management strategies to improve hunter satisfaction and enhance outreach opportunities to both hunters and non-hunters

- **Pedestrian Access across Railroad Rights-of-Way (Alternative 4)**

In Alternative 4 the NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible. As in Alternative 1 priorities would be to secure legal crossings at locations where visitors currently frequently cross tracks illegally. In addition effort would be focused on securing legal crossings needed for development of the new developed campground at Terry Beach and for a rim to river trail along Fire Creek.

- **Access and Parking (Alternative 4)**

In Alternative 4 management actions would generally maintain existing patterns of motorized access within the park, while permitting expansion of motorized access for visitors and/or administrative use in park development zones, historic resource

zones, river corridor zones, and frontcountry zones. Almost two-thirds (60.8%) of the park would be zoned backcountry where roads and parking would be limited to zone perimeters (see Figure 2.9) and where only non-motorized access could occur in the zone interior.

In Alternative 4 trailheads would provide adequate parking for visitors at the endpoints of rim to river trails. Similarly trailheads with adequate parking would be provided for new trails offering visitor experiences in and around river gateways. A new park road would be built in the Highland-Backus area providing access to new trails on the plateau and to a new developed campground.

At Cunard existing problems with inadequate parking for private paddlers on peak visitation days would be alleviated by:

- adding parking for private paddlers at Cunard (common to Alternatives 2 to 5)
- adding new private paddler parking along the Fisherman's Trail access road (common to Alternatives 2 to 5)
- implementing an alternative transportation system (ATS) composed of a concession-based shuttle that would operate on the Cunard Road, picking up and dropping off riders at a satellite parking area on the rim (at the site of the proposed Cunard boundary adjustment); the shuttle would primarily serve private paddlers and other visitors – outfitted paddlers would continue to ride to and from the river access on outfitter-operated buses

In addition the NPS would work cooperatively with the WV DOH to:

- design and construct pullouts on WV SR 41 from Stannaford to McCreery
- design and construct improvements to WV SR 25/2 in Thurmond

- **Other Visitor Facilities (including disabled access) (Alternative 4)**

Additional visitor facilities associated with Alternative 4 would include camping, picnicking, and river access facilities located in and around river gateways or in support of rim to river experiences. All practicable efforts would be made to provide access for the disabled at new facilities (common to Alternatives 2 to 5).

In the Meadow Creek River Gateway area:

- a new developed public campground would be developed at Meadow Creek West; in conjunction with this facility there would be an amphitheatre, picnic facilities, and a public river access site, including a river launch (with disabled boater access), parking, comfort/changing stations, and utilities

In the Prince/McCreery River Gateway area:

- a new developed campground and river access would be located at Terry Beach (if and when the required property could be acquired by the NPS from a willing seller)
- improvements to existing primitive campgrounds at Glade Creek, Mill Creek, Grandview Sandbar, and Army Camp would add more campsites in the area

In the Thurmond River Gateway area the existing Dun Glen campground would be closed (because of its location in the floodplain) and existing day-use facilities would be rehabilitated.

In the Cunard River Gateway area new picnicking facilities would be added at Brooklyn with parking and pedestrian access to the New River.

In the Canyon Rim/Fayette Station River Gateway area a new developed campground would be located at the existing NPS Burnwood day-use/operations area. This campground would address the need for camping facilities in proximity to rock climbing areas and cultural resource attractions in the lower gorge.

In the Highland-Backus rim area, a new developed campground would be developed.

River access improvements associated with Alternative 4 would include:

- a new access at Meadow Creek West near the Sandstone Visitor Center
- the existing McCreery river access would be closed
- a new river access at Terry Beach (described above)
- at Cunard expansion of existing parking for private paddlers and addition of new private paddler parking along the Fisherman's Trail access road (common to Alternatives 2 to 5), as well as implementation of an alternative transportation system at Cunard (see Access and Parking above)

2.7.5 Working with Local Communities (Alternative 4)

- **Sustaining Communities within the Park (Alternative 4)**

Hinton. No additional actions would be implemented in Alternative 4 to strengthen the connection between the city, its residents, and the mission of the NPS at the park beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.7 above).

Thurmond. Thurmond – a river gateway in the north end of the park – would become a major visitor attraction where the railroading story would be told (see Table 2.23). Visitation levels would dramatically increase. Visitor lodging would also likely be made available in restored houses. Visitors would be more likely to

explore areas of the town where private residents live. The permanent residential population would increase as a result of NPS staff living in some restored houses. The NPS would continue to work cooperatively with residents – including NPS staff residents – to address issues associated with living in the historic town.

Other Communities within the Park. Collaborative priorities for communities within the park in Alternative 4 are summarized in Table 2.26 below. The collaboration actions referenced in Table 2.26 are described above in the discussion of actions common to Alternatives 2 to 5 (see Section 2.4.7).

2.7.6 Land Protection (Alternative 4)

- **Land Protection Priorities (Alternative 4)**

In the future the NPS land protection program would focus efforts on the highest priority properties still to be protected in the park (see Section 2.4.8 above). For Alternative 4 the priorities for working with willing sellers of private property would be further refined to focus on acquiring properties that are important to accomplishing the overall concept for the alternative, such as properties that:

- include sites needed for trailheads, trail connections, or recreational sites along rim to river trails and along other new trails offering visitors experiences in and around river gateways
- include a site for a developed campground near the river in the northern end of the park

- **Stewardship of Private Land Remaining within the Park Boundary (Alternative 4)**

In the future the NPS would work cooperatively with the owners of private lands remaining within the park boundary to promote sensitive stewardship of privately-owned resources and values that are fundamental to the park (see Section 2.4.8 above). In Alternative 4 NPS would further focus the stewardship program on the private lands that are of high priority for protection as noted in Section 2.4.8 above and in the preceding section (Land Protection Priorities).

2.7.7 Partnerships (Alternative 4)

- **Relevance of the Park to Local Visitors (Alternative 4)**

In the future the NPS would take a number of actions aimed at strengthening the connection between the public and the mission of the NPS at New River Gorge National River (see Section 2.4.9 above). No additional actions would be implemented in Alternative 4 to enhance local appreciation and understanding of the park beyond those identified in Section 2.4.9.

Table 2.26 Alternative 4 – Collaborative Priorities for Communities within the Park*

		Collaborative Actions by the NPS and Local Communities within the Park									
				Provide Technical Assistance to Communities for							
Community	Alternative 4 Setting	Collaboration Priority	Form Community Partner Group	Developing a Community Vision Plan	Managing Change	Managing Visitor Impacts	Documenting Resources	Obtaining Grants	Managing Invasive Species	Providing Private Sector Visitor Services	Develop NPS Facilities, as Needed
Hinton	a major partner gateway community partly within the park at its southern end; no major existing or new visitor use facilities	1	✓			✓	✓	✓		✓	
Meadow Creek	a "river gateway" (increased minimum visitor through traffic); Sandstone Visitor Center and numerous new visitor facilities in vicinity	1	✓	✓	✓	✓	✓	✓	✓	✓	✓
Prince/ Quinnimont	a "river gateway" (increased visitor and public through traffic on WV SR 41); numerous existing and new visitor facilities in vicinity; rehabilitate and lease the Prince Brothers General Store; restore the cultural landscape at the Prince Brothers General Store and the Prince Estate; work cooperatively with AMTRAK to maintain customer service to Prince and provide interpretation at the Prince Station; provide roadside interpretation along WV Route 41 from Stanaford to Prince/Quinnimont	1	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terry	a community near the Prince "River Gateway" (no visitor through traffic); numerous existing and new visitor facilities in vicinity	2	✓	✓	✓	✓	✓	✓	✓		
Thayer	a remote community (unimproved McKendree Road); a few existing visitor facilities in vicinity	3	✓	✓			✓	✓	✓		✓
Backus	on plateau; numerous new visitor facilities in vicinity	3	✓	✓	✓	✓	✓	✓	✓	✓	✓
Highland	on plateau; no existing or new visitor facilities in vicinity	3	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thurmond	a major "river gateway"; restoration and rehabilitation of historic structures would dramatically increase visitation and the number of residents living in the town	1				✓	✓	✓	✓	✓	✓

1 – High Priority 2 – Medium Priority 3 – Low Priority ✓ - action recommended, as funding allows

- **Gateway Community Partnerships (Alternative 4)**

In the future the NPS would expand efforts to work cooperatively with its gateway communities to define and accomplish shared goals (see Section 2.4.9 above). In Alternative 4 partnerships between the NPS and the park's gateway communities would seek to enhance the visitor experience by providing better visitor orientation, by promoting services needed by visitors in gateway communities, by fostering improved wayfinding signage, and by promoting complementary interpretive and recreational experiences at other attractions in southern West Virginia. Small visitor contact facilities and/or information kiosks would provide information on recreation activities, visitor facilities, and interpretive programs at the park as well as at other attractions in the region.

- **Regional Tourism Partnerships (Alternative 4)**

In the future the NPS would expand its participation in regional economic development planning efforts underway by the various regional planning agencies and organizations in southern West Virginia (see Section 2.4.9 above). No additional actions would be implemented in Alternative 4 related to NPS participation in these efforts beyond those identified in Section 2.4.9.

- **Other Partnerships (Alternative 4)**

In the future the NPS would expand its collaboration with other public agencies and groups – including Babcock and Hawks Nest State Parks, state and county agencies, and organized stakeholder groups (see Section 2.4.9 above). In Alternative 4 the NPS would further increase collaborative efforts with the state parks (for trail development) and with the WV DNR (for development of cooperative game management plan and harvest monitoring).

2.7.8 Area-Specific Desired Conditions and Needed Changes (Alternative 4)

Table 2.27 identifies the desired resource conditions and desired visitor experiences for specific areas of the park in Alternative 4. The area-specific desired conditions focus on fundamental and other important resources and values and the visitor experience opportunities associated with them that would be appropriate in particular locations based on proposed management zoning.

Table 2.27 also identifies the general types of actions in specific areas of the park that would be needed and allowable to achieve desired conditions in Alternative 4. These are examples of the actions needed to move from existing conditions to desired conditions. Identifying the types of needed and allowable changes helps 1) to provide a sense of what management actions might occur and what development might look like in Alternative 4, 2) to identify the impacts of these actions, and 3) to estimate the general costs of implementing the actions.

2.7.9 Costs (Alternative 4)

The NPS has prepared estimates of annual operating costs and one-time costs associated with Alternative 4 using NPS and industry cost estimating guidelines (see Table 2.37 in Section 2.14 below). Annual recurring costs include personnel and non-labor costs, such as utilities, vehicles, travel, and supplies. One-time capital investments include construction, exhibits, research and planning. These costs are presented for comparative purposes only and will be refined at a later date based upon final design of facilities and other considerations. Some projects have the potential to be funded through partnerships and volunteers, or through shared funding with other agencies. Therefore, actual costs would vary depending on when specific actions are implemented and on contributions by partners and volunteers.

- **NPS Annual Operating Costs and Staffing Requirements (Alternative 4)**

NPS annual operating costs associated with Alternative 4 are estimated to be $15,570,000 (2009 dollars). This includes the anticipated cost for staff salaries 12 and benefits for 186 full-time equivalent staff, utilities, supplies, leasing (including leased park offices, as in Alternative 4) and other materials needed for park maintenance and operations.

Operating costs for Alternative 4 include the addition of 26 new FTE. The new positions include one new FTE to help develop and manage partnerships with the gateway communities, additional protection rangers to manage and cover new campgrounds, new maintenance staff to maintain and service the new campgrounds, trails and river access/day use facilities and new interpretive staff to expand interpretive programs and service increased visitation as the result of new facilities.

- **NPS One-Time Costs (Alternative 4)**

NPS one-time costs associated with Alternative 4 are estimated to be $29,300,000 (2009 dollars) including one-time facilities costs and non-facilities costs.

Facility costs include projects such as the following:

- rehabilitate the Richmond-Hamilton, Trump-Lilly and Vallandingham farmhouses and the Prince Brothers General Store through the NPS historic leasing program
- rehabilitate two historic houses for temporary housing and 18 for the historic lease program in Thurmond
- rehabilitate Thurmond's commercial row through partnership
- provide new trails for rock climber access
- develop a new campground for rock climbers
- provide two new equestrian trails

- provide new rim to river hiking trails and trailheads at Pinnacle Rock, Beauty Mountain, Upper Glade Creek, Davis Branch, Fire Creek, Garden Ground, Grandview, Hump Mountain, and other areas
- provide a new stacked loop biking trail in a frontcountry area
- provide new improvements to Turkey Spur at Grandview
- provide improvements to parking and circulation at Grandview
- improve Cunard and Fayette Station river access areas to relieve congestion
- expand parking at middle gorge areas such as Glade Creek, McCreery, and Thayer
- provide new roads to access Highland Backus plateau areas and develop new campground
- relocate stone cliff campground from riparian area
- improve day use areas at Dun Glen, McCreery, and Mill Creek
- develop a new camping facility at Meadow Creek West and additional camping south of I-64
- expand existing primitive campgrounds at Glade Creek, Grandview Sandbar, and Army Camp
- develop new designated backcountry campsites
- develop new campground with river access at Terry Beach

Non-facility costs include projects such as the following:

- restore the cultural landscape at the Prince Brothers General Store and Estate
- develop 20 cultural resources as discovery sites accessible from gateway communities
- pedestrian access across CSX right-of-way at new campgrounds
- develop new scenic vistas
- install and maintain information kiosks at gateway communities
- improve local appreciation and understanding by providing roadside interpretation along seven major roads through gateway communities

Table 2.27 Alternative 4 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Development Areas			
Bass Lake	▪ Bass Lake Campground (private) ▪ no park facilities	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide roadside interpretation along WV SR 20 from I-64 to Hinton
Sandstone Visitor Center	▪ Sandstone Visitor Center ▪ parking, picnicking facilities, and public restrooms ▪ NPS operations facility	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a rim-to-river trail from the Sandstone Visitor Center to Lower Hump Mountain
Meadow Creek West	▪ no park facilities	▪ a variety of camping experiences are available for different types of visitors ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ river access facilities enable paddlers of all skill levels to experience the park ▪ accessible facilities enable disabled visitors to experience the park	▪ provide a developed campground ▪ offer amphitheatre-based interpretive programs ▪ provide a public river access facility including a river launch, parking, road improvements, comfort/changing station, utilities, picnicking facilities, and disabled boater access
Grandview	▪ day-use facilities (picnicking facilities, recreational facilities, playground, trails, overlooks, restrooms) (high use – demand for picnic shelters exceeds capacity) ▪ amphitheatre (used for Theatre West Virginia productions) (needs rehabilitation) ▪ visitor contact station (functionally obsolete) ▪ main overlook not ADA accessible ▪ road system and parking (pedestrian and vehicular circulation issues occur during peak visitation periods) ▪ public water supply and wastewater treatment facilities ▪ NPS operations facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a Grandview to Mill Creek rim-to-river trail (with trailhead facilities) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Terry Beach	▪ McCreery: - river access (high use) - demand exceeds capacity during peak visitation periods leading to safety issues and visitor conflicts - private paddler safety issues due to pedestrian crossing of WV 41) - NPS unable to acquire property needed to relocate parking and address safety issues ▪ Terry Beach - private river access (low use) - undesignated camping (low use) ▪ no park facilities	▪ visitors enjoy a safe and secure experience at the park ▪ conflicts among visitor user groups are minimized ▪ river access facilities enable paddlers of all skill levels to experience the river ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ a variety of camping experiences are available for different types of visitors	▪ close the McCreery river access and restore the site ▪ provide a public river access facility at Terry Beach, including a river launch, parking, road improvements, comfort/changing station, utilities, picnicking facilities, and disabled boater access ▪ provide a developed campground at Terry Beach ▪ provide a trail from Army Camp to Stone Cliff (with trailhead facilities)
Dun Glen	▪ McKendree Road (WV SR 25) parallels the New River just above the river level ▪ Dun Glen - day use facilities (picnicking, parking, restrooms) - group campground(in floodplain) - park operations facility (in remnants of Dun Glen Hotel) (block access to river – functionally obsolete) - park housing (dorms) (functionally obsolete) ▪ visitors frequently illegally cross over CSX Corman Spur Line at Southside Junction	▪ a nearly continuous strip of natural riparian habitat occurs along the river ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ management facilities support efficient park operations	▪ close existing campground and restore riparian habitat ▪ relocate existing park housing elsewhere in the park ▪ rehabilitate day-use facilities (restrooms, picnic shelter, parking, access road) ▪ as park operations buildings become functionally obsolete, consider relocating existing park operations functions to Burnwood and demolishing buildings

Table 2.27 Alternative 4 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Glen Jean (Park Headquarters)	▪ park headquarters, headquarters annex (Glen Jean Bank), and operations facilities ▪ Glen Jean Bank (listed on National Register) (good condition) ▪ all structures located within 25-year floodplain ▪ park collection facility in Glen Jean Bank (within the floodplain)	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ interpret the Glen Jean Bank ▪ provide roadside interpretation along WV SR 25 from Glen Jean to Thurmond
Cunard	▪ river access (high use) ▪ crowded conditions during most summer weekends, especially when river levels are low ▪ inadequate private paddler ▪ parking inadequate boat slide capacity ▪ limited river access for disabled boaters ▪ visitor conflicts	▪ traffic circulation and parking is managed to reduce impacts on park resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience ▪ visitors use a variety of travel modes to access the park and specific visitor use areas ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ during periods of high visitor use provide a concession-based shuttle from satellite parking areas to the river access site ▪ provide roadside interpretation along the Cunard Access Road from the community of Cunard to the Cunard River access ▪ interpret the Cunard tipple and coke ovens ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Fayette Station	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ river access (high use) ▪ day-use facilities (parking, picnicking, public restrooms) ▪ CSX Main Line (active) ▪ visitors (primarily private paddlers) frequently illegally cross the CSX Main Line to reach the river access	▪ visitors enjoy a safe and secure experience at the park	▪ develop a pedestrian walkway connecting the private boater parking area with the day-use area ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Burnwood	▪ environmental education based at picnic pavilions (functionally obsolete) ▪ Laing Loop Nature Trail ▪ park operations facilities (functionally obsolete) ▪ public water supply and wastewater treatment facility (serving Burnwood and the Canyon Rim Visitor Center) (excess capacity)	▪ a variety of camping experiences are available for different types of visitors	▪ provide a developed campground (with connection to existing Burnwood water and wastewater systems) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Historic Resource Areas			
Richmond Bottom	▪ Richmond-Hamilton Farm: - farmhouse (habitable condition), split-log barns (period condition), other outbuildings (period condition) - fields not leased for agriculture - no park facilities - no interpretive programs ▪ Vallandingham Farm - log cabin (not habitable), log smokehouse, other outbuildings - vegetation impacting site - no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ at Richmond-Hamilton Farm: - rehabilitate the farmhouse (for reuse through the NPS historic leasing program) - interpret the Richmond-Hamilton Farm site - provide access and parking for visitors - provide wayfinding signage for a rim to river trail from Richmond-Hamilton to Trump-Lilly ▪ at Vallandingham Farm, rehabilitate the farmhouse (for reuse through the NPS historic leasing program)
Trump-Lilly Farm	▪ farm, outbuildings, farm fields, and orchard ▪ excellent example of post-bellum subsistence farmstead in uplands of the New River ▪ listed on National Register	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce	▪ rehabilitate the farmhouse (for reuse through the NPS historic leasing program) ▪ interpret the Trump-Lilly Farm site ▪ provide wayfinding signage for a rim to river trail from Richmond-Hamilton to

Table 2.27 Alternative 4 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	▪ farmhouse not habitable ▪ approximately 10 percent of historic fields are presently open ▪ no park facilities	income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	Trump-Lilly
Prince Brothers General Store	▪ wood-frame store (recently stabilized on exterior) ▪ last surviving commercial building of its type along the New River ▪ listed on National Register (for its architectural design) ▪ no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ rehabilitate the Prince Brothers General Store (for reuse through the NPS historic leasing program) ▪ restore the cultural landscape at the Prince Brothers General Store
Thurmond	▪ town mostly owned by the NPS, although some houses remain in private ownership and are occupied year-round ▪ entire town site included within the Thurmond Historic District (listed on National Register) ▪ restored Thurmond Depot (used as NPS visitor center) (listed individually on National Register) ▪ Commercial Row (stabilized on exterior) (listed individually on National Register) ▪ remnants of C&O train yard and passenger depot ▪ various frame houses (variable condition – some in poor condition, some recently stabilized on exterior only) ▪ vegetation (kudzu) negatively impacted site ▪ structures at Commercial row have lead and asbestos contamination ▪ inadequate water supply and wastewater treatment systems	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ rehabilitate commercial row buildings (for reuse through the NPS historic leasing program) ▪ rehabilitate houses that are currently in good condition for reuse for park housing, park dormitory housing, or visitor lodging through the NPS historic leasing program ▪ restore other remaining historic structures (on the exterior only) ▪ provide a trail from Thurmond to Sewell Trail (including trailhead facilities)
River Corridor Areas			
Meadow Creek to Quinnimont	▪ Glade Creek Road Scenic Backway ▪ Glade Creek - river access (moderate use) - Glade Creek campground and day-use area (high use) (demand for camping typically exceeds capacity) - Glade Creek Trail and Trailhead (high use) ▪ Mill Creek - river access (low use) - undesignated camping occurs in floodplain) ▪ CSX Main Line on river right (active)	▪ a variety of camping experiences are available for different types of visitors ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ at Glade Creek, expand the existing campground ▪ at Mill Creek - provide a Grandview to Mill Creek rim-to-river trail (with trailhead facilities) - provide a vault toilet

Table 2.27 Alternative 4 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	- no restrooms ▪ walk-in camping at Grassy Shoals, Mill Creek, and Royal Pull-Out		
Quinnimont to Army Camp	▪ Glade Creek Road Scenic Backway ▪ Grandview Sandbar - river access (moderate use) - day-use facilities (low use) - campground (high use) (demand frequently exceeds capacity) ▪ Army Camp - river access (moderate use) - day-use facilities (low use) - campground (demand for camping typically exceeds capacity) ▪ CSX Main Line on river right (active) ▪ CSX Piney Creek spur line on river left (active)	▪ a variety of camping experiences are available for different types of visitors ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ at Army Camp - expand the existing campground - provide a rim-to-river trail from Army Camp to Pinnacle Rock (with trailhead facilities) ▪ at Grandview Sandbar: - expand the existing campground - interpret the Royal Cemetery
Stone Cliff to Arbuckle Creek	▪ Stone Cliff - river access (high use) - campground and day-use area (in floodplain) (high use) - Stone Cliff Trail and trailhead (low use) ▪ CSX Main Line on river right (active)	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ at Stone Cliff, provide a trail from Army Camp to Stone Cliff ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Brooklyn to Hawks Nest	▪ Brooklyn - undesignated camping (moderate use) - river fishing (no day-use facilities) (moderate use) ▪ Teays Landing river access (private) ▪ CSX Main Line on river right upstream of Cunard and on river right and river left downstream of Cunard (active) ▪ visitors frequently illegally cross over CSX Main Line - to reach the lower railroad area (for fishing and boating) - to reach Short Creek (for camping and fishing) - to reach Kaymoor via the tunnel under the tracks (for hiking)	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ at Brooklyn, provide new picnicking facilities with parking and pedestrian access to the river ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12)) ▪ work cooperatively with the CSX Corporation to secure safe legal public access to the river across the CSX right-of-way in the lower railroad area, at Short Creek, and at Kaymoor
Forest Areas			
Sewell Mountain (Frontcountry Zone)	▪ Big Branch Trail and Trailhead (moderate use)	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a rim to river trail from Trump-Lilly Farm to Richmond-Hamilton Farm
Chestnut Mountain (Backcountry Zone)	▪ Sandstone Overlook – parking demand exceeds capacity ▪ Gwinn Ridge Trail provides access for hiking ▪ Gwinn Ridge Trailhead – parking demand exceeds capacity ▪ Lick Creek - water quality impaired	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide roadside interpretation from I-64 to Hinton
Meadow Creek South (Frontcountry Zone)	▪ Meadow Creek – water quality impaired ▪ fish stocking in Meadow Creek (moderate fishing use) ▪ hunting area (on plateau) ▪ CSX Meadow Creek rail line (active) ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide a rim to river trail from the Lower Hump Mountain to the Sandstone Visitor Center ▪ provide roadside interpretation along Meadow Creek Road from Meadow Bridge to Meadow Creek
Bucklick Branch	▪ hunting area ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide an equestrian loop trail (with trailhead facilities)
Highland-Backus (Frontcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River on the gorge wall ▪ hunting area ▪ no designated trailheads – one site with no developed facilities is heavily used for parking by hunters ▪ no park facilities	▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads ▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a park access road ▪ provide trails: - generally in the Highland-Backus area - from Dowdy Creek to Highland Mountain - Highland Mountain Biking Trail ▪ provide a developed campground in the

Table 2.27 Alternative 4 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
		▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of camping experiences are available for different types of visitors	plateau area ▪ provide trailheads: - to access new hiking trails - to access new biking trails
Stretcher Neck (Backcountry Zone)	▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a river-to-rim trail from Army Camp to Pinnacle Rock
Dowdy Creek (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River on the gorge wall ▪ hunting area ▪ no designated trailheads – two sites with no developed facilities are heavily used for parking by hunters ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ a variety of camping experiences are available for different types of visitors ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide several designated backcountry campsite groups along the Dowdy Creek Highland Mountain Trail ▪ provide a trail from Dowdy Creek to Highland Mountain ▪ provide a trailhead for the Dowdy Creek to Highland Mountain Trail
Glade Creek (Backcountry Zone)	▪ popular hunting and fishing area (moderate fishing use) ▪ fish stocking in Glade Creek by WV DNR and Glade-Pinch Trout Association ▪ fish stocking in Mill Creek by WV DNR ▪ Glade Creek Trail provides fishing access and a connection from the rim to the river (admin vehicles permitted on upper section) ▪ Polls Plateau Trail, Kates Plateau Trail and Kates Falls Trail provide access for primitive camping and hunting ▪ Lower Glade Creek Trailhead ▪ Upper Glade Creek Trailhead (demand exceeds capacity) ▪ Cloverdale Road area used for access to Kates Plateau Trail although no trailhead facilities are available	▪ hydrologic features provide a mosaic of habitats that supports a full range of natural aquatic organisms	▪ complete studies to understand impacts of stocking on native trout fish stocking; continue to support stocking by WV DNR and park partners, if deemed appropriate ▪ provide trails: - a segment of the rim-to-river trail from Grandview to Mill Creek - a trail from Cloverdale Road to Upper Glade Creek Trail ▪ provide trailheads: - expand parking capacity at the existing Glade Creek Trailhead - provide a trailhead at Cloverdale Road
Royal (Frontcountry Zone)	▪ CSX Piney Creek spur line (active) ▪ Piney Creek - water quality impaired ▪ no park facilities	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide roadside interpretation along WV SR 41 from Stanaford to Prince/Quinnimont
Terry-Batoff Creek (Backcountry Zone)	▪ CSX Piney Creek spur line (active) ▪ Piney Creek - water quality impaired ▪ no park facilities	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide roadside interpretation along WV SR 41 from Stanaford to Prince/Quinnimont ▪ provide a trail from Army Camp to Stone Cliff
Garden Ground (Backcountry Zone)	▪ Stone Cliff Trail (low use) ▪ no designated trailheads – one plateau site with no developed facilities heavily used for parking	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide trails: - a rim-to-river trail from the Garden Ground plateau to the New River - a trail from Army Camp to Stone Cliff ▪ provide a trailhead for the Army Camp to Stone Cliff Trail
Dunloup Creek (Frontcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River at the river level ▪ Thurmond-Minden Trail and Trailhead (high use) ▪ Southside Trail (high use) ▪ fish stocking in Dunloup Creek by WV DNR (moderate fishing use) ▪ CSX Corman spur line (active) ▪ recurring flooding along Dunloup Creek	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ if and when the CSX Corman Line is abandoned provide a rail/trail from Mt. Hope to Southside Junction ▪ provide a trailhead for the Mt. Hope to Southside Junction Rail/Trail ▪ provide roadside interpretation along WV SR 25 from Glen Jean to Thurmond
Arbuckle Creek (Frontcountry Zone)	▪ Thurmond-Minden Trail and Trailhead (high use) ▪ Southside Trail (high use) ▪ Arbuckle Creek – impaired	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide roadside interpretation from Minden to the Thurmond-Minden Trail Trailhead

Table 2.27 Alternative 4 – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Rush Run (Backcountry Zone)	▪ Brooklyn Mine Trail and Trailhead (high use) ▪ Southside Trail (high use) ▪ Cunard Access Road ▪ Cunard Trailhead parking area ▪ provides critical habitat for rare mammals	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide roadside interpretation along the Cunard Access Road from the community of Cunard to the Cunard River access ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Above Thurmond (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River near the river level ▪ hunting area (on plateau) ▪ no designated trailheads – one site with no developed facilities are heavily used for parking ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a trail from the Stone Cliff coke ovens to Stone Cliff Mine
Below Thurmond (Frontcountry Zone)	▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a trail from Thurmond to Sewell
Sewell (Backcountry Zone)	▪ hunting area (plateau above Fire Creek, Ephraim Creek, Mann Creek, and Keeney Creek) ▪ no NPS facilities ▪ partially included within Babcock State Park (facilities include trails) ▪ fish stocking in Glade Creek and Mann Creek by WV DNR (moderate use) ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ mutual park management goals are effectively realized through collaboration among the NPS, Hawks Nest State Park, and Babcock State Par ▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a trail from Thurmond to Sewell ▪ provide a trail (with trailhead facilities) from GW Carver (via Babcock State Park) to Sewell to Caperton to Keeney Creek (in cooperation with Babcock State Park) ▪ provide a rim-to-river trail along Fire Creek (with trailhead facilities) ▪ block ATV access to Cunard across the New River railroad bridge ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.11))
Babcock State Park (Frontcountry Zone)	▪ Babcock State Park (facilities include cabins, campground, Glade Creek Grist Mill, swimming beach, boat rentals, picnic facilities, trails, horseback riding concession) ▪ fish stocking in Glade Creek by WV DNR (moderate use)	▪ mutual park management goals are effectively realized through collaboration among the NPS, Hawks Nest State Park, and Babcock State Park ▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a trail (with trailhead facilities) from GW Carver (via Babcock State Park) to Sewell to Caperton to Keeney Creek (in cooperation with Babcock State Park)
Beauty Mountain (Frontcountry Zone)	▪ Beauty Mountain climbing area ▪ Beauty Mountain overlook (no designated trail) ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide roadside interpretation along WV SR 85/2 from Lookout to Winona to Nuttallburg ▪ provide a trail (with trailhead facilities) to the Beauty Mountain overlook ▪ provide a trail (with trailhead facilities) to Keeney Creek Beach (including a CSX crossing) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Sunshine Buttress (Frontcountry Zone)	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ New River Bridge Trail (low use) ▪ Sunshine Buttress climbing area (low use) ▪ no designated trails to climbing routes at the top or base of Sunshine Buttress ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a trail (with trailhead facilities) to the New River Bridge staging area ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Ames (Frontcountry Zone)	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ Bridge Buttress climbing area (high use) ▪ Bridge Buttress parking area ▪ Bubba City climbing area (moderate use) ▪ Junkyard climbing area (moderate use) ▪ no designated trails to climbing routes at Bubba City or Junkyard ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ provide road access to the Junkyard climbing area ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))

2.8 Alternative 5 – Exploration Experiences (Preferred Alternative)

2.8.1 Overall Management Concept (Alternative 5 – Preferred Alternative)

Alternative 5 would preserve areas for primitive recreational experiences from end to end of the park (see Figure 2.10).[1] Interspersed with these primitive areas would be cultural and interpretive resource focal areas where visitors could explore communities and other places that once populated the gorge, experience the river, and enjoy a variety of recreational experiences. A north-south through the park connector composed of improved scenic roads and trails would enable visitors to travel the length of the park, visiting these areas and accessing the backcountry. Partnerships with gateway communities and improved rim to river experiences would foster links to the park as a whole and to specific cultural and interpretive resource areas within the parks. Other connecting trails outside the park – made possible through partnerships – would offer visitors an opportunity to hike or bike from New River Gorge National River to the Bluestone National Scenic River, the Gauley River National Recreation Area, and other attractions in the region.

2.8.2 Visitor Experience and Visitor Orientation (Alternative 5 – Preferred Alternative)

- **Experiencing the Park (Alternative 5 – Preferred Alternative)**

Alternative 5 would emphasize a combination of primitive outdoor experiences in the park's forest complemented by diverse opportunities for visitors in and around specific focal areas (see Figure 2.10). Backcountry forest in much of the park would offer the most primitive outdoor experiences where visitors would be immersed in nature with few modern conveniences, while frontcountry forest would offer a broad variety of less primitive recreational experiences, such as family activities, biking and equestrian use. In contrast, five focal areas would make available to visitors concentrated opportunities for cultural, natural, scenic, interpretive, and recreation experiences in specific areas of the park. The historic context for each focal area would define the stories that would be told, focusing as appropriate on the park's early settlement/agricultural or industrial themes. A river gateway within each focal area would be the location where visitors would learn about the resources and recreation opportunities. From river gateways visitors would move out into the broader focal area and the park on the water by boat, on trails by foot or bicycle, or on scenic roads. The new through park connector would enable visitors to explore the park from end-to-end. It would also connect focal areas and provide expanded access to cultural resources, scenic vistas, and natural features within the forest. As visitors explore the park on the through park connector and other new trails they would learn about the park's history when they come upon cultural resource "discovery sites" where interpretive media would tell the park's stories.

[1] *See Tables 2.2 and 2.3 above for a general comparison of the alternative concepts and a summary of the broad organizing principles for each alternative*

KEY

- Focal Area
- River Gateway
- Connection to Focal Area
- Partner Gateway Community at Park Edge

Through Park Connector

- Through Park Connector Corridor
- Connector Trail Using an Existing Trail/Improved Existing Trail
- Connector Trail to be developed as a New Trail

- Future Connector Trail (outside the park)
- Existing Road / Improved Existing Road
- New Road
- Primitive Outdoor Experience Area
- NPS Land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

PROSPERITY
BRADLEY
PINEY VIEW
STANAFORD
Beckley
Mount Hope
Glen Jean
Oak Hill
Minden
Fayetteville
Ansted
Future Connector Trail from Prince to Beckley
Future Connector Trail from Glade Creek to Beckley
Future Connector Trail from Southside Junction to Mount Hope
Future Connector Trail from Southside Junction to Oak Hill
Future Connector Trail from Hawks Nest State Park to Gauley River National Recreation Area
McCreery
Army Camp
Grandview/Prince
Grandview
Prince
McKendree
Dun Glen
Stone Cliff
Thurmond
Fayette Station
Kaymoor
Canyon Rim Visitor Center
Cunard
Nuttalburg
Lower River Gorge
Highland
Thayer
Glade Creek
State Route 41
Backus
Winona
Babcock State Park
Babcock State Park
Future Connector Trail from Sewell to Gauley River National Recreation Area
Future Connector Trail from Hinton to Bluestone National Scenic River
Meadow Creek
Sandstone Visitor Center
Sandstone
State Route 20
Future New River Parkway
Hinton
Upper River Gorge
Meadow Bridge
Future Connector Trail from Meadow Creek to Meadow Bridge
3
64
41
19
60

Figure 2.10

ALTERNATIVE 5 CONCEPT: EXPLORATION EXPERIENCES (PREFERRED ALTERNATIVE)

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Partnerships between the NPS and the park's gateway communities would seek to enhance the park experience by providing better visitor orientation, by promoting services needed by visitors in gateway communities, by fostering improved wayfinding signage, and by promoting complementary interpretive and recreational experiences at other attractions in southern West Virginia.

Table 2.28 provides an overview of potential visitor experiences in various places in the park. Table 2.28 also summarizes management actions in Alternative 5 that would define where and how visitors would enjoy the important experiences that they may have at New River Gorge National River, including:

- appreciating life in the gorge – the human history story
- appreciating/experiencing the wildness of the landscape
- experiencing the power of the river
- experiencing scenic beauty

Visitors would also continue to enjoy the classic park experiences at Sandstone Falls, Grandview, Thurmond, Endless Wall, Canyon Rim, and Fayette Station Road; new management actions consistent with the overall concept for Alternative 5 would enhance the visitor experience at Sandstone Falls, Thurmond, and Fayette Station Road.

- **Visitor Orientation (Alternative 5 – Preferred Alternative)**

Visitor orientation would focus on describing opportunities for recreation and for exploring the park along the through park connector and on roads and trails within the five focal areas. Emphasis would also be on potential primitive recreational experiences and on rim to river trails, within and near river gateways, and along new trails emanating from river gateways. Visitors would learn about recreation opportunities, places where they can discover the park's significant natural and cultural resources, and the areas where different recreation activities would be possible.

New park brochures and informational materials would describe the through park connector, the park's focal areas, rim to river experiences, and river gateways. They would also emphasize connections to other trails outside the park, such as trails to the Gauley River National Recreation Area.

Visitor centers at Canyon Rim and Sandstone would continue as the primary venues where visitor orientation would occur. From these locations visitors would be directed to the through park connector, focal areas, rim to river trails, and river gateways. Working collaboratively with WV DOH, the park would seek to place signage along public roads directing visitors to rim to river trails and river gateways as they leave visitor centers and as they approach the park from US 19, US 60, I-64, and WV SR 41.

Table 2.28 Important Visitor Experiences (Alternative 5 – Preferred Alternative)

Places Where Visitors Would Generally Experience the Park in Alternative 5	
Through Park Connector	The through park connector would unify the park, providing visitors the opportunity to explore the park from one end to the other as a multi-day backpacking or biking trip. Alternatively visitors could explore the park on the through park connector in a series of day trips originating from trailheads throughout the park.
Primitive Outdoor Experience Area	The Primitive Outdoor Experience Area would encompass much of the park's forest from end to end of the park, including both backcountry and frontcountry areas. Visitors have opportunities to experience wildness, solitude, adventure, exploration, and discovery. Recreation would be unstructured and trail-based. When in backcountry areas visitors would be immersed in nature, away from modern conveniences. When in frontcountry areas visitors would be in contact with nature but fairly close to modern conveniences.
Upper River Gorge Focal Area	The Upper River Gorge Focal Area would encompass the river corridor in the southern end of the park from Hinton to Meadow Creek. Visitors would learn about early settlement and farming history at a representative restored farmhouse in the New River Parkway corridor (existing River Road corridor). From New River Parkway (now River Road) and from improved recreation sites along the parkway and at Sandstone Falls, visitors would have opportunities to view the river, learn about the park's natural resources, and picnic. New hiking and biking trails would enable visitors to explore the park's forest and to visit the restored farmsteads on foot or by bicycle. Opportunities for camping would be available at two new developed campgrounds.
Grandview / Prince Focal Area	The Grandview/Prince Focal Area would encompass the area from the rim to the river on river left from Grandview to Terry Beach, as well as the river corridor area from Quinnimont to Prince on river right. Prince would serve as a river gateway (see below) where visitors would be oriented to the area and the park's railroading and lumbering stories would be told at rehabilitated historic structures and at cultural resource "discovery sites". Visitors could explore the park on a variety of new trails, including the through park connector and rim to river trails from Grandview to Mill Creek and from Army Camp to Pinnacle Rock. Access to the river would be enhanced by replacement of the McCreery river access with a new river access at Terry Beach. Camping opportunities would be enhanced by expansion of existing primitive campgrounds and development of a new developed campground at Terry Beach.
Thurmond Focal Area	The Thurmond Focal Area would encompass the river corridor from Stone Cliff through Thurmond. Thurmond would be a river gateway (see below) as well as a major visitor attraction where the railroading story would be told (see Classic Park Experiences below). Visitors would continue to have opportunities for camping at Stone Cliff and for picnicking at the river at both Stone Cliff and Dun Glen. Visitors could explore the park from Southside Junction where a trailhead would be provided for the through park connector as well as from trails from Thurmond to Sewell and from Thurmond to other cultural resource "discovery sites". Visitors would be able to stay overnight in lodging provided in rehabilitated historic buildings operated through the historic leasing or concessions program. Commercial services would also be available in rehabilitated historic buildings.
Babcock State Park Focal Area	The Babcock State Park Focal Area would encompass the southern portion Babcock State Park. NPS would work in partnership with the state park to ensure that national park visitors know about and include Babcock in their visit to the area. Visitors would continue to have a traditional park experience at Babcock offered by the state, including developed recreation activities such as camping, hiking, biking, swimming, and learning about the park's natural resources and cultural resources.
Industrial Gorge Focal Area	The Lower Gorge Focal Area would encompass the river corridor and Endless Wall area in the northern end of the park from above Cunard to Hawks Nest State Park. Visitors would learn about the gorge's industrial history related to mining, lumbering, and railroading. River gateways would be located at Cunard, Nuttallburg, and Fayette Station. An expanded network of trails would enhance access to cultural resource "discovery sites" in remote forested areas.

Table 2.28 Important Visitor Experiences (Alternative 5 – Preferred Alternative)

Places Where Visitors Would Generally Experience the Park in Alternative 5 (continued)	
River Gateways	River gateways would be places within the park's focal areas where visitors would be oriented to the focal area and from which they would move out into the park via trails, roads, and/or the river. At river gateways visitors would learn about recreation activities and the opportunities in the vicinity to explore the park and to experience its resources and history. Visitor facilities – such as river accesses, trailheads, day-use areas, scenic vistas, and campgrounds – would be clustered in or very near river gateways. Historic resources would be rehabilitated for visitor use. Some river gateways would offer commercial services for visitors, such as lodging, food service, grocery stores, sport shops, and guide service.
Partner Gateway Communities	Partner gateway communities would include the communities adjoining or near the park where visitors arrive from outside the region, where many stay while visiting the park, and where many receive initial orientation to the area. Small visitor contact facilities and/or information kiosks would provide information on recreation activities, visitor facilities, and interpretive programs at New River Gorge as well as at other attractions in the region. Gateway communities would typically offer commercial services for visitors – varying from a full range of services in larger gateways to very limited services in smaller gateways. Gateway communities and the NPS would enter into cooperative partnerships to ensure that both parties would benefit from one another's actions to protect park resources, to enhance the visitor experience, and to generally contribute to the park's position as a major tourist attraction in the region.
Rim to River Trails and Roads	Rim to river experiences would occur along roads and trails that connect plateau areas above the rim to the river below. Traveling these routes by vehicle, foot, or bicycle, visitors could appreciate the wildness of the park, its beauty, and the power of the river evidenced by the rugged terrain and the depth of the gorge. Waysides along rim to river trails and cultural resource "discovery sites" would tell the park's stories. Many rim to river roads and trails would begin at the park's gateway communities and would end at its river gateways.
Important Park Experiences That Visitors Would Have *(underlined elements are additions included in Alternative 5)*	
Appreciate life in the gorge – the human history story	**Throughout the park there are cultural resource sites where human history stories could be told.** Visitors to the park's river gateways and focal areas would have opportunities to learn about life in the gorge by visiting rehabilitated cultural resources that are leased through the NPS historic leasing program. In the Upper River Corridor Focal Area visitors would learn about early Appalachian settlement by visiting historic farms where interpretive programs and exhibits would be available. The farmhouses would be restored to period condition and set within restored cultural landscapes. In the Grandview/Prince Focal Area visitors would learn about life in a railroading and lumbering town at the rehabilitated Prince Brothers General Store and other nearby sites. In the Lower Gorge Focal Area visitors would: - learn about life in a railroading town during the park's industrial era at the Thurmond River Gateway (see Classic Experiences above). - learn about life in a mining town during the park's industrial era at the Nuttallburg River Gateway where mining structures and town ruins would be stabilized (as in Alternative 1). Visitors would also learn about the history of life in the gorge when they come upon and find cultural resources discovery sites along the through park connector, along trails at or near river gateways, and along rim to river trails (approximately 30 to 35 sites).

Table 2.28 Important Visitor Experiences (Alternative 5 – Preferred Alternative)

Important Park Experiences That Visitors Would Have (continued) *(underlined elements are additions included in Alternative 5)*	
Appreciate/experience the wildness of the landscape	**A sense of wildness dominates the landscape setting in most areas of the park.** Blocks of intact and unfragmented forest along most of the length of the park on one or both sides of the river would be managed as backcountry forest, preserving their wild character and enhancing the perception of the park's wildness as visitors experience the park. Overall, backcountry forest blocks would compose approximately 66.4 percent of the park. While paddling the river visitors would be transported to remote and wild areas in the upper, middle, and lower gorge, relying on the existing network of river accesses which take possible a variety of paddling experiences in a wild landscape setting. Addition of a new river access in the Upper Gorge Focal Area near the Meadow Creek River Gateway would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips in the middle gorge. In the Prince/McCreery River Gateway replacement of the McCreery river access with a new river access at Terry Beach would facilitate private paddlers safely accessing the river for trips in the middle gorge. New access to the river might also be added in the Lower Gorge Focal Area at Surprise, in the event that transportation system improvements at Cunard do not adequately alleviate crowding at the existing Cunard river access. Visitors venturing into the park's forest would explore the park making their way along a greatly expanded network of trails at times near the water's edge and at times looking into the gorge. Over time, and as property and rights-of-way are acquired, NPS would seek to develop trails on both river right and river left, from the new New River Parkway Bridge to Hawks Nest. These trails would connect and provide a loop trail that would provide for several days of hiking in the park. The loop trail would ultimately utilize existing bench roads, rim-top trails, and river level roads, and provide a variety of hiking experiences. Camping along the route would be facilitated so that people could enjoy multi-day hikes in the park. Initially a new through park connector would enable visitors to travel the length of the park; while a few connector segments would follow scenic roads, it would still provide an opportunity for multi-day backpacking trips. Other new trails would offer visitors rim to river hiking experiences at numerous locations throughout the park. New trails would also offer visitors hiking experiences at numerous locations in and around river gateways. Exploration of the park by bicycle – pending adoption of a special regulation and subject to a development of a trail management plan – would occur on a variety of trail types in frontcountry zones and would occur only on singletrack trails in backcountry zones. Bikers could also explore the park on new stacked loop biking trails in the Bucklick Branch and Craig Branch areas. Visitors could also explore the park by horseback in the Bucklick Branch area and in the Chestnut Mountain area. Visitors camping in the forest would experience nature and the sense of solitude that comes from spending extended time in the outdoors at existing campsites and at new camping facilities, including: - in the Upper River Corridor Focal Area, a new developed campground at the river's edge - in the Prince/McCreery River Focal Area, 1) a new developed campground at Terry Beach, and 2) expansions to existing campgrounds - in the Lower Gorge Focal Area, a new developed campground on the plateau From existing developed overlooks and a new developed overlook at Brooks Falls expansive vistas of rugged terrain, dense forest, and the turbulent river in the gorge below would evoke appreciation of the wild landscape (as in Alternative 1). New opportunities for views evoking a sense of wildness would be added along rim to river trails and in trails near river gateways.

Table 2.28 Important Visitor Experiences (Alternative 5 – Preferred Alternative)

Important Park Experiences That Visitors Would Have (continued) *(underlined elements are additions included in Alternative 5)*	
Experience the power of the river	**Throughout the park the power of the river is evident wherever visitors can be on the river, be at the river's edge, or view the river from afar.** The New River would carry paddlers along its freeflowing course through the gorge cut by its waters deep in the Appalachian Plateau. Those who ride the river as it descends through the gorge would feel its power and experience the thrill of adventure and discovery as the water flows turbulently over and amidst massive boulders transported through time from the cliff walls above. River experiences would be available from the existing network of river accesses for paddlers of all skill levels during most spring, summer, and fall months. Addition of a new river access in the Upper Gorge Focal Area near the Meadow Creek River Gateway would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips in the middle gorge. In the Prince/McCreery River Gateway addition of a new river access at Terry Beach would reduce crowding at the McCreery river access and facilitate private paddlers safely accessing the river for trips in the middle gorge. New access to the river might also be added in the Lower Gorge Focal Area at Surprise, in the event that transportation system improvements at Cunard do not adequately alleviate crowding at the existing Cunard river access. At the river's edge visitors could see, smell, and hear the river, feeling its power as they sense around them the scale of the gorge shaped by the flowing water. From the existing network of river accesses and day-use areas at the river's edge visitors would experience the river as it flows calmly yet powerfully on its course northward; elsewhere visitors would experience a wild river flowing turbulently around rocks and boulders. In Upper Gorge Focal Area, the river's edge experience would be enhanced in the River Road corridor by day-use area improvements included in the New River Parkway project (as in Alternative 1) and by addition of a new river access at Meadow Creek West. In the Grandview/Prince Focal Area a new river access at Terry Beach would enhance access to the river's edge in the Prince River Gateway area. In the Lower Gorge Focal Area enhancements to the Brooklyn River access would enhance access to the river's edge in the Cunard River Gateway Area. From existing developed overlooks and a new developed overlook at Brooks Falls the depth of the gorge, the exposed cliff walls, and the massive boulders in the river below, would evidence the river's power to shape the landscape (as in Alternative 1). New opportunities for views evidencing the river's power to shape the landscape would be added along rim to river trails and along trails near river gateways.
Experience scenic beauty	**Throughout the park its scenic beauty is evident from roads, trails, overlooks, and the river.** From existing roads visitors would have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. In the middle of the park opportunities to experience the scenic quality of the park's landscape would be enhanced through cooperation with the WV DOH aimed at making improvements to McKendree Road, designating the road as a state scenic backway, and establishing the road as segment of the new through park connector. Also, in the Upper Gorge Focal Area, as visitors travel New River Parkway (existing River Road) from Sandstone to Hinton the scenic beauty of the park would be evident in the dramatic landscape visible from the New River Bridge and along the parkway (as in Alternative 1). Also, in the Lower Gorge Focal Area, efforts would be made to enhance opportunities for scenic vistas along Fayette Station Road by working with WV DOH to add pull-outs (as in Alternative 1). Visitors traveling on existing trails would continue to have scenic views of the park's forest, streams, and rugged landforms, with occasional glimpses of the river. Visitors would also enjoy the park's scenic resources from the new through park connector, rim to river trails, and new trails near river gateways. Visitors would continue to have panoramic scenic views of the park's landscape from existing developed overlooks and from a new developed overlook at Brooks Falls (as in Alternative 1). New opportunities for panoramic scenic views would be added along rim to river trails and along trails near river gateways.

Table 2.28 Important Visitor Experiences (Alternative 5 – Preferred Alternative)

Classic Park Experiences *(underlined elements are additions included in Alternative 5)*	
Paddling the New River	Paddlers would continue to experience the power of the river and the park's wild character and natural beauty as they float the river, stopping to picnic, fish, visit natural and cultural sites of interest, and/or camp. Opportunities for paddlers of all skill levels would be enhanced by addition of a new river access in the middle of the park (at Meadow Creek West) that would expand opportunities for new fishing float trips, family float trips, and beginning paddler float trips. If needed to address capacity issues at Cunard, addition of a new river access at Surprise would enhance outfitted paddler trip logistics and the overall river experience in the lower gorge on peak visitation days and during low flow periods by reducing congestion on the river and by extending the length of full-day outfitted paddler trips. Addition of a new river access at Surprise would also increase visitor access along that road for camping and fishing and allow the improvement of several recreation sites upstream of Brooklyn by providing restrooms and formalized trail access. Several recreation sites along Glade Creek Road (Royal Pullout, Mill Creek, Grassy Shoals) would be enhanced by adding vehicle parking, formalized trail access, and restrooms. Opportunities for disabled paddlers would be enhanced by addition of disabled boater access at the Cunard and McCreery (Terry Beach) river accesses (in Alternatives 2 to 5). The condition of river recreation sites popular for river lunch stops, camping, and fishing would be enhanced by improving access and providing restroom facilities where practicable (in Alternatives 2 to 5). More frequent river patrols would provide visitor education and, as needed, increased enforcement of existing regulations related to group size, trash removal, and human waste removal where restrooms are not available (in Alternatives 2 to 5).
Sandstone Falls	The boardwalk and recreational facilities at Sandstone would continue to bring visitors to the water's edge where they can feel the power of the river, experience its beauty, and learn about the park's significant natural resources (as in Alternative 1). The visitor experience would be enhanced by expansion of the existing boardwalk.
Sandstone Falls Visitor Center	At the Sandstone Falls Visitor Center visitors would continue to be oriented to the park with an emphasis on the combination of primitive outdoor experiences in the park's forest complemented by diverse opportunities for visitors in and around specific focal areas (see Section 2.8.2 above).
Grandview	Social gatherings, cultural events, and recreational activities at Grandview would continue in a setting where visitors can experience the scenic beauty of the park, the wildness of its landscape, and the power of the river (as in Alternative 1). Park visitors would enjoy safer access to the Turkey Spur overlook (as in Alternative 1). Theatre goers would continue to enjoy productions at an updated Cliffside Amphitheatre (as in Alternative 1).
Kaymoor and Nuttallburg	Nuttallburg would be highlighted as a river gateway in the north end of the park where the park's industrial story would be told. Trails would provide visitor access to historic mining areas at Kaymoor and Nuttallburg (as in Alternative 1). Nationally significant mining resources at Nuttallburg would be interpreted for visitors and made more accessible through parking and trail improvements (as in Alternative 1).
Thurmond	Thurmond would become a major visitor attraction in the north end of the park where the railroading story would be told. Contamination at Commercial Row structures would be remediated (as in Alternative 1) and the buildings rehabilitated so that commercial activities can return to the town (through the park's leasing program). The town would be home to some NPS staff that would live in rehabilitated historic houses. Visitors might also be able to stay in the town in lodging made available in rehabilitated historic houses. Historic buildings that are not rehabilitated would be stabilized and restored on the exterior only.
Experiencing the Cliffs	The massive sandstone cliffs in the Endless Wall area and elsewhere would continue to attract visitors seeking to experience their beauty as well as the thrill of adventure, exploration, and solitude of rock climbing (as in Alternative 1). Access to the Endless Wall would be made easier and safer by adding parking and by establishing designated and maintained trails to climbing routes (in Alternatives 2 to 5). Climbing and other visitor activities in the Endless Wall area would also be limited to day use (in Alternatives 2 to 5).

Table 2.28 Important Visitor Experiences (Alternative 5 – Preferred Alternative)

Classic Park Experiences (continued) *(underlined elements are additions included in Alternative 5)*	
Canyon Rim	At Canyon Rim visitors would continue to be oriented to the park at the visitor center with an emphasis on the combination of primitive outdoor experiences in the park's forest complemented by diverse opportunities for visitors in and around specific focal areas (see Section 2.8.2 above). Visitors would continue to have opportunities to view the river and the gorge from existing overlooks (as in Alternative 1).
Fayette Station Road	Fayette Station Road would continue to be a major visitor attraction in the north end of the park where visitors would experience the historic travel route across the river, learn about the park's industrial heritage, view the river, and feel its power (as in Alternative 1). Improvements to Fayette Station Road and parking facilities, as well as implementation of shuttle service during periods of high visitor use, would make for a safer visitor experience with more opportunities to experience the park's scenic resources and with fewer opportunities for visitor conflicts (in Alternatives 2 to 5). A new day use area adjacent to the river would increase opportunities for visitors to experience the river and to watch paddlers as they emerge from the river at the end their float trip through the gorge.

Visitor orientation would also occur at partner gateway communities and in river gateways. Information about the park would be available at small visitor contact facilities and/or kiosks.

2.8.3 Resource Management (Alternative 5 – Preferred Alternative)

- **Maintaining Natural Processes and Restoring Natural Systems (Alternative 5 – Preferred Alternative)**

Resource Stewardship Strategies. The management strategies shown in Table 2.12 are the actions that the NPS would implement to achieve and maintain over time desired natural resource conditions. The strategies address the management issues challenging the park relevant to maintaining natural processes and restoring natural systems. Implementation of these strategies would be common to Alternatives 2 to 5.

Unfragmented Forest. In Alternative 5 blocks of intact and unfragmented forest would extend along most of the length of the park on one or both sides of the river (see Table 2.30 and Figure 2.11). The backcountry zones would be managed to protect and restore unfragmented forest blocks largely free of human disturbance and to offer opportunities for visitors to be immersed in nature, relying on non-motorized access.

Frontcountry forest zoning would generally apply to locations where visitor activities would be concentrated. In frontcountry areas large contiguous forest blocks would generally be maintained, although development for visitor use facilities might occur that would cause limited forest fragmentation. Visitors would access the frontcountry forest by roads and by trails.

Table 2.29

New River Gorge National River
Alternative 5 – Management Zoning Summary

Management Zone	Area (acres)
Backcountry	47,541 (66.4%)
Frontcountry	17,438 (24.4%)
River Corridor	5,525 (7.7%)
Historic Resource	599 (0.9%)
Park Development	443 (0.6%)

Table 2.30
New River Gorge National River
Backcountry Forest Management Zoning in Alternative 5 (see Figure 2.10)

Backcountry Zones Common to Alternatives 2 to 5

- Fall Branch
- Meadow Creek North
- Glade Creek
- Garden Ground
- Stretcher Neck
- Claremont
- Above Thurmond
- Rush Run
- Sewell
- Endless Wall

Additional Areas Zoned Backcountry in Alternative 5

- Sewell Mountain
- Irish Mountain
- Highland-Backus
- Dowdy Creek
- Substation
- Below Thurmond
- Beauty Mountain

Riparian Corridor. No additional areas would be managed as riparian zones in Alternative 5 beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

Water Quality Management (Alternative 5 – Preferred Alternative)

No additional actions would be implemented in Alternative 5 related to water quality management beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

- **Cultural Resource Management (Alternative 5 – Preferred Alternative)**

In Alternative 5 public outreach and educational efforts will be emphasized within the cultural and interpretive resource focal areas to increase the public's awareness of and appreciation for these valuable resources. Cultural resource management actions would focus on treatment and interpretation of:

- representative coal, timbering, and railroading resources at or near river gateways at Thurmond, Grandview/Prince, and Hinton
- representative early settlement/agricultural resources in the southern end of the park
- representative discovery sites along the through park connector, trails at or near river gateways, and along rim to river trails

Resources in River Gateways. In general, historic structures in river gateways would be restored or rehabilitated and adaptively reused through the NPS historic leasing program for commercial and/or residential uses. Representative structures to be rehabilitated and reused would include Prince Brothers General Store, Commercial Row in Thurmond, and houses in Thurmond that remain in good condition. Partners would be sought to assist with rehabilitation. At Nuttallburg (as in Alternative 1), a variety of management actions would be implemented to treat resources, to tell the story of mining in the gorge, and to provide safe visitor access facilities.

Early Settlement/Agricultural Resources. Cultural resources in the southern end of the park would generally be managed to tell the park's early settlement/ agricultural stories. The following actions would be implemented:

- one representative farmhouse would be restored
- other representative farmhouses would be rehabilitated and leased through the park's leasing program
- the cultural landscape associated with restored farmhouses (farm fields, fence lines, and orchards) would be restored
- as properties in the Richmond Bottom and Westfall Farm areas are acquired the cultural landscape would be rehabilitated

KEY

- Backcountry Zone
- Frontcountry Zone
- River Corridor Zone
- Historic Resource Zone
- Park Development Zone
- Community

PROSPERITY
BRADLEY
BECKLEY
PINEY VIEW
MOUNT HOPE
STANAFORD
OAK HILL
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE
Babcock State Park

Glen Jean (Park Headquarters)
Stone Cliff to Arbuckle Creek
Thurmond
Church Dun Glen
Terry Beach
Terry
Terry-Batoff Creek
Army Camp to Stone Cliff
Stretcher Neck
Quinnimont to Army Camp
Royal
Grandview
Carper Farm
Harrah Homestead
Garden Ground
Dunloup Creek
Arbuckle Creek
Dun Glen
Above Thurmond
Below Thurmond
Substation
Rush Run
Cunard
Sunshine Buttress
Marr Branch
Ames
Fayette Station
Burnwood
Canyon Rim Visitor Center
Kaymoor
Endless Wall
Brooklyn to Hawks Nest
Craig Branch
Nuttalburg
Beauty Mountain
Sewell
Arbuckle Creek to Brooklyn
Prince-Quinnimont
Quinnimont Church
Dowdy Creek
Glade Creek
Highland-Backus
Highland Mountain
Claremont
Thayer
Thayer Church
Meadow Creek to Quinnimont
Backus
Bucklick Branch
Meadow Creek North
Richmond Farm
Sandstone Falls Island
Westall Farm
Phillips Farm
Trump/Lilly Farm
Fall Branch
Irish Mountain
Richmond Campground
Sewell Mountain
Richmond Bottom
Chestnut Mountain
Meadow Creek West
Meadow Creek
Meadow Creek South
Sandstone Visitor Center
Brooks Island
Bass Lake
Camp Brookside
Hinton Depot
Hinton to Meadow Creek
Babcock State Park

Figure 2.11

ALTERNATIVE 5: MANAGEMENT ZONES (PREFERRED ALTERNATIVE)

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

- interpretative media would be installed
- some farm fields would be planted in warm season grasses and managed to encourage open land birds

Discovery Sites. In Alternative 5 cultural resource management actions would also include stabilization and interpretation of cultural resources as discovery sites (from 30 to 35 sites) (see Section 2.4.5 Cultural Resource Management above). Visitors would come upon and find these sites as they experience the park from the through park connector, trails at or near river gateways, and from rim to river trails. Discovery sites would include a variety of cultural resources representative of the different archeological resources, cultural landscapes, historic structures, and ethnographic resources that tell the park's stories.

Camp Brookside. Also in the southern end of the park, at Camp Brookside the NPS would work in partnership with an educational institution to rehabilitate camp buildings for adaptive reuse for education purposes or for use as a youth training camp.

- **Protecting Scenic Resources in and around the Gorge (Alternative 5)**

No additional actions would be implemented in Alternative 5 to protect scenic resources in and around the gorge beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.5 above).

Visitors would have new opportunities to experience the park's scenic resources throughout the park from the new through park connector, from numerous new rim-to river trails, and from numerous new trails in the vicinity of river gateways (see Section 2.8.4 below).

2.8.4 Visitor Use and Visitor Facilities (Alternative 5 – Preferred Alternative)

- **Hiking and Equestrian Use (Alternative 5 – Preferred Alternative)**

In addition to the trail system expansion common to Alternatives 2 to 5 and the trail improvements at Nuttallburg (as in Alternative 1), Alternative 5 would provide trails offering visitors opportunities to explore the park's cultural resources and to have a variety of recreation experiences in the park's frontcountry and backcountry.

Initially hikers would be able to travel from end to end of the park, generally at or near the river – on a new through park connector. A few segments would be scenic roads, making it possible for visitors unable to hike or bike to explore some of the remote areas of the park. The through park connector would generally be composed of the following segments (from upstream to downstream) (see Figure 2.10):

- New River Parkway (existing River Road) – from Brooklin (near Hinton) to the new New River Parkway bridge
- a new trail from the new New River Parkway bridge to the Glade Creek Campground
- existing Glade Creek Road from the Glade Creek Campground to WV SR 41 and WV SR 41/8 – from Glade Creek Road to Terry
- existing WV SR 41 and McKendree Road from Glade Creek Road to Southside Junction
- existing trails and administrative roads from Southside Junction to the Bridge Trailhead (at Fayette Station Road)
- existing Fayette Station Road from the Bridge Trailhead to a new trailhead at Teays Landing
- new trail from a new trailhead at Teays Landing to Hawks Nest State Park

Over time, and as property and rights-of-way are acquired, NPS would seek to develop trails on both river right and river left, from the new New River Parkway Bridge to Hawks Nest. These trails would connect and provide a loop trail that would provide for several days of hiking in the park. The loop trail would ultimately utilize existing bench roads, rim-top trails, and river level roads, and provide a variety of hiking experiences. Camping along the route would be facilitated so that people could enjoy multi-day hikes in the park.

In addition to the trail system expansion common to Alternatives 2 to 5, Alternative 5 would include new park trails to provide rim to river experiences and experiences in and around river gateways. All new trails would generally use existing unmaintained trails.

Possible new trails offering visitors rim to river experiences would include:

- a loop trail connecting Richmond-Hamilton Farm, Vallandingham Farm, Trump-Lilly Farm, and Phillips Farm
- a trail from the Sandstone Visitor Center to Hump Mountain
- a trail from Grandview to Mill Creek
- a trail from Army Camp to Pinnacle Rock
- a trail from Cloverdale Road to the Upper Glade Creek Trails
- a trail from Mt. Hope to Southside Junction (if and when the CSX Corman Line right-of-way is abandoned and acquired by the NPS)
- a trail from Meadow Bridge to Meadow Creek (if and when the CSX Meadow Creek line right-of-way is abandoned and acquired by the NPS)

- a trail from Stanaford to Prince/Quinnimont (if and when the CSX Piney Creek spur line is abandoned and acquired by the NPS)
- a trail from GW Carver (via Babcock State Park) to Sewell to Caperton to Keeney Creek (in cooperation with Babcock State Park)

Possible new trails offering visitors experiences in and around river gateways would include:

- a trail to Fayette Mine
- a trail from Thurmond to Sewell
- a trail along Davis Branch (in the Meadow Creek North area) (with trailhead facilities)
- a trail from Dowdy Creek to Highland Mountain
- a trail from the Stone Cliff coke ovens to Stone Cliff Mine
- a trail to the Beauty Mountain Overlook

In Alternative 5 the NPS would also cooperate with the park's gateway communities, state agencies, and private landowners to develop new trail connections between the three national park units, state parks, rail trails, and other attractions in the region (see Figure 2.12). As NPS and its regional partners develop both the long distance continuous trails in the park and those connecting the park to the region, a network of farm- or community-based accommodations such as small bed-and-breakfasts could be developed to support trail users.

Alternative 5 would address the need for additional equestrian trails by providing new equestrian loop trails with trailhead facilities in the Bucklick Branch, Craig Branch, and Chestnut Mountain areas. The boardwalks at Sandstone Falls would also be expanded.

Trailhead facilities would be provided for all new trails. Improvements would also be made to the Glade Creek trailhead.

- **Biking (Alternative 5 – Preferred Alternative)**

Alternative 5 would include potential joint hiking and biking use of existing and new trails listed in the preceding section subject to the general design principles identified for biking trails in Section 2.4.5 above. In addition, in Alternative 5 possible new biking opportunities would include:

- a continuous trail open to biking from end to end of the park (the through park connector) composed of a combination of trail types (see preceding section)
- development of stacked loop trails in the Bucklick Branch, Garden Ground, and Craig Branch areas

- development of new rail trails with biking access on railroad rights-of-way once they are abandoned and acquired by the NPS, including:
  - the CSX Corman line from Mt. Hope to Southside Junction
  - the CSX Meadow Creek line from Meadow Bridge to Meadow Creek
  - the CSX Piney Creek spur line along WV SR 41 from Stanaford to Prince/Quinnimont
- opening of the existing Glade Creek Trail to biking
- development of new trail connections between the three national park units, state parks, rail trails, and other attractions through cooperation between the NPS and the park's gateway communities, state agencies, county governments, and private landowners

- **Hunting (Alternative 5 – Preferred Alternative) (Enhanced Hunting Program)**

In Alternative 5 hunting would continue largely as it is today except for the following:

- the historic Grandview State Park area would be open to limited bow hunting via a permit/lottery system
- upland gamebird habitat would be increased by creating/restoring early successional habitat in historic resource zones (where such management is consistent with the park's cultural landscape restoration goals)
- as in Alternative 4 (Modified Hunting Program), the NPS and WV DNR would collaboratively monitor park-specific game harvest and hunter use levels, using a voluntary hunter registration/permit process and designated hunt units; this process would include distribution of information to hunters (hunt unit maps, regulations, etc.) and a voluntary end-of-season hunter questionnaire provided by the NPS
- as in Alternative 4 (Modified Hunting Program), the NPS and WV DNR would develop a cooperative game management plan specific to designated hunt units in the park that would also identify management strategies to improve hunter satisfaction and enhance outreach opportunities to both hunters and non-hunters

- **Pedestrian Access across Railroad Rights-of-Way (Alternative 5 – Preferred Alternative)**

In Alternative 5 the NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible. As in Alternative 1 priorities would be to secure legal crossings at locations where visitors currently frequently cross tracks illegally. In addition effort would be focused on securing legal crossings needed for development of a new

KEY

TRAILS

- Existing Trails
- Proposed Trails within the Park
- Future Trail Connections outside the Park (in collaboration with other public agencies, gateway communities, and willing private landowners)

OWNERSHIP

- NPS Land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits
- US Army Corps (Gauley River National Recreation Area)

Bluestone National Scenic River

New River Gorge National River

Gauley River National Recreation Area

SOPHIA
CRAB ORCHARD
COAL CITY
MABSCOTT
MACARTHUR
BECKLEY
PROSPERITY
BRADLEY
PAX
GAULEY BRIDGE
MOUNT HOPE
OAK HILL
BEAVER
DANIELS
STANAFORD
PINEY VIEW
SHADY SPRING
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE
RAINELLE
SUMMERSVILLE

64
77
19
41
60

Figure 2.12

POTENTIAL CONNECTIONS TO COMMUNITY TRAILS (PREFERRED ALTERNATIVE)

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 4 mi. 8 mi. 12 mi. 16 mi.

developed campground at Terry Beach and for a rim to river trail from GW Carver to Keeney Creek.

- **Access and Parking (Alternative 5 – Preferred Alternative)**

In Alternative 5 management actions would generally maintain existing patterns of motorized access within the park, while permitting expansion of motorized access for visitors and/or administrative use in park development zones, historic resource zones, river corridor zones, and frontcountry zones. Approximately two-thirds (66.4%) of the park would be zoned backcountry where roads and parking would be limited to zone perimeters (see Figure 2.11) and where only non-motorized access could occur in the zone interior.

In Alternative 5 trailheads would provide adequate parking for visitors at the endpoints of rim to river trails. Similarly trailheads with adequate parking would be provided for new trails offering visitor experiences in and around river gateways and in focal areas.

Existing problems with inadequate parking at visitor facilities would be alleviated by expanding parking areas at Sandstone Falls, the Gwinn Ridge trailhead, the Glade Creek trailhead, the Thayer campground and river access, and the Brooklyn day-use area. New visitor parking would be provided at Richmond-Hamilton Farm, Vallandingham Farm, and Cochran Farm.

New trailheads would provide adequate parking for visitors at the endpoints of new trails offering visitors opportunities to explore the park's primitive areas and cultural focal areas in remote areas of the park. Similarly trailheads with adequate parking would be provided along the length of the new through park connector.

At Cunard existing problems with inadequate parking for private paddlers on peak visitation days would be alleviated by:

- adding parking for private paddlers at Cunard (common to Alternatives 2 to 5)
- adding new private paddler parking along the Fisherman's Trail access road (common to Alternatives 2 to 5)
- implementing an alternative transportation system (ATS) composed of a concession-based shuttle that would operate on the Cunard Road, picking up and dropping off riders at a satellite parking area on the rim (at the site of the proposed Cunard boundary adjustment); the shuttle would primarily serve private paddlers and other visitors – outfitted paddlers would continue to ride to and from the river access on outfitter-operated buses
- expanding parking for fishermen and private boaters at Brooklyn

- if after making the above-listed improvements at Cunard and Brooklyn, visitor crowding issues during peak visitation days are still not adequately addressed, then the NPS would consider adding a new river access at Surprise, including – as appropriate and as practicable – extension of Cunard Road and electrical service beyond Brooklyn and development of a river launch, drop-off areas and parking facilities (for outfitted paddlers and private paddlers), comfort/changing stations, picnicking facilities, and water supply

In addition the NPS would work cooperatively with the WV DOH to:

- design and construct pull-outs on WV SR 41 from Stannaford to McCreery
- design and construct improvements to McKendree Road (WV SR 25) from Stone Cliff Bridge to Prince and to designate it a state scenic byway
- design and construct improvements to WV SR 25/2 in Thurmond

- **Other Visitor Facilities (including disabled access) (Alternative 5 – Preferred Alternative)**

Additional visitor facilities associated with Alternative 5 would include camping, picnicking, and river access facilities in support of rim to river experiences, in and around river gateways, and in focal areas. All practicable efforts would be made to provide access for the disabled at new facilities (common to Alternatives 2 to 5).

In the Upper River Gorge Focal Area:

- at Camp Brookside the NPS would work in partnership with an educational institution to rehabilitate camp buildings for adaptive reuse for education purposes
- a new developed campground would be provided at the Bass Lake site (if and when it could be acquired by the NPS from a willing seller) or at a park development zone in the New River Parkway corridor (existing River Road corridor), such as at Richmond Bottom
- a new developed public campground would be developed at Meadow Creek West; in conjunction with this facility there would be an amphitheatre, picnic facilities, and a public river access site, including a river launch (with disabled boater access), parking, comfort/changing stations, and utilities

In the Grandview/Prince Focal Area:

- a new developed campground and river access would be provided at Terry Beach (if and when the required property could be acquired by the NPS from a willing seller)
- improvements to existing primitive campgrounds at Glade Creek, Mill Creek, Grandview Sandbar, and Army Camp would add more campsites to each

In the Thurmond Focal Area, the existing Dun Glen campground would be closed (because of its location in the floodplain) and existing day-use facilities would be rehabilitated.

In the Lower Gorge Focal Area:

- a new developed campground would be located at the existing NPS Burnwood day-use/operations area; this campground would address the need for camping facilities in proximity to rock climbing areas and cultural resource attractions in the lower gorge
- a new day-use area would be added near the Fayette Station river access
- new picnicking facilities would be added with parking and pedestrian access to the New River at Brooklyn
- at Cunard existing problems with inadequate parking for private paddlers on peak visitation days would be alleviated by implementing a number of improvements (see Access and Parking above)

River access improvements associated with Alternative 5 would include:

- a new access at Meadow Creek West near the Sandstone Visitor Center
- a new river access at Terry Beach (described above)
- additional parking for private paddlers at Cunard and implementation of an alternative transportation system (see Access and Parking above)
- expanding parking for fishermen and private boaters at Brooklyn (see Access and Parking above)
- if after making the above-listed improvements at Cunard and Brooklyn, visitor crowding issues during peak visitation days are still not adequately addressed, then the NPS would consider adding a new river access at Surprise (see Access and Parking above)

Additional camping facilities would include several groups of designated backcountry campsite groups 1) along the Through Park Connector, and 2) along the Dowdy Creek Highland Mountain Trail.

2.8.5 Working with Local Communities (Alternative 5 – Preferred Alternative)

- **Sustaining Communities within the Park (Alternative 5 – Preferred Alternative)**

Hinton. No additional actions would be implemented in Alternative 5 to strengthen the connection between the city, its residents, and the mission of the NPS at the park beyond those identified as common to Alternatives 2 to 5 (see Section 2.4.7 above).

Thurmond. Thurmond would become a major visitor attraction in the north end of the park where the railroading story would be told (see Table 2.28). Visitation levels would dramatically increase. Visitor lodging would likely be available in restored houses. Visitors would be more likely to explore areas of the town where private residents live. The town's permanent residential population would increase as a result of NPS staff living in some restored houses. The NPS would continue to work cooperatively with residents – including NPS staff residents – to address issues associated with living in the historic town.

Other Communities within the Park. Collaborative priorities for communities within the park in Alternative 5 are summarized in Table 2.31 below. The collaboration actions referenced in Table 2.31 are described above in the discussion of actions common to Alternatives 2 to 5 (see Section 2.4.7).

2.8.6 Land Protection (Alternative 5 – Preferred Alternative)

- **Land Protection Priorities (Alternative 5 – Preferred Alternative)**

In the future the NPS land protection program would focus efforts on the highest priority properties still to be protected in the park (see Section 2.4.8 above). For Alternative 5 the priorities for working with willing sellers of private property would be further refined to focus on acquiring properties that are important to accomplishing the overall concept for the alternative, such as properties that:

- include early settlement/agricultural cultural resources in the south end of the park
- include industrial and mining town ruins in the north end of the park
- include sites needed for trailheads, trail connections, or recreational sites along the through park connector and along other new trails offering visitors experiences in and around river gateways
- include a site for a developed campground near the river in the south end of the park

- **Stewardship of Private Land Remaining within the Park Boundary (Alternative 5 – Preferred Alternative)**

In the future the NPS would work cooperatively with the owners of private lands remaining within the park boundary to promote sensitive stewardship of privately-owned resources and values that are fundamental to the park (see Section 2.4.8 above). In Alternative 5 NPS would further focus the stewardship program on the private lands that are of high priority for protection as noted in Section 2.4.8 above and in the preceding section (Land Protection Priorities).

Table 2.31 Alternative 5 – Collaborative Priorities for Communities within the Park*

		Collaborative Actions by the NPS and Local Communities within the Park									
				Provide Technical Assistance to Communities for							
Community	Alternative 5 Setting	Collaboration Priority	Form Community Partner Group	Developing a Community Vision Plan	Managing Change	Managing Visitor Impacts	Documenting Resources	Obtaining Grants	Managing Invasive Species	Providing Private Sector Visitor Services	Develop NPS Facilities, as Needed
Hinton	A major gateway community partly within the park at its southern end; no major existing or new visitor use facilities	1	✓			✓	✓	✓		✓	
Meadow Creek	a "river gateway" at the downstream end of the Upper River Corridor Focal Area (minimum visitor through traffic); Sandstone Visitor Center and numerous new visitor facilities in vicinity	1	✓	✓	✓	✓	✓	✓	✓	✓	✓
Prince/ Quinnimont	a "river gateway" in the center of the Grandview/ Prince Focal Area (visitor and public through traffic on WV SR 41); numerous existing and new visitor facilities in vicinity; rehabilitate and lease the Prince Brothers General Store; restore the cultural landscape at the Prince Brothers General Store and the Prince Estate; work cooperatively with AMTRAK to maintain customer service to Prince and provide interpretation at the Prince Station; provide roadside interpretation along WV Route 41 from Stanaford to Prince/Quinnimont	1	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terry	adjoining a new recreation node within the Grandview/Prince Focal Area (no visitor through traffic); numerous existing and new visitor facilities in vicinity	2	✓	✓	✓	✓	✓	✓	✓	✓	
Thayer	along the through park connector (McKendree Road Scenic Backway); a few existing and new visitor facilities in vicinity	1	✓	✓	✓	✓	✓	✓	✓	✓	✓
Backus	on plateau surrounded by primitive outdoor experience area; no existing or new visitor facilities in vicinity	3	✓	✓			✓		✓		
Highland	on plateau surrounded by primitive outdoor experience area; no existing or new visitor facilities in vicinity	3	✓	✓			✓		✓		
Thurmond	a major "river gateway" within a park focal area; restoration and rehabilitation of historic structures would dramatically increase visitation and the number of residents living in the town	1				✓	✓	✓	✓	✓	✓

1 – High Priority 2 – Medium Priority 3 – Low Priority ✓ - action recommended, as funding allows

2.8.7 Partnerships (Alternative 5 – Preferred Alternative)

- **Relevance of the Park to Local Visitors (Alternative 5 – Preferred Alternative)**

In the future the NPS would take a number of actions aimed at strengthening the connection between the public and the mission of the NPS at New River Gorge National River (see Section 2.4.9 above). No additional actions would be implemented in Alternative 5 to enhance local appreciation and understanding of the park beyond those identified in Section 2.4.9.

- **Gateway Community Partnerships (Alternative 5 – Preferred Alternative)**

In the future the NPS would expand efforts to work cooperatively with its gateway communities to define and accomplish shared goals (see Section 2.4.9 above). As in Alternative 4, partnerships between the NPS and the park's gateway communities would seek to enhance the visitor experience by providing better visitor orientation, by promoting services needed by visitors in gateway communities, by fostering improved wayfinding signage, and by promoting complementary interpretive and recreational experiences at other attractions in southern West Virginia. Small visitor contact facilities and/or information kiosks would provide information on recreation activities, visitor facilities, and interpretive programs at the park as well as at other attractions in the region.

- **Regional Tourism Partnerships (Alternative 5 – Preferred Alternative)**

In the future the NPS would expand its participation in regional economic development planning efforts underway by the various regional planning agencies and organizations in southern West Virginia (see Section 2.4.9 above). No additional actions would be implemented in Alternative 5 related to NPS participation in these efforts beyond those identified in Section 2.4.9.

- **Other Partnerships (Alternative 5 – Preferred Alternative)**

In the future the NPS would expand its collaboration with other public agencies and groups – including Babcock and Hawks Nest State Parks, state and county agencies, and organized stakeholder groups (see Section 2.4.9 above). In Alternative 5 the NPS would further increase collaborative efforts with the state parks (for trail development), with biking stakeholder groups (for development of stacked loop trails), and with the WV DNR (for development of a cooperative game management plan and harvest monitoring).

As NPS and its regional partners develop both the long distance continuous trails in the park and those connecting the park to the region, a network of farm- or community-based accommodations such as small bed-and-breakfasts could be developed to support trail users. Similar systems in Europe allow visitors to have meals and non-camping alternatives, geared to single-night stays, relieving hikers, and bikers of the need to carry tents, cooking gear, and heavy provisions.

2.8.8 Area-Specific Desired Conditions and Needed Changes (Alternative 5 – Preferred Alternative)

Table 2.32 identifies the desired resource conditions and desired visitor experiences for specific areas of the park in Alternative 5. The area-specific desired conditions focus on fundamental and other important resources and values and the visitor experience opportunities associated with them that would be appropriate in particular locations based on proposed management zoning.

Table 2.32 also identifies the general types of actions in specific areas of the park that would be needed and allowable to achieve desired conditions in Alternative 5. These are examples of the actions needed to move from existing conditions to desired conditions. Identifying the types of needed and allowable changes helps 1) to provide a sense of what management actions might occur and what development might look like in Alternative 5, 2) to identify the impacts of these actions, and 3) to estimate the general costs of implementing the actions.

2.8.9 Costs (Alternative 5 – Preferred Alternative)

The NPS has prepared estimates of annual operating costs and one-time costs associated with Alternative 5 using NPS and industry cost estimating guidelines (see Table 2.37 in Section 2.14 below). Annual recurring costs include personnel and non-labor costs, such as utilities, vehicles, travel, and supplies. One-time capital investments include construction, exhibits, research and planning. These costs are presented for comparative purposes only and will be refined at a later date based upon final design of facilities and other considerations. Some projects have the potential to be funded through partnerships and volunteers, or through shared funding with other agencies. Therefore, actual costs would vary depending on when specific actions are implemented and on contributions by partners and volunteers.

- **NPS Annual Operating Costs and Staffing Requirements (Alternative 5 – Preferred Alternative)**

NPS annual operating costs associated with Alternative 5 are estimated to be $15,820,000 (2009 dollars). This includes the anticipated cost for staff salaries and benefits for 189 full-time equivalent staff, utilities, supplies, leasing (including leased park offices, as in Alternative 5) and other materials needed for park maintenance and operations.

Operating costs for Alternative 5 include the addition of 29 new FTE. The new positions include one new FTE to help develop and manage partnerships with the gateway communities, additional protection rangers to manage and cover new campgrounds, new maintenance staff to maintain and service the new campgrounds, trails and river access/day use facilities and new interpretive staff to expand interpretive programs and service increased visitation as the result of new facilities.

- **NPS One-Time Costs (Alternative 5 – Preferred Alternative)**

NPS one-time costs associated with Alternative 5 are estimated to be $29,670,000 (2009 dollars) including one-time facilities costs and non-facilities costs.

Facility costs include projects such as the following:

- restore Richmond-Hamilton farm for interpretation
- rehabilitate the Trump-Lilly and Vallandingham farmhouses and the Prince Brothers General Store through the NPS historic leasing program
- rehabilitate Camp Brookside for educational purposes
- rehabilitate a few historic houses as park housing and the remainder of the historic houses for the historic lease program in Thurmond
- rehabilitate Thurmond's commercial row through partnership
- provide new trails for rock climber access
- provide two new equestrian trails
- provide hiking and biking trails and trailheads for rim to river experiences, the through park connector, backcountry areas and cultural sites
- provide two new hiking and biking trails and trailheads as part of the through park connector
- provide a new stacked loop biking trail in a front country area
- provide new improvements to Turkey Spur at Grandview
- provide improvements to parking and circulation at Grandview
- improve Cunard and Fayette Station river access areas to relieve congestion
- provide improvements and expand sandstone falls facilities
- expand parking at middle gorge areas such as Glade Creek, McCreery, Thayer and Gwinn Ridge
- relocate Stone Cliff campground from riparian area
- improve day use areas at Brooks Falls, Dun Glen, Mill Creek and Fayette Station
- develop a new camping facility at Meadow Creek West and additional camping south of I-64
- expand existing primitive campgrounds at Glade Creek, Grandview Sandbar, and Army Camp
- develop new designated backcountry campsites
- develop new campground with river access at Terry Beach

Non-facility costs include projects such as the following:

- restore the cultural landscape at the Prince Brothers General Store and Estate
- restore farm fields, fence lines and orchards on historic farms for agricultural leasing program
- develop 35 cultural resources as discovery sites accessible from gateway communities and along through the park connector
- pedestrian access across CSX right-of-way at new campgrounds
- develop new scenic vistas
- install and maintain information kiosks at gateway communities
- improve local appreciation and understanding by providing roadside interpretation along four roads through gateway communities

Table 2.32 Alternative 5 (Preferred Alternative) – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Development Areas			
Richmond Campground	▪ newly acquired site with limited infrastructure ▪ no park facilities	▪ a variety of camping experiences are available for different types of visitors	▪ provide a developed campground (one campground would be developed north of I-64 in a park development zone on river left, such as Richmond Bottom, OR at Bass Lake on river right)
Bass Lake	▪ Bass Lake Campground (private) ▪ no park facilities	▪ a variety of camping experiences are available for different types of visitors ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a developed campground (one campground would be developed north of I-64 in a park development zone on river left, such as Richmond Bottom, OR at Bass Lake on river right) ▪ provide a public river access (including facilities for disabled boaters) ▪ provide picnicking facilities and hiking trails near the river
Sandstone Visitor Center	▪ Sandstone Visitor Center ▪ parking, picnicking facilities, and public restrooms ▪ NPS operations facility	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a rim-to-river trail from the Sandstone Visitor Center to Lower Hump Mountain
Meadow Creek West	▪ no park facilities	▪ a variety of camping experiences are available for different types of visitors ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ river access facilities enable paddlers of all skill levels to experience the park ▪ accessible facilities enable disabled visitors to experience the park	▪ provide a developed campground ▪ offer amphitheatre-based interpretive programs ▪ provide a public river access facility including a river launch, parking, road improvements, comfort/changing station, utilities, picnicking facilities, and disabled boater access
Grandview	▪ day-use facilities (picnicking facilities, recreational facilities, playground, trails, overlooks, restrooms) (high use – demand for picnic shelters exceeds capacity) ▪ amphitheatre (used for Theatre West Virginia productions) (needs rehabilitation) ▪ visitor contact station (functionally obsolete) ▪ main overlook not ADA accessible ▪ road system and parking (pedestrian and vehicular circulation issues occur during peak visitation periods) ▪ public water supply and wastewater treatment facilities ▪ NPS operations facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a Grandview to Mill Creek rim-to-river trail (with trailhead facilities) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Terry Beach	▪ McCreery: - river access (high use) - demand exceeds capacity during peak visitation periods leading to safety issues and visitor conflicts - private paddler safety issues due to pedestrian crossing of WV SR 41) - NPS unable to acquire property needed to relocate parking and address safety issues ▪ Terry Beach - private river access (low use) - undesignated camping (low use) ▪ no park facilities	▪ visitors enjoy a safe and secure experience in the park ▪ conflicts among visitor user groups are minimized ▪ river access facilities enable paddlers of all skill levels to experience the river ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of camping experiences are available for different types of visitors	▪ provide a public river access facility at Terry Beach, including a river launch, parking, road improvements, comfort/changing station, utilities, picnicking facilities, and disabled boater access ▪ provide a developed campground at Terry Beach
Dun Glen	▪ McKendree Road (WV SR 25) parallels the New River just above the river level ▪ Dun Glen - day use facilities (picnicking, parking, restrooms)	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ a nearly continuous strip of natural riparian habitat occurs along the rive	▪ designate McKendree Road as a segment of the through park connector ▪ close existing campground and restore riparian habitat ▪ as it becomes obsolete, relocate existing

Table 2.32 Alternative 5 (Preferred Alternative) – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	- group campground(in floodplain) - park operations facility (in remnants of Dun Glen Hotel) (block access to river – functionally obsolete) - park housing (dorms) (functionally obsolete) ▪ visitors frequently illegally cross over CSX Corman Spur Line at Southside Junction	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ management facilities support efficient park operations	▪ park housing elsewhere in the park ▪ rehabilitate day-use facilities (restrooms, picnic shelter, parking, access road) ▪ as park operations buildings become functionally obsolete, consider relocating existing park operations functions to Burnwood and demolishing buildings
Glen Jean (Park Headquarters)	▪ park headquarters, headquarters annex (Glen Jean Bank), and operations facilities ▪ Glen Jean Bank (listed on National Register) (good condition) ▪ all structures located within 25-year floodplain ▪ park collection facility in Glen Jean Bank (within the floodplain)	▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ interpret the Glen Jean Bank ▪ provide roadside interpretation along WV SR 25 from Glen Jean to Thurmond
Cunard	▪ river access (high use) ▪ crowded conditions during most summer weekends, especially when river levels are low ▪ inadequate private paddler ▪ parking inadequate boat slide capacity ▪ limited river access for disabled boaters ▪ visitor conflicts	▪ traffic circulation and parking is managed to reduce impacts on park resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience ▪ visitors use a variety of travel modes to access the park and specific visitor use sites ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ during periods of high visitor use provide a concession-based shuttle from satellite parking areas to the river access site ▪ if after making the above-listed river access improvements identified for Cunard and Brooklyn, capacity issues still remain on peak visitation days, then consider developing a new public river access facility at Surprise *(see Arbuckle Creek to Brooklyn River Corridor Zone below)* ▪ provide interpretation along the Cunard Access Road from the community of Cunard to the Cunard River access ▪ interpret the Cunard tipple and coke ovens ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Fayette Station	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ river access (high use) ▪ day-use facilities (parking, picnicking, public restrooms) ▪ CSX Main Line (active) ▪ visitors (primarily private paddlers) frequently illegally cross the CSX Main Line to reach the river access	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ designate an existing trail as a segment of the through park connector ▪ provide a day-use area adjacent to the New River ▪ provide a trail (with trailhead facilities) to Fayette Mine ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Burnwood	▪ environmental education based at picnic pavilions (functionally obsolete) ▪ Laing Loop Nature Trail ▪ park operations facilities (functionally obsolete) ▪ public water supply and wastewater treatment facility (serving Burnwood and the Canyon Rim Visitor Center) (excess capacity)	▪ a variety of camping experiences are available for different types of visitors	▪ provide a developed campground (with connection to existing Burnwood water and wastewater systems) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Historic Resource Areas			
Richmond Bottom	▪ Richmond-Hamilton Farm: - farmhouse (habitable condition), split-log barns (period condition), other outbuildings (period condition) - fields not leased for agriculture - no park facilities - no interpretive programs ▪ Vallandingham Farm - log cabin (not habitable), log smokehouse, other outbuildings - vegetation impacting site - no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences	▪ at Richmond-Hamilton Farm: - restore farm fields, fence lines, and orchards - restore the farmhouse and barns to period condition - interpret the cultural landscape - provide access and parking for visitors - provide a farm loop trail ▪ at Vallandingham Farm: - rehabilitate the cultural landscape - rehabilitate the farmhouse (for reuse through the NPS historic leasing program)

Table 2.32 Alternative 5 (Preferred Alternative) – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
		▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of trails enable visitors with different physical capabilities to explore the park	- provide access and parking for visitors - provide a farm loop trail ▪ as other properties at Richmond Bottom are acquired or otherwise protected, remove modern structures and maintain farm fields and plantings ▪ lease all restored and rehabilitated farm fields for agricultural use provide trailhead facilities at farmstead destinations on the farm loop trail
Trump-Lilly Farm	▪ farm, outbuildings, farm fields, and orchard ▪ excellent example of post-bellum subsistence farmstead in uplands of the New River ▪ listed on National Register ▪ farmhouse not habitable ▪ approximately 10 percent of historic fields are presently open ▪ no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ restore the cultural landscape ▪ rehabilitate the farmhouse (for reuse through the NPS historic leasing program) ▪ provide a farm loop trail ▪ lease restored farm fields for agricultural use
Westfall Farm	▪ privately-owned; recently subdivided and some new homes constructed ▪ no park facilities ▪ Cochran Farm: - outbuildings, cemetery, small pond (filling in) - most of site is an open field with - no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ visitor services and facilities are appropriately scaled and located, and facilitate enjoyable and educational visits to the park	▪ at Cochran Farm - restore the cultural landscape - provide access and parking for visitors ▪ as properties within the historic extent of the farm are acquired or otherwise protected, remove modern structures and maintain farm fields and plantings ▪ lease restored fields for agricultural use
Camp Brookside	▪ site retains original camp structures, generally in good condition ▪ landscape features are indicative of a typical recreational camp ▪ good example of post-World War II social welfare programs established by American companies ▪ potentially eligible for the National Register ▪ NPS ranger station and maintenance storage building ▪ no interpretive programs	▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences ▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ cobble and flatrock communities persist	▪ in partnership with an educational institution, rehabilitate buildings for adaptive reuse for environmental education purposes; potential uses include, but are not limited to, conference facilities, classrooms, and student overnight accommodations
Sandstone Falls Island	▪ most visited site in upper gorge ▪ park day-use facility with parking, and picnicking ▪ boardwalk and interpretive trail takes visitors through rare Appalachian	▪ cobble and flatrock communities persist ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide additional parking ▪ expand boardwalk trails ▪ replace and expand restroom facilities

Table 2.32 Alternative 5 (Preferred Alternative) – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	▪ flatrock community and provides vistas of Sandstone Falls ▪ river access below falls ▪ restrooms functionally obsolete ▪ lack of visitor control leads to riparian zone impacts ▪ parking inadequate during periods of high visitor use and other times	▪	
Harrah Homestead	▪ wood-frame house, wood-frame outbuildings, log smokehouse (all in very poor condition) ▪ vegetation impacting site ▪ no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ views of cultural landscapes are protected	▪ restore the cultural landscape and the exterior of the house and ancillary buildings as a display of life outside of the towns in the gorge
Prince Brothers General Store	▪ wood-frame store (recently stabilized on exterior) ▪ last surviving commercial building of its type along the New River ▪ listed on National Register (for its architectural design) ▪ no park facilities	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ rehabilitate the Prince Brothers General Store (for reuse through the NPS historic leasing program) ▪ restore the cultural landscape at the Prince Brothers General Store
Thurmond	▪ town mostly owned by the NPS, although some houses remain in private ownership and are occupied year-round ▪ entire town site included within the Thurmond Historic District (listed on National Register) ▪ restored Thurmond Depot (used as NPS visitor center) (listed individually on National Register) ▪ Commercial Row (stabilized on exterior) (listed individually on National Register) ▪ remnants of C&O train yard and passenger depot ▪ various frame houses (variable condition – some in poor condition, some recently stabilized on exterior only) ▪ vegetation (kudzu) negatively impacted site ▪ structures at Commercial row have lead and asbestos contamination ▪ inadequate water supply and wastewater treatment systems	▪ remaining elements of historic buildings, structures, and cultural landscapes are preserved or protected; some are made accessible to visitors ▪ historic buildings and cultural landscapes are managed to produce income that offsets the cost of their ongoing maintenance ▪ collaborative partnerships with non-profit and private partners expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences ▪ views of cultural landscapes are protected ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ rehabilitate commercial row buildings (for reuse through the NPS historic leasing program) ▪ rehabilitate houses that are currently in good condition for reuse for park housing, park dormitory housing, or visitor lodging through the NPS historic leasing program ▪ restore other remaining historic structures (on the exterior only) ▪ provide a trail from Thurmond to Sewell Trail (including trailhead facilities)
River Corridor Areas			
Hinton to Meadow Creek	▪ New River fishing (high use) ▪ Akers river access and day-use facilities (low use) ▪ Tug Creek river access (low use) ▪ Brooks Falls river access, day-use facilities, undesignated camping (in floodplain) (poor condition) (high use) ▪ Hellems Beach river access, day-use facilities, and campground (campsites in floodplain – use over capacity during peak visitation periods) (high use)	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ river access facilities enable paddlers of all skill levels to experience the river ▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ designate New River Parkway (existing River Road) as a segment of the through park connector ▪ at Brooks Falls: - improve existing river access facilities - provide new restroom facilities ▪ provide a through park connector segment (with trailhead facilities) from I-64 to Glade Creek Road ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))

Table 2.32 Alternative 5 (Preferred Alternative) – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	▪ Sandstone Falls river take-out (moderate use) ▪ Meadow Creek private river access (low use) ▪ future WV DOH-funded reconstruction of River Road as New River Parkway, including a bridge across the New River and recreation site enhancements ▪ CSX Main Line on river right (active)		
Meadow Creek to Quinnimont	▪ Glade Creek Road Scenic Backway ▪ Glade Creek - river access (moderate use) - Glade Creek campground and day-use area (high use) (demand for camping typically exceeds capacity) - Glade Creek Trail and Trailhead (high use) ▪ Mill Creek - river access (low use) - undesignated camping occurs in floodplain) - no restrooms ▪ walk-in camping at Grassy Shoals, Mill Creek, and Royal Pull-Out ▪ CSX Main Line on river right (active)	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ a variety of camping experiences are available for different types of visitors ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a through park connector segment (with trailhead facilities) from I-64 to Glade Creek Road ▪ designate Glade Creek Road as a segment of the through park connector ▪ at Glade Creek, expand the existing campground ▪ at Mill Creek - provide a Grandview to Mill Creek rim-to-river trail (with trailhead facilities) ▪ provide a vault toilet
Quinnimont to Army Camp	▪ Glade Creek Road Scenic Backway ▪ Grandview Sandbar - river access (moderate use) - day-use facilities (low use) - campground (high use) (demand frequently exceeds capacity) ▪ Army Camp - river access (moderate use) - day-use facilities (low use) - campground (demand for camping typically exceeds capacity) ▪ CSX Main Line on river right (active) ▪ CSX Piney Creek spur line on river left (active)	▪ a variety of camping experiences are available for different types of visitors ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ at Army Camp - expand the existing campground - provide a river-to-rim trail from Army Camp to Pinnacle Rock (with trailhead facilities) ▪ at Grandview Sandbar, expand the existing campground
Army Camp to Stone Cliff	▪ Thayer - river access (low use) - day-use area and campground (undesignated sites) (demand frequently exceeds capacity)(no public restrooms) ▪ CSX Main Line on river right (active) ▪ visitors frequently illegally cross CSX Main Line to reach Depot Beach, Apple Orchard, McKendree, and Todd Beach (for camping) ▪ river rest stop at Dowdy Creek where paddlers frequently illegally cross under CSX Main Line to reach Dowdy Falls ▪	▪ a variety of camping experiences are available for different types of visitors ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ at Thayer: - designate campsites in the area now used for primitive camping - provide a vault toilet - improve existing river access, parking, and picnicking facilities ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12)) ▪ work cooperatively with the CSX Corporation to secure safe legal public access to the river across the CSX right-of-way at Depot Beach, Apple Orchard, McKendree, and Todd Beach
Arbuckle Creek to Brooklyn	▪ ACE river access (private) ▪ Brooklyn to Southside Junction Administrative Road ▪ CSX Main Line on river right (active)	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ traffic circulation and parking is managed to reduce impacts on park resources and provide for safe visitor use while mitigating intrusion of auto traffic on the visitor experience ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads ▪ a nearly continuous strip of natural riparian habitat occurs along the river	▪ if after making the river access improvements at Cunard *(see Cunard Development Zone above)* and at Brooklyn *(see Brooklyn to Hawks Nest River Corridor Zone below)*, capacity issues still remain on peak visitation days, then consider developing a new public river access facility at Surprise, including as appropriate and as practicable, river launch, parking, road improvements, comfort/changing station, utilities, picnicking facilities, and disabled boater access

Table 2.32 Alternative 5 (Preferred Alternative) – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Brooklyn to Hawks Nest	▪ Brooklyn - undesignated camping (moderate use) - river fishing (no day-use facilities) (moderate use) ▪ Teays Landing river access (private) ▪ CSX Main Line on river right upstream of Cunard and on river right and river left downstream of Cunard (active) ▪ visitors frequently illegally cross over CSX Main Line - to reach the lower railroad area (for fishing and boating) - to reach Short Creek (for camping and fishing) - to reach Kaymoor via the tunnel under the tracks (for hiking) and day-use area	▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ at Brooklyn, provide new picnicking facilities with parking and pedestrian access to the river ▪ at Teays Landing, provide a trail segment for the through park connector (with trailhead facilities) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12)) ▪ work cooperatively with the CSX Corporation to secure safe legal public access to the river across the CSX right-of-way in the lower railroad area, at Short Creek, and at Kaymoor
Forest Areas			
Sewell Mountain (Backcountry Zone)	▪ Big Branch Trail and Trailhead (moderate use)	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a farm loop trail
Chestnut Mountain (Backcountry Zone)	▪ Sandstone Overlook – parking demand exceeds capacity ▪ Gwinn Ridge Trail provides access for hiking ▪ Gwinn Ridge Trailhead – parking demand exceeds capacity ▪ Lick Creek - water quality impaired	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide an equestrian loop trail ▪ expand parking capacity at the Gwinn Ridge Trailhead, including facilities for horse trailers
Irish Mountain (Backcountry Zone)	▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of camping experiences are available for different types of visitors	▪ provide a trail segment of the through park connector from New River Parkway (existing River Road) to the Glade Creek drainage ▪ provide a trailhead for the through park connector ▪ provide a designated backcountry campsite group
Meadow Creek South (Frontcountry Zone)	▪ Meadow Creek – water quality impaired ▪ fish stocking in Meadow Creek (moderate fishing use) ▪ hunting area (on plateau) ▪ CSX Meadow Creek rail line (active) ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide trails: - a trail from Sandstone Visitor Center to Meadow Creek - a rim-to-river trail from the Sandstone Visitor Center to Lower Hump Mountain - a rim-to-river trail from WV SR 20 to Glade Creek (using the Meadow Creek rail line right-of-way, if and when it is abandoned) ▪ provide a trailhead for the Meadow Creek Rail/Trail
Meadow Creek North (Backcountry Zone)	▪ hunting area (on plateau) ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a trail along Davis Branch ▪ provide a trailhead for the new Davis Branch Trail
Bucklick Branch (Frontcountry Zone)	▪ hunting area ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a stacked loop bike trail (with trailhead facilities) ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12)) ▪ provide an equestrian loop trail (with trailhead facilities)

Table 2.32 Alternative 5 (Preferred Alternative) – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Highland-Backus (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River on the gorge wall ▪ hunting area ▪ no designated trailheads – one site with no developed facilities is heavily used for parking by hunters ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ designate McKendree Road as a segment of the through park connector ▪ provide trails - from Davis Branch to Quinnimont - from Quinnimont to Dowdy Creek ▪ work cooperatively with WV DOH to improve McKendree Road and designate it a state scenic backway
Stretcher Neck (Backcountry Zone)	▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a river-to-rim trail from Army Camp to Pinnacle Rock
Dowdy Creek (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River on the gorge wall ▪ hunting area ▪ no designated trailheads – two sites with no developed facilities are heavily used for parking by hunters ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ a variety of camping experiences are available for different types of visitors ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ provide a trail from Dowdy Creek to Highland Mountain ▪ provide a trailhead for the Dowdy Creek to the Highland Mountain Trail ▪ provide several designated backcountry campsite groups along the Dowdy Creek Highland Mountain Trail ▪ designate McKendree Road as a segment of the through park connector ▪ work cooperatively with WV DOH to improve McKendree Road and designate it a state scenic backway
Claremont (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River just above the river level ▪ fishing – Buffalo Creek (low use) ▪ no designated trailheads – two sites with no developed facilities are heavily used for parking by hunters ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ designate McKendree Road as a segment of the through park connector
Substation (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River just above the river level ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ designate McKendree Road as a segment of the through park connector
Glade Creek (Backcountry Zone)	▪ popular hunting and fishing area (moderate fishing use) ▪ fish stocking in Glade Creek by WV DNR and Glade-Pinch Trout Association ▪ fish stocking in Mill Creek by WV DNR ▪ Glade Creek Trail provides fishing access and a connection from the rim to the river (admin vehicles permitted on upper section) ▪ Polls Plateau Trail, Kates Plateau Trail and Kates Falls Trail provide access for primitive camping and hunting ▪ Lower Glade Creek Trailhead ▪ Upper Glade Creek Trailhead (demand exceeds capacity) ▪ Cloverdale Road area used for access to Kates Plateau Trail although no trailhead facilities are available	▪ hydrologic features provide a mosaic of habitats that supports a full range of natural aquatic organisms ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ complete studies to understand impacts of stocking on native trout fish stocking; continue to support stocking by WV DNR and park partners, if deemed appropriate ▪ provide trails: - a segment of the through park connector from the New River Parkway to Glade Creek - a segment of the Grandview to Mill Creek rim-to-river trail - a trail from Cloverdale Road to the upper Glade Creek Trail ▪ open Glade Creek Trail to biking ▪ provide trailheads: - expand parking capacity at Glade Creek Trailhead - provide a trailhead at Cloverdale Road
Royal (Backcountry Zone)	▪ CSX Piney Creek spur line (active) ▪ Piney Creek - water quality impaired ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide trails: - a segment of the Grandview to Mill Creek rim-to-river trail - a segment of the WV SR 41 to Glade Creek rim-to-river trail (using the CSX Piney Creek spur line right-of-way, if and when it is abandoned) ▪ provide trailheads: - for the Grandview to Mill Creek Trail - for the WV SR 41 to Glade Creek Trail ▪ provide roadside interpretation along WV SR 41

Table 2.32 Alternative 5 (Preferred Alternative) – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
Terry-Batoff Creek (Backcountry Zone)	▪ CSX Piney Creek spur line (active) ▪ Piney Creek - water quality impaired ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide a segment of the new WV SR 41 to Glade Creek rim-to-river trail (using the CSX Piney Creek spur line right-of-way, if and when it is abandoned) ▪ provide roadside interpretation along WV SR 41
Garden Ground (Backcountry Zone)	▪ Stone Cliff Trail (low use) ▪ no designated trailheads – one plateau site with no developed facilities heavily used for parking	▪ a variety of camping experiences are available for different types of visitors ▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ provide a designated backcountry campsite group ▪ provide a stacked loop bike trail (with trailhead facilities) ▪ provide a segment of the through park connector from the Stone Cliff Trail to Terry
Dunloup Creek (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River at the river level ▪ Thurmond-Minden Trail and Trailhead (high use) ▪ Southside Trail (high use) ▪ fish stocking in Dunloup Creek by WV DNR (moderate fishing use) ▪ CSX Corman spur line (active) ▪ recurring flooding along Dunloup Creek	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ designate McKendree Road as a segment of the through park connector ▪ if and when the CSX Corman Line is abandoned provide a rail/trail from Mt. Hope to Southside Junction ▪ provide a trailhead for the Mt. Hope to Southside Junction Rail/Trail ▪ provide roadside interpretation along WV SR 25 from Glen Jean to Thurmond
Arbuckle Creek (Backcountry Zone)	▪ Thurmond-Minden Trail and Trailhead (high use) ▪ Southside Trail (high use) ▪ Arbuckle Creek – impaired	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ a variety of camping experiences are available for different types of visitors	▪ designate an existing trail as a segment of the through park connector ▪ provide a designated backcountry campsite group
Rush Run (Backcountry Zone)	▪ Brooklyn Mine Trail and Trailhead (high use) ▪ Southside Trail (high use) ▪ Cunard Access Road ▪ Cunard Trailhead parking area ▪ provides critical habitat for rare mammals	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ designate an existing trail as a segment of the through park connector ▪ provide roadside interpretation along the Cunard Access Road from the community of Cunard to the Cunard River access ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Craig Branch (Frontcountry Zone)	▪ Fayette Station Road "classic park experience" (high use) ▪ numerous park trails (high use) ▪ South Nuttall climbing area (low use) ▪ Kaymoor climbing area (moderate use) ▪ Butcher Branch climbing area (high use) ▪ Longmont Trailhead ▪ Bridge Trailhead ▪ Wolf Creek Trailhead (demand frequently exceeds capacity)	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ a variety of camping experiences are available for different types of visitors ▪ visitor services and facilities are appropriately scaled and located, and they facilitate enjoyable and educational visits to the park	▪ designate an existing trail as a segment of the through park connector ▪ provide a designated backcountry campsite group ▪ provide a stacked loop bike trail and a new equestrian loop trail (with shared trailhead facilities) ▪ improve the existing Wolf Creek Trailhead
Above Thurmond (Backcountry Zone)	▪ McKendree Road (WV SR 25) parallels the New River near the river level ▪ hunting area (on plateau) ▪ no designated trailheads – one site with no developed facilities are heavily used for parking ▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ connectivity in the park is enhanced through improvements to existing public roads and park roads and addition of new roads	▪ designate McKendree Road as a segment of the through park connector ▪ provide trails: - from the Stone Cliff coke ovens to Stone Cliff Mine - from Stone Cliff Mine to Thurmond
Below Thurmond (Backcountry Zone)	▪ no park facilities	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ develop trail from Thurmond to Sewell
Sewell (Backcountry Zone)	▪ hunting area (plateau above Fire Creek, Ephraim Creek, Mann Creek, and Keeney Creek) ▪ no NPS facilities ▪ partially included within Babcock State Park (facilities include trails)	▪ mutual park management goals are effectively realized through collaboration among the NPS, Hawks Nest State Park, and Babcock State Park ▪ a variety of trails enable visitors with different physical capabilities to explore	▪ provide a trail from Thurmond to Sewell ▪ provide a trail (with trailhead facilities) from GW Carver (via Babcock State Park) to Sewell to Caperton to Keeney Creek (in cooperation with Babcock State Park)

Table 2.32 Alternative 5 (Preferred Alternative) – Area-Specific Desired Conditions and Needed Changes

Management Zone / Site-Specific Area (upstream to downstream)	Existing Conditions and Facilities	Desired Conditions	Examples of Changes Needed to Achieve Desired Conditions
	▪ fish stocking in Glade Creek and Mann Creek by WV DNR (moderate use) ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	the park	▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Babcock State Park (Frontcountry Zone)	▪ Babcock State Park (facilities include cabins, campground, Glade Creek Grist Mill, swimming beach, boat rentals, picnic facilities, trails, horseback riding concession) ▪ fish stocking in Glade Creek by WV DNR (moderate use)	▪ mutual park management goals are effectively realized through collaboration among the NPS, Hawks Nest State Park, and Babcock State Park ▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a trail (with trailhead facilities) from GW Carver (via Babcock State Park) to Sewell to Caperton to Keeney Creek (in cooperation with Babcock State Park)
Beauty Mountain (Backcountry Zone)	▪ Beauty Mountain climbing area ▪ Beauty Mountain overlook (no designated trail) ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ interpretive and educational programs are expanded to increase visitor understanding and appreciation of the park's resources	▪ provide a trail (with trailhead facilities) to the Beauty Mountain overlook ▪ provide a trail from Nuttallburg to Fayette Mine ▪ provide roadside interpretation along WV SR 85/2 from Lookout to Winona to Nuttallburg ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Endless Wall (Backcountry Zone)	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ Ambassador Buttress climbing area (low use) ▪ Diamond Foot/Cirque climbing area (moderate use) ▪ Endless Wall climbing area (high use) ▪ Endless Wall Trail and Nuttall Trailhead (high use) ▪ Fern Creek Trail and Trailhead (high use) ▪ proliferation of undesignated trails accessing Ambassador Buttress and at the base of the Endless Wall ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ a variety of trails enable visitors with different physical capabilities to explore the park	▪ provide a trail to Fayette Mine ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))
Ames (Frontcountry Zone)	▪ Fayette Station Road (high use) (traffic volumes and types of vehicles generally exceed the roadway's design capacity) ▪ Bridge Buttress climbing area (high use) ▪ Bridge Buttress parking area ▪ Bubba City climbing area (moderate use) ▪ Junkyard climbing area (moderate use) ▪ no designated trails to climbing routes at Bubba City or Junkyard ▪ provides critical habitat for rare mammals ▪ rare rimrock pine communities occur in cliff areas	▪ a variety of trails enable visitors with different physical capabilities to explore the park ▪ mutual park management goals are effectively realized through collaboration among the NPS, Hawks Nest State Park, and Babcock State Park	▪ provide a trail segment for the through park connector ▪ (also see examples of changes common to Alternatives 2 to 5 (Table 2.12))

2.9 Alternatives Considered but Dismissed

2.9.1 Elimination of Hunting at New River Gorge National River

When the decision to develop a new General Management Plan was made in 2004, Section 1106 of Public Law 95-625, the New River Gorge National River enabling legislation, provided in part that "The Secretary may permit hunting and fishing on lands and waters under his jurisdiction within the boundaries of the New River Gorge National River in accordance with applicable Federal and State laws . . ." The park's existing General Management Plan (GMP), dated November 1982, addressed hunting as an approved recreational activity. Page 15 states that "Recreational hunting of game will be permitted in accordance with state regulations, with the exception of jointly designated limited closures for reasons of public safety or wildlife preservation." An Environmental Assessment was completed and a Finding of No Significant Impact was signed by the Regional Director in October 1978. Since adoption of the 1982 GMP, the NPS has permitted hunting on lands owned by the United States and administered by the NPS, except for reasons of public safety in areas of developed recreational facilities, such as river accesses, high-use trails, and campgrounds, etc.

After the GMP was completed and hunting had begun at New River Gorge National River, 36 C.F.R. § 2.2(b)(2) was changed to state, "Hunting may be allowed in park areas where such activity is specifically authorized as a discretionary activity under Federal Statutory law if the superintendent determines that such activity is consistent with public safety and enjoyment and sound resource management principles. Such hunting shall be allowed pursuant to special regulations." However, New River Gorge National River had never developed such a regulation.

Public Employees for Environmental Responsibility (PEER), in a letter dated April 10, 2002, pointed out the need for a regulation to be promulgated to permit hunting at New River Gorge National River. On September 25, 2003, an interim final rule (RIN1024-AD-12) was published in the Federal Register that would have allowed hunting to continue within the park. The rule was written to become effective immediately. On October 9, 2003, the director received a letter from a law firm representing the Fund for Animals that questioned the legality of the interim final regulation. At the request of Senator Byrd's staff, the Washington office prepared bill language for inclusion in the FY 2004 Interior Appropriations Bill to allow hunting to continue within the park while a final regulation was prepared.

The FY 2004 Final Interior Appropriations Bill, Section 150, contained language that directed that "The National Park Service shall issue a special regulation concerning continued hunting at New River Gorge National River in compliance with the requirements of the Administrative Procedures Act, with opportunity for public comment, and shall also comply with the National Environmental Policy Act as appropriate. Notwithstanding any other provision of law, the September 25, 2003

interim final rule authorizing continued hunting at New River Gorge National River shall be in effect until the final special regulation supersedes it." Since the NPS was planning to begin a GMP in 2004, it was determined that the GMP would initiate compliance with the National Environmental Policy Act by determining whether or not hunting was an appropriate activity for New River Gorge National River.

In preparation for the GMP, the Department of Fisheries and Wildlife Sciences at Virginia Tech prepared an *Assessment of Hunting Impacts at New River Gorge National River, West Virginia* (Hooper et al, 2006). The assessment concluded that "hunting conducted in accordance with existing laws and regulations should have no adverse impact on the fauna and flora within the boundaries of New River Gorge."

In consultation with the Solicitor's Office of the Department of the Interior, NPS decided that the best way to determine whether or not hunting was an appropriate activity for New River Gorge National River was to evaluate a range of alternatives, including the elimination of hunting within the boundary of the park. As a part of its scoping process, NPS drafted alternatives for hunting, including elimination of hunting, and described them along with other aspects of the proposed alternatives in a newsletter dated October 22, 2007, which was mailed to 797 people or groups. The concepts for hunting alternatives were described as:

- Continuation of Existing Hunting Program
- Enhanced Hunting Program
- Modified Hunting Program
- Elimination of Hunting Program on NPS Lands within the Park

Under this latter option all land owned by the NPS within the park boundary would be closed to hunting. Hunting on private lands within the park boundary would continue to be governed by the hunting and fishing regulations of the WV DNR. The existing hunting program would be phased out over five years.

On November 6, 7 and 8, 2007, NPS held public scoping meetings on the proposed alternatives included in the October 2007 newsletter, in Hinton, Beckley and Fayetteville respectively. Almost 300 people attended a meeting, and the meetings were largely dominated by the hunting issue. Almost every commenter opposed the inclusion of an alternative that would eliminate hunting.

Within a few weeks of these public meetings, Congress took up the issue of hunting at New River Gorge National River, and legislation that would have changed the park's authorizing legislation from "may allow hunting" to "shall allow hunting" passed the House of Representatives on March 4, 2008 (H.R. 5137). The Senate did not take up the bill, and the 110th Congress adjourned without passing the legislation. However, Congress' interest in this issue continued, and Section 7115 of Public Law 111-11, the Omnibus Public Land Management Act of 2009, which was

signed into law on March 30, 2009, contains language that says "Section 1106 of the National Parks and Recreation Act of 1978 (16 USC 460m-20) is amended in the first sentence by striking "may" and inserting "shall"."

Hunting, which had been discretionary at New River Gorge until the passage of Public Law 111-11 in March 2009, is no longer discretionary but is now authorized. Title 36 CFR § 2.2(b)(4) provides: "Where hunting or trapping or both are authorized, such activities shall be conducted in accordance with Federal law and the laws of the State within whose exterior boundaries a park area or a portion thereof is located. Nonconflicting State laws are adopted as a part of these regulations." In light of both Section 150 of the FY 2004 Final Interior Appropriations Act and Section 7115 of Public Law 111-11, the elimination of hunting on NPS lands within the proclamation boundary of New River Gorge National River is no longer viable. It is clearly Congress' intent that hunting continues at the park, so the elimination of hunting alternative was considered but rejected.

2.10 Biking in the Park

2.10.1 Background

Portions of nine trails in the park are currently open to bicycles, providing access to a variety of places such as overlooks, the New River, and historic sites in the lower gorge (see Table 3.40). Many members of the public and park user groups have requested that the NPS consider designation of additional routes for biking in the park. In response to these concerns the NPS has considered and evaluated alternative actions for expansion of biking opportunities in the park as part of the alternatives analysis in this GMP/EIS.

2.10.2 Biking Alternatives Considered in this GMP/EIS

- **Biking Management Actions Proposed in Alternative 1 (Continuation of Current Management)**

In Alternative 1 biking in the park would continue to be permitted on park administrative roads currently listed in the *New River Gorge National River Superintendent's Compendium* (NPS 2007) (see Table 3.38). No other biking trails would be designated.

- **Biking Management Actions Common to Alternatives 2 to 5**

The GMP alternatives evaluated in this GMP/EIS generally propose that additional biking opportunities could occur on new trails in the park generally as follows:

- in frontcountry zones, river corridor zones, historic resource zones, and park development zones – biking could occur on a variety of trail types
- in backcountry zones – biking could occur only on singletrack trails

- in historic resource, river corridor, and park development zones – biking could occur on a limited basis on a variety of trail types

No biking would be permitted in the Endless Wall area.

New biking trails would be designed and built specifically to minimize negative impacts to park resources (soils, water quality, vegetation, and archeological and historical sites, etc.) and visitor experiences. All new trails developed in backcountry zones – and even the majority of new trails developed in frontcountry zones – would be designed and maintained to a minimal width (mostly singletrack) so as to retain contiguous habitat and to prevent creation of fragmenting features. Any proposal for new trails or trail uses would be analyzed and evaluated for environmental, cultural, and visitor experience impacts before final approval.

- **Biking Management Actions Proposed in Alternative 2**

Alternative 2 would include potential joint hiking and biking use of existing and new trails listed in the preceding section (Biking Management Actions Common to Alternatives 2 to 5) subject to the general design principles identified for biking trails in Section 2.4.6 above. In addition, in Alternative 2 a possible new rail trail with biking access would be developed from Thurmond to Sewell.

- **Biking Management Actions Proposed in Alternative 3**

Alternative 3 would include potential joint hiking and biking use of existing and new trails as listed in the preceding section (Biking Management Actions Common to Alternatives 2 to 5) subject to the general design principles identified for biking trails in Section 2.4.6 above. In addition, in Alternative 3 possible new biking opportunities would include:

- a continuous trail open to biking from end to end of the park (the through park trail) composed of a combination of trail types (see Section 2.6.4)
- development of a new biking trail in the Highland-Backus frontcountry zone

- **Biking Management Actions Proposed in Alternative 4**

Alternative 4 would include potential joint hiking and biking use of existing and new trails listed in the preceding section (Biking Management Actions Common to Alternatives 2 to 5) subject to the general design principles identified for biking trails in Section 2.4.6 above. In addition, in Alternative 4 possible new biking opportunities would include:

- a new rail trail with biking access from Thurmond to Sewell
- development of a new biking trail in the Highland-Backus frontcountry zone
- development of a new rail trail with biking access from Mt. Hope to Southside Junction (if and when the CSX Corman Line right-of-way is abandoned and acquired by the NPS)

- **Biking Management Actions Proposed in Alternative 5 (Preferred Alternative)**

Alternative 5 would include potential joint hiking and biking use of existing and new trails listed in the preceding section (Biking Management Actions Common to Alternatives 2 to 5) subject to the general design principles identified for biking trails in Section 2.4.6 above. In addition, in Alternative 5 possible new biking opportunities would include:

- a continuous trail open to biking from end to end of the park (the through park connector) composed of a combination of trail types (see preceding section)
- development of stacked loop trails in the Bucklick Branch, Garden Ground, and Craig Branch areas
- development of new rail trails with biking access on railroad rights-of-way once they are abandoned and acquired by the NPS, including:
  - the CSX Corman line from Mt. Hope to Southside Junction
  - the CSX Meadow Creek line from Meadow Bridge to Meadow Creek
  - the CSX Piney Creek spur line along WV SR 41 from Stanaford to Prince/Quinnimont
- development of new trail connections between the three national park units, state parks, rail trails, and other attractions in the region through cooperation between the NPS and the park's gateway communities, state agencies and private landowners

2.10.3 Public Comments Received Related to Biking Alternatives

The NPS has consulted the general public and park user groups interested in biking during development of the biking options.

In October 2007 a newsletter was sent to 797 people and groups on the park mailing list outlining the biking options under consideration and inviting the public to meetings for discussion of the GMP alternatives as well as the biking options.

On November 6, 7, and 8, 2007, public meetings on the proposed GMP alternatives included a presentation of the biking options under consideration and a question-and-answer session. Most comments related to biking supported addition of expanded biking in the park, particularly expansion of singletrack and stacked loop trails.

2.10.4 Future Biking Trail Planning and Promulgation of Special Regulations

The final location of new biking trails would be identified in the biking component of the park's new trail management plan. The plan would be prepared for the preferred alternative as a planning effort subsequent to approval of the GMP/EIS

(see Section 2.13.1 below). Following completion of the plan a special regulation would be promulgated pursuant to 36 CFR Chapter 4 §4.30 adding the newly designated routes to the list of routes where biking is permitted in the Superintendent's Compendium.

2.11 Indicators and Standards

User Capacity is one statutory requirement for the GMP established in the 1978 National Parks and Recreation Act. The Act called for the identification of and implementation commitments for visitor carrying capacities. The NPS GMP Sourcebook (2008) explains that planners have found that user capacity is a more appropriate term than visitor carrying capacity because it conveys the concept that capacity is applicable to all park users, including local residents. The NPS defines user capacity as the type and level of use that can be accommodated while sustaining the desired resource conditions, social conditions, and visitor experiences consistent with the purposes of the park. The approach to user capacity is now focused on measuring the success at achieving and maintaining desired resource conditions and visitor experiences as affected by people's use of the parks. The NPS does not solely track and control user numbers, but instead manages the levels, types, behaviors, and patterns of visitor use and other public uses as needed to control the condition of the resources and the quality of the visitor experiences. The GMP planning process requires the development of a monitoring system to test the effectiveness of the management actions taken by identifying indicators and standards which gauge when or if the desired conditions have been achieved.

The user capacity decision making process can be summarized by the following major planning and management steps:

- establish desired conditions for resources, visitor experiences, and general levels of management, development, and access for different areas of the park
- identify indicators and standards to measure success at achieving desired conditions
- monitor existing conditions in relation to indicators and standards
- implement appropriate management actions to maintain or restore desired conditions and assess the effects of those actions taken

GMPs now include a general description of how indicators and standards will be monitored (to ensure they are feasible). The development of specific monitoring protocols is left to a detailed monitoring plan, which is beyond the scope of the GMP. The Indicators and Standards may require modification if new knowledge is gained about the efficacy of those selected during the GMP planning process.

The user capacity at the New River Gorge National River is affected by several factors largely outside the control of the National Park Service. The first involves the substantial amount of private land ownership and the inclusion of eight or more riverside communities within or immediately adjacent to the park boundary. These properties often provide numerous and uncontrolled private access to the river and lands within the park. The park has pursued the acquisition of park lands from willing sellers but complete ownership of all lands within the boundary is not expected. The NPS instead hopes to collaborate with the local governments and landowners to sustain the existing community character while protecting the natural, cultural, and scenic resources within the park.

Another factor with great potential to affect the amounts and types of visitation to the park involves several residential subdivisions in Fayette County. The developers expect full build-out within 20 years and include more than 2500 new homes located adjacent to the park and spread over some 10 miles in length. The new developments are likely to have substantial effects on visitation and may require substantial adjustments to park services and facilities.

The user capacity of the New River itself is also affected by the fact that commercial whitewater activities are regulated by the state of West Virginia. The West Virginia National Interest River Conservation Act of 1987 (PL 100-534) states, "...the Secretary of the Interior shall enter into a cooperative agreement with the state of West Virginia providing for the state's regulation, in accordance with state law, of persons providing commercial recreational watercraft services on units of the National Park System and components of the National Wild and Scenic Rivers System subject to this Act." The New River within the park boundary was designated a "whitewater zone" by the WV Whitewater Commission and includes three sections of the Upper New River and one section of the Lower New River. The sections include the Upper New River from Hinton to WV SR 41 at Prince, another section of the Upper New River from WV SR 41 (approximately the McCreery river access) to the railroad trestle at Thurmond, and the third section of the Upper New River from Thurmond to Manns Creek (just downstream of the Cunard river access), and the Lower New from Manns Creek to Teays Landing. The WV DNR was tasked with the regulation of approximately 20 commercial licenses and setting the maximum daily and yearly use limits. As the demand for whitewater recreation increased, the Whitewater Commission initiated a study in 1995 utilizing a Limits of Acceptable Change process to implement a "rational criteria" for river allocation for the WV whitewater industry. The report, however, did not address an allocation system which included the non-commercial boaters. While non-commercial use is not well documented, the NPS estimated the total amount of non-commercial use in 2007 to be about 31,466 users, which represents almost 20% of the total whitewater use. Congestion at the McCreery, Cunard, and Fayette Station river accesses involving commercial and non-commercial boaters has become an issue and concern for park management. These concerns will be addressed through

improvements in site design and capacity rather than an allocation system attempting to limit commercial and non-commercial use.

Further, the steady decline of commercial whitewater use since its peak in 1995 has driven a recent consolidation of outfitters. In 2008 ten of the largest outfitters consolidated into three large companies. Commercial outfitters hope to gain an economy of scale and also diversify and expand the experiences they offer the park visitors. These efforts are likely to change visitor use patterns throughout the park.

Based on some of the most pressing existing or potential use concerns at sites within New River Gorge National River, a set of five possible resource and visitor experience indicators have been identified for the park that may be monitored to assess visitor-related impacts on park resources and the quality of the visitor experience (see Table 2.33). The applicability of each indicator to management zones has also been identified. The final selection of any indicators and standards for monitoring purposes or the implementation of any management actions that affect use would comply with NEPA, NHPA, and other laws, regulations, and policy, as needed.

2.12 Mitigation Measures to be Included as Part of Future Actions Implementing the Preferred GMP Alternative

New River Gorge National River
NPS Management Mandate

Future resource management and development of visitor facilities at New River Gorge National River will be implemented by the NPS in accordance with its congressional mandate to manage the lands under its stewardship "in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (NPS Organic Act, 16 USC 1).

Over the next 20 years as the NPS implements the actions associated with the preferred GMP alternative it must protect unimpaired the park's natural and cultural resources and the quality of the visitor experience. To ensure that this happens, a consistent set of mitigation measures would be applied to all management actions in the park. In the future the NPS would complete appropriate review of environmental impacts associated with management actions (i.e., those reviews required by the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), and other relevant legislation). As part of the environmental reviews, the NPS would avoid, minimize, and mitigate adverse impacts of management actions when practicable. The implementation of a compliance-monitoring program would be within the parameters of NEPA and NHPA compliance documents, U.S. Army Corps of Engineers Section 404 permits, etc. The compliance-monitoring program would oversee these mitigation measures and would include reporting protocols. The mitigation measures and best management practices that would generally be applied to avoid or minimize potential impacts from implementation of future management actions in the park are summarized in Table 2.34 below.

Table 2.33 Park User Capacity Indicators

	Backcountry Zone		
	Resources/Values	**Indicator**	**Standard**
1	Contiguous forest habitat	Number and size (acres) of contiguous forest habitat and the number and size of fragmenting features	The number and size of contiguous forest habitat will be managed for no net loss and may be increased by reducing the number and size of fragmenting features
2	Recreation sites – including rock climbing areas, campsites, fishing areas in tributary streams	Recreation site condition assessment – rating of good, fair, poor based on site size, ground cover loss, damaged trees, amount of litter/human waste	The condition of key recreation sites will be maintained in "good condition"
3	Water quality in tributary streams	Fecal coliform bacteria density (colony forming units/100 ml)	Fecal coliform bacteria density does not exceed the West Virginia standard for water quality contact recreation (400 colony forming units/100 ml) in more than 10 percent of samples taken at any established monitoring station during a given year, nor does the average (geometric mean) of at least five samples taken within one year exceed 200 colony forming units/100 ml)
4	Visitor opportunities free of the sense of crowding or congestion	Number of encounters with other visitors per day	Visitors >90 percent of the time will report the number of encounters with other visitors as "low"
	Frontcountry Zone		
	Resources/Values	**Indicator**	**Standard**
5	Contiguous forest habitat	Number and size (acres) of contiguous forest habitat and the number and size of fragmenting features	The number and size of contiguous forest habitat will be managed for no net loss and may be increased by reducing the number and size of fragmenting features.
6	Recreation sites – including rock climbing areas, campsites, fishing areas in tributary stream	Recreation site condition assessment – rating of good, fair, poor based on site size, ground cover loss, damaged trees, amount of litter/human waste	The condition of key recreation sites will be maintained in "good condition"
7	Water quality in tributary streams	Fecal coliform bacteria density (colony forming units/100 ml)	Fecal coliform bacteria density does not exceed the West Virginia standard for water quality contact recreation (400 colony forming units/100 ml) in more than 10 percent of samples taken at any established monitoring station during a given year, nor does the average (geometric mean) of at least five samples taken within one year exceed 200 colony forming units/100 ml)
8	Visitor opportunities free of the sense of crowding or congestion	Number of encounters with other visitors per day	Visitors >90 percent of the time will report the number of encounters with other visitors as "low" to "moderate"

Table 2.33 Park User Capacity Indicators

	Resources/Values	Indicator	Standard
Historic Resource Zone			
9	Contiguous riparian/forest habitat	Number and size (acres) of contiguous riparian/forest habitat and the number and size of fragmenting features	The number and size and contiguous riparian/forest habitat will be managed for no net loss and may be increased by reducing the number and size of fragmenting features
10	Water quality in New River and its tributary streams	Fecal coliform bacteria density (colony forming units/100 ml)	Fecal coliform bacteria density does not exceed the West Virginia standard for water contact recreation (400 colony forming units/100 ml) in more than 10 percent of samples taken at any established monitoring station during a given year, nor does the average (geometric mean) of at least five samples taken within one year exceed 200 colony forming units/100 ml)
11	Recreation sites – including river lunch stops, camping and fishing areas	Recreation site condition assessment – rating of good, fair, poor based on site size, ground cover loss, damaged trees, amount of litter/human waste	The condition of key recreation sites will be maintained in "good condition"
River Corridor Zone			
	Resources/Values	**Indicator**	**Standard**
12	Cultural resources – including coal, railroad, settlement, archeological, ethnographic resources, and museum collections (emphasis on stabilization, rehabilitation, and development for improved visitor experience and public use of sites)	Change in site condition/integrity (measured through List of Classified Structures, Cultural Landscape Inventory, and ASMIS protocols) rating is good, fair, poor, considering factors such as vandalism, vehicle disturbance, commercial activities, and new developments	All properties will be managed in "good condition"
13	Visitor services and facilities	Visitor satisfaction with the scale, location, and condition of visitor services and facilities	Greater than 90 percent of all visitors surveyed report "high" levels of satisfaction with the scale, location, and condition of visitor services and facilities
Park Development Zone			
	Resources/Values	**Indicator**	**Standard**
14	Water quality in New River and its tributary streams	Fecal coliform bacteria density (colony forming units/100 ml)	Fecal coliform bacteria density does not exceed the West Virginia standard for water contact recreation (400 colony forming units/100 ml) in more than 10 percent of samples taken at any established monitoring station during a given year, nor does the average (geometric mean) of at least five samples taken within one year exceed 200 colony forming units/100 ml)
15	Visitor services and facilities	Visitor satisfaction with the scale, location, and condition of visitor services and facilities	Greater than 90 percent of all visitors surveyed report "high" levels of satisfaction with the scale, location, and condition of visitor services and facilities

Table 2.34 Mitigation Measures to be Included as Part of Future Actions Implementing the Preferred GMP Alternative

Impact Topic	Mitigation Measure
Cultural Resources	■ Continue to develop inventories for and oversee research about archeological, historic, and ethnographic resources to better understand and manage the resources, including historic and ethnographic cultural landscapes. Conduct any needed archeological or other resource specific surveys, prepare national register evaluations, and identify recommended treatments. Incorporate the results of these efforts into the park's resource stewardship strategy and site-specific planning and compliance documents. Continue to manage cultural resources and museum collections following federal regulations and NPS guidelines and Director's Order 24, "Museum collections Management", Director's Order 28 "Cultural Resource Management", NPS 28 "Cultural Resource Management", and NPS 28A "Cultural Resource Management". Inventory the park's collection and keep museum collections in a manner that would meet NPS curatorial standards. ■ Follow site-specific planning and compliance procedures, in accordance with the *Secretary of the Interior's Standards for Archeology and Historic Preservation.* Locate projects in previously disturbed or existing developed areas to avoid or minimize adverse impacts to archeological resources. Use screening and/or sensitive design that would be compatible with historic resources and cultural landscapes and avoid development adjacent to ethnographic resources. If adverse impacts could not be avoided, these impacts would be mitigated by strategies determined through a consultation process with all interested parties. ■ Conduct archeological site monitoring and routine protection. Conduct data recovery excavations at archeological sites threatened with destruction, where protection or site avoidance during design and construction is infeasible. Strictly adhere to NPS standards and guidelines on the display and care of artifacts. This would include artifacts used in exhibits in the visitor center. Irreplaceable items would be kept above the 500-year floodplain. ■ Mitigating measures for structures and landscapes include documentation according to standards of the Historic American Buildings Survey/Historic American Engineering Record/Historic American Landscape Survey (HABS/HAER/HALS) and in accordance with the Secretary's Standards and Guidelines for Historical and Archaeological Documentation. The level of this documentation, which includes photography, archeological data recovery, and/or a narrative history, would depend on significance (national, state, or local) and individual attributes (an individually significant structure, individual elements of a cultural landscape, etc.) and be determined in consultation with the state historic preservation officer, tribal historic preservation officer(s), local community (ies), and/or other interested parties. When demolition of a historic structure is proposed, and following thorough documentation, architectural elements, and objects may be salvaged for reuse in rehabilitating similar structures, or they may be added to the park's museum collection. In addition, the historical alteration of the human environment and reasons for that alteration would be interpreted to national park visitors. ■ Continue ongoing consultations with culturally associated groups and American Indian tribes. Protect sensitive traditional use areas to the extent feasible by avoiding or mitigating impacts on the ethnographic resources and continuing to provide access to traditional use and spiritual areas. Mitigation could include identification of and assistance in accessing alternative resource gathering areas and screening new development from traditional use areas. ■ Encourage visitors through the park's interpretive programs t respect and leave undisturbed any inadvertently encountered archeological resources as well as to respect and leave undisturbed any offerings placed by American Indians.
Water Resources	■ To prevent water pollution during construction, use erosion control measures, minimize discharge to water bodies, and regularly inspect construction equipment for leaks of petroleum and other chemicals. Minimize use of heavy equipment in a waterway. ■ Build a runoff filtration system to minimize water pollution form larger parking areas.

Table 2.34 Mitigation Measures to be Included as Part of Future Actions Implementing the Preferred GMP Alternative

Impact Topic	Mitigation Measure
Wetlands	■ Delineate wetlands by qualified NPS staff or certified wetland specialists and clearly mark the wetlands before construction work. ■ Perform construction activities in a cautious manner to prevent damage caused by equipment, erosion, siltation, etc.
Soils	■ Build new facilities on soils suitable for development. ■ Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion control measures, such as erosion matting, silt fencing, and sedimentation basins in construction areas to reduce erosion, surface scouring, and discharge to water bodies. ■ Once work is completed, revegetate construction areas with native plants in a timely period.
Nonnative (Exotic) Species	■ Implement a noxious weed control program. Standard measures could include the following elements: - ensure construction-related equipment arrives on-site free of mud or seed-bearing material - certify all seeds and straw material are weed-free - identify areas of noxious weeds pre-construction - treat noxious weeds or noxious weed topsoil before construction (e.g., topsoil segregation, storage, herbicide treatment) - revegetate with appropriate native species
Threatened and Endangered Species and Species of Concern	■ Mitigation actions would occur during normal park operations as well as before, during, and after construction to minimize immediate and long-term impacts on rare, threatened, and endangered species. These actions would vary be specific project and area of the park affected, and additional mitigation would be added depending on the specific action and location. Many of the measures listed above for vegetation and wildlife would also benefit rare, threatened, and endangered species by helping to preserve habitat. mitigation actions specific to rare, threatened, and endangered species would include the following: - conduct surveys for rare, threatened, and endangered species as warranted - locate and design facilities/actions to avoid adverse effects on rare, threatened, and endangered species – if avoidance is infeasible, minimize and compensate for adverse effects on rare, threatened, and endangered species as appropriate and in consultation with the appropriate resource agencies - conduct work outside of critical periods for the specific species. - develop and implement restoration and/or monitoring plans as warranted – plans should include methods for implementation, performance standards, monitoring criteria, and adaptive management techniques - implement measures to reduce adverse effects of non-native plants and wildlife on rare, threatened, and endangered species
Vegetation	■ Monitor areas used by visitors (e.g., trails) for signs of native vegetation disturbance – use public education, native plants to revegetate disturbed areas, erosion control measures, and barriers to control potential impacts on plants from trail erosion or social trailing. ■ Designate river access/crossing points, and use barriers and closures to prevent trampling and loss of riparian vegetation. ■ Develop revegetation plans for the disturbed are and require the use of native species – revegetation plans should specify seed/plant source, seed/plant mixes, soil preparation, etc. Salvage vegetation should be used to the extent possible.

Table 2.34 Mitigation Measures to be Included as Part of Future Actions Implementing the Preferred GMP Alternative

Impact Topic	Mitigation Measure
Wildlife	■ Employ techniques to reduce impacts on wildlife, including visitor education programs, restrictions on visitor activities, and park ranger patrols. ■ Implement a natural resource protection program. Standard measures would include construction scheduling, biological monitoring, erosion and sediment control, the use of fencing or other means to protect sensitive resources adjacent to construction, the removal of all food-related items or rubbish, topsoil salvage, and revegetation. This could include specific construction monitoring by resource specialists as well as treatment and reporting procedures.
Air quality	■ Implement a dust abatement program. Standard dust abatement measures could include the following elements: water or otherwise stabilize soils, cover haul trucks, employ speed limits on unpaved roads, minimize vegetation clearing, and revegetate after construction.
Visitor Safety and Experiences	■ Implement a traffic control plan, as warranted. Standard measures include strategies to maintain safe and efficient traffic flow during the construction period. ■ Implement measures to reduce adverse effects of construction on visitor safety and experience. ■ Implement an interpretation and education program. Continue directional signs and education programs to promote understanding among park visitors. ■ Conduct an accessibility study to understand barriers to park programs and facilities – based on this study, implement a strategy to provide the maximum level of accessibility.
Hazardous Materials	■ Implement a spill prevention and pollution control program for hazardous materials. Standard measures could include: - hazardous materials storage and handling procedures - spill containment, cleanup, and reporting procedures; - limitation of refueling and other hazardous activities to upland/non-sensitive sites
Soundscape	■ Implement standard noise abatement measures during park operations and construction. Standard noise abatement measures could include the following elements: - a schedule that minimizes impacts on adjacent noise-sensitive uses - use of the best available noise control techniques wherever feasible - use of hydraulically or electrically powered impact tools when feasible - location of stationary noise sources as far from sensitive uses as possible ■ Site and design facilities to minimize objectionable noise. ■ Explore options to reduce the sounds of maintenance equipment.

2.13 Needed Future Plans

2.13.1 Trail Management Plan

Future development and management of the park's trail system would occur in accordance with a new trail management plan that the NPS would prepare following completion of the GMP/EIS. Trails would be planned and developed as an integral part of the park's transportation system and incorporate principles of universal design. All trails would be located, designed, and managed to: 1) reduce conflicts with automobiles and incompatible uses, 2) allow for a satisfying park experience, 3) allow accessibility by the greatest number of people, and 4) protect park resources. The trails plan would contain specific, measurable management objectives related to trail development and use. The plan would also consider a wide range of techniques in managing trail use to avoid adverse impacts

on park resources, values, or desired visitor experiences. In formulating the plan the Superintendent would be permitted to designate specific areas for trail use and/or impose local restrictions, use limits, and closures. Management measures would be consistent with the desired condition decisions made in the GMP/EIS. The NPS would also cooperate with other land managers, nonprofit organizations, and user groups to facilitate local and regional trail access to the park. The plan would be supported by appropriate documentation of compliance with NEPA and NHPA and would be developed with public involvement.

2.13.2 Camping Management Plan

Future development and management of camping in the park would occur in accordance with a new camping management plan that the NPS would prepare following completion of the GMP/EIS. The camping management plan would provide for a variety of experiences ranging from primitive backcountry camping to developed frontcountry camping. The plan would address management issues regarding designated versus undesignated camping, use of fire pans, wastewater treatment, and water supply. It would contain specific, measurable management objectives related to development and use of camping facilities in the park. The plan would also consider a wide range of techniques in managing camping use to avoid adverse impacts on park resources, values, or desired visitor experiences. In formulating the plan the Superintendent would be permitted to designate specific areas for camping use and/or impose local restrictions, use limits, and closures. Management measures would be consistent with the desired condition decisions made in the GMP/EIS. The camping management plan would be supported by appropriate documentation of compliance with NEPA and NHPA and would be developed with public involvement.

During completion of the camping management plan the NPS would also consider charging fees for camping and instituting a reservation system. A camping fee would enable the NPS to provide a higher level of customer service and would benefit visitors. As the NPS considers the establishment of a fee program, it would engage the public and obtain input from Congressional delegations and local, county, state, and federal officials, as well as the local Chambers of Commerce, commercial tour operators, and the general public.

2.13.3 Resource Stewardship Strategy

The NPS would complete a Resource Stewardship Strategy (RSS). This would be a long-term plan – with an expected life on the order of 20 years – which would address how the park would achieve its desired natural and cultural resource conditions as described in this GMP.

The RSS would evaluate the park's fundamental and other important resources and values (see Section 1.7.3 above and NPS 2007a) and identify the following:

- the major components of the park's fundamental and other important resources and values that must be protected in the future
- how to evaluate success in protecting those resources
- measurable targets for success
- a comprehensive strategic plan for achieving and maintaining the targets for success

As a program planning document, the RSS would serve as a link between the park's GMP and its strategic planning, helping to allocate the park's personnel and financial resources to implement resource stewardship actions.

2.14 Cost Comparison

2.14.1 Estimated Costs for Implementing the Plan

Table 2.35 presents a summary of the annual operating and one-time costs for the five GMP alternatives. The cost figures are provided here and throughout the plan only to provide an estimate of the relative costs of the alternatives. The following statements apply to the cost estimates:

- the costs are presented as estimates (in 2009 dollars) and are not appropriate for budgeting purposes
- the estimates presented have been developed using NPS and industry standards to the extent available
- specific costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations
- actual costs to the NPS will vary depending on if and when the actions are implemented, and on contributions by partners and volunteers
- approval of the GMP/EIS does not guarantee that funding or staffing for proposed actions will be available
- the implementation of the approved plan, no matter which alternative is selected, will depend on future NPS funding levels and service-wide priorities, and on partnership funds, time, and effort

2.14.2 Funding for Actions Identified in the GMP

The NPS develops 5-year deferred maintenance and capital improvement plans. These plans are developed by a systematic process of evaluating proposals from the field to determine which projects are of greatest need in priority order focusing on critical health and safety issues and critical resource protection requirements. Actions that add specific projects to the 5-year plans inevitably result in other projects being displaced when budgets are limited.

Table 2.35 Alternatives Cost Comparison (2009 dollars)

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
NPS Annual Operating Costs[1]	$13,350,000	$15,570,000	$15,740,000	$15,570,000	$15,820,000
NPS Staffing – FTE[2]	160	186	188	186	189
Total One-Time NPS Costs[3]	$16,200,000	$27,350,000	$28,700,000	$29,300,000	$29,670,000
NPS Facility Costs[4]	$15,380,000	$23,000,000	$27,700,000	$27,500,000	$27,800,000
NPS Non-Facility Costs[5]	$820,000	$4,350,000	$1,000,000	$1,800,000	$1,870,000
Other Costs	See note 6	See note 6	See note 6	See note 6	See note 6

1. NPS annual operating costs are the total NPS costs per year for maintenance and operations associated with each alternative, including: utilities, supplies, staff salaries and benefits, leasing, and other materials. Cost and staffing estimates assume the alternative is fully implemented as described in Sections 2.2.11, 2.5.9, 2.6.9, 2.7.9, and 2.8.9 above.
2. The total number of full-time equivalents (FTE) is the number of NPS person-years of staff required to maintain the assets of the park at a good level, provide acceptable visitor services, protect resources, and generally support the park's operations. The FTE number indicates funded NPS staff only, not volunteer positions or positions funded by partners. FTE salaries and benefits are included in the annual operating costs. The general duties of existing and proposed staff are described for each alternative in Sections 2.2.11, 2.5.9, 2.6.9, 2.7.9, and 2.8.9 above.
3. Total one-time NPS costs equal the sum of facility costs, non-facility costs, and other costs.
4. One-time NPS facility costs include those for design, construction, rehabilitation, or adaptive reuse of NPS facilities, including visitor centers, roads, parking areas, administrative facilities, comfort stations, educational facilities, entrance stations, fire stations, maintenance facilities, museum collections facilities, and other visitor facilities. These are described for each alternative in Sections 2.2.11, 2.5.9, 2.6.9, 2.7.9, and 2.8.9 above.
5. One-time NPS non-facility costs include those for the preservation of cultural or natural resources not related to facilities, the development of visitor use tools not related to facilities, and other park management activities that would require substantial funding above the park annual operating costs. These are described for each alternative in Sections 2.2.11, 2.5.9, 2.6.9, 2.7.9, and 2.8.9 above.
6. The New River Parkway would be a 10-mile, two-lane scenic parkway road connecting I-64 with Sandstone Falls, other NPS cultural and recreation areas and the southern gateway community of Hinton. The parkway has been the subject of a 20-year planning process, which culminated in a signed and approved record of decision (ROD) in February 2004. The cost of the road has escalated from approximately $6 million to a current estimate of $130 million. The cost is expected to be borne by the Federal Highway Administration and the West Virginia Department of Transportation.

Capital development, maintenance, and staffing proposals in this GMP/EIS would be evaluated in light of competing priorities for New River Gorge National River and other units of the national park system. Because emphasis in the budget process is currently placed on addressing needs to maintain existing infrastructure, funding for new development is not likely within the next five years. However, the potential for implementing development and operational proposals in this plan may be improved if funding is available from partnerships that do not rely on the NPS's budget.

2.15 Comparison of Alternatives

Table 2.36 **Comparison of Alternatives** – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
Visitor Experience and Visitor Orientation	▪ Visitors would have classic park experiences as they currently exist at Sandstone Falls, Sandstone Visitor Center, Grandview, Thurmond, Endless Wall, Kaymoor, Nuttallburg, Canyon Rim, and Fayette Station Road ▪ Other important experiences that visitors would have would remain largely as they are today, focused on existing attractions and visitor facilities ▪ Improvements associated with the future New River Parkway would greatly enhance access, visitor facilities, and the experiences visitors may have in the south end of the park	▪ Cultural resources and interpretive experiences would be emphasized in themed areas in the north and south ends of the park; primitive recreation would be emphasized in the middle of the park ▪ Actions to enhance the classic park experiences would occur at Endless Wall, Fayette Station Road, and Sandstone Falls ▪ Improvements associated with the future New River Parkway would greatly enhance access, visitor facilities, and the experiences visitors may have in the south end of the park	▪ Recreation, scenic experiences, and discovery of cultural resources would be emphasized along a new through park trail ▪ Actions to enhance the classic park experiences would occur at Endless Wall, Fayette Station Road, and Thurmond ▪ Improvements associated with the future New River Parkway would greatly enhance access, visitor facilities, and the experiences visitors may have in the south end of the park	▪ Cultural and recreation resources and experiences would be emphasized in proximity to gateways and along rim to river trails and roads ▪ Actions to enhance the classic park experiences would occur at Endless Wall, Fayette Station Road, and Thurmond ▪ Improvements associated with the future New River Parkway would greatly enhance access, visitor facilities, and the experiences visitors may have in the south end of the park	▪ Primitive recreation experiences would be emphasized throughout the park along a new through park connector; river gateways and focal areas would be managed for a broad variety of interpretive and recreational experiences ▪ Actions to enhance the visitor classic park experiences would occur at Endless Wall, Fayette Station Road, Thurmond, and Sandstone Falls ▪ Improvements associated with the future New River Parkway would greatly enhance access, visitor facilities, and the experiences visitors may have in the south end of the park
Maintaining Natural Processes and Restoring Natural Systems	▪ Existing natural resource management programs would continue	▪ Approximately 68.5% (49,000 acres) of the park would be managed as large contiguous tracts of intact unfragmented backcountry forest	▪ Approximately 43% (30,750 acres) of the park would be managed as large contiguous tracts of intact unfragmented backcountry forest	▪ Approximately 60.8% (43,500 acres) of the park would be managed as large contiguous tracts of intact unfragmented backcountry forest	▪ Approximately 66.4% (47,500 acres) of the park would be managed as large contiguous tracts of intact unfragmented backcountry forest
Water Quality Management	▪ NPS would continue to collect ambient water quality data for the New River and many tributaries ▪ NPS would continue to provide technical assistance to local communities, public service districts, and groups involved with water quality management ▪ At Thurmond, community water and wastewater manage-ment systems would be developed to serve both NPS facilities and all existing occupied private development ▪ Sanitary facilities would continue to be provided at most developed visitor facilities ▪ River rest stops and other sites in remote areas would continue to have few or no sanitary facilities	▪ NPS would continue to collect ambient water quality data for the New River and many tributaries; as funding permits, the water quality monitoring program would be expanded to: 1) include most tributaries to the New River, 2) to increase sampling frequency, 3) to increase monitoring during high flows ▪ NPS would continue to provide technical assistance to local communities, public service districts, and groups involved with water quality management ▪ At Thurmond, community water and wastewater manage-ment systems would be developed to serve both NPS facilities and all existing and new occupied private development ▪ Availability of sanitary facilities would be expanded at 1) all developed visitor	▪ Same as Alternative 2	▪ Same as Alternative 2	▪ Same as Alternative 2

Table 2.36 Comparison of Alternatives – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
		facilities, and 2) in remote areas of the park where visitor use is high ▪ Technical assistance to local communities, public service districts, and groups involved with water quality management would be expanded ▪ Public education and technical assistance would be provided regarding maintenance of on-site disposal systems in tributary watersheds ▪ Where practicable, make excess capacity in park wastewater treatment facilities available for treatment of wastewater flows from adjoining neighborhoods			
Cultural Resource Management	▪ Farmsteads in the south end of the park would be managed as follows: - farmhouses would be stabilized - outbuildings would be maintained in period condition - farm fields, fence lines, and orchards would be maintained - farmland would be leased for agriculture - as properties in the Richmond Bottom area and at Westfall Farm, are acquired or otherwise protected, modern structures would be removed - remaining buildings at the Harrah Homestead would be stabilized ▪ Prince Brothers General Store would be stabilized ▪ Contamination at Thurmond Commercial Row structures would be remediated and the structures stabilized ▪ Nationally significant industrial resources would be stabilized at the Nuttallburg Mining Complex and Nuttallburg town site ▪ A new storage facility for the park's museum collections would be constructed ▪ Infrequently used items in the park's collection would be moved to a regional storage facility	▪ Farmsteads in the south end of the park would tell early settlement/ agricultural stories: - representative farmhouses and outbuildings would be restored - the cultural landscape associated with restored farmhouses would be red ▪ Industrial resources in the north end of the park would tell mining, lumbering, and railroading stories: - at Thurmond, Commercial Row buildings would be rehabilitated and leased, representative historic houses would be restored, other viable houses would be rehabilitated and leased (for commercial use, park housing, dormitory housing, or visitor lodging), and remaining structures would be stabilized - several industrial sites (app. 5) would be managed as discovery sites ▪ Camp Brookside would be rehabilitated and adaptively reused (in partnership with an educational institution) ▪ Discovery sites (approx. 5 along trails and roads in the middle of the park would be managed and interpreted to tell the park's railroading stories	▪ Discovery sites (from 30 to 35 sites) along the through park trail, other trails, and park roads would be managed and interpreted to tell the park's early settlement/ agricultural and industrial stores related to mining, lumbering, and railroading ▪ Farmsteads in the south end of the park would be rehabilitated and leased through the NPS historic leasing program ▪ At Thurmond, the remaining historic structures would be stabilized (maintaining the exteriors only) ▪ Nationally significant industrial resources would be stabilized at the Nuttallburg Mining Complex and Nuttallburg town site ▪ A new storage facility for the park's museum collections would be constructed ▪ Infrequently used items in the park's collection would be moved to a regional storage facility	▪ Cultural resources in river gateways and in the south end of the park would be rehabilitated and adaptively reused through the NPS historic leasing program, such as: - representative farmhouses in the southern end of the park would be rehabilitated and leased - Prince Brothers General Store would rehabilitated and leased - at Thurmond, Commercial Row buildings and houses in good condition would be rehabilitated and leased (for commercial use, park housing, dormitory housing, or visitor lodging); other structures would be restored (on the exterior only) ▪ The cultural landscape at the Prince Brothers General Store would be restored ▪ Discovery sites (from 20 to 25 sites) along trails at and near river gateways, and along rim to river trails, would be managed and interpreted to tell the park's early settlement/ agricultural and industrial stores related to mining, lumbering, and railroading	▪ Cultural resources in river gateways would be rehabilitated and adaptively reused through the NPS historic leasing program, such as: - Prince Brothers General Store would be rehabilitated and leased - the cultural landscape at the Prince Brothers General Store would be restored - at Thurmond, Commercial Row buildings and houses in good condition would be rehabilitated and leased (for commercial use, park housing, dormitory housing, or visitor lodging); other structures would be restored (on the exterior only) ▪ Farmsteads in the south end of the park would tell early settlement/ agricultural stories: - Richmond-Hamilton Farm, its outbuildings, and associated cultura landscape would be restored - buildings at other farm would be rehabilitated and leased; fields at other farms would be rehabilitated and leased - as properties in the Richmond Bottom area and at Westfall Farm areas are

Table 2.36 Comparison of Alternatives – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
		▪ Nationally significant industrial resources would be stabilized at the Nuttallburg Mining Complex and Nuttallburg town site ▪ A new storage facility for the park's museum collections would be constructed ▪ Infrequently used items in the park's collection would be moved to a regional storage facility		▪ Nationally significant industrial resources would be stabilized at the Nuttallburg Mining Complex and Nuttallburg town site ▪ A new storage facility for the park's museum collections would be constructed ▪ Infrequently used items in the park's collection would be moved to a regional storage facility	acquired or otherwise protected, the cultural landscape would be rehabilitated - some farm fields would be planted in warm season grasses and managed to encourage open land birds ▪ Camp Brookside would be rehabilitated and adaptively reused (in partnership with an educational institution) ▪ Discovery sites (from 30 to 35 sites) along the through park connector, trails at or near river gateways, and from rim to river trails would be managed and interpreted to tell the park's early settlement/ agricultural and industrial stores related to mining, lumbering, and railroading ▪ Nationally significant industrial resources would be stabilized at the Nuttallburg Mining Complex and Nuttallburg town site ▪ A new storage facility for the park's museum collections would be constructed ▪ Infrequently used items in the park's collection would be moved to a regional storage facility
Protecting Scenic Resources in and around the Gorge	▪ NPS would seek to avoid or minimize impacts of land development on outstanding scenic values in and around the gorge by: - collaborating with landowners would seek to avoid or mitigate adverse impacts of land development proposals on outstanding scenic values in and around the gorge - seeking to be involved early on in the development review process when lands with outstanding scenic values are proposed for development - providing comments on proposed development projects with potential adverse impacts on outstanding scenic values in and around the gorge	▪ Actions as proposed in Alternative 1 ▪ NPS would undertake additional actions to protect outstanding scenic values in and around the gorge, including: - coordinating with owners of land possessing outstanding scenic values in and around the gorge in advance of decisions to develop their land - greatly expanding coordination and technical assistance to avoid or minimize adverse impacts of land development on outstanding scenic values in and around the gorge - coordinating with professionals providing services to owners of lands with outstanding scenic values in and around the gorge	▪ Actions as proposed in Alternative 1 ▪ NPS would undertake additional actions to protect outstanding scenic values in and around the gorge (as in Alternative 2) ▪ Visitors would have new opportunities to experience the park's scenic resources from the new through park trail as well as from a number of new shorter trails in the middle of the park	▪ Actions as proposed in Alternative 1 ▪ NPS would undertake additional actions to protect outstanding scenic values in and around the gorge (as in Alternative 2) ▪ Visitors would have new opportunities to experience the park's scenic resources throughout the park from numerous new rim to river trails and from numerous new trails in the vicinity of river gateways	▪ Actions as proposed in Alternative 1 ▪ NPS would undertake additional actions to protect outstanding scenic values in and around the gorge (as in Alternative 2) ▪ Visitors would have new opportunities to experience the park's scenic resources throughout the park from the new through park connector, from numerous new rim-to river trails, and from numerous new trails in the vicinity of river gateways

Table 2.36 Comparison of Alternatives – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
		▪ Visitors would have new opportunities to experience the park's scenic resources along several new trails: - in the south, a new farm loop trail would provide scenic views of the upper river gorge, the pastoral landscape, and cultural landscapes at the park's early settlement farms - in the north, new trails to industrial sites would provide scenic views of the lower gorge and cultural landscapes illustrative of the park's industrial heritage			
Hiking and Equestrian Use	▪ New hiking trails would be added in the Nuttallburg Visitor Use Area	▪ New hiking trails would be added in the Nuttallburg Visitor Use Area (as in Alt. 1) ▪ New trails would be added to improve access to rock climbing areas in the Endless Wall, Sunshine Buttress, Bubba City, and Junkyard areas ▪ New equestrian loop trail would be added in the Craig Branch area ▪ The Laing Loop Nature Trail would be expanded ▪ New trails would provide access to cultural resources in the south and north ends of the park, such as: - Fayette Mine trail - Stone Cliff Mine trail - a trail from Stone Cliff Mine to the Stone Cliff coke ovens - Thurmond to Sewell rail trail - farm loop trail in southern end of the park - Sandstone Boardwalk expansion ▪ Trailheads would be provided for all new trails	▪ New hiking trails would be added in the Nuttallburg Visitor Use Area (as in Alt. 1) ▪ New trails would be added to improve access to rock climbing areas in the Endless Wall, Sunshine Buttress, Bubba City, and Junkyard areas ▪ New equestrian loop trai would be added in the Bucklick Branch area ▪ The Laing Loop Nature Trail would be expanded ▪ A new through park trail would enable visitors to travel from end to end of the park via a hiking/biking trail ▪ New trails would provide better access to the middle part of the park (generally using existing unmaintained trails), such as: - a trail from Sandstone Visitor Center to Princ (on river right) - a new trail along Davis Branch (in the Meadow Creek North area) - new trails in the Highland-Backus area ▪ a new trail from Dowdy Creek to Highland Mountain ▪ Trailheads would be provided for all new trails	▪ New hiking trails would be added in the Nuttallburg Visitor Use Area (as in Alt. 1) ▪ New trails would be added to improve access to rock climbing areas in the Endless Wall, Sunshine Buttress, Bubba City, and Junkyard areas ▪ New equestrian loop trails would be added in the Bucklick Branch area ▪ The Laing Loop Nature Trail would be expanded ▪ New trails would provide rim to river experiences, such as: - from Sandstone Visitor Center to Hump Mountain - from Grandview to Mill Creek - from Army Camp to Pinnacle Rock - from Trump-Lilly to Richmond-Hamilton Farm - from Cloverdale Road to Upper Glade Creek Trail - from Garden Ground to the New River - from Mt. Hope to Southside Junction (rail trail once rail is abandoned) - from GW Carver to Keeney Creek - from the rim to the river along Fire Creek ▪ New trails would provide experiences in and around river gateways, such as: - from Terry Beach to Stone Cliff	▪ New hiking trails would be added in the Nuttallburg Visitor Use Area (as in Alt. 1) ▪ New trails would be added to improve access to rock climbing areas in the Endless Wall, Sunshine Buttress, Bubba City, and Junkyard areas ▪ New equestrian loop trails would be added in the Chestnut Mountain, Bucklick Branch, and Craig Branch areas ▪ The Laing Loop Nature Trail would be expanded ▪ A new through park connector would enable visitors to travel from end to end of the park via a combination of trail and road segments ▪ A new loop trail along both sides of the river from the new New River Parkway Bridge to Hawks Nest Dam ▪ New trails would provide rim to river experiences, such as: - farm loop trail in the south end of the park - from Sandstone Visitor Center to Hump Mountains - from Grandview to Mill Creek - from Army Camp to Pinnacle Rock - from Cloverdale Road to Upper Glade Creek Trail - from Mt. Hope to Southside Junction (rail trail once rail is abandoned) - from Meadow Bridge

Table 2.36 Comparison of Alternatives – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
				- from Thurmond to Sewell - new trails in the Highland-Backus area - from Dowdy Creek to Highland Mountain - from WV SR 82 to the New River Bridge staging area - from Stone Cliff Mine to the Stone Cliff coke ovens - to the Beauty Mountain Overlook - from Keeney Creek Road to Keeney Creek Beach ▪ Trailheads would be provided for all new trails	to Meadow Creek (rail trail once rail is abandoned) - from Stanford to Prince/Quinnimont (rail trail once rail is abandoned) - from GW Carver to Keeney Creek ▪ New trails would provide experiences in and around river gateways, such as: - to Fayette Mine - from Thurmond to Sewell - along Davis Branch (in the Meadow Creek North area) - from Dowdy Creek to Highland Mountain - from Stone Cliff Mine to the Stone Cliff coke ovens - to the Beauty Mountain Overlook ▪ Trailheads would be provided for all new trails ▪ Cooperation between NPS and the park's gateway communities, state agencies, and private landowners would seek to develop new trail connections between the three national park units, state parks, rail trails, and other attractions
Biking	▪ Biking in the park would continue on administrative roads currently listed in the *Superintendent's Compendium* (NPS 2007)	▪ A new trail management plan would identify where joint use hiking and biking trails would be developed in the park, subject to the following guidelines: - biking could occur on a variety of trail types in frontcountry zones, river corridor zones, and park development zones - biking could occur only on singletrack trails in backcountry zones ▪ A new rail trail with biking access would be developed from Thurmond to Sewell	▪ A new trail management plan would identify where joint use hiking and biking trails would be developed in the park, subject to the following guidelines: - biking could occur on a variety of trail types in frontcountry zones, river corridor zones, and park development zones - biking could occur only on singletrack trails in backcountry zones ▪ A new through park trail would be developed; it would be a joint use hiking and biking trail; it would enable visitors to bike from end to end of the park ▪ A new biking trail would be developed in the Highland-Backus area	▪ A new trail management plan would identify where joint use hiking and biking trails would be developed in the park, subject to the following guidelines: - biking could occur on a variety of trail types in frontcountry zones, river corridor zones, and park development zones - biking could occur only on singletrack trails in backcountry zones ▪ A new biking trails would be developed in the Highland-Backus area ▪ A new rail trail with biking access would be developed from Mt. Hope to Southside Junction (once rail is abandoned)	▪ A new trail management plan would identify where joint use hiking and biking trails would be developed in the park, subject to the following guidelines: - biking could occur on a variety of trail types in frontcountry zones, river corridor zones, and park development zones - biking could occur only on singletrack trails in backcountry zones ▪ The new through park connector would be developed; it would be a joint use hiking and biking route with some road sections where vehicles would be present; it would enable visitors to bike from end to end of the park ▪ New stacked loop trails for biking would be developed in:

Table 2.36 Comparison of Alternatives – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
					- Bucklick Branch - Garden Ground - Craig Branch ▪ Glade Creek Trail would be open to biking ▪ Rail trails with biking access would be developed (once rail is abandoned): - from Mt. Hope to Southside Junction - from Meadow Bridge to Meadow Creek - from Stanaford to Prince/Quinnimont ▪ Cooperation between NPS and the park's gateway communities, state agencies, and private landowners would seek to develop new trail connections between the three national park units, state parks, rail trails, and other attractions
Hunting	▪ Hunting would continue in accordance with WV DNR regulations ▪ A few areas would continue to be closed to hunting for safety reasons, including: - safety zones designated in the park compendium (NPS 2007) - areas within historic boundaries of Grandview State Park and Sandstone Falls State Park	▪ Same as Alternative 1	▪ Same as Alternative 1	▪ Hunting would continue in accordance with WV DNR regulations largely as it is today ▪ Some activities would be phased out over a 5-year period, including: - hunting of native "pest" species - use of hunting dogs outside of applicable season for training ▪ New collaborative actions by NPS and WV DNR would include: - monitoring or park specific game harvest levels and hunter use levels using a voluntary reporting system - implementation of a cooperative game management plan	▪ Hunting would continue in accordance with WV DNR regulations largely as it is today ▪ Exceptions would include: - the historic Grandview State Park area would be opened to limited bow hunting - upland gamebird habitat would be increased in some historic resource zones ▪ As in Alternative 4, new collaborative actions by NPS and WV DNR would be implemented
Pedestrian Access across Railroad Rights-of-Way	▪ NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible ▪ Effort would be aimed at securing legal crossings where illegal crossing occur most frequently, such as at Hinton, Depot Beach, Apple Orchard, McKendree, Todd Beach, Southside Junction, Piney Creek, Dowdy Creek, Nuttallburg, Keeney Creek, Kaymoor, Short Creek, the Lower Railroad area, and	▪ NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible ▪ Effort would be aimed at securing legal crossings where illegal crossing occur most frequently (as in Alternative 1)	▪ NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible ▪ Effort would be aimed at securing legal crossings where illegal crossing occur most frequently (as in Alternative 1) ▪ Effort would also be aimed at securing legal crossings where needed for new visitor facilities, such as for the new developed campground at Terry Beach and for the through park trail	▪ NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible ▪ Effort would be aimed at securing legal crossings where illegal crossing occur most frequently (as in Alternative 1) ▪ Effort would also be aimed at securing legal crossings where needed for new visitor facilities, such as for the new developed campground at Terry Beach and for a rim to river trail along Fire Creek	▪ NPS would continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible ▪ Effort would be aimed at securing legal crossings where illegal crossing occur most frequently (as in Alternative 1) ▪ Effort would also be aimed at securing legal crossings where needed for new visitor facilities, such as for the new developed campground at Terry Beach, for the through park connector, for a rim to river trail

Table 2.36 **Comparison of Alternatives** – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
	Fayette Station				along Fire Creek, for a rim to river trail from GW Carver to Keeney Creek
Access and Parking	▪ New River Parkway would be developed by the WV DOT from I-64 to Hinton ▪ Trailhead parking would be provided at the Nuttallburg Visitor Use Area ▪ Improvements would be made to Turkey Spur Road at Grandview ▪ NPS would work cooperatively with WV DOH to: - implement traffic calming measures on WV SR 41 near McCreery - improve Fayette Station Road (widen, add pull-outs, other actions)	▪ New River Parkway would be developed by the WV DOT from I-64 to Hinton ▪ Trailhead parking would be provided at the Nuttallburg Visitor Use Area ▪ Improvements would be made to Turkey Spur Road at Grandview ▪ NPS would work cooperatively with WV DOH to: - implement traffic calming measures on WV SR 41 near McCreery - improve Fayette Station Road (widen, add pull-outs, other actions) ▪ An alternative transportation system with a concession-based shuttle would be implemented during peak visitation periods on Fayette Station Road to alleviate congestion ▪ Improvements would be made at the Fayette Station parking area above the CSX right-of-way to address private paddler needs ▪ Parking facilities would be developed to address parking needs in the Bubba City, Junkyard, Ambassador, Keeney Creek, Dowdy, Bluff, and Polls areas (where boundary adjustments are proposed) ▪ New trailheads with parking would be provided for all new trails ▪ Access would be enhanced at sites in the south end of the park: - visitor parking would be added at Trump-Lilly Farm - visitor parking would be expanded at Sandstone Falls ▪ Access would be enhanced in the north end of the park: - a new park road would be built in the Alabama area to access climbing areas and a new campground	▪ New River Parkway would be developed by the WV DOT from I-64 to Hinton ▪ Trailhead parking would be provided at the Nuttallburg Visitor Use Area ▪ Improvements would be made to Turkey Spur Road at Grandview ▪ NPS would work cooperatively with WV DOH to: - implement traffic calming measures on WV SR 41 near McCreery - improve Fayette Station Road (widen, add pull-outs, other actions) - improve McKendree Road and to designate it a state scenic backway ▪ An alternative transportation system with a concession-based shuttle would be implemented during peak visitation periods on Fayette Station Road to alleviate congestion ▪ Improvements would be made at the Fayette Station parking area above the CSX right-of-way to address private paddler needs ▪ Parking facilities would be developed to address parking needs in the Bubba City, Junkyard, Ambassador, Keeney Creek, Dowdy, Bluff, and Polls areas (where boundary adjustments are proposed) ▪ New trailheads with parking would be provided for all new trails ▪ Access would be enhanced at sites in the middle of the park: - parking areas would be expanded at the Glade Creek trailhead, the McCreery river access, and the Thayer campground and river access - a new park road would be built in the Highland-Backus area	▪ New River Parkway would be developed by the WV DOT from I-64 to Hinton ▪ Trailhead parking would be provided at the Nuttallburg Visitor Use Area ▪ Improvements would be made to Turkey Spur Road at Grandview ▪ NPS would work cooperatively with WV DOH to: - WV SR 41 near McCreery - improve Fayette Station Road (widen, add pull-outs, other actions) ▪ An alternative transportation system with a concession-based shuttle would be implemented during peak visitation periods on Fayette Station Road to alleviate congestion ▪ Improvements would be made at the Fayette Station parking area above the CSX right-of-way to address private paddler needs ▪ Parking facilities would be developed to address parking needs in the Bubba City, Junkyard, Ambassador, Keeney Creek, Dowdy, Bluff, and Polls areas (where boundary adjustments are proposed) ▪ New trailheads with parking would be provided for all new trails ▪ Access would be enhanced at sites above the rim: - visitor parking would be added at Trump-Lilly Farm - a new park road would be built in the Highland-Backus area providing access to new trails in the plateau area and a new campground ▪ At Cunard, capacity issues would be addressed by: - expanding the existing private paddler parking area - adding new private	▪ New River Parkway would be developed by the WV DOT from I-64 to Hinton ▪ Trailhead parking would be provided at the Nuttallburg Visitor Use Area ▪ Improvements would be made to Turkey Spur Road at Grandview ▪ NPS would work cooperatively with WV DOH to: - improve Fayette Station Road (widen, add pull-outs, other actions) - improve McKendree Road and designate it a state scenic backway ▪ An alternative transportation system with a concession-based shuttle would be implemented during peak visitation periods on Fayette Station Road to alleviate congestion ▪ Improvements would be made at the Fayette Station parking area above the CSX right-of-way to address private paddler needs ▪ Parking facilities would be developed to address parking needs in the Bubba City, Junkyard, Ambassador, Keeney Creek, Dowdy, Bluff, and Polls areas (where boundary adjustments are proposed) ▪ New trailheads with parking would be provided for all new trails ▪ Access would be enhanced in remote areas where opportunities for exploration experiences occur: - visitor parking would be added at Richmond-Hamilton Farm - parking would be expanded at Sandstone Falls, the Gwinn Ridge trailhead, the Glade Creek trailhead, the Thayer campground and river access, and the Brooklyn day use

Table 2.36 Comparison of Alternatives – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
		▪ At Cunard, capacity issues would be addressed by: - expanding the existing private paddler parking area ▪ adding new private paddler parking along the Fisherman's Trail access road	providing access to new trails in the plateau area and a new campground ▪ At Cunard, capacity issues would be addressed by: - expanding the existing private paddler parking area - adding new private paddler parking along the Fisherman's Trail access road ▪ adding a new river access at Surprise	paddler parking along the Fisherman's Trail access road ▪ implementing an alternative transportatio system with a concession-based shuttle during peak visitation periods primarily for private paddlers and other visitors	area ▪ At Cunard, capacity issues would be addressed by: - expanding the existing private paddler parking area - adding new private paddler parking along the Fisherman's Trail access road - implementing an alternative transportation system with a concession-based shuttle during peak visitation periods primarily for private paddlers and other visitors - expanding parking for fishermen and private boaters at Brooklyn ▪ If after making access improvements at Cunard (see Access and Parking above), visitor crowding issues during peak visitation periods are still not adequately address, then consider adding a new river access at Surprise
Other Visitor Facilities (including disabled access)	▪ New hiking trails, parking, and comfort stations would be added in the Nuttallburg Visitor Use Area ▪ As part of the New River Parkway project, the WV DOH would develop: - boat and river access facilities at Mermaid Beach - parking at Longbottom Overlook - parking and picnicking facilities at the Fall Branch access - visitor access and parking facilities at Richmond-Hamilton, Vallandingham, and Cochran Farms ▪ As part of the Burnwood Center project, improvements to visitor facilities would include: - rehabilitation of existing picnic shelters - construction of a new environmental education building ▪ NPS would continue to make accessibility improvements at existing and new facilities with the goal of making all visitor facilities at developed	▪ The existing primitive campground at Stone Cliff would be closed and the site restored; a new campground and picnicking facilities developed at the Stone Cliff bench level ▪ All practicable efforts would be made to provide access for the disabled at new facilities ▪ Visitor facilities would be enhanced at sites in the south end of the park: - existing facilities at Brooks Falls would be improved - a new comfort station would be added at Sandstone Falls - Camp Brookside would be rehabilitated and adaptively reused (in partnership with an educational institution) ▪ Visitor facilities would be enhanced at sites in the north end of the park: - a new developed campground would be provided in the Alabama area ▪ In the middle of the park day-use facilities	▪ A new developed campground would be provided at Meadow Creek West, including a new river access ▪ The existing primitive campground at Stone Cliff would be closed and the site restored; a new campground and picnicking facilities developed at the Stone Cliff bench level ▪ All practicable efforts would be made to provide access for the disabled at new facilities ▪ Visitor facilities would be enhanced at sites in the middle of the park on both sides of the river: - on river left, camping opportunities would be provided along the through park trail, including: 1) expansions to existing primitive campgrounds, 2) addition of several groups of designated backcountry campsites, and 3) a new developed campground at Terry Beach - on river right, new camping opportunities would be provided including: 1)	▪ A new developed campground would be provided at Meadow Creek West, including a new river access ▪ The existing primitive campground at Stone Cliff would be closed and the site restored; a new campground and picnicking facilities developed at the Stone Cliff bench level ▪ All practicable efforts would be made to provide access for the disabled at new facilities ▪ Visitor facilities would be enhanced in river gateway areas: - in the Prince/ McCreery area, new camping opportunities would include: 1) expansions to existing primitive campgrounds, and 2) a new developed campground at Terry Beach - in the Thurmond area, the Dun Glen campground would be closed and the existing day-use facilities would be rehabilitated - in the Cunard area, new picnicking and parking facilities	▪ A new developed campground would be provided at Meadow Creek West, including a new river access ▪ The existing primitive campground at Stone Cliff would be closed and the site restored; a new campground and picnicking facilities developed at the Stone Cliff bench level ▪ All practicable efforts would be made to provide access for the disabled at new facilities ▪ Visitor facilities would be enhanced in focal areas: - in the Upper Gorge Focal Area, new visitor facilities would include: 1) a new developed campground located south of I-64, and 2) Camp Brookside would be rehabilitated and adaptively reused (in partnership with an educational institution) - in the Grandview/ Prince Focal Area, new camping opportunities would include: 1) a new developed camp-ground at Terry

Table 2.36 **Comparison of Alternatives** – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
	visitor use areas accessible to visitors and employees with disabilities. ▪ Where practicable given river conditions, NPS would seek to provide river access for disabled boaters that would enable them to experience safe river trips of different lengths and levels of difficulty.	at Dun Glen would be rehabilitated ▪ River access would be improved, including: - enhancements to the Brooks Falls river access - enhancements at Cunard (see Access and Parking above) ▪ Accessibility for disabled visitors would be enhanced (as described in Alternative 1) ▪ Working cooperatively with WV DOT, provide opportunities for visitors to view and learn about the park from the New River Bridge maintenance catwalk	expansions to existing primitive campgrounds, 2) addition of several groups of designated backcountry campsites, and 3) a new developed campground in the Highland-Backus area ▪ Visitor facilities would be enhanced at sites in the south and north ends of the park: - a new developed campground would be added in the south end of the park - a new developed campground would be added in the Burnwood area ▪ River access would be improved, including: - enhancements to improve safety for private paddlers at McCreery - enhancements at Cunard (see Access and Parking above) - a new river access at Bass Lake - a new river access at Meadow Creek West ▪ Accessibility for disabled visitors would be enhanced (as described in Alternative 1) ▪ Working cooperatively with WV DOT, provide opportunities for visitors to view and learn about the park from the New River Bridge maintenance catwalk (common to Alts 5)	would be added at Brooklyn - in the Canyon Rim/Fayette Station area, a new developed campground would be provided in proximity to climbing areas ▪ In the Highland-Backus area, a new developed campground would be added ▪ River access would be improved, including: - replacement of the McCreery river access with a new river access at Terry Beach - enhancements at Cunard (see Access and Parking above) - a new river access at Meadow Creek West ▪ Accessibility for disabled visitors would be enhanced (as described in Alternative 1) ▪ work cooperatively with the WV DOT to provide tours of the New River Bridge using the bridge's maintenance catwalk ▪ Working cooperatively with WV DOT, provide opportunities for visitors to view and learn about the park from the New River Bridge maintenance catwalk (common to Alts 2 to 5)	Beach and 2) expansions to existing primitive campgrounds - in the Thurmond Focal Area, the Dun Glen campground would be closed and the existing day-use facilities would be rehabilitated - in the Lower Gorge Focal Area, new visitor facilities would include: 1) a new developed campground in proximity to climbing areas, 2) a new day use area near the Fayette Station river access, and 3) new picnicking facilities and parking at Brooklyn ▪ River access would be improved, including: - addition of a new river access at Terry Beach - enhancements at Cunard, including a possible new access at Surprise (see Access and Parking above) - a new river access at Meadow Creek West ▪ Accessibility for disabled visitors would be enhanced (as described in Alternative 1) ▪ Working cooperatively with WV DOT, provide opportunities for visitors to view and learn about the park from the New River Bridge maintenance catwalk (common to Alts 2 to 5)
Sustaining Communities within the Park	▪ As funding permits, NPS would continue to acquire properties within communities in the park as they become available from willing sellers ▪ At Thurmond, the NPS would develop a community water system and wastewater management system for park use; excess capacity would be made available for the use of private residents in the town	▪ In general, the NPS would not seek to acquire private land within communities inside the park, including Meadow Creek, Prince/Quinnimont, Backus, Highland Mountain, Terry, Thayer, Thurmond, and Hinton ▪ Exceptions would occur where a property 1) includes resources and values that are fundamental or importan to the park and that require protection, and/o 2) it is needed to implement management actions recommended in the GMP ▪ Collaboration between the NPS and these communities would	▪ In general, the NPS would not seek to acquire private land within communities inside the park, including Meadow Creek, Prince/Quinnimont, Backus, Highland, Terry, Thayer, Thurmond, and Hinton ▪ Exceptions would occur where a property 1) includes resources and values that are fundamental or importan to the park and that require protection, and/o 2) it is needed to implement management actions recommended in the GMP ▪ Collaboration between the NPS and these communities would	▪ In general, the NPS would not seek to acquire private land within communities inside the park, including Meadow Creek, Prince/Quinnimont, Backus, Highland, Terry, Thayer, Thurmond, and Hinton ▪ Exceptions would occur where a property 1) includes resources and values that are fundamental or importan to the park and that require protection, and/o 2) it is needed to implement management actions recommended in the GMP ▪ Collaboration between the NPS and these communities would	▪ In general, the NPS would not seek to acquire private land within communities inside the park, including Meadow Creek, Prince/Quinnimont, Backus, Highland, Terry, Thayer, Thurmond, and Hinton ▪ Exceptions would occur where a property 1) includes resources and values that are fundamental or importan to the park and that require protection, and/o 2) it is needed to implement management actions recommended in the GMP ▪ Collaboration between the NPS and these communities would

Table 2.36 Comparison of Alternatives – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
		generally seek to sustain community character, protect resources, and encourage, as appropriate, development of visitor amenities and interpretive media ▪ Collaboration priorities for communities entirely within the park would be as follows: - Priority 1 – Hinton Meadow Creek, and Thurmond - Priority 2 – Prince, Terry, and Thayer - Priority 3 – Backus and Highland ▪ At Thurmond, community water and wastewater management systems would be developed to serve both NPS facilities and all existing and new occupied private development	generally seek to sustain community character, protect resources, and encourage, as appropriate, development of visitor amenities and interpretive media ▪ Collaboration priorities for communities entirely within the park would be as follows: - Priority 1 – Hinton, Meadow Creek, Terry, Backus, Highland, and Thurmond - Priority 2 – Prince and Thayer ▪ At Thurmond, community water and wastewater management systems would be developed to serve both NPS facilities and all existing and new occupied private development	generally seek to sustain community character, protect resources, and encourage, as appropriate, development of visitor amenities and interpretive media ▪ Collaboration priorities for communities entirely within the park would be as follows: - Priority 1 – Hinton, Meadow Creek, Prince, and Thurmond - Priority 2 – Terry, Backus and Highland - Priority 3 – Thayer ▪ At Thurmond, community water and wastewater management systems would be developed to serve both NPS facilities and all existing and new occupied private development	generally seek to sustain community character, protect resources, and encourage, as appropriate, development of visitor amenities and interpretive media ▪ Collaboration priorities for communities entirely within the park would be as follows: - Priority 1 – Hinton, Meadow Creek, Prince, Thayer, and Thurmond - Priority 2 – Terry - Priority 3 – Backus and Highland ▪ At Thurmond, community water and wastewater management systems would be developed to serve both NPS facilities and all existing and new occupied private development
Land Protection	▪ No boundary adjustments would occur that would add land to the park or that would delete land from the park ▪ NPS would continue to respond to all opportunities for negotiation with willing sellers of land within the park boundary as they arise, subject to staff capacity and availability of funds	▪ Park boundary would be adjusted to add approximately 212.5 acres to the park in six areas; additions would address operational and management issues ▪ Park boundary would be adjusted to delete 75.4 acres from the park in three areas; deletions would eliminate severe operational issues ▪ NPS would focus land protection on the highest priority properties still to be protected, such as land that: - includes significant resources and values that are fundamental or important to the park - is needed to implement the GMP - is within the proposed boundary adjustments - is needed for park operations - is in imminent threat of change to non-park uses as a result of private investment - composes a large property whose acquisition would contribute significantly to federal ownership within the park boundary - is within abandoned railroad rights-of-way ▪ Other land important to	▪ Park boundary would be adjusted to add approximately 212.5 acres to the park in six areas; additions would address operational and management issues ▪ Park boundary would be adjusted to delete 75.4 acres from the park in three areas; deletions would eliminate severe operational issues ▪ NPS would focus land protection on the highes priority properties still to be protected, such as land that: - includes significant resources and values that are fundamental or important to the park - is needed to implement the GMP - is needed for park operations - is within the proposed boundary adjustments - is in imminent threat of change to non-park uses as a result of private investment - composes a large property whose acquisition would contribute significantly to federal ownership within the park boundary - is within abandoned railroad rights-of-way ▪ Other land important to	▪ Park boundary would be adjusted to add approximately 212.5 acres to the park in six areas; additions would address operational and management issues ▪ Park boundary would be adjusted to delete 75.4 acres from the park in three areas; deletions would eliminate severe operational issues ▪ NPS would focus land protection on the highest priority properties still to be protected, such as land that: - includes significant resources and values that are fundamental or important to the park - is needed to implement the GMP - is needed for park operations - is within the proposed boundary adjustments - is in imminent threat of change to non-park uses as a result of private investment - composes a large property whose acquisition would contribute significantly to federal ownership within the park boundary - is within abandoned railroad rights-of-way ▪ Other land important to	▪ Park boundary would be adjusted to add approximately 212.5 acres to the park in six areas; additions would address operational and management issues ▪ Park boundary would be adjusted to delete 75.4 acres from the park in three areas; deletions would eliminate severe operational issues ▪ NPS would focus land protection on the highest priority properties still to be protected, such as land that: - includes significant resources and values that are fundamental or important to the park - is needed to implement the GMP - is needed for park operations - is within the proposed boundary adjustments - is in imminent threat of change to non-park uses as a result of private investment - composes a large property whose acquisition would contribute significantly to federal ownership within the park boundary - is within abandoned railroad rights-of-way ▪ Other land important to

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Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
		implementation of GMP Alternative 2 would include: - early settlement/ agricultural cultural resources in the south end of the park - industrial and mining town ruins in the north end of the park - sites needed for recreation facilities in the middle of the park - a site for a developed campground in the north end of the park	implementation of GMP Alternative 3 would include: - a site for a developed campground in the south end of the park - sites needed for recreation facilities along the through park trail and along other new trails	implementation of GMP Alternative 4 would include: - sites needed for recreation facilities along rim to river trails and along other new trails offering visitors experiences in and around river gateways - a site for a developed campground in the north end of the park	implementation of GMP Alternative 5 would include: - early settlement/ agricultural cultural resources in the south end of the park - industrial and mining town ruins in the north end of the park - a site for a developed campground in the south end of the park - sites needed for recreation facilities along the through park connector and along other new trails offering visitors experiences in and around river gateways
Stewardship of Private Lands within the Park Boundary	▪ NPS would continue to respond to landowner needs and concerns on an individual basis as they arise, seeking to address issues and provide technical assistance where practicable	▪ NPS would implement a program to work cooperatively with owners of private land within the park boundary to promote sensitive stewardship. This program would focus on private lands: - with a history of prior disturbance - with significant fundamental or important resources and values - that are highly susceptible to change - that are of high priority for land protection in Alternative 2 (see above)	▪ NPS would implement a program to work cooperatively with owners of private land within the park boundary to promote sensitive stewardship. This program would focus on private lands: - with a history of prior disturbance - with significant fundamental or important resources and values - that are highly susceptible to change - that are of high priority for land protection in Alternative 3 (see above)	▪ NPS would implement a program to work cooperatively with owners of private land within the park boundary to promote sensitive stewardship. This program would focus on private lands: - with a history of prior disturbance - with significant fundamental or important resources and values - that are highly susceptible to change - that are of high priority for land protection in Alternative 4 (see above)	▪ NPS would implement a program to work cooperatively with owners of private land within the park boundary to promote sensitive stewardship. This program would focus on private lands: - with a history of prior disturbance - with significant fundamental or important resources and values - that are highly susceptible to change - that are of high priority for land protection in Alternative 5 (see above)
Relevance of the Park to Local Visitors	▪ Actions implemented to strengthen the connection between the public and the NPS mission at the park would continue	▪ Additional actions would be implemented to strengthen the connection between the public and the NPS mission at the park, including: - aggressively building the capacity of the recently created Friends of New River Gorge group - implementing an "Experience New River Gorge" program - expanding the scope and frequency of environmental education programs - increasing the number of special events in the park and its gateway communities - producing a greater variety of park informational materials - expanding park	▪ Same as Alternative 2	▪ Same as Alternative 2	▪ Same as Alternative 2

Table 2.36 Comparison of Alternatives – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
		coverage by local media - maintaining information kiosks in gateway communities and communities within the park			
Gateway Community Partnerships	▪ Informal cooperative relationships between the NPS and the park's gateway communities would continue, including provision of some technical assistance with land use planning and GIS database management	▪ Work cooperatively with gateway communities to accomplish shared goals ▪ Take a leadership role in enhancing civic engagement to promote better understanding and communication between the NPS and its neighbors ▪ Make available technical assistance to address issues of mutual concern	▪ Same as Alternative 2	▪ Enter into cooperative partnerships to ensure that NPS and gateway communities benefit from one another's actions ▪ Take a leadership role in enhancing civic engagement to promote better understanding and communication between the NPS and its neighbors ▪ Make available technical assistance to address issues of mutual concern	▪ Cooperation with Enter into cooperative partnerships to ensure that NPS and gateway communities benefit from one another's actions ▪ Take a leadership role in enhancing civic engagement to promote better understanding and communication between the NPS and its neighbors ▪ Make available technical assistance to address issues of mutual concern ▪ Cooperation with gateway communities, state agencies, and private landowners would seek to develop trail connections among the three national parks units, state parks, rail trails , and other attractions in the region
Regional Tourism Partnerships	▪ Continue to work cooperatively on many initiatives with local and regional economic development interests	▪ Expand participation in regional economic development efforts with the goal of achieving a seamless network of regional parks, open spaces, trails, and heritage sites in southern West Virginia that would increase biodiversity and create a greater array of educational and appropriate recrea-tional opportunities	▪ Same as Alternative 2	▪ Same as Alternative 2	▪ Same as Alternative 2
Other Partnerships	▪ Cooperation with Hawks Nest State Park would continue to focus on protecting scenic resources in and around the gorge ▪ Cooperation with county and state agencies would continue at existing levels ▪ Cooperation would continue with visitor user groups with identifying issues and identification of potential solutions	▪ Cooperation with Hawks Nest and Babcock State Parks would be expanded, with a focus on collaboration regarding resource management, interpretive programs, and visitor facilities ▪ Cooperation with county and state agencies would be expanded, with a focus on resource management (particularly water quality management) and land use planning ▪ Collaborative partner-ships with non-profit and private partners would expand the park's capacity to protect park resources and provide high quality visitor	▪ Same as Alternative 2	▪ Same as Alternative 2	▪ Same as Alternative 2

Table 2.36 **Comparison of Alternatives** – Summary of Representative Management Actions that could Occur

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
		interpretation and experiences (such as at Camp Brookside and Thurmond) ▪ Cooperation with organized stakeholder groups would be expanded, with a focus on working with those having capacity to assist NPS with resource management, visitor safety, and development of new visitor facilities ▪ Cooperation with WV DOT would seek to offer visitor tours from the New River Bridge maintenance catwalk			
Park Operations	▪ Approximately 160 full-time equivalents would be needed for park operations ▪ Existing funding levels for operations would continue; no new sources of funding would be available beyond what currently exists ▪ New facilities at Nuttallburg and along the New River Parkway would support efficient park management ▪ The level of resource management would be maintained; park staffing would continue to be inadequate to meet minimum needs ▪ Land within the park boundary would continue to be acquired without funding to provide for adequate management and law enforcement ▪ The current park boundary would continue to be insufficient to support efficient park operations ▪ Historic structures would continue to be maintained only on the exterior with no leasing potential ▪ Existing staff capacity would continue to limit the park's ability to address the growing variety of partnerships and community relations issues	▪ Approximately 186 full-time equivalents would be needed for park operations ▪ Existing funding levels for operations would continue; new sources of funding would be available as NPS works with local users and visitors to create partnerships that would provide a minor income stream to support park purposes ▪ New facilities at Nuttallburg, along the New River Parkway, and elsewhere in the north and south ends of the park would support efficient park management ▪ Targeted strategies to protect and improve resources would facilitate active resource management; redirect-tion of park staffing would better enable the park to meet its mission ▪ New management zoning would make it easier for park employees to manage land acquired within the park boundary in the absence of additional funding for park operations ▪ Rehabilitation and leasing of historic structures would provide a moderate income stream ▪ Development of friends groups, improved relationships with user groups, and working with local governments would moderately enhance the park's ability to meet its mission	▪ Approximately 188 full-time equivalents would be needed for park operations ▪ Existing funding levels for operations would continue; new sources of funding would be available as NPS works with local users and visitors to create partnerships that would provide a minor income stream to support park purposes ▪ New facilities at Nuttallburg, along the New River Parkway, and in the middle of the park would support efficient park management ▪ Targeted strategies to protect and improve resources would facilitate active resource management; redirect-tion of park staffing would better enable the park to meet its mission ▪ New management zoning would make it easier for park employees to manage land acquired within the park boundary in the absence of additional funding for park operations ▪ Rehabilitation and leasing of historic structures would provide a minor income stream ▪ Development of friends groups, improved relationships with user groups, and working with local governments would moderately enhance the park's ability to meet its mission	▪ Approximately 186 full-time equivalents would be needed for park operations ▪ Existing funding levels for operations would continue; new sources of funding would be available as NPS works with local users and visitors to create partnerships that would provide a major income stream to support park purposes ▪ New facilities at Nuttallburg, along the New River Parkway, and in the vicinity of river gateways would support efficient park management ▪ Targeted strategies to protect and improve resources would facilitate active resource management; redirect-tion of park staffing would better enable the park to meet its mission ▪ New management zoning would make it easier for park employees to manage land acquired within the park boundary in the absence of additional funding for park operations ▪ Rehabilitation and leasing of historic structures would provide a major income stream ▪ Development of friends groups, improved relationships with user groups, and greatly enhanced efforts to work with local governments would significantly enhance the park's ability to meet its mission	▪ Approximately 189 full-time equivalents would be needed for park operations ▪ Existing funding levels for operations would continue; new sources of funding would be available as NPS works with local users and visitors to create partnerships that would provide a major income stream to support park purposes ▪ New facilities at Nuttallburg, along the New River Parkway, in the vicinity of river gateways, and in focal areas would support efficient park management ▪ Targeted strategies to protect and improve resources would facilitate active resource management; redirect-tion of park staffing would better enable the park to meet its mission ▪ New management zoning would make it easier for park employees to manage land acquired within the park boundary in the absence of additional funding for park operations ▪ Rehabilitation and leasing of historic structures would provide a major income stream ▪ Development of friends groups, improved relationships with user groups, and greatly enhanced efforts to work with local governments would significantly enhance the park's ability to meet its mission

2.16 Comparison of Impacts of the Alternatives

Table 2.37 Comparison of Impacts of the Alternatives

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
Physiography, Geology, and Soils	▪ negligible to local long-term minor beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term moderate to major beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor adverse impacts	▪ local long-term moderate to major beneficial impacts ▪ local short-term minor adverse impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term moderate to major beneficial impacts ▪ local short-term minor adverse impacts ▪ local long-term minor to moderate and adverse impacts	▪ local long-term moderate to major beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor to moderate adverse impacts
Floodplains	▪ local long-term minor beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts	Without a new river access at Surprise: ▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts With a new river access at Surprise: ▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts
Water Quality	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor adverse impacts
Vegetation	▪ local long-term minor to moderate and beneficial impacts ▪ local long-term moderate adverse impacts	▪ local long-term moderate to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term moderate to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term moderate to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term moderate to major beneficial impacts ▪ local long-term minor to moderate adverse impacts
Aquatic Wildlife	▪ local long-term minor beneficial impacts ▪ local long-term minor to moderate and adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts
Terrestrial Wildlife	▪ local long-term minor to moderate beneficial impacts ▪ local short-term minor adverse impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local short-term minor adverse impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local short-term minor adverse impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local short-term minor adverse impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local short-term minor adverse impacts ▪ local long-term minor to moderate adverse impacts
Rare, Threatened, and Endangered Species	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts
Scenic Resources	▪ local long-term minor to moderate beneficial impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor impacts

Table 2.37 Comparison of Impacts of the Alternatives (continued)

Subject	Alternative 1 (Continuation of Current Management)	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (Preferred Alternative)
Archeological Resources	▪ local long-term minor beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor adverse impacts	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor adverse impacts
Cultural Landscapes	▪ local long-term minor beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to moderate beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term moderate beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term major beneficial impacts ▪ local short-term minor to moderate adverse impacts ▪ local long-term minor to moderate and adverse impacts
Historic Structures	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts
Ethnographic Resources	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts
Economy	▪ regional short-term minor beneficial impacts ▪ regional long-term minor beneficial impacts	▪ regional short-term minor to moderate beneficial impacts ▪ regional long-term minor to moderate beneficial impacts	▪ regional short-term minor to moderate beneficial impacts ▪ regional long-term minor to moderate beneficial impacts	▪ regional short-term minor to moderate beneficial impacts ▪ regional long-term minor to moderate beneficial impacts	▪ regional short-term minor to moderate beneficial impacts ▪ regional long-term minor to moderate beneficial impacts
Communities	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor adverse impacts
Visitor Use and Visitor Experience	▪ local long-term minor to moderate beneficial impacts ▪ local long-term moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ (adverse impacts not identified)
Park Access	▪ local long-term minor to moderate beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts	▪ local long-term minor to major beneficial impacts ▪ local long-term minor to moderate adverse impacts
Park Operations	▪ local long-term major beneficial impacts in a few areas of the park ▪ local long-term moderate to major adverse impacts	▪ local long-term major beneficial impacts throughout the park ▪ local short-term minor adverse impacts	▪ local long-term major beneficial impacts throughout the park ▪ local short-term minor adverse impacts	▪ local long-term major beneficial impacts throughout the park ▪ local short-term minor adverse impacts	▪ local long-term major beneficial impacts throughout the park ▪ local short-term minor adverse impacts

2.17 Consistency with the National Environmental Policy Act

2.17.1 Introduction

The NPS requirements for implementing NEPA include an analysis of how each alternative meets or achieves the purposes of NEPA, as stated in Sections 101(b) and 102(1). Each alternative analyzed in a NEPA document must be assessed as to how it meets the following purposes:

1. Fulfills the responsibilities of each generation as trustee of the environment for succeeding generations
2. Ensures for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings
3. Attains the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences
4. Preserves important historic, cultural, and natural aspects of our national heritage and maintains, wherever possible, an environment that supports diversity and variety of individual choice
5. Achieves a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources

Alternative 1 would minimally meet the six purposes of NEPA. There would be no new sources of park operating funds, such as from friends groups, donations, or volunteers beyond what currently exists, making it increasingly difficult for declining park staff to meet the park's mission to manage the park leaving it unimpaired for the enjoyment of future generations (Purpose 1). NPS would continue to have difficulty adequately protecting natural, scenic, and cultural resources due to limitations in the numbers of park staff (Purpose 4). The existing level of programming, activities, and enforcement would be maintained and used, with limited construction of new facilities and addition of only a few new programs, as funds allow (Purposes 2, 3, and 5). The park would not provide additional recreational facilities requested by the public during GMP scoping (Purposes 2, 3, and 5). Existing resource management actions – particularly water quality monitoring and management planning to improve water quality in the New River and its tributaries – would continue as they are today with long-term benefits continuing to be limited due to inadequate staffing (Purpose 6).

Alternatives 2 to 5 would better meet the six purposes of NEPA when compared to Alternative 1. While existing funding levels for operations would continue, new sources of funding would be available as NPS works with local users, park neighbors, gateway communities, and regional economic development interests in collaborative

and innovative ways to improve NPS's ability to meet the park's mission (Purpose 1). Desired conditions would better define for park staff the goals of natural, scenic, and cultural resource management; targeted strategies to protect and improve resources as well as strategic use of partner organizations and others would better meet the park's resource protection goals; staffing would be redirected to areas most likely to create beneficial impacts on resources (Purpose 4). Desired future conditions would also better define for park staff the goals of interpretive and education programs (Purposes 2, 3, and 5). Wastewater management facilities at public sites would enhance the overall visitor experience (Purpose 3). Wastewater management facilities at public sites would enhance the overall visitor experience and improve water quality (Purposes 3, 4, and 5). Existing resource management actions – particularly water quality monitoring and management planning to improve water quality in the New River and its tributaries – would be greatly enhanced resulting in long-term benefits to the park's renewable resources (Purpose 6).

In Alternative 2, new sources of funding available as NPS works with its partners would moderately enhance the park's ability to meet its mission and to support targeted resource protection goals (Purposes 1 through 6). Approximately 68.5 percent (49,000 acres) of the park would be managed as unfragmented backcountry forest, preserving a core area within a globally significant mixed-mesophytic forest (Purposes 4 and 6). Historic Camp Brookside and many historic structures at Thurmond would be rehabilitated and leased, enhancing their long-term protection and providing a moderate income stream to support their long-term maintenance (Purposes 4 and 5). The park would provide some additional recreational facilities – concentrated in the north and south ends of the park – as requested by the public during GMP scoping (Purposes 2, 3, and 5).

In Alternative 3, new sources of funding available as NPS works with its partners would moderately enhance the park's ability to meet its mission and to support targeted resource protection goals (Purposes 1 through 6). Approximately 43 percent (30,750 acres) of the park would be managed as unfragmented backcountry forest, preserving a core area within a globally significant mixed-mesophytic forest (Purposes 4 and 6). Three historic farmhouses would be rehabilitated and leased, enhancing their long-term protection and providing a minor income stream to support their long-term maintenance (Purposes 4 and 5). The park would provide some additional recreational facilities – concentrated in the middle of the park – as requested by the public during GMP scoping (Purposes 2, 3, and 5).

In Alternative 4, new sources of funding available as NPS works with its partners would majorly enhance the park's ability to meet its mission and to support targeted resource protection goals (Purposes 1 through 6). Approximately 60.8 percent (43,500 acres) of the park would be managed as unfragmented backcountry forest,

preserving a core area within a globally significant mixed-mesophytic forest (Purposes 4 and 6). Three historic farmhouses, most historic structures at Thurmond, and the Prince Brother's General Store would be rehabilitated and leased, enhancing their long-term protection and providing a major income stream to support their long-term maintenance (Purposes 4 and 5). The park would provide many of the additional recreational facilities – concentrated in the vicinity in the vicinity of river gateways throughout the park – as requested by the public during GMP scoping (Purposes 2, 3, and 5).

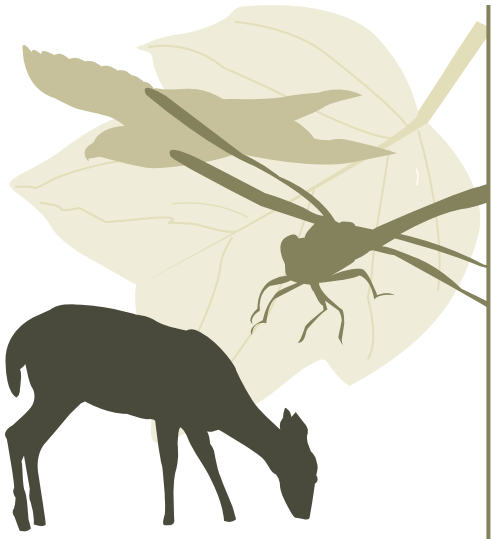
In Alternative 5, new sources of funding available as NPS works with its partners would majorly enhance the park's ability to meet its mission and to support targeted resource protection goals (Purposes 1 through 6). Approximately 66.4 percent (47,500 acres) of the park would be managed as unfragmented backcountry forest, preserving a core area within a globally significant mixed-mesophytic forest (Purposes 4 and 6). Historic Camp Brookside, three historic farmhouses, most historic structures at Thurmond, and the Prince Brother's General Store would be rehabilitated and leased, enhancing their long-term protection and providing a major income stream to support their long-term maintenance (Purposes 4 and 5). The park would provide most of the additional recreational facilities – concentrated in the vicinity of river gateways and in focal areas throughout the park – as requested by the public during GMP scoping (Purposes 2, 3, and 5).

2.17.2 Environmentally Preferred Alternative

In accordance with NPS Director's Order #12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*, the NPS is required to identify the environmentally preferred alternative in its NEPA documents. The environmentally preferred alternative is the alternative that best promotes the national environmental policy expressed in NEPA (Section 101(b)) (516 DM 4.10). The *Council on Environmental Quality's Forty Questions* (Q6a) further clarifies the identification of the environmentally preferred alternative stating, "simply put, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural processes."

The NPS has determined that the environmentally preferred alternative is **Alternative 5 (Preferred Alternative)**. This conclusion is based on careful review of potential impacts as a result of implementing the management alternatives and assessing proposed mitigation for cultural and natural resource impacts. Alternative 5 would surpass Alternative 1 in meeting all six NEPA purposes. Collaborative partnerships in Alternatives 4 and 5 would generate new funding sources and volunteer services that would have a major positive impact on resource protection activities. Alternative 5 would preserve only 1,500 fewer acres of unfragmented backcountry forest (47,500 acres total) when compared to Alternative 2 (49,000 acres total) (Purposes 4 and 5). Alternative 5 would

rehabilitate and lease the greatest number of historic structures better protecting their integrity and generating a major income stream for their ongoing maintenance (Purposes 1 and 4). Collectively the management actions in Alternative 5 would better enhance NPS's ability to conserve the scenery, natural and historic resources, and wildlife at New River Gorge National River and to provide for the park's enjoyment in a manner that will leave it unimpaired for the enjoyment of future generations.



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3 Affected Environment

Rare habitats including cliff and rimrock habitats.

A large mosaic of habitat provides refuge for rare species, such as the peregrine falcon.

New River Gorge National River lies at the core of a globally significant forest, contains the most diverse flora of any river gorge in central and southern Appalachia, and provides essential habitat for endangered mammals and rare birds and amphibians.

Opposite side: An unfragmented globally rare forest encompassing varied forest types.

3.0 Affected Environment

3.1 Introduction

3.1.1 Park Setting

Congress established New River Gorge National River in 1978 (Public Law 95-625) as a unit of the national park system. The park is located in southern West Virginia, including land within Summers, Raleigh, and Fayette Counties. The park's authorized boundary encompasses 72,186 acres within a 53-mile corridor along the New River that extends from the city of Hinton on the south to the upstream limit of Hawks Nest State Park on the north. NPS owns 52,960 acres within the park boundary, including land acquired from willing sellers and from the state of West Virginia. NPS has also secured conservation easements on 164 acres within the park boundary. Approximately 4,608 acres within the boundary are owned by the other public agencies, the largest tract encompassing 3,637 acres within Babcock State Park.

New River Gorge National River
Park Purpose

The purposes of New River Gorge National River are to:

- Preserve an important free-flowing segment of the New River
- Preserve, protect, and conserve outstanding resources and values in and around the New River Gorge, including geologic and hydrologic features, terrestrial and aquatic ecosystems, historic and archeological resources, cultural heritage, and scenic character
- Provide opportunities for public understanding, appreciation, and enjoyment of the park's natural, cultural, scenic, and recreational resources and values

3.1.2 Park Significance

New River Gorge National River possesses many resources and values that are important within a global, national, regional, and systemwide context and that are important enough to warrant national park designation. The significance of the park's resources and values is summarized in the following statements (NPS 2009):

- Flowing water is the definitive creative force of the New River Gorge. The New River, one of the oldest rivers in the world, continues to sculpt the longest and deepest river gorge in the Appalachian Mountains.
- The waters of the New River system contain a mosaic of hydrologic features and aquatic habitats, support a unique aquatic ecosystem, and nourish a riparian zone that supports rare plants, animals, and communities
- New River Gorge National River lies at the core of a globally significant forest, contains the most diverse flora of any river gorge in central and southern Appalachia, and provides essential habitat for endangered mammals and rare birds and amphibians.
- New River Gorge National River contains a large, outstanding, and representative group of historic places that testify to the experiences of those diverse people who settled and developed this part of Appalachia between the 19th and mid-20th centuries.
- Broad views of unbroken forest, steep gorge walls, and a river both tranquil and turbulent are punctuated by pastoral landscapes and industrial ruins to produce dramatic and extraordinary views from the river, along trails and rural roads, and from rocky overlooks.
- New River Gorge National River provides visitors with exceptional opportunities for exploration, adventure, and discovery and to experience solitude and a sense of community.

New River Gorge National River
Impact Topics Retained for Further Analysis

Topics

- Physiography, Geology and Soils
- Floodplains
- Water Quality
- Vegetation
- Aquatic Wildlife
- Terrestrial Wildlife
- Rare, Threatened, and Endangered Species
- Scenic Resources
- Archeological Resources
- Cultural Landscapes
- Historic Structures
- Ethnographic Resources
- Regional and Local Economy
- Communities
- Visitor Use and Visitor Experience
- Park Access
- Park Operations

The following sections of the GMP/EIS describe most of the fundamental and other important resources and values in the park that are critical to maintaining the park's significance as expressed in the above statements. Included in the discussion are

those resource and values that are impact topics retained for further analysis in this Draft GMP/EIS (see Section 1.10 above). (Also included in the following sections of the GMP/EIS are descriptions of existing conditions for impact topics that are not directly related to park resources or values (see Section 1.10 above).

New River Gorge National River
Park Significance Statement 1

Flowing water is the definitive creative force of the New River Gorge. The New River, one of the oldest rivers in the world, continues to sculpt the longest and deepest river gorge in the Appalachian Mountains.

Fundamental Resources and Values

- Geologic processes and the features they have created that exemplify the geology of the Appalachian Plateau, including sandstone and shale exposures over 1000 meters high (representing more than 100 million years of geologic time), house-sized boulders scattered from rim to river, plant and invertebrate fossils, steep channel drop-offs, and coal seams composed of some of the best bituminous coal in the world

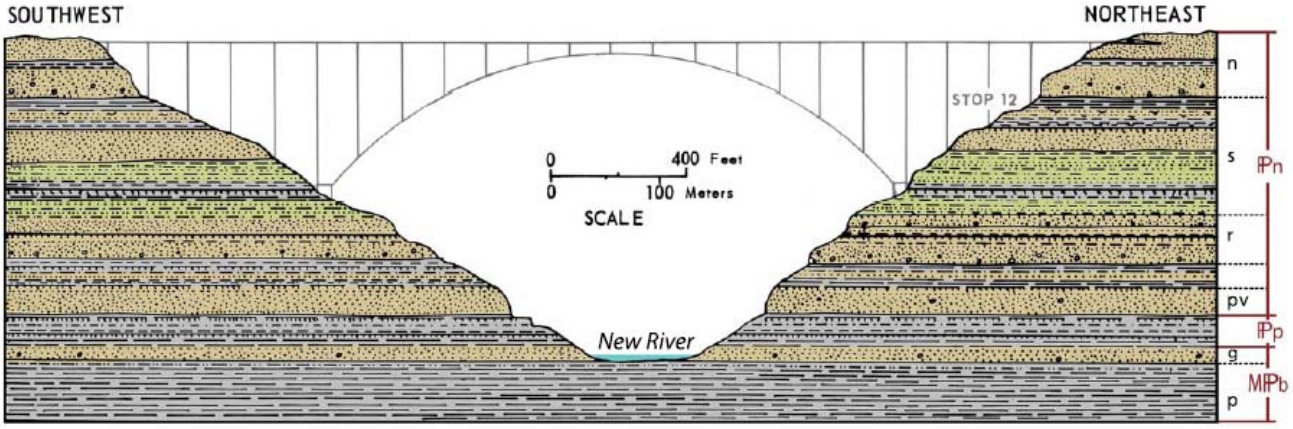
3.2 Natural Resources

3.2.1 Physiography, Geology, and Soils

New River Gorge National River is located in the Kanawha section of the Appalachian Highlands. The Appalachian Highlands are characterized by relatively flat lying rock formations with deeply incised streams in gorges and narrow valleys.

- **New River Gorge**

New River Gorge is the most prominent physiographic feature at New River Gorge National River. The gorge is formed by the New River as it cuts through the Appalachian Plateau from the city of Hinton to Hawks Nest State Park. As an erosional feature the gorge is important from geologic, historic, and natural perspectives. Size and topographic relief of the gorge make it an outstanding, nationally significant natural phenomenon (Lessing 1986). Cutting 66 miles through the Appalachian Plateau, the new River Gorge exposes 3,280 feet of rock representing 60 million years of near continuous geologic history from the mid-Mississippian (~340 million years before present (MYBP)) through upper Pennsylvanian (~280 MYBP).



Cross section of New River Formation (PP) at New River Bridge. **n**: Nuttall Sandstone Member; **s**: Sewell coal bed; **r**: Raleigh Sandstone Member; **pv**: Pineville Sandstone Member; PPp: Pocahontas Formation; MPPb: Bluestone Formation; **g**: Glady Fork Sandstone Member; **p**: Pride Shale Member.

FIGURE 3.1
NEW RIVER GORGE GEOLOGIC CROSS-SECTION

■ Age of the River

According to geological records, the New River was the main headwater's branch of an ancient watercourse called the Teays River. The Teays River flowed west to an immense inland sea that covered the central part of North America during the Mesozoic Era. Because the New River existed before the Appalachian Mountains, it was able to cut into them as fast as they were uplifted, thus maintaining its ancient course (Grafton et al. 1980). The New River is the only river that cuts through the Appalachian Mountains instead of draining from or around them (Mott 1995).

Geologic interpretations of rocks within the gorge and geological phenomenon associated with the gorge indicate that the New River could be as young as three million years old or as old as 320 million years (Lessing 1986). The youngest rocks in the gorge were deposited at or near sea level 320 million years ago. However, if erosion rates are used to date the gorge, then its age is between two to three million years old (Lessing 1986). If the New River is 320 million years old it would be the second oldest river in the world, second only to the Nile in Egypt or to the Finke in Australia. Despite questions regarding the age of the New River, it is probably one of the oldest rivers in the Appalachians (Grafton et al. 1980).

■ Geologic Formations

The gorge cuts through several geologic formations, composed predominantly of sandstones and shales of the Pennsylvania Period and the Mississippian (see Figure 3.1).

Pennsylvanian Period. The Pennsylvanian Formation is composed of the New River Formation and the Lower Pennsylvanian Formation. Three of the 13 members of the New River Formation are named sandstone outcrops – the Nuttall, Raleigh, and Pineville – that are composed of quartz cemented sandstones or quartzose sandstone. These sandstones are extremely resistant to weathering and erosion. They form the nearly vertical rock walls found in the lower portion of New River Gorge. These cliffs are most pronounced in the Nuttall Sandstone, which is an uncommon sandstone type that is 98 percent quartz (Schwietering 1984).

Mississippian Period. The Mississippian Formation rocks form the rolling hills and less steeply sloping gorge walls of the southern end of the park. In general these rocks are not well studied because of their lack of coal seams. They are mostly composed of highly erodible shales of the Bluestone, Princeton, Hinton, and Bluefield Formations. The Hinton Formation is the oldest exposed formation within the boundary of the park.

■ Outstanding Geologic Features

Cliffs. Several other unique geologic features occur within New River Gorge National River (see Figure 3.2). The Nuttall Sandstone creates a prominent cliff

feature in the northern reaches of the gorge on river right.[1] A large, nearly continuous outcrop called "Endless Wall" is about 11 miles in length and contains over 1,000 named climbing routes offering recreational opportunities to climbers due to its tough lithology and southerly exposure. The Nuttall Sandstone also outcrops on river left forming discontinuous cliffs. Other cliff features include cliffs in the middle gorge derived from the Raleigh Sandstone and some discontinuous cliffs along Meadow Creak derived from the Pineville Sandstone.

Rock Cities. Rock cities are rock talus accumulations that form when large sandstone blocks cleave away from their parent formation – generally the Nuttall and the Raleigh Sandstones – and then transport slowly down to the river. Rock cities are found at several locations within New River Gorge as well as along the cliff outcrop at Beauty Mountain.

Large Boulders. There are 72 house-size boulders (basal area equal to or greater than 2,000 square feet) found in the New River, principally between Thurmond and Fayette Station as well as at Turkey Spur. Similar to rock cities, these boulders are derived from Nuttall Sandstone. After breaking away from the cliff face they move over time to the river, providing the hydraulic shaping for many New River's rapids.

Rock Overhangs. Rock overhangs are found throughout New River Gorge, particularly under thicker sandstone members in the northern part of the park.

Spheroidal Weathering. Spheroidal weathering of the soft shales of the Bluestone Formation display the unique power that surface water runoff has in weathering rock.

- **Paleontological Resources**

Some shale members of the Hinton and Bluestone Formations – including the Pride, Eads Mill, and the File Mile members – frequently contain plant, vertebrate, and invertebrate fossils. An important plant fossil – a seed fern (*Mariopteris muricata)* – is present in the gorge that indicates the separation between two geologic ages within the Pennsylvanian period (Grafton et al. 1980). Because of the good preservation of this fossil the gorge is an excellent resource for geologic/paleo environmental studies.

- **Coal Resources and Coal Mining**

In the process of forming the gorge, the New River sliced into and through coal-bearing Carboniferous period sediments, some of the thickest through which any river flows. The configuration of the gorge permitted these coal seams to be exposed. This exposure not only alerted people to the presence of coal in the area, but also permitted its relatively easy removal and led to the industrialization of the area. Coal extracted from the gorge is bituminous and low in sulfur content,

[1] *River right is on the viewer's right when looking downstream; river left is on the viewer's left when looking downstream.*

KEY

GEOLOGIC FEATURES

- New River Gorge (depth from the river to the nearest high point)
- Cliff Feature - Nuttall Sandstone Outcrop
- Cliff Feature - Pineville Sandstone Outcrop
- "Rock City" Feature (rock talus accumulations)
- House-size Boulders (footprint > 2,000 sq.ft.) (rocks fractured from upper rock layers)

MINED COAL FEATURES

- Mined Coal- Fire Creek Coal (strip mine & underground mine areas)
- Mined Coal - Sewell Coal (strip mine & underground mine areas)
- Mined Coal - Pocohontas Coal (strip mine & underground mine areas)
- Abandoned Mine Lands
- Coal Outcrop - Fire Creek Coal
- Coal Outcrop - Sewell Coal
- Coal Outcrop - Pocohontas #6 Coal

BECKLEY
PINEY VIEW
MOUNT HOPE
STANAFORD
OAK HILL
FAYETTE COUNTY
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE
SUMMERS COUNTY

Turkey Spur Rock City
Grandview Rock City
Nuttallburg Rock City
Beauty Mountain Rock City

1360′ 1320′ 1240′ 1320′ 1160′ 1400′ 1480′ 1440′ 1600′ 1400′ 1760′ 1800′ 1720′ 1720′ 1600′ 1880′ 1960′ 1360′ 1200′ 1480′ 1240′ 1200′ 1160′ 1040′ 1040′ 1120′

Figure 3.2

GEOLOGIC FEATURES AND MINED COAL AREAS

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

making it easily converted to coke. Because of the low sulfur content of the coal, acid mine drainage is not a serious problem in the gorge (Grafton et al. 1980; Mott 1995). One seam of coal found in the area – Sewell – is of global significance because of its low sulfur content, few metal impurities, and high heat value.

Today there are 115 abandoned coal mines in the park, most of which are unreclaimed (Yuill 1988). There is currently no active mining in the park. Of the NPS owned lands within the legislative boundary of the park, mineral rights for coal are predominately owned by the NPS "in fee simple" meaning that the minerals (including coal) are in ownership by the federal government. On lands owned by the NPS where mineral rights have not been secured, surface mining would be precluded by the parks authorizing legislation. The authorizing legislation at 16 USC 460mm–19 Sec. 1105. (a) states, "Notwithstanding any other provisions of law, no surface mining of any kind shall be permitted on federally-owned lands within the boundary of the national river where the subsurface estate is not federally owned…."

Additionally, on all other lands within the park boundary (including privately-owned lands) all persons who conduct mineral development within parks will do so only in conformance with applicable statutes, regulations, and NPS policies. These statutes include the Mining in the Parks Act, the Minerals Leasing Act, the Acquired Lands Mineral Leasing Act, the Surface Mining Control and Reclamation Act of 1977, the National Park System General Authorities Act, and enabling statutes for individual parks. Applicable regulations include 36 CFR Part 9, Subpart A and Subpart B; 43 CFR Parts 3100-3500; and special use regulations. A substantial element of these statutes, regulations, and policies is that they are written to ensure that any of the operations associated with minerals extraction within a park would not adversely impact public health and safety, environmental or scenic values, or natural and cultural resources. Surface mining activities would in all likelihood fail to meet these strict protections and therefore not be permitted.

- **Oil and Gas Resources**

In 2006 there were ten active natural gas wells listed with the WV DEP Office of Oil and Gas within the park (Clare 2006). All wells produced gas from shallow Mississippian plays (<2000 ft depth) in the Twenty Mille Creek East Gas Field located beneath the upper gorge at the north end of the park. The U.S. Geological Survey has predicted that there are 32 billion cubic feet of natural gas located in the deeper plays beneath the New River Gorge. These plays are unexplored but would likely be situated along the Mann Mountain Anticline which has its southern terminus in the Highland Mountain area. Currently gas producers in the region have no plans to develop new wells in the park and speculation is that unless natural gas prices go up significantly the deeper plays needed for new wells in the park would be uneconomical (Clare 2006).

Currently there is no known oil production in the vicinity of the park (Clare 2006). However the park is in the vicinity of the geologic formation known as the Marcellus Shale. Oil and gas industry interest is increasing as this geologic formation becomes better understood. Drilling of the Marcellus Shale creates potential impacts, especially concerning the use of water and chemicals needed to facilitate horizontal drilling. While other formations may not be feasible to drill, the viability of Marcellus Shale wells is not yet known (NPS 2008e).

- **Soils**

Silt loam soils underlie most of the park (see Appendix F, Table F.1) (USDA 1975 and 1984). They generally fall into three broad categories defined by where the soils occur on the landscape and the parent material from which they are derived:

- Calvin, Gilpin, and Dekalb soils derived from sandstone, shale, and siltstone generally occur on ridgetops and side slopes. These soils are very stony, shallow (1½ - 3' deep), and well drained with moderately high runoff potential; erosion potential is high due to steep slopes despite moderately low natural soil erodibility.

- Ernest and Meckesville soils derived from colluvium generally occur at foot slopes, along the New River (downstream of Quinnimont), and along tributary streams. These soils are very stony, deep, and poorly drained with moderately low to moderately high runoff potential; erosion potential is very high due to the combination of steep slopes and high soil erodibility.

  Kanawha, Ashton, Chagrin soils derived from alluvium, and alluvial land and gravelly alluvial land, generally occur along the New River in the floodplain and on low terraces above the floodplain. These soils are deep and well drained with moderately low runoff potential; erosion potential is moderately low.

Soil limitations for developed uses are generally severe to moderately severe throughout the park due to one or more of the following characteristics: steep slopes, shallow depth to bedrock, stoniness, flood hazard, and wetness.

- **Geology and Soils Related Management Concerns**

Abandoned Mine Lands. Environmental problems associated with abandoned mine lands include: unstable highwalls producing rock fall, unstable piles of mine waste and mine benches eroding contaminants, and acid mine drainage directly from portals and from large pile of mine waste. Some mine benches have culverts in established drainages that tend to obstruct the natural flow of rainwater surge events. When obstructed flows then flow over mine benches and strip benches they erode the surface and scour new drainage features.

Visitor problems associated with abandoned mine lands include: unstable buildings and structures, unguarded access to underground mine works, and unstable highwalls.

Landslide and Slumping Hazards. Disturbances resulting from human activities have historically contributed to landslides. Many historic and recent landslides in the lower gorge are found below an outpouring of water from abandoned deep mines and are also associated with spoil and refuse piles from strip and deep mining (Remo 1999). Many small slides in the park have occurred along roads where construction has required cutting into steep slopes, creating unstable slopes and exposing loose soil and rock to runoff.

3.2.2 The New River and Its Floodplains

■ Overview of the New River and its Tributaries in the Park

Originating near Blowing Rock in the Blue Ridge Mountains of North Carolina, the New River flows northward for approximately 250 miles through North Carolina, western Virginia, and south-central West Virginia to Gauley Bridge where it joins the Gauley River to form the Kanawha River (Figure 3.3). The Kanawha River flows through Charleston and eventually drains into the Ohio River, a tributary to the Mississippi River. The New River watershed encompasses approximately 5,274 square miles, including 756 square miles in North Carolina, 3,044 square miles in Virginia, and 1,474 square miles in West Virginia. The two major tributaries to the New River – the Greenbrier and the Bluestone – flow into the New River above Hinton, West Virginia, a few miles upstream of the park.

The New River channel today follows the ancient Teays River which dates to the beginning of the Pennsylvanian period and originally flowed north through Ohio and up into the northern end of the modern Mississippi River basin. About 10,000 years ago the last advance of glacial ice buried most of the Teays River and diverted water to the New into the Ohio and Kanawha rivers that were created by glacial action.

New River Gorge National River encompasses approximately 53 miles of the New River from the city of Hinton to Hawks Nest State Park near the town of Ansted. The 53-mile reach is composed of three subreaches of similar slope, geometry, and roughness (Wiley 1989) (see Table 3.1). Approximately 106 perennial and intermittent streams flow into the river within the park (Wilson et al. 2003). Major tributaries include Glade Creek, Piney Creek, Dunloup Creek, Wolf Creek, Laurel Creek (near Sandstone), Lick Creek, Meadow Creek, Laurel Creek (near Quinnimont), Manns Creek, and Mill Creek (see Figures 3.4 and 3.5).

The New River within New River Gorge NR is preserved as a free-flowing stream between two impoundments – Bluestone Lake upstream and Hawks Nest Lake downstream. Flow is regulated by Bluestone Dam, built in the late 1940s and

New River Gorge National River
Park Significance Statement 2

The waters of this free flowing segment of the New River system contain a mosaic of hydrologic features and aquatic habitats, support a unique aquatic ecosystem, and nourish a riparian zone that supports rare plants, animals, and communities.

Fundamental Resources and Values

- a variety and density of riverine hydrologic features and processes unparalleled in the Eastern United States, including pools, backwaters, glides, runs, shoals, riffles, torrents, cascades, chutes, rapids, and waterfalls
- a highly productive aquatic ecosystem that includes distinct assemblages of native fish (many found nowhere else), mussels, crayfish, macroinvertebrates, and a broad array of other aquatic life, including rare amphibians, reptiles, birds, and mammals
- the riparian zone is the most biologically diverse part of the park, and contains globally rare communities and essential habitat for several rare species

Other Important Resources and Values

- other aquatic/wetland resources, including vernal pools, wetlands, ephemeral streams, and seeps that provide habitat for rare species
- clean water that supports healthy aquatic and riparian environments

TABLE 3.1 New River Subreach Characteristics

Characteristic or Feature	Hinton to Meadow Creek Subreach	Meadow Creek to Sewell Subreach	Sewell to Fayette Subreach
Average length	13 miles	32 miles	8 miles
Average width	850 feet	550 feet	350 feet
Floodplain	one floodplain on one bank (approx. 1,500 feet wide)	no distinct floodplain	no floodplain (the streambanks are the valley walls)
Average depth (for a discharge of 2,000 ft^3/s)	5 feet	8 feet	12 feet
Average river bed slope	1.5 feet per 1,000 feet	1.5 feet per 1,000 feet	4 feet per 1,000 feet
Large Falls	Brooks Falls (8' to 10' drop) Sandstone Falls (25' drop)	no large falls	no large falls
Deepest pools (for a discharge of 2,000 ft^3/s)	15 to 20 feet deep (downstream of Brooks Falls and Sandstone Falls)	20 to 25 feet deep (near towns of Glade, Thurmond, and Beury)	35 to 40 feet deep (upstream from Caperton and near Nuttall Station)
Islands	three islands (0.8, 0.4, and 0.2 miles long)	one island (0.2 miles long)	no islands

Source: Wiley 1992

operated by the U.S. Army Corps of Engineers (COE) for flood control, recreation, and low flow enhancement. Bluestone Dam is generally managed on a "run-of-the-river" (outflow equals inflow) basis with minimal retention time, except when additional waters are retained to minimize flooding (Purvis et al. 2002). Mean winter flows continue to be higher than mean summer flows and there is no long-term storage of water by Claytor or Bluestone Dam (Purvis et al. 2002). On a daily basis the flows discharged through Bluestone Dam appear to correspond with the natural flow pattern. Hourly fluctuations in river flow result from the hydroelectric generation activity at the nonfederal Claytor Dam farther upstream in combination with the COE's goal to keep lake levels relatively constant recreational pool within Bluestone Lake (Mott 1995). Currently hourly releases from the Bluestone Dam are frequently timed to support commercial rafting activities.

Since construction of the dam the historic periodic flood regime on the New River has been largely eliminated. Both the magnitude and the frequency of extreme high floods have been reduced (Flug 1987). The 100-year discharge at Hinton has been lowered from 250,000 ft^3/second to 150,000 ft^3/second (Purvis et al. 1999).

Base from U.S. Geological Survey digital data, 1:2,000,000, 1992 and National Park Service digital data, 1:24,000, 1996

FIGURE 3.3
KANAWHA- NEW RIVER DRAINAGE BASIN

Table 3.2

New River Gorge National River
Streams with FEMA Flood Insurance Studies

Streams	
Summers County	▪ New River
	▪ Brooks Branch
	▪ Laurel Creek
	▪ Lick Creek
	▪ Meadow Creek
Fayette County	▪ Mill Creek
	▪ Wolf Creek
	▪ Dunloup Creek

** Source: FEMA 1980 and 1988*

■ Floodplain Studies and Mapping

Flood profiles, inundation maps, and floodway determinations are available for some of the New River and its tributaries within the park. The Federal Emergency Management Agency (FEMA) has completed flood insurance studies that provide flood profiles for the 10-, 50-, 100-, and 500-year recurrence interval floods and maps showing the floodway and areas inundated by the 100- and 500-year storms for only a few streams within the park (see Table 3.2).

The U.S. Geological Survey in cooperation with the NPS has studied the frequency and magnitude of flooding in the park on the New River and portions of Wolf Creek, Craig Branch, Manns Creek, Dunloup Creek, and Mill Creek (Wiley et al. 1994). This study revealed the following general characteristics of the river's floodplain:

- between Hinton and Meadow Creek the river has a floodplain on one bank that is approximately 1,500 feet wide
- between Meadow Creek and Sewell the river lacks a distinct floodplain
- between Sewell and Fayette there is no floodplain because the streambanks are the valley walls

Since 1994 the NPS has used the more detailed findings from this study regarding river discharges, water surface elevations, and velocities for the 2-, 25- and 100-year flood-recurrence intervals for planning and designing park facilities along the New River. No inundation map or floodway was determined.

■ Flooding Related Water Resource Management Concerns

New River Flooding. Despite general flow moderation in the New River infrequent highly localized severe flooding continues to occur on the river and its tributaries, such as in July 2001. Tributary watersheds and the river segments in their vicinity that received large amounts of rain from intense storm cells and ensuing runoff were severely impacted, while adjacent or nearby watersheds that received little rainfall were minimally affected (Purvis et al. 2006). These floods caused extensive damage to property, including cultural resources, roads and trails, buildings, and surface water quality (NPS 2001b). Debris flow caused extensive soil erosion, restructured some stream channels, and caused severe sedimentation often due to mass-movement events located below old mine sites (NPS 2001b). Newly deposited alluvial fans at the mouth of some tributaries measured 15 feet in thickness (NPS 2001b).

Discharges from Bluestone Dam. Bluestone Dam has been successful in reducing flood peaks by at least 50 percent but has had a sizable effect on other biophysical processes . Changes to flow dynamics brought about by construction of the dam have had adverse effects on the physical and biological attributes of the river (Purvis et al. 2002). For example, decreases in the extent and frequency of

KEY

- Rivers and Streams
- Rapid
- Island
- Waterfall
- Upland Wetland
- Cliff Drip
- Pool

Glade Creek at New River

New River - McCreery Pool

Dunloup Falls

Lower Coal Run Falls

Wolf Creek

Brooks Falls rapids
(Camp Brookside flatrock opposite)

Upper Marr Branch
falls and ledges

New River island and side channel

Pools at Sandstone Falls

Dowdy Creek

Keeneys Creek

Runoff in debris flow chute
Fayette Station Road

Meadow Creek: Claypool Falls

New River
side channel backwater

Flatrock community,
Sandstone Falls

Sandstone Falls

Meadow Creek
cascade step pools

Little Beaver Lake
Piney Creek
Mill Creek
Dowdy Creek
Quinnimont Rapids
Laurel Creek
Grassy Shoals Rapids
Glade Creek
Silo Rapids
Dunloup Creek
FAYETTEVILLE
Wolf Creek
Fayette Station Rapids
MillersFolly Rapids
Greyhound Rapids
Double Z Rapids
Dudleys Dip Rapids
Surprise Rapids
Lower Railroad Rapids
Keeneys Rapids
Upper Railroad Rapids
Walnut Creek
ANSTED
New River
Meadow Creek
Madam Creek
Brooks Falls
Bluestone Dam
HINTON
Greenbriar River

Figure 3.4

HYDROLOGIC FEATURES

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

major flooding events have altered the riparian and in-stream vegetative and geomorphological structure of the river (Purvis et al. 2002). Flow regulation tends to isolate the river from the floodplain preventing regeneration of floodplain sediments and water bodies and not allowing for resetting of succession of riparian and other floodplain vegetation (Purvis et al. 2002). Isolation of the floodplain from the river does not allow formation of new floodplain and accelerates the trend toward terrestrial conditions in existing floodplain habitats. In addition, changes in flow dynamics have affected the location and composition of gravel bars in the river (D. Chambers, USGS 2003 pers. comm.). Flood regime alteration by large dams such as Bluestone Dam also facilitates invasions by non-native organisms that might not otherwise survive extreme flows (Lytle et al. 2004). Manipulation of flood drought timing in regulated rivers can also change fish distributions by favoring species that spawn only during certain times of the year (Lytle et al. 2004).

Dunloup Creek Flooding. Flooding along Dunloup Creek has been a long-term, recurring problem causing damage to residences, small businesses, and numerous other structures. Findings of the *Dunloup Creek Final Watershed Plan* (USDA NRCS 2007) concluded that structural flood control measures such as levees and dams are not economically feasible and recommended a voluntary buy-out as the preferred action to reduce flood-related problems for threatened properties within the 100-year floodplain. Private properties within the floodplain would be acquired, restored to natural conditions (including removal of all structures), and maintained in perpetuity as natural floodplain (USDA NRCS 2007).

The park's Glen Jean Headquarters Complex is located just above the 25-year floodplain of Dunloup Creek. Estimates by the Natural Resources Conservation Service (NRCS) are that the 100-year flood would inundate the building with approximately 3 feet of water; in a 500-year flood the water level in the building would likely rise to approximately 6 feet. The federal buy-out recommended by the NRCS would not be available to NPS. If and when the headquarters is flooded and the buildings rendered unserviceable the NPS would review the options for relocating the facility.

3.2.3 Water Quality

- **New River Water Quality**

Baseline water quality data and ongoing monitoring of the New River indicate that water quality in the New River is generally satisfactory for water contact recreation such as swimming, boating, and fishing (Wilson et al. 2006) although it is adversely impacted by fecal coliform contamination, sedimentation, acidic runoff, trace metals, and trace chemical elements (Purvis et al. 2002) (see Figure 3.5). Because of occasional fecal coliform concentrations in excess of water quality standards the state of West Virginia has designated the river as impaired for its entire length in the park (WVDNR 2006). Probable human-caused sources of the contamination

include residential and municipal development, wastewater discharge, farming, livestock grazing, and recreational use.

Fecal coliform contamination is a problem in the New River at the mouths of polluted tributaries and for some distance downstream of polluted tributaries. Many of the polluted tributaries enter the New River near popular access sites for recreational activities such as whitewater boating and angling. Water quality monitoring indicates that water quality is impacted by fecal coliform contamination in these areas during periods of high turbidity, 48-hour precipitation, and high discharge events (Purvis et al. 1999; Wilson et al. 2003). Since 1990 samples taken at 11 locations along the New River have exceeded state fecal coliform standards from 0 to 13 percent of the time (see Appendix F, Table F.2) (Purvis et al. 2006).

Mine land runoff and metals contamination do not significantly affect the New River main stem because of dilution. Unlike other Appalachian areas, coal in the vicinity of the park is generally low in sulfur, and does not produce much acid mine drainage. Further, some of the extensive limestone areas traversed by the New River and its tributaries help reduce potential acid mine drainage problems, and contribute to a well-buffered ecosystem (WV DNR 1989).

- **Tributary Streams Water Quality**

Several tributaries to the New River are impaired by improper treatment and disposal of domestic sewage. This is the most pervasive water resource issue in the park (Purvis et al. 2002). Sixteen wastewater treatment plants discharge almost 9.4 million gallons of treated wastewater per day into tributaries of the New River within the park (Purvis et al. 2002). Sewer overflow systems release a combination of storm runoff and untreated sewage directly into streams during storm events (Purvis et al. 1999; Purvis et al. 2002). Hydraulic overloads and poorly designed or maintained wastewater systems also contribute sewage pollutants to tributaries. Fecal coliform bacteria contamination is found at varying levels in every tributary, with higher concentrations exceeding West Virginia water quality standards by three orders of magnitude (Mott 1995; Wilson et al. 2003). In particular, Madam, Piney, Dunloup, Arbuckle, Coal Run, Keeney, and Wolf Creeks, and Marr Brach have high levels of fecal coliform bacteria. On these tributaries fecal coliform counts exceeded the fecal coliform standard for contact recreation from 25 to 100 percent of the time from 2001 to 2003 (see Appendix F, Table F.2) (Wilson et al. 2003).

In addition, toxins and metals associated with poorly or untreated municipal outfalls, combined with cumulative impacts from other sources, are probably impacting biotic communities of the tributaries (Mott 1995).

Two pathogens often found in human and animal waste, *Giardia* and enteric viruses, were detected in a reconnaissance study of Madam and Dunloup Creeks in 2002

KEY

Watersheds and Water Quality

- NERI boundary
- Watershed Boundaries
- Rivers and Streams
- Rivers and Streams – Impaired
  (including rivers and streams that were designated impaired in 2004 by the State of West Virginia because they did not meet state water quality standards or they did not meet their designated use)

Results of Fecal Coliform Sampling by NPS 1, 2

- Watersheds where <10% of Samples had more than 200 Fecal Coliform Bacteria/100 ml H2O
- Watersheds where 10-25% of Samples had more than 200 Fecal Coliform Bacteria/100 ml H2O
- Watersheds where >25% of Samples had more than 200 Fecal Coliform Bacteria/100 ml H2O
- Watersheds Not Sampled by NPS

1 The period of record for fecal coliform sampling by NPS generally extends from 1990 to 2003.

2 The West Virginia Water Quality criterion for recreational waters is 200 fecal coliform/100 ml H_2O with no more than 10 percent of samples exceeding 400 fecal coliform/100 ml H_2O.

Piney Creek
Dunloup Creek
Arbuckle Creek
Laurel Creek (Cotton Hill)
Penfield Branch
Marr Branch
Wolf Creek
Rush Run
Coal Run
Mill Creek
Mill Creek
Dowdy Creek
Glade Creek
Fire Creek
Short Creek
Fern Creek
Slater Creek
Buffalo Creek
Keeney Creek
Ephraim Creek
Fall Branch
Farleys Creek
Camp Branch
Laurel Creek
Davis Branch
Manns Creek
Madam Creek
Kates Branch
Big Branch
Owens Branch
Meadow Creek
Tug Creek
Brooks Branch
Laurel Creek
Lick Creek

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Figure 3.5

WATERSHEDS AND WATER QUALITY

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

(Messinger 2002). Although water samples were examined for the pathogens *Cryptosporidium* and *Salmonella*, they were not detected in the park (Messinger 2002).

Some tributary streams are affected by organic industrial contaminants and acid mine drainage. Tributaries with mine runoff problems include Rush Run, Piney Creek, Meadow Creek, Wolf Creek, Arbuckle Creek, Dunloup Creek, and Peters Creek. The state of West Virginia has identified Dunloup Creek as an impaired waterway along its entire length due to aluminum contamination from an unknown source, perhaps from an abandoned mine (Mott 1995). Wolf Creek has such concentrated discharges of acidic mine waters that low pH values are a problem. On Wolf Creek, fish kills due to low pH have caused the WV DNR to discontinue trout stocking in the stream. Meadow Creek runs directly through a 400-foot thick deposit of mine waste; however the waste pile has been stabilized and reclaimed by WV DEP). Rush Run is also impaired due to abandoned mine discharge (Marshall 2001). In several other tributaries metal laden-waters and sediment from barren unreclaimed mine spoils result in reduced habitat quality.

- **Water Quality Management Concerns**

Sewage Pollution. Lack of adequate and proper treatment for domestic waste is the most pressing and pervasive water resource issue at the park. The problem is most pressing in streams tributary to the New River. Several areas near the park have relatively high concentrations of households without septic systems or sewer service. In many instances existing septic systems do not function properly. In communities with sewage treatment plants, sewer lines feeding those plants are frequently broken. Most sewage systems combine sanitary and storm runoff in one collection system; during long or intense rain events inflows frequently exceed plant design capacity causing incoming sewage to bypass the plant after receiving only chlorination before discharging into a receiving stream. These conditions cause frequent elevated fecal coliform levels in tributaries and in the New River oftentimes in excess of water quality standards for contact recreation.

Water Quality Data Collection and Management. Historically water quality monitoring has occurred on a relatively regular schedule primarily by the NPS and/or the state of West Virginia. Currently the NPS monitors fecal coliform bacteria because the state standard for water contact recreation is based on this parameter. NPS should consider analyzing more samples for *E.Coli* as scientific evidence suggests that *E.Coli* is a superior sanitary water indicator. More monitoring during high flows associated with storm events and snowmelt runoff is needed to document conditions during peak flow periods. While NPS currently observes quality assurance (QA) and quality control (QC) in its monitoring, QA/QC standards should be a more important and visible component of the program. Water quality data needs to be maintained in one database at park headquarters and also entered in the EPA's STORET database.

Agricultural and Urban Runoff. Agricultural and urban runoff is the primary source of non-point pollution in the park's streams and rivers of the parks. Much of the watershed of the park – particularly the Greenbrier River watershed – is in agricultural use. High rates of soil erosion resulting in increased loads of silts and sediments, as well as runoff of fertilizers, pesticides, and herbicides are common problems of agriculturally impacted rivers. Existing development in the park's watershed has increased the volume of urban runoff contributing sediment and pollutants washed from lawns, roads, and other impervious surfaces. As future growth occurs water quality impacts from urban runoff will likely increase, although new federal and state requirements for stormwater management will help to mitigate some impacts.

Mineral Development. Numerous active and abandoned coal mines in or near the park pose existing and potential environmental problems for park water resources. Several tributaries in the park are impacted by acidic drainage or seepage through piles of processing waste ('gob"). Seeps from improperly sealed mine shafts may have low pH (<3.0), high conductivity, and high concentrations of sulfate, iron, aluminum, manganese, and chloride. Erosion from barren strip-mined areas typically increases turbidity downstream following precipitation. Runoff from strip-mined areas that accumulates in ponds is typically acidic and contains high metal concentrations. Both new and abandoned mine roads can erode, causing landslides and high turbidity and/or high sediment loads in streams

Timber Harvesting. Statewide, timber volumes and timberland acres are at the highest levels of the past century and timber harvesting is expected to continue for many years (Purvis et al. 2002). The potential exists for increased logging activity and associated timber processing industries near the park. Unless carefully managed, timber harvest substantially alters the physical environment of streams, changes stream flow, raises stream temperature, and increases sedimentation.

Discharges from Bluestone Dam. The New River within the park is affected by operation of Bluestone and Claytor Dams. Bluestone Dam is a bottom-release facility that decreases stream temperature in the tailwaters. Reduction in water temperature and the potential to elevate dissolved oxygen downstream of the dam is the primary water quality issue related to Bluestone Dam.

Hazardous Spills and Waste Sites. Potential sources of hazardous materials and toxics in the park include accidental releases by such means as train derailments, tanker-truck highway accidents, and spraying of herbicides along railroad rights-of-way, as well as leachate and runoff from landfills and industrial sites. Trains on the CSX main line as well as trucks and other vehicles on state and federal highways routinely transport chemicals, coal, and a variety of other potentially toxic substances through the park and across the river on bridges. Numerous incidences of derailments and spills have occurred over the years most of which spilled coal,

except one which spilled sulfated mercury (Purvis et al. 2002). Leachate from the abandoned Fayette County Landfill, located at the head of Rush Run, may be leaking into ground and/or surface waters in the park (Mott 1995). Collection basins are installed around the facility to trap surface runoff, but reportedly over flow on a regular basis. The park has not received data from ground or surface water monitoring associated with the site (Mott 1995). Another 20 active or abandoned landfills exist in the area that could be draining leachate toward the park (Purvis et al. 2002). Illegal roadside dumping of trash also occurs within the park and may move down-slope to tributary drainages (Mott 1995).

3.2.4 Vegetation

■ The Park's Forest

New River Gorge National River is located within an expanse of mixed-mesophytic forest that is the largest remaining area of midatlantic forest in the world, making it a globally significant resource (Ritters et al. 2000). Within the park the continuous span of mixed-deciduous forest (composed of both oak-hickory and mixed-mesophytic forest types) is approximately 60 miles (96.6 km) long by 2 miles (3.2 km) wide, one of the largest in the nation (Ritters et al. 2000). Approximately 84 percent of the land cover is forested and 65 percent of the forestland is interior forest (Ritters et al. 2000). By comparison, only 45 percent of the forestland in West Virginia would be classified as interior forest (based on the same scale of analysis) (WV Gap Analysis Program 2003).

Significant expanses of the park's forest remain largely unfragmented by roads, trails, utility corridors, or developed land uses (see Figure 3.6). These large blocks of unfragmented forest are largely intact natural landscapes and are of high conservation priority because they contain a diversity of plant species and support a significant community of forest-interior birds. Many rare vegetation communities are included with the large unfragmented forest blocks.

■ Community Types and Associations

Forty-one forest community types are found in the park representing 39 forest associations (Vanderhorst 2007). These include:

- 16 upland forest and woodland types
- 15 riparian types (including jurisdictional wetlands along the New River and its lower tributaries
- headwater wetlands types
- one non-vascular type
- one sparse vegetation type
- 3 cultural types (kudzu patch, old field, and pine plantation)

New River Gorge National River
Park Significance Statement 3

New River Gorge National River lies at the core of a globally significant forest, contains the most diverse flora of any river gorge in central and southern Appalachia, and provides essential habitat for endangered mammals and rare birds and amphibians.

Fundamental Resources and Values

- rare expanse of unfragmented and varied forest types
- a diverse mosaic of habitats occurring over a large elevational gradient that supports forty identified plant communities containing at least 1,342 species and 54 rare plants
- abundant and diverse breeding populations of birds that spend part of their lives in the tropics but depend upon the unfragmented forests here for breeding, especially wood warblers, vireos, and thrushes

Other Important Resources and Values

- clean air

Two upland forest types are classified as distinct types within the park, but are placed in the same association. One riparian type is a "placeholder" pending further field sampling.

Upland deciduous forest is the predominant natural vegetation within the park. Three upland deciduous forest associations dominate, intergrading with one another and generally correlating with soil moisture and fertility gradients affected by topographic position, aspect, and geology (Vanderhoorst 2007). They include:

- **sugar maple–buckeye–basswood forest** occupies moist, fertile sites on concave, lower, and northerly facing colluvial gorge slopes on shale derived soils
- **oak–hickory forest** occupies drier, less fertile sites and predominates on plateaus with residual soils derived primarily from sandstone
- **oak–hickory–sugar maple forest** is intermediate and predominates on southerly facing, convex, and upper colluvial gorge slopes and on northerly aspects and on plateaus

Three additional deciduous forest associations occur less extensively in the park (Vanderhoorst 2007):

- **oak–ericad forest** is somewhat less extensive compared to the major three associations and occurs on drier, less fertile sites than the Oak – Hickory Forest
- **chinquapin oak–black maple forest** is an uncommon association restricted to areas with calcareous bedrock
- **yellow birch cold cove forest** is an uncommon association restricted to deep canyons with low solar exposure

Less abundant than deciduous forests are natural upland forests with a significant conifer component that occur in more specialized habitats (Vanderhoorst 2007):

- **cliff top Virginia pine forest** and **cliff top pitch pine woodland** on southerly slopes
- **hemlock–sweet birch–tulip poplar–giant rhododendron forest** and the related **Deciduous Tree–Giant Rhododendron Forest** are fairly abundant types which occur in moist sites (coves, ravines) with acidic, low fertility soils

Riparian areas cover a small area within the park but contribute significantly to its overall biological diversity. They are some of the most diverse, dynamic, and complex biophysical habitats in the terrestrial environment (Naiman et al. 1993). Fifteen riparian associations are classified in the park. Probable reasons for high diversity of species and communities in riparian zones include abundant seed

KEY

Extent of Unfragmented Forest

- More than 90 Percent Unfragmented Forest (within the 50-acre grid cell shown)
- 81 to 90 Percent Unfragmented Forest (within the 50-acre grid cell shown)
- 66 to 80 Percent Unfragmented Forest (within the 50-acre grid cell shown)
- Less than 65 Percent Unfragmented Forest (within the 50-acre grid cell shown)

Unfragmented forest includes land that is not fragmented by roads, trails, utility corridors, or developed land uses. It is represented by the percentage of land within 50-acre grid cells that is unfragmented by these features.

BECKLEY
PINEY VIEW
STANAFORD
MOUNT HOPE
OAK HILL
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Figure 3.6

EXTENT OF UNFRAGMENTED FOREST

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

sources, abundant moisture and nutrients, and strong environmental gradients created by variation in flooding intensity and periodicity as affected by elevations (Vanderhoorst 2007).

Small areas of headwater wetlands also contribute significantly to species and landscape diversity in the park.

Semi-natural vegetation has developed in mined areas and in sites cleared by humans and then abandoned. Four successional forest types and additional patches of early successional Old Field occur within these areas (Vanderhoorst 2007).

- **Successional Dynamics**

Upland Forest and Woodlands. Plant communities in the park are generally young (<75 years old), reflecting past land use disturbance and natural disturbance regimes (e.g., flooding, landslides) (Fortney et al. 1995). Almost all the park was heavily impacted by logging, mining, and other human development in the late 1800s through the 1900s. Extensive canopy disturbance resulted in an increase in cover by early successional and shade tolerant tree species. Following recovery of forest canopy cover, succession continues by the replacement of shade intolerant species with shade tolerant species. Forest soil moisture, organic matter, and fertility is generally increasing as time passes since fire or other human-caused disturbance. Seed dispersal acts as a slow agent to reintroduce shade tolerant understory plant species which were displaced by canopy removal. These processes occur at the stand level and at the landscape level.

In the absence of fire or other human-caused canopy and ground disturbance the aerial cover of the park's upland forest and woodland associations are likely to change in generally predictable ways (Vanderhoorst 2007). Areas of forest and woodland associations adapted to more xeric conditions (cliff top Virginia pine forest, cliff top pitch pine woodland, oak/ericad forest, oak-hickory forest) are likely to decrease over time. Areas of forest and woodland associations adapted to more mesic conditions (sugar maple – buckeye – basswood forest, oak – hickory – sugar maple forest, deciduous tree/giant rhododendron) are likely to increase. Boundaries between these associations are likely to move upslope. Areas of hemlock – sweet birch – tulip poplar forest/giant rhododendron forest would be expected to increase but *Tsuga canadensis* (hemlock) is currently threatened by *Adelges tsugae* (hemlock wooly adelgid), an exotic insect pest.

Riparian and Headwater Wetland Communities. Successional dynamics of riparian and headwater wetland communities in the park are quite different from those of upland communities (Vanderhoorst 2007). Riparian communities are maintained by a disturbance regime of periodic floods. Flooding can maintain open canopies by removing individual trees or large events can remove entire patches of vegetation. Especially ephemeral riparian vegetation associations include riverscour

prairie, riverscour annuals, and lizardtail backwater slough. Successional dynamics and extent of many headwater wetlands are controlled by beaver.

- **Aquatic Plants**

Diatoms are the primary type of algae found in surveyed tributaries (Rutherford 1999). Many tributaries in the park vicinity contain algal species that are indicators of salt brine, sewage, and oil (Weaks et al. 1997). The high abundance and frequency of the algae, *Schizonthrix calcicola*, indicates that human waste is a major contributor to pollution in many streams surveyed (Mahan 2004).

The dominant macrophyte in the park is water star-grass (*Heteranthera dubia*), an aquatic grass often associated with mussel beds in the New River (Buhlmann et al. 1987, Jirka et al. 1987, Buhlmann 1990). Aside from its association with mussel beds, water star-grass provides habitat for macroinvertebrates and fish in the New River. Pondweed (*Potamogeton* spp.) and Nuttall waterweed (*Elodea* spp.) are also common in the New River and are often present in mussel beds (Buhlmann et al. 1987, Jirka et al. 1987, Buhlmann 1990). The size of *Elodea* beds within the park has increased in recent years, perhaps due to increased eutrophication of the New River (Buhlmann 1990).

Poor water quality and associated eutrophication may increase the abundance of some algae and plants species in the park's streams (Mahan 2004). However, increased eutrophication also threatens to eliminate or restrict the distribution of certain aquatic plant species in the park (Weaks et al. 1997).

- **Rare or Significant Plant Communities**

Several vegetation associations in the park are likely to be globally and/or state rare (Vanderhoorst 2007). Although formal ranks have not been established for many associations, a list of those likely to be rare is provided in Table 3.3 (see Figure 3.7). Many of these communities contribute significantly to the regional biodiversity of plants and animals in the park, including the dry sandstone cliff, the cliff top-Virginia pine, and juniper-Virginia pine flatrock woodland communities.

Of the park's rare or significant vegetation communities the juniper-Virginia pine flatrock woodland (high Appalachian flatrock) community is most rare. It is a globally rare ecological community that is composed of locally rare sedges, cedars, pines, and other plants. It occurs in two locations within the park on flat sandstone ledges along the New River and is dependent on the scouring caused by occasional flooding for its long-term integrity (Buhlmann et al. 1987)

KEY

Rare Species Diversity

- 6 to 10 occurrences of rare species (within the 50-acre grid cell shown)
- 3 to 5 occurrences of rare species (within the 50-acre grid cell shown)
- 3 to 5 occurrences of rare species (within the 50-acre grid cell shown)
- No occurrences of rare species (within the 50-acre grid cell shown)

Rare species diversity is represented by the number of verified occurrences of rare species within 50-acre grid cells.

Rare species include species designated as follows:

- *designated as endangered or threatened by the federal government*
- *designated as rare by the State of West Virginia*
- *designated as declining by Partners in Flight (a consortium of public agencies and private organizations whose mission is bird conservation)*

BECKLEY
PINEY VIEW
STANAFORD
MOUNT HOPE
OAK HILL
FAYETTEVILLE
ANSTED
HINTON
MEADOW BRIDGE

Figure 3.7

RARE SPECIES DIVERSITY

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

TABLE 3.3 Vegetation Associations Likely to be Globally and/or West Virginia State Rare

Community Name	Association	Global Rank	West Virginia Rank
Upland Forests and Woodlands			
Chinquapin Oak–Black Maple Forest	*Acer saccharum – Quercus muehlenbergii / Cercis Canadensis* Forest	G4?	SNR
Cliff Top Pitch Pine Woodland	*Pinus rigida – Quercus coccinea / Vaccinium angustifolium* Woodland	GNR	SNR
Cliff Top Virginia Pine Forest	*Pinus virginiana – Pinus (rigida, echinata) – (Quercus prinus)/ Vaccinium pallidum* Forest	G4?	SNR
Hemlock–Chestnut Oak/Catawba Rhododendron Forest	*Quercus prinus / Rhododendron catawbiense – Kalmia latifolia* Forest	G3?	SNR
Yellow Birch Cold Cove Forest	*Betula alleghaniensis – (Tsuga Canadensis) / Rhododendron maximum / Leucothoe fontanesiana* Forest	G3 G4Q	SNR
Lichen and Sparse Vegetation			
Dry Sandstone Cliff	Appalachian – Alleghenian Sandstone Dry Cliff Sparse Vegetation	GNR	SNR
Riparian Communities			
Black Willow Slackwater Woodland	*Salix nigra – Betula nigra / Schoenoplectus (pungens, tabernaemontani)* Wooded Herbaceous Vegetation	GNA	SNR
Juniper–Virginia Pine Flatrock Woodland	*Juniperas virginiana* var. *virginiana – Pinus virginiana – Quercus stellata / Amelanchier stolonifera / Danthonia spicata – Melica mutica* Woodland	G2	S1
Lizardtail Backwater Slough	*Peltandra virginica – Saururus cernuus – Carex crinita / Climacium americanum* Herbaceous Vegetation	G2?	SNR
Oak–Tulip Poplar/Silverbell Floodplain Forest	*Quercus (alba, rubra, velutina) / Halesia tetraptera* Forest	GNR	SNR
Riverscour Prairie	*Andropogon gerardii – Panicum virgatum – Baptisia australis* Herbaceous Vegetation	G2 G3	SNR
Sycamore–Ash Floodplain Forest	*Platanus occidentalis – Fraxinus pennsylvanica / Carpinus caroliniana / Verbesina alternifolia* Forest	GNR	SNR
Sycamore–River Birch Riverscour Woodland	*Platanus occidentalis – (Betula nigra, Salix* spp.) Temporarily Flooded Woodland	GNR	SNR
Headwater Wetlands			
Forest Seep	*Acer rubrum – Nyssa sylvatica / Ilex verticillata – Vaccinium fuscatum / Osmunda cinnamomea* Forest	G3 G4	SNR

G2 – Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 – Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent or widespread
G4 – Apparently secure globally – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
GNA – Not applicable – A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
GNR – Global rank not yet assessed. **S1** – Critically imperiled in state – 5 or fewer occurrences. **SNR** – State rank not yet assessed.

Source: Vanderhoorst 2007

- **Vegetation Management Concerns**

Fragmenting Land Uses. Roads, railroads, logging, mining, and urban development have fragmented the continuous expanse of forest in the park. The potential threat of additional forest fragmentation associated with these land uses is greatest where land within the park's authorized boundaries remains in private ownership.

Fire Management. A comprehensive fire history for the park needs to be developed to help determine the historic role of fire in maintaining and/or creating selected vegetation communities (Mahan 2004). Forest composition research indicates that oak is not regenerating within the park (Fortney et al. 1995). Oak stands are being replaced by mixed-mesophytic species such as maple, tulip poplar, and back gum; a history of fire suppression probably has limited oak regeneration (Mahan 2004). Virginia pine and pitch pine are declining throughout their range, especially along cliffs and within the Appalachian flatrock communities within the park probably due in part to an absence of fire (Mahan 2004).

Deer Overbrowsing. In the park region the white-tailed deer herd is well above estimated pre-European settlement population levels, having increased from approximately 8 to 20 deer per square mile (Horsely et al. 2003) to 33 deer per square mile (WV DNR 2003). In general higher populations of white-tailed deer in the eastern U.S. in the late 20th and early 21st centuries have reduced plant diversity, caused forest regeneration failure, and have had secondary impacts on other wildlife communities (Horsely et al. 2003). Within the park deer herd may be partially limiting the success of oak regeneration in the park (Mahan 2004). Oak is a preferred food to deer and continued grazing by deer will contribute to the replacement of oak by species such as red maple that are less palatable to deer (Curtis et al. 2001).

Exotic Insects and/or Diseases. Several exotic insects have impacted the park's vegetation. Oak mortality by gypsy moths (*Lymantria dispar*) may be partially responsible for decline in oak in the park (Mahan 2004). Defoliation attributed to gypsy moth has declined dramatically over the last decade due to the introduction of a fungus that is fatal to the pest and due to the application of a lethal bacteria. Occasional outbreaks of gypsy moth populations are still possible. The ridges, south-facing aspects, and dry plateau areas with significant oak component have the potential for being most affected (Mahan 2004).

Infestation of *Tsuga canadensis* (hemlock) by *Adelges tsugae* (hemlock wooly adelgid) is now considered widespread in the park. Many stands of hemlock are likely to die and survival of individual trees or small stands may depend on human intervention (Vanderhoorst 2007). Decline of hemlock may represent the single greatest change to vegetation in the park in the near future (Vanderhoorst 2007). Exotic insects and/or diseases also threaten *Fagus grandifolia* (American beech),

Cornus florida (dogwood), *Juglans cinerea* (butternut), and other native plant species.

Timber Harvesting. Illegal and legal logging continues to occur within the authorized boundaries of the park. Threats from logging include fragmentation of continuous forest blocks and erosion from logging roads.

Visitor Use Impacts on Rare Vegetation Associations. A high proportion of the potentially rare vegetation associations in the park are associated with riparian zones or cliffs. These are areas of the park where recreation activities (boating, fishing, rock climbing, and sightseeing) are concentrated and threaten occurrences of potentially rare vegetation communities and their component plant and animal species (Vanderhoorst 2007). Rock-climbing can lead to decreased abundance and richness of vascular and nonvascular plants and lichens, indicating that the entire biotic community may be affected (McMillan et al. 2003). Fishing, recreational day use, and river access threaten the park's two globally rare high Appalachian flatrock communities.

Alteration of Natural Flooding Regimes. The park's rare Appalachian flatrock communities are dependent upon catastrophic flooding to retain the early succession dominance of the locally rare sedges, cedars, pines, and other plants typical of these sites. With construction of Bluestone Dam and consequent reduction of catastrophic flooding, species characteristic of other riparian and mesophytic communities have invaded the Appalachian flatrock communities. Regulation of water flow in the New River has also caused the soil layer to accumulate at flatrock sites, thus permitting hardwood species and non-natives to invade (Mahan 2004).

Invasive Plants. The spread of exotic plant species poses the greatest threat to the park's native vegetation because of their ability to often outcompete native species (Vanderhoorst 2007). Early successional vegetation has reclaimed many areas which were cleared in the past, especially where abandoned farms and mines have been acquired by the NPS. Vegetation in these areas usually includes a large component of exotic plant species, including intentional introductions and weeds. Weedy exotics have also become established in natural vegetation types, especially in rich forests and riparian communities (Vanderhoorst 2007). Kudzu is a very pervasive nonnative plant in the park that threatens natural communities as well as cultural resources. Japanese knotweed has completely transformed several kilometers of riparian shoreline into mono-cultures of knotweed. Garlic mustard (*Alliaria officinalis*) another aggressive colonizer, along with Japanese stilt grass (*Microstegium vimineum*) threatens large expanses of mesic bottomland habitat that is home to most of the park's rare plant species. Japanese knotweed (*Polygonum cuspdatrum*) and purple loosestrife (*Lythrum salicaria*) are particularly

damaging to floodplain habitats because of their ability to rapidly colonize native and disturbed areas.

3.2.5 Aquatic Wildlife

- **Fish**

A variety of habitat types in the New River support a diversity of fish. Biological surveys indicate that from 72 (NPSpecies 2003) to 90 (Purvis et al. 2002) species of fish are present in the park. WV GAP data predicts that 68 species of fish occur in the park, representing 40 percent (68 of 167 species) of the fish species known from West Virginia and 10 percent (7 of 68 species) of the species of special concern from West Virginia (WV Gap Analysis Program 2003).

The most common species within the New River are bigmouth chub (*Nocomis platyrhynchus*), spotfin shiner (*Cyprinella spiloptera*), silver shiner (*Notropis photogenis*), mimic shiner (*Notropis volucellus*), bluntnose minnow (*Pimephales notatus*), channel catfish (*Ictalurus punctatus*), flathead catfish (*Pylodictis livaris), and smallmouth bass* (Lobb et al. 1987, Purvis et al. 2002). Small tributaries contain brook trout (*Salvelinus fontinalis*), rosyside dace (*Clinostomus funduloides*), blacknose dace (*Rhinichthys atractulus*), creek chub (*Semotilus atromaculatus*), mottled sculpin (*Cottus bairdii*), and fantail darter (*Etheostoma flabellare*).

Native Nongame Fish. The New River drainage has a native fish fauna that is distinct from those of the rest of the Ohio River system (Jenkins et al. 1994). The fauna are composed of relatively few native species with a high proportion of these species being endemic (species with their native range restricted to a certain geographic area) (Lincoln et al. 1982). The high rate of species native only to the area is primarily due to the isolation of the New River from neighboring river systems by Kanawha Falls (Sheldon 1988). Seven species of fish are endemic to the New River drainage (Stauffer et al. 1980, Jenkins et al. 1994): bigmouth chub, New River shiner (*Notropis scabriceps*), Kanawha minnow (*Phenacobius teretulus*), fine-scaled saddle (candy) darter (*Etheostoma osburni*), Bluestone sculpin (*Cottus* sp. [undescribed]), Kanawha darter (*Etheostoma kanawhae*), and Appalachian darter (*Percina gymnocephala*). However, only the bigmouth chub, a species of special concern in West Virginia and the New River shiner have been collected within the boundaries of the park (Stauffer et al. 1980, Welsh et al. 2001, Purvis 2004).

The bigmouth chub spawns in mid-May in riffle, run, and tail-of-pool habitats (Lobb et al. 1988). Areas with gravel (used for nest building, shallow depths, and moderate velocities are preferred spawning habitat for this species (Lobb et al. 1988).

Nonnative Fish. The New River watershed has an unusually high number of nonnative fish. Forty-seven species of fish in the New River watershed are native and 43 are nonnative (Purvis et al. 2002). With 48 percent of its fish fauna being

nonnative, the New River system has the largest number and proportion of nonnative fish species among major eastern and central North American drainages (Jenkins et al. 1994, Mott 1995). Prior to European settlement, Kanawha Falls acted as a natural barrier to fish migration, and the portion of the New River above the falls was relatively low in fish diversity but had a high rate of endemism (Jenkins and Burkhead 1994). Today, as a result of nonnative species introductions, species distribution above and below the falls is about equal (Cincotta et al. 1999). Recent research indicates that several species of nonnative fish have expanded their range in the park (Cincotta et al. 1999). The most recent addition to the New River fauna is the rudd (*Scardinius erythrophthalmus*), a minnow native to Europe (Easton et al. 1991).

One factor that appears particularly important in the introduction and the spread of nonnative fish species in the park is dumping of bait buckets by anglers (Purvis et al. 2002). In particular, least brook lamprey, telescope shiner, whitetail shiner, spottail shiner, and variegated darter are probably benefiting from bait bucket dumping (Purvis et al. 2002). The introduction of nonnative fish and their range expansions within the New River could have negative effects on native fish populations (Mahan 2004). For example, the variegated darter and rainbow darter (*Etheostoma caeruleum*) are nonnatives that may out compete natives (Welsh et al. 2001).

Game Fish. The New River within the park is one of the most important warm-water fisheries in West Virginia and is one of the most heavily fished areas in the eastern United States (Purvis et al. 2002, Jones et al. 2003). The New River contains excellent warm-water fish habitat, with a pool-riffle geomorphic structure, abundant cover, and generally good chemical quality. New River game fish include muskellunge, channel and flathead catfish, white crappie (*Pomoxis annularis*), black crappie (*Pomoxis nigromaculatus*), smallmouth bass, spotted bass (*Micropterus punctulatus*), largemouth bass, and walleye (*Sander vitreum*) (NPS 1994). Most game fish presently found in the New River were deliberately introduced, and only four game fish, American eel (*Anguilla rostrata*), channel and flathead catfish, and green sunfish (*Lepomis cyanellus*), are native (Jenkins et al. 1994). In addition the state of West Virginia stocks nonnative rainbow and brown trout in the tributaries to the New River within the park (Mott 1995).

One of the most sought after game fish in the park is the smallmouth bass. This game fish is not native to the New River or its drainages and was probably first introduced in West Virginia in the early 1800s (Jenkins et al. 1994). This species supports a valuable recreational fishery throughout its native and introduced range. Smallmouth bass decrease in abundance downstream of Bluestone Dam, correlating with a decrease in macroinvertebrate production downstream from the dam (Easton et al. 1995). Catch-and-release regulations are in effect for smallmouth and largemouth bass in the park between I-64 and the takeout at Grandview Sandbar).

Brook trout, brown trout, and rainbow trout are stocked by the WV Division of Natural Resources in numerous tributaries of the New River for purposes of maintaining a put and take fishery. Some streams are also stocked by local chapters of Trout Unlimited. It is believed that most stocked trout are caught within a short time after stocking, although many fish may live for many weeks or months after stocking. An apparently self-maintaining population of brook trout has become established in Buffalo Creek, which is designated "fly-fishing only" by the state. An apparently self-maintaining population of brown trout has become established in lower Glade Creek, which is designated "catch-and-release" by the state.

- **Aquatic Invertebrates**

Molluscs, crayfish, and other macroinvertebrates are important components of aquatic environments in the park.

Mussels. Native mussel communities are an important part of the benthic community in the park. The majority of mussel beds in the park are in the upper third of the park (Jirka et al. 1987). Mussels decrease significantly in abundance below Glade Creek with no living or dead mussels found in the lower eight miles of the river within the park (Jirka et al. 1987. Eight mussel species in the park are predominately found on gravel, cobble, and sometimes sandy substrate. Submerged aquatic vegetation is important to establishment of mussel beds in the park because it provides habitat to the fish hosts of the larval mussels (Jirka et al. 1987). Additionally the environmental conditions created by islands in the river seem to support mussel beds (Jirka et al. 1987).

Although there are abundant mussel fauna in the park, the population is relatively low in diversity (eight species) when compared to the diversity of mussels (34 species) found in the Kanawha River (Taylor 1983). Physical barriers to upstream dispersal of fish and mussels, particularly Kanawha Falls, probably have the greatest influence on mussel diversity in the park (Jirka and Neves 1987). Mucket pearly mussel (*Actinonaias [ligamentina] carinata*) is the most common mussel species within the park, although it has never been collected upstream of Roundbottom Creek (Markham et al. 1980, Pennington and Associates 2002).

Because native mussels are declining throughout the Appalachians, and because of their dependence on good water quality, most native mussels are recognized as species of special concern in West Virginia.

Crayfish. Seven species of crayfish are known to exist within the park, of which only the Appalachian brook crayfish (*Cambaraus bartonii*) and rock crayfish (*Cambaraus carinirostris*) are native. The nonnative species were likely introduced by anglers as discarded or escaped bait (Purvis et al. 2002).

Crayfish are an important food item for many birds, mammals, and reptiles and are the major food item for large smallmouth bass (Roell et al. 1985). Crayfish also support an important recreational and commercial bait fishery in the park (Nielsen et al. 1988, Jones at al 2003). At current levels the commercial harvest seems to be sustainable in the park with annual harvest by anglers and commercial bait catchers at about 4 percent of annual production (Roell et al. 1985).

Macroinvertebrates. Monitoring for invertebrates in the New River indicates that aquatic invertebrate abundance is highest directly below Bluestone Dam and decreases downstream (Voshell 1985) and that the macroinvertebrate community is most diverse at Sandstone Falls (Voshell et al. 1996).

Hellgrammites (*Megaloptera* sp.) are relatively large aquatic macroinvertebrates that provide food for game fish and bait for anglers and support a recreational and commercial bait fishery in and around the park (Nielsen et al. 1988, Roell et al. 1985). Approximately 8 percent of the annual production of age 1 and 2 hellgrammites is harvested by anglers and commercial bait dealers (Roell et al. 1985)

Black Fly Larva. Black flies are found throughout the New River with the primary breeding area in the river stretch between Hinton and Meadow Creek (Voshell 1984). Black flies are an important food source for foraging fish, including smallmouth bass.

Other Aquatic Invertebrates. Little information is available about aquatic gastropods in the park (Mahan 2004). At least five species of pulmonate snails are found in the New River (Dillon et al. 1982). Abandoned mine portals in the park may provide significant habitat for cave isopods (Mahan 2004).

- **Aquatic Wildlife Management Concerns**

Fishery Management and Introduction of Nonnative Species. Nonnative fish generally threaten native fish assemblages through competition for habitat and food (Mahan 2004). Enabling legislation for the park permits WV DNR to stock trout within the park in consultation with the NPS. The NPS currently does not have adequate knowledge about native fish communities and the impacts of stocking nonnative brook, brown, and rainbow trout on native stream ecosystems are largely unknown (Purvis et al. 2002). Scattered literature (Crossman 1991) indicates introduced predatory fishes, like trout, probably alter fish and invertebrate community structure in streams (Garman et al. 1982, Allan 1983). Introduced game fish have been implicated in the decline and extinction of native fish populations (Miller et al. 1989, Moyle et al. 1990). Benthic algal communities (periphyton) may be indirectly influenced by predator-induced depression of algivorous fish (Power et al. 1983) and invertebrates (Feminella et al. 1995, Bourassa et al. 1998).

The native mussel community is at risk from competition with non-native species. The introduced Asian clam (*Cobicula fluminea*) is well established throughout the New River (Stauffer et al. 1980). Unlike native mussels *Cobicula* have free-swimming larvae (Pennak 1989) and therefore do not require a specific fish host to complete their life cycle. The NPS should monitor for the very invasive nonnative zebra mussel (*Dreissena polymorpha*) which has not yet been detected in the park.

Studies of crayfish in the New River have shown dramatic changes in community composition (Roell et al. 1992) due to the likely introduction of nonnative crayfish by anglers as discarded or escaped bait. Whether introduced crayfish have continued to expand their dominance in the community is a threat to the food supply for smallmouth bass and a threat to the commercial bait fishery in the area between Bluestone Dam and Sandstone Falls.

Bti Application to Remove Black Flies. The direct application of Bti by West Virginia to control black fly larva in the New River reduces black fly populations within the park and may detrimentally affect the availability of food (black flies and macroinvertebrates) for foraging fish, including smallmouth bass (Mahan 2004). Currently the change in prey selection by smallmouth bass and other fish that feed on black fly larva is unknown (Mahan 2004). Additional monitoring is needed to determine if spraying Bti has a negative effect on the biota of the river and to examine prey selection of fish post-Bti application to determine how prey use has changed due to control of black fly larva in the New River.

Sewage Pollution / Agricultural and Urban Runoff. Poor water quality caused by inadequately treated wastewater, agricultural runoff, and runoff from urban areas in the New River and its tributaries threatens native, nonnative, and game fish populations (Mahan 2004). Poor water quality in the New River also threatens native mussel communities (Mahan 2004).

Timber Harvesting. Unless carefully managed, timber harvest can substantially degrade habitat and fish populations (Bisson et al. 1992). In general there is a reduction in fish species diversity attributed to habitat simplifications, and an increase in standing crop biomass attributed to greater light penetration and autotrophic production (Bisson et al. 1992). Aquatic invertebrates are also adversely be affected by clear-cut timber harvest (Bisson et al. 1992).

Impoundments. High flow in the New River caused by dam discharge or natural flooding events could interrupt smallmouth bass and bigmouth chub spawning activity and decrease foraging success, especially during summer (Graham et al. 1986, Easton et al. 1995). Minimum water flow must maintain sufficient depths over spawning areas to prevent dewatering, but not too high so as to erode gravel nest mounds, especially during peak spawning activity (Lobb et al. 1988).

Increases in natural or human-induced (e.g., dam releases) flood events could result in increased streambed and bank instability, streambed scouring, erosion, and turbidity, which discourages riparian vegetation, streambed vegetation, and algal growth (Lobb et al. 1987). Any reduction in macrophytes and the dislodging of clinging macroinvertebrates would reduce the standing stock of macroinvertebrates in the river and potentially have negative impacts on fish productivity (Lobb et al. 1987).

Changes in substrate type and stability (e.g., erosive discharges), and high silt loads associated with dam discharges and sedimentation may negatively affect mussel communities (Jirka et al. 1987).

3.2.6 Terrestrial Wildlife

- **Mammals**

The park contains 91.5 percent (54 of 59 species) of the mammalian species known to occur in West Virginia and 77 percent (17 of 22 species) of the mammalian species of special concern in West Virginia.

White-tailed Deer. The population of white-tailed deer in the park vicinity (WV DNR District IV) is approximately 33 deer per square mile of available deer habitat (WV DNR 2003). This density is significantly higher than estimates of pre-European settlement deer densities of approximately 8 to 20 deer per square mile on the Appalachian plateau (Horsely et al. 2003). The WV DNR has recognized the population increase and has adjusted hunting regulations in an effort to control deer numbers (S. Pugh, 2003, NPS, pers. comm.). Annual harvest records for the park are unknown. In 2002 there were 29,927 deer harvested from WV DNR District IV, of which only 47 were recorded as being taken in the park. Hunters probably harvested more deer within the park but failed to indicate locations on harvest report cards (Mahan 2004).

Black Bear. The black bear population in West Virginia is generally growing. The majority of the population increase is centered in the southern part of the state, including Raleigh, Fayette, Boone, and Kanawha Counties. Recent studies in these counties indicate a very healthy bear population with an average litter size of three cubs. WV DNR has expanded bear hunting opportunities to keep pace with the biological and sociological carrying capacities for bears in each region of the state. WV DNR recently opened a statewide archery season, additional gun hunting, and a special November gun season in five southern counties, including Fayette and Raleigh where bear numbers exceed management objectives. The actual population size and harvest numbers for black bear in the park are unknown.

Allegheny Woodrats. The park contains globally significant populations of Allegheny woodrats (*Neotoma magister*), a federally designated species of special concern that is in decline throughout the rest of its range in the eastern United

States (Balcom et al. 1996). Most populations within New River Gorge National River are stable; however, a few populations have declined significantly since 1999.

The woodrat populations in and around the park may represent the core population for this species in the eastern United States. The reason for their persistence in the park is unknown, although it may be due to the occurrence of abandoned mine portals (Mahan 2004).

Bat Communities. The park contains a regionally significant assemblage of bats that includes 10 species that have been documented through various study methods. Bats in the park use abandoned mine portals as roosting sites and cliffs for foraging (Johnson 2003). Two federally endangered species of bats (Virginia big-eared bat [Cornynorhinus townsendii] and Indiana bat [Myotis sodalis]) have been identified as using abandoned mine portals in the park. In addition two state-rare species of bats, Rafinesque's big-eared bat (*Cornynorhinus rafinesquii)* and small-footed myotis (*Myotis leibii*), also have been identified as using abandoned mint portals (Castleberry et al. 2002).

Small Mammals. Ten species of small mammals (mice, voles, shrews, and moles) have been trapped in the park (Buhlmann et al. 1987). The long-tailed shrew (*Sorex dispar*), southern pygmy shrew (*S. hoyi winnemana*), and golden mouse (*Ochrotomys nuttalli*) are small mammals of special concern the have been document in the park (McDonald et al. 1989, WV DNR 2003). Other rare species of small mammals such as rock vole (*Microtus chrotorrhinus*), rock shrew (*S. dispar*), and water shrew (*S. palustris*) all may occur in the park as suitable habitat seems to be available.

Fur-bearing and Other Mammals. Little is known about the distribution and density of populations of riparian and furbearing mammals such as the northern river otter, beaver, mink and other weasels, muskrat, and bobcat (*Felis rufus*). Beaver (*Castor Canadensis*), mink (*Mustela vison*), muskrat (*Ondatra zebithicus*), and river otter (*Lutra Canadensis*) have been introduced into the New River system (Purvis et al. 2002).

- **Birds**

Currently 233 species of birds are known to occur in the park (NPSpecies 2003). This represents 74.4 percent (125 of 168 species) of the species found in West Virginia and 42 percent (25 of 59 species) of the species identified as state species of special concern (WV Gap Analysis Program 2003) (see Appendix F, Table F.3). Of the 233 species found in the park, approximately 93 were detected during breeding season and therefore may nest in the park (Pauley et al. 1997)

Neotropical Migratory Birds. The park is globally significant in providing critical habitat for neotropical migratory birds (neotropical migrants), especially the wood warblers (Family Parulidae). These species depend upon unfragmented mixed

deciduous forests with well-developed canopies and gap dynamics (e.g., tree falls) in place. Cerulean warblers, a neotropical migrant that is in decline throughout the Northeast appears to have a concentrated distribution in and around the park (Rosenberg et al. 2000). This population of cerulean warblers may be a critical source population for the Appalachians (Rosenberg et al. 2000). Several other species of neotropical wood warblers found in the park, including Swainson's warbler (*Limnothlypis swainsonii*), wood thrush (*Hylocichla mustelina*), Kentucky warbler (*oporonis formosus*), and worm-eating warbler (*Helmitheros vermivorus*) are either species of special concern in West Virginia (Swainson's warbler) or are on the Partners in Flight (PIF) watchlist (wood thrush, Kentucky warbler, worm-eating warbler) (USFWS 1999). The PIF watchlist does not include federally threatened or endangered species; rather, it identifies those species that are still fairly common but which will probably someday become endangered or threatened (USFWS 1999). Several species on the watchlist have declined precipitously over the past several decades, occupy habitats that are under severe threat, are found in low numbers, or have such restricted ranges that their existence is tenuous (USFWS 1999).

Aside from the species dependent upon mature, unfragmented forests, some bird species depend upon small (<1 ha {2.47 ac}) forest gaps created by tree falls and other natural and/or human induced disturbances (e.g., logging, land clearing around abandoned mine sites). These forest gaps contain early successional vegetation communities and add vegetative and structural diversity to the forest landscape. The golden-winged warbler (*Vermivora chrysoptera*), a species of special concern in West Virginia and declining throughout the eastern U.S., is a species that depends on these gap dynamics and is currently found in the park (Pauley 1993, Pauley et al. 1997, Canterbury et al. 2002).

Hemlock stands provide another important habitat component for rare species of birds at the park (Wood 2000). The Swainson's warbler and Louisiana waterthrush (*Seiurus motacilla*), two species that are either species of special concern or listed on the PIF watchlist in West Virginia, nest along streams in forests with some hemlock and/or rhododendron component (Wood 2000, O'Connell et al. 2003).

Waterbirds and Waterfowl. The waterways of the park support species of birds that depend on good water quality (e.g., Louisiana water thrush, belted kingfisher). Water-dependent species found in the park, such as green herons (*Butorides virescens*), great blue herons (*Ardea herodias*), spotted sandpipers (*Actitis macularia*), and various species of waterfowl, use riparian corridors along tributaries and emergent weed beds for foraging habitat (Buhlmann et al. 1987).

Raptors. Thirteen species of raptors have been documented in the park. Peregrine falcons (*Falco peregrinus*), once a federally listed species and since delisted, have been sighted in the gorge and could potentially nest on the cliff faces in the park (Sullivan 1995). Peregrine falcons have been hacked in the park, but no current or

historical nesting records for the park exist (Sullivan 1995, Jarvis 2002). Another raptor, the bald eagle (*Haliaeetus leucocephalus*), has been documented in the park (NPSpecies 2003).

Wild Turkey. Based on harvest records, wild turkey populations in West Virginia appear to be stable or expanding (WV DNR 2003). Biologists estimate that there are approximately 130,000 turkeys in West Virginia (WV DNR 2003). The last decade has ranked as the most productive turkey harvest period on record in West Virginia. In 2002 there were 19 turkeys harvested from the park (WV DNR 2003). Hunters may have harvested many more turkeys in the park but failed to indicate locations on harvest records.

- **Reptiles**

Thirty-eight species of reptiles have been documented in the park (NPSpecies 2003). Approximately 79.5 percent (31 of 39 species) of the reptiles of West Virginia are predicted to occur in the park and 62 percent (10 of 16) of the reptile species of special concern are predicted to occur in the park (see Appendix F, Table F.3).

Turtles. Two subspecies of the painted turtle (*Chrysemys picta marginata* and *C. p. picta*) occur in the park. It is one of the few areas where these subspecies interbreed, making the park regionally significant for painted turtles (Buhlmann and Vaughan 1987). The eastern river cooter (*Chrysemys concinna*), a species of special concern in West Virginia, is native in the park. One other turtle species of special concern, the common map turtle (*Graptemys geographica*), occurs in the park.

Lizards and Snakes. Timber rattlesnakes (*Crotalus horridus*) are known from several locations in the park, including Stone Cliff, Glade Creek, and Grandview, as well as Babcock State Park where there are den sites. Large populations of fence lizards (*Sceloporus undulatus*), five-lined skinks (*Eumeces fasciatus*), and copperheads (*Agkistrodon contortrix*) are also present. Three other reptile species of special concern occur including the broad-headed skink (*Eumeces laticeps*), eastern worm snake (*Carphophis amoenus*), and rough green snake (*Opheodrys aestivus*).

- **Amphibians**

Continuous forest, abandoned mine portals, and river/stream systems of the park provide habitat for a diverse, nationally significant assemblage of amphibians. Forty-eight species of amphibians have been documented in the park (NPSpecies 2003). These species represent 82 percent (37 of 45 species) of the amphibian species known from West Virginia and 60 percent (10 of 17 species) of the state species of special concern (WV Gap Analysis Program 2003).

Salamanders. An outstanding diversity of woodland salamanders occur in the park (Pauley et al. 1997), typical of the southern Appalachians which contain the most diverse temperate salamander communities in the world (Southern Appalachian Biodiversity Institute 2003). Tributaries of the New River contain a high species richness of salamanders within the park as due abandoned mine portals.

The black-bellied salamander (*Desmognathus quadramaculatus*), a species of special concern in West Virginia, is at the northern most portion of its range in the park and more common there than previously thought (McDonald et al. 1989). Cave salamanders, another species of special concern in West Virginia, use abandoned coal mines (Pauley et al. 1997, Bryan et al. 1999). Cave salamanders use abandoned mine portals and other habitat (e.g., fractured rock) in the park. Wet sandstone cliffs are critical habitat for the rare green salamander (*Aneides aeneus*) and the common slimy salamander (*Plethodon glutinosus*) (Buhlmann et al. 1987, Pauley 1993, Pauley et al. 1997). Dowdy Creek appears to be an especially important, high quality stream supporting both black-bellied and spring salamanders (*Gyrinophilus porphyriticus*) (Buhlmann and Vaughan 1987).

The mudpuppy (*Necturus maculosus*), a large aquatic salamander has been captured in the park. Intensive searches have failed to document the presence of the eastern hellbender (*Cryptobranchus alleganiensis*) – another large aquatic salamander.

Frogs and Toads. Little is known about the distribution and abundance of frogs and toads in the park. They are a potentially important food resource for herons and riparian mammals.

- **Impacts of Hunting on Terrestrial Wildlife**

New River Gorge National River when combined with the Bluestone National Scenic River and the Gauley River National Recreation Area forms the largest public hunting area in southern West Virginia. Hunting is permitted within most of the New River Gorge National River, but is restricted from the former Grandview State Park area and other high use areas. Much of the land still in private ownership within the park boundary is leased to private hunting clubs and is restricted to club member use only.

No research is available describing hunting patterns and hunter intensity at New River Gorge National River (Mahan 2004). However, national and state trends suggest that big game hunting is more likely to occur than small game hunting within the park boundaries (Hooper et al. 2006). Deer hunting probably is the most popular activity, based in part on historical and current hunter numbers, days afield hunting, and hunting expenditures (Hooper et al. 2006). National and state trends also suggest that squirrel hunting is the most popular small game activity (Hooper et al. 2006). Due to small sample sizes within the national surveys, existing

information is not sufficient to make firm conclusions about preferences or intensity of migratory bird hunting and other animal hunting within the park boundaries (Hooper et al. 2006).

Recent study of the impacts of hunting in the park indicates that hunting in accordance with applicable state regulations has not caused adverse effects on any of the species of mammals or birds which are or may be hunted and that currently occur within the park boundaries (Hooper et al 2006). Recent study further indicates that no evidence exists to support the position that any other species found within the park boundaries have been affected adversely by hunting (Hooper et al 2006).

- **Terrestrial Wildlife Management Concerns**

Loss of Forest Habitat and Forest Fragmentation. Populations of neotropical wood warblers are threatened by loss of forest habitat and forest fragmentation, particularly along waterways and in upland forests. Forest fragmentation also threatens the park's globally significant population of Allegheny woodrats.

Deer Overbrowsing. (see Section 3.2.4 above)

Exotic Insects and/or Diseases. Hemlock-dependent species of neotropical birds will be adversely threatened if hemlock woolly adelgid causes hemlock decline in the park. The rare water shrew (*S. palustris*) – if present in the park, as suspected – would be negatively affected by loss of eastern hemlock.

Water Quality. Poor water quality in the New River and its tributaries threatens populations of aquatic-dependent avian species, turtles, salamanders, and riparian fur-bearing mammals in the park.

Invasive Species. Invasive nonnative plants in wetlands and riparian areas may adversely affect breeding habitats for salamanders. Nonnative frogs such as the green treefrog (*Hyla cinerea*) and squirrel treefrog (*Hyla squirlla*) may be being inadvertently introduced to the park from motor homes.

Collecting. Over-collecting of salamanders by anglers and commercial bait harvesters may threaten salamander populations in the park. Over 50 percent of commercial bait licenses handle salamanders. The black-bellied salamander (*Desmognathus quadramaculatus*) a species of special concern in West Virginia is a particularly popular fishing bait and may be particularly susceptible to over-collecting.

Gaps in Knowledge. Little is known about the occurrence and distribution of many species of special concern in the park; research is needed to ascertain the use of habitat – the New River, the river's tributaries, wetlands, rock outcrops, cliff faces, abandoned mine portals, and ephemeral pools – by these species. Research is also

needed to better understand avian habitat relationships, avian distribution and abundance, and avian reproductive success at the park. Accurate counts of game species taken from the park are needed, particularly for white-tailed deer, black bear, and turkey. Reasons for the persistence of the Allegheny woodrat in the park compared to declines in the rest of their range are not understood. Information about foraging behavior, diet, and habitat use is needed for the park's bat population.

3.2.7 Rare, Threatened, and Endangered Species

Numerous rare, threatened, and endangered species are known to occur in the park (see Figure 3.7 and Appendix F, Table F.3). Species designated extremely rare and critically imperiled in the state of West Virginia include 19 plant species, 2 mammal species (small-footed myotis and Rafinesque's big-eared bat), and 2 mussel species (purple wartyback and pocketbook mussel). The status and distribution of many of these species and their essential habitats within the park are largely unknown.

- **Federally Designated Plant Species**

No federally-designated plant species are known to occur within the park. However two federally-designated plant species (not listed in Appendix F, Table F.3) are suspected although their presence has not yet been confirmed by resource managers. Virginia spirea (*Spiraea virginiana*) is a federally threatened, disturbance-adapted shrub occurring on steeply-slope riparian sites that was found historically along the New River below Hawks Nest Dam in the 1960s (Mahan 2004). Running buffalo clover (*Trifolium stoloniferum*) is a federally endangered species that has reportedly been found on the Cotton Hill floodplain in the park (Mahan 2004).

Two state-designated plant species are under consideration for federal listing as threatened or endangered. Steele's meadow rue (*Thalictrum steeleanum*) is found in three locations in the park on well-drained slopes with relatively open understory.

Bittercress (*Cardamine clematitis*) may be present on the New River floodplain near Stone Cliff, although there is uncertainty as to whether the species present is actually *Cardamine flagellifera*; both *Cardamine* species are southern Appalachian endemics that reach their northern limit in West Virginia and are found only within the park in West Virginia.

- **Federally Designated Mammal Species**

Two mammal species are federally-designated as endangered and one species is federally-designated as a species of special concern. The federally-endangered Indiana bat (*Myotis sodalis*) and the Virginia big-eared bat (*Cornynorhinus townsendii*) use abandoned mine portals as roosting sites and cliffs for foraging. The park contains stable, healthy, globally significant populations of Allegheny woodrats (*Neotoma magister*), a federally designated species of special concern that

New River Gorge National River
Park Significance Statement 4

New River Gorge National River contains a large, outstanding, and representative group of historic places that testify to the experiences of those diverse people who settled and developed this part of Appalachia between the 19th and mid-20th centuries.

Fundamental Resources and Values

- rare historic colliery structures and coke ovens of unmatched integrity, such as at Nuttallburg and Kaymoor, and the historic structures and ruins associated with more than 50 company owned towns
- railroad depots, rail yards, rail grades, steel and timber trestle bridges, railroad equipment, archeological sites and associated towns, like Thurmond, developed to support the railroad
- rare surviving examples of subsistence farms, such as Trump-Lily and Richmond-Hamilton

Other Important Resources and Values

- former community sites, homesteads, and other places in the park where the ancestors of families long associated with the New River lived and worked and where their living descendents today have traditional associations and land-based ties
- the knowledge and cultural values of the families long associated with New River Gorge who have traditionally used the waters of the New River system, the aquatic plants and animals that inhabit those waters, and the native terrestrial plants and animals in and around New River Gorge
- the history and archeology associated with the park's lumbering industry, Civilian Conservation Corps-era state parks, and Native Americans

Table 3.4

New River Gorge National River
Prehistoric Chronology

13000 – 8000 B.C.
Paleo Indian Period

Small, free-wandering groups subsisted by hunting large game animals and foraging wild plants

8000 – 10000 B.C.
Archaic Period

Shift to seasonal hunting and gathering; evolved to more settled people who supplemented hunting and gathering by harvesting sunflowers, pumpkins, and gourds

1000 B.C. – A.D. 900
Woodland Period

Small groups living in rockshelters and some villages with economies based on intensive maize-based agriculture

A.D. 900 – 1670
Late Prehistoric Period

Small groups with increasing sedentary village life and dependence on cultivation of corn, beans, and squash

is in decline throughout the rest of its range in the eastern United States (Balcom et al. 1996).

The federally endangered northern flying squirrel (Glaucomy volans fuscus), is predicted to occur in the park but never documented (WV Gap Analysis Program 2003).

- **Federally Designated Amphibian Species**

The Cheat Mountain salamander (*Plethodon nettingi*), a federally listed threatened species, is predicted to occur in the park (WV GAP 2003). However it has not been documented and the appropriate habitat (boreal forests) is not present in the park.

3.3 Cultural Resources

3.3.1 Prehistoric Archeological Resources

- **Prehistoric Archeological Resources**

The first human occupants in the New River Gorge area were Paleo-Indian hunters who arrived about 13,000 years ago. Two features of the gorge area significantly influenced prehistoric use of the region, making it an extremely interesting location archeologically (Pollack and Crothers 2005). Native Americans who inhabited the area in prehistoric times dating back over 13,000 years ago were primarily attracted by the abundance of natural resources in its uplands and riparian areas. Level ground in the uplands on either side of the New River also provided natural north-south travel corridors connecting prehistoric cultures in the Southeast and Ohio River Valley.

Intermontane and Dan River Cultures upstream of the gorge included prehistoric cultures of the valley and ridge province of the upper Tennessee River system and the upper reaches of the Roanoke River Valley. A significant Fort Ancient Bluestone phase farming community was present in the Bluestone Lake area immediately upstream from the gorge. Downstream of the gorge prehistoric groups had more affinities with the Fort Ancient Culture of the Kanawha and Ohio River Valleys. While the cultures represented tribal societies of similar sociopolitical complexity, they were distinguished from one other by differences in material culture, subsistence patterns, and village organization (Pollack and Crothers 2005). Non-local goods found at sites upstream and downstream of the gorge – in the form of marine shell and copper artifacts – suggest that these groups participated in long distance exchange networks, especially after A.D. 1400 (Pollack and Crothers 2005).

The presence of historic trails that appear to have some antiquity and that traverse the uplands in the vicinity of the gorge also suggests some level of interaction among groups living to the south and north (Pollack and Crothers, 2005). Primary trails crossed the gorge area, but did not follow the New River itself due to the

natural obstacles. Secondary trails also crossed the gorge, fording the river at different places.

Recorded Prehistoric Sites. Archeological investigations conducted since the late 1800s have documented 355 prehistoric archeological sites within the park or within one kilometer of the park boundary (Pollack and Crothers 2005). Prior to 1980 archeologists had identified only 13 prehistoric sites within the park. Since 1980 the National Park Service, the West Virginia Geological Survey, the West Virginia Archaeological Society, cultural resource management consultants, and avocational archeologists have recorded an additional 342 prehistoric sites. The most comprehensive effort was included as part of the *Archaeological Overview and Assessment of New River Gorge National River* (Pollack and Crothers 2005). This study included a survey of 1,013 acres designed to obtain information regarding prehistoric utilization of a variety of environmental zones with the park.

Surface collections, documented private artifact collections, and shovel testing have provided most of the available information for the 355 recorded sites. Archeologists have conducted limited excavations at only a few sites. Most sites have not been evaluated for eligibility for inclusion in the National Register of Historic Places. Currently, although several are identified as significant archeological resources (Fuerst 1981) none are nominated to or have formally been determined eligible for the National Register.

Site Distribution Patterns by Time Period and Site Type. In general the prehistoric sites tend to occur in five geologic and physiographic settings within the park (Pollack and Crothers 2005):

- large floodplains and relatively flat slopes close to water with old alluvial and colluvial deposits
- cliff-forming Raleigh and Nuttall sandstone members of the New River Formation
- upland settings associated with ridgetops, overlooks, and the level landforms at stream junctures
- major tributary valleys of the New River
- some features of the New River, such as major falls and shoals may have attracted prehistoric groups

Based solely on the number of identifiable component(s) found at the 355 sites the prehistoric activities in the New River Gorge area seems to have peaked during the Late Archaic (3000-1000 B.C.) and then gradually declined through the Late Prehistoric (A.D. 1000-1700) (Pollack and Crothers 2005). The most intensive utilization occurred during the Late Middle and Late Woodland periods. The sites utilized included small upland camps, rockshelters, mounds, large bottomland

camps, and perhaps some villages. The most common site type recorded is an open habitation without subsurface features (139 sites or 39%), typically characterized by a surface scatter of chert flakes. Most of these sites are located upstream from Sandstone Falls, on wider floodplain areas and terraces. The second most commonly found site is a rockshelter (107 sites or 30%). Through time there was an increase in the use of rockshelters, with Woodland and Late Prehistoric groups using these types of sites to a greater extent than earlier groups. Other sites types include multiple activity areas that were used for tool manufacture and rejuvenation, and hunting and gathering camps. Only one earth and stone mound has been documented in the park. Because no Paleo-Indian sites have been excavated in West Virginia, the two Paleo-Indian sites recorded in the park would be very significant if further research determines that the sites have intact Paleo-Indian components (Pollack and Crothers 2005).

- **Prehistoric Archeological Resource Management Concerns**

Gaps in Knowledge. Additional archeological research in the park is needed to document potential prehistoric archeological sites and to fully understand the most potentially significant sites investigated in previous field studies. Because of the park's position between the prehistoric cultures in the Ohio River Valleys and those in the Southeast, further prehistoric archeological research has the potential to significantly contribute to understanding of the cultural diversity of, and interaction between, Native American groups who once lived in western West Virginia and southwestern Virginia (Pollack and Crothers 2005).

National Register Nominations. As significant prehistoric archeological sites are identified in the park, an evaluation of them should be completed to assess their eligibility for listing and site management plans prepared for their protection.

3.3.2 Historic Contexts

Five historic contexts provide a framework for describing and understanding the cultural resources within the boundaries of New River Gorge National River: 1) the coal industry, 2) the railroad industry, 3) the lumber industry, 4) Euro-American settlement/agriculture, and 5) recreation/state parks (Unrau 1996, Workman et al. 2005, Stahlgren et al. 2007).

- **Coal Industry Historic Context**

Historic Development of the New River Coal Field. Lying in the center of the rich Appalachian bituminous coal field, two-thirds of the land in West Virginia is underlain with coal seams, fifty of which are sufficiently thick to be considered minable. Found in all but two of West Virginia's 55 counties coal has been mined in the state for more than a century. From 1927 until 1973 West Virginia led the nation in coal production in the United States. In no other state in the nation has coal been so central to economic development and social life.

Table 3.5

New River Gorge National River
Historic Chronology –

1670 – 1798
Early Exploration and Settlement

Traders entered the region in the 1670s; early settlement began in 1744 primarily by the English, German, and Scotch-Irish; by the mid-1700s indigenous culture had changed irrevocably

1798 – 1873
Pre-Industrial Period

A self sufficient farm economy evolved in the gorge; construction of the James River and Kanawha River Turnpike enabled some farmers to engage in trade

1873 – 1902
Industrialization

Opening of C&O Railroad through the gorge enabled rapid growth of the coal and lumber industries; thousands of workers – including many immigrants from Europe and blacks – moved into the gorge

1902 – 1925
Prosperity

Production from the New River coal field reached its peak; new waves of immigrants arrived

1925 – 1960
Post Industrial Recession

The Great Depression came early and stayed late; the over expanded coal industry became unprofitable and timber supplies were depleted; out-migration commenced and many of the gorge's towns were abandoned; mining largely ceased by the early 1960s

The southern West Virginia coal fields exported huge amounts of coal recognized internationally for its quality. Production commenced in 1873 when the C&O Railroad service became operational in the area. Growth of the coal industry during the 1870s and 1880s was very rapid and towns and cities grew up throughout the region. Before the development of coal, the local economy was based predominantly on subsistence agriculture and there were few manufacturing jobs. By the early 1920s southern West Virginia was a heavily populated region with an industrial economy dependent upon coal production and linked to national and international markets. Largely because of plants along the New River the state was also a major producer of high-grade coke required for steel production. Throughout this period West Virginia remained devoted to the production of coal and coke destined for distant markets, reliant upon the railroads for transportation.

New River Gorge lies within the New River coal field. The coal-bearing rocks consist of some 2,100 feet of interbedded sandstone, shale, and underclay, the principal seams of which are the Beckley, Sewell, and Fire Creek formations. The importance of the coal in the gorge area is derived from its suitability for power plants and metallurgical use. It is a clean-burning, low-sulfur, low-ash bituminous coal that is internationally recognized for its quality and high energy content (BTUs).

Coal development in the New River coal field was originally characterized by small enterprises, frequently organized on a family basis. Many of the early entrepreneurs who opened and developed the field often came with experience in other coal fields, especially from eastern Pennsylvania and Great Britain. The first coal shipment over the C&O Railroad was made from Quinnimont by Joseph Beury in 1873, and included coal extracted from the Fire Creek seam in his Quinnimont mines. Other entrepreneurs – such as John Nuttall – soon became interested the New River coal field, developing other mines throughout the New River Gorge. The 1880s were a boom decade in the New River Gorge area as dozens of mines were opened and coal towns settled. These early operations were located along the C&O mainline, with the majority of the mine openings high on the walls of the gorge and the mining towns located on the plateau surrounding the gorge or at the bottom of the gorge along the railroad. Later development of the coal field accessed rich seams on either side of the river as branch lines were built up tributary drainages such as Loup Creek to Glen Jean and Keeney Creek in the Nuttallburg area.

Production in the New River coal field increased dramatically in the early years of the 20th century, peaking in 1916 when Fayette and Raleigh Counties produced more than 18 million tons of coal, with Fayette County ranking second overall in statewide production. After 1917 a coal slump settled over the field. Between 1922 and 1933, production levels fluctuated with an overall decrease in the quantity of coal mined. This decrease followed the overall industry trend throughout West Virginia in the 1920s and early 1930s as the industry suffered from the effects of overexpansion and mines closed when demand slackened. The coal market

Table 3.6

New River Gorge National River
Coal Industry Complex – Known and Potential Cultural Resource Types (Unrau 1996)

Primary Production Facilities
- mining portals
- mining machinery

Secondary Production Facilities
- coal hoist/headhouses
- tipples
- conveyors
- buildings, structures, and objects associated with coal production
- mining plant internal transportation facilities
- facilities for coke-making

Transportation Facilities
- railroad tracks, sidings, yards, and support structures
- rolling stock
- roundhouses, stations, repair shops, and offices

Company Towns
- houses and ancillary outbuildings
- company stores
- community buildings
- private manufacturing/commercial buildings

Buildings in Incorporated Towns Associated with the Coal Industry
- residences and ancillary outbuildings for:
  - coal operators and managers
  - coal miners
  - railroad workers
  - railroad administrators
- private manufacturing/commercial buildings and ancillary outbuildings
- community buildings

Buildings or Sites Associated with Significant Events and/or Personalities in the Mine Wars and the Union Movement during the 1900 – 1930 Period

Environmental Sites
- "gob" piles
- water impoundments

Sites Associated with Recent Historical Figures or Recent Events of Great Significance Related to the Coal Industry

Government Facilities Associated with the Coal Industry

recovered during World War II, and a brief coal boom ensued in the New River field, leading to peak production in the New River field during the late 1940s. Changes in methods of recovering coal resources, such as surface and auger mining, began to accelerate in the 1950s, drastically altering the economy as well as the landscape of the New River field. These changes, together with the working out of some older mines and slackening demand, substantially reduced coal production in the gorge area. By 1968 coal production from the field had dropped dramatically and mining within New River Gorge had stopped.

Company towns throughout the gorge – once bustling with life and activity – were the most important institutions in the coal fields of southern West Virginia and New River Gorge. Housing was a necessity, and the coal operators were the only entities in the region with the means to build it on the massive scale required by the expanding industry. As a result the company town was more prevalent in West Virginia than in any other state. Locations of company towns were determined by proximity to mine outcrop. The basic facilities for mining, the mine opening and the tipple were constructed first. Next consideration was given to the location of a railroad siding. Finally, in the remaining space, whether it was valley floor or hillside, the town was constructed. Some towns in the gorge existed on two or more levels, the river edge and one or more benches or ridges above. New River coal towns, like others in southern West Virginia, practiced a tripartite racial and ethnic form of segregation with separate residential areas for whites, immigrants, and blacks. The quality of housing was simple and poor with better quality homes closer to the town center set aside for white families.

During the boom mining years there were some 45 towns in the gorge. Now few – such as Thayer – remain.

Coal Industry-Related Cultural Resources in the Park. Today most of the gorge's historic properties related to coal mining are best described as historic archeological sites. Abandoned coal mining operations and company towns which might have survived as "ghost towns" in a different environment have deteriorated rapidly in the temperate New River climate. Most structures associated with the coal towns and mines were designed to be short-lived and were dismantled when abandoned. Coal company houses and other structures along the river in the gorge were often salvaged or removed to be rebuilt in communities above the gorge. Many abandoned houses were destroyed by fire or years of neglect because of absentee ownership. More substantial structures, such as coke ovens and tipples, have survived better than the frame residences and mine equipment structures, but all have been subjected to vandalism, salvage, "pot-hunting", and the destructive effects of rapid and dense vegetation growth. The West Virginia State Historic Preservation Office estimates that the extant ruins of most coal towns and mining sites in the gorge contain an average of some 10 to 20 percent of original fabric (Unrau 1996). A few historic structures survive relatively intact in the historic coal

towns and mining sites, but many towns and mines have only remnant ruins while others have disappeared entirely. In the most isolated sections of the gorge many coal town and mining sites have virtually returned to their preindustrial state.

- **Railroad Industry Historic Context**

Historic Development of the Railroads in the Park. Commencing service in 1873, the Chesapeake and Ohio (C&O) Railroad was the first post-Civil War trunk line constructed through the Central Appalachians, stretching 419 miles from Richmond – then one of the south's leading industrial cities – to the Ohio River Valley at Huntington, West Virginia. New River Gorge presented the most challenging section for engineering and construction of the new C&O line due to the vertical gradient, the gorge, the narrow river floodplain, and bedrock conditions. The last sections of the railroad to be built included the Stretcher's Neck Tunnel (completed in July 1872) followed by the last few difficult sections along the lower New River. On January 29, 1883, the last spike was driven at Hawks Nest by dignitaries from Richmond, Virginia.

Although many factors have shaped the New River Gorge area, none has been as significant as the coming of the railroad and the subsequent exploitation of the coal reserves along its route. The impact of the railroad on the culture and landscape of New River Gorge was immediate and dramatic. In the fifty years following the railroad opening, thousands of workers and their families flooded into the gorge to exploit the coal and timber resources that were within easy reach of the railroad. Dozens of boom towns emerged. Development stretched up the tributaries of the New River, following spur lines built to tap outlying coal deposits, including the Keeney Creek Branch Line, Southside Branch Line, Piney Creek Branch Line, Rend Branch Line, Laurel Creek Branch Line, Kanawha Glen Jean and Eastern Railroad, Manns Creek Railroad, White Oak Railway, Glade Creek and Raleigh Railroad, and Sewell Valley Railroad.

With the coming of the railroad to the gorge five principal towns having a direct relationship to the railroad industry were established in the area. These towns – Hinton, Thurmond, Quinnimont, Prince, and Meadow Creek – became notable not only as railroad shipping points but also as settlements having significant rail yard operations and structural elements embodying a distinctive style of industrial railroad architecture. These towns also exemplified the ways in which the railroad industry influenced the historical demographic and socioeconomic patterns of the area.

Aside from these five towns there were numerous other locations along the C&O mainline in the gorge where railroad-related structures were constructed. The same distinctive architectural style was used by the C&O for stations, depots, signal stations, employee residences, and other structures associated with operation and maintenance of the mainline.

Table 3.7

New River Gorge National River
Railroad Industry Complex – Known and Potential Cultural Resource Types (Unrau 1996)

Primary Railway Roadbed Structures/Features

- rail line components – rail bed, tracks, crossties
- roadbed structures – bridges, tunnels, culverts, drainage structures, trestles
- roadbed engineering features – cuts, fills, embankments

Secondary Railway Support Facilities

- railway operations – powerhouses, engine houses, switches, signal towers, block signal bridges, water stations, coaling towers, sanding stations, repair shops, sidings, yards, depots, stations, roundhouses, offices, bunkhouses, manager's houses
- rolling stock

Railroad Service Towns/Centers

- houses/residences and ancillary outbuildings for:
  - railroad operators
  - railroad managers
  - railroad workers
- community buildings
- private manufacturing/commercial buildings

Buildings in Incorporated Towns Associated with the Railroad Industry

- houses/residences and ancillary outbuildings for:
  - railroad operators
  - railroad managers

Government Facilities Associated with the Railroad Industry

Following World War II the role of the railroad diminished. As coal company towns began to disappear after the 1950s, the significance of the railroad began to decline. Paved roads and automobiles enabled miners to live on the plateau rather than within walking distance of the mines. The railroad became less important to the transportation needs of the region. In the 1950s dieselization of the railroad impacted towns throughout America, including the gorge's railroad towns – whose economies were almost entirely dependent on the railroad – as traditionally-skilled workers trained to maintain steam equipment were laid off.

Even with the decline of mining in the New River coal field in the 1950s, and the general decline of the American railroad industry in the 1960s and 1970s, CSX (formerly the C&O Railroad) has continued operations through the gorge. Ultimately the C&O Railroad grew from its initial 419 miles in 1883 to 1,425 miles in 1900 to 2,500 miles in 1920, and 5,100 in 1950. The name was changed to the Chessie System in 1962 when the C&O Railroad acquired the Baltimore and Ohio Railroad. In 1980, following another merger, the Chessie System became CSX, a company headquartered in Jacksonville, Florida, with 27,000 miles of track in 22 states. Today the main commodity that the CSX railroad hauls through the gorge to the Midwest and the East Coast is coal. Amtrak – traveling on the CSX mainline – also continues to provide passenger service to the gorge, with regular stops at Prince and Hinton and a flag stop at Thurmond.

Railroad Industry-Related Cultural Resources in the Park. Since coal operations in the gorge ceased the gorge's railroad towns have declined – with the exception of the town of Hinton. CSX has razed most of railroad related resources. The Hinton Depot remains and is owned by the City of Hinton. The Thurmond Depot remains and is owned by the NPS and used as a visitor center.

The branch rail lines and many of the structures that were associated with the operation of the C&O mainline are no longer needed and have fallen into disuse and decay. Virtually all the track on the branch lines has been removed, leaving only remnants of rail line cuts, embankments, trestles, and culverts. Many of the early railroad structures associated with the operation of the C&O Railroad mainline that are no longer needed for modern rail operations have been razed. NPS has recently rehabilitated two trestles on the Keeney Creek Branch line at Nuttallburg.

- **Lumber Industry Historic Context**

Lumber Industry Development in the Park. Both before and after the Civil War many farm families in present-day West Virginia engaged in occasional timber cutting for sale to local sawmills. Almost every county had at least one sawmill, which usually combined with the gristmill located along the banks of the stream. Nevertheless, sawmills in West Virginia were comparatively few and small capacity. In 1869, there were only 348 sawmills in the state of which 150 were operated by steam and 185 by water. Some 20 to 30 steam-powered mills were located along

the Baltimore and Ohio Railroad in the northern part of the state about that time. By 1880 the number of mills in the state increased to 472. Except along the Baltimore and Ohio Railroad, the chief method of transportation was by rafting saw logs and crossties and floating lumber and other wood products in small barges on the larger streams.

With the introduction of the band saw and the extension of the railroads into remote areas of West Virginia, the timber industry entered a new phase in the state during the 1880s. The industry – previously confined to the Baltimore and Ohio Railroad and the tributaries of the Ohio River – now pushed into the mountainous areas of the interior. Lumber companies largely from New York, Pennsylvania, Michigan, and Minnesota bought most of the choice timberland of the state, usually at two to five dollars an acre. By the late 1880s and the 1890s the timber industry became one of the most important elements of the state's economy. It reached its peak in the state during the period between 1907 and 1917. By 1920 most of West Virginia's virgin timber was gone and the lumber industry began a precipitous decline.

As in the rest of the state the lumber industry in the New River Gorge region was one of boom and bust. After completion of the C&O Railroad in 1873 and the later construction of the branch lines in the 1890s, the New River Gorge area became the center of large timber operations. The region underwent tremendous change, not only as its coal resources were extracted but also as its relatively pristine timber lands were harvested during a lumber boom that extended primarily from the early 1880s to the late 1910s. Throughout this boom period large portions of the region's forest lands were felled, and lumber towns and camps bustling with activity grew up almost overnight when great sawmills were brought in. Flourishing for a time, these boom towns waned and disappeared as the timber was cut and the mills were moved to other locations, leaving only deserted buildings, rail lines, and mill foundations. The lumber industry contributed to the growth and development of railroading in the gorge and as such railroad centers and towns such as Thurmond, Hinton, Quinnimont, and Prince became significant sites associated with the shipment of lumber products to markets outside the gorge.

To house workers the lumber companies – such as the Meadow River Lumber Company, Babcock Coke and Coal Company, Blue Jay Lumber Company, and the Sewell Lumber Company – established towns and lumber camps in key locations around the gorge. The most significant timber operation in the gorge was located in the Sewell Mountain area.

Lumber Industry-Related Cultural Resources in the Park. Despite the historic impact of the lumber industry on the natural environment, its material legacy in the gorge is quite limited because of the transient nature of the industry and its extensive use of portable structures for logging operations. Surveys have found no examples of extant lumber industry structures in the park. Only a few ruins, broken

Table 3.8

New River Gorge National River
Lumber Industry Complex – Known and Potential Cultural Resource Types (Unrau 1996)

Primary Production Facilities
- tree stumps
- cutting machinery and equipment

Secondary Production Facilities
- sawmills
- buildings, structures, and objects associated with lumber production
- sawmill plant internal transportation facilities
- lumber yards

Transportation Facilities
- railroad tracks, sidings, yards, and support structures
- rolling stock
- roundhouses, stations/depots, repair shops, offices
- logging roads and trails and associated structures

Logging Camp Facilities
- dormitories/bunkhouses with kitchens and dining rooms
- superintendent's/foreman's residences
- office and ancillary outbuildings for management
- shops and outbuildings associated with maintenance and storage of equipment

Lumber Towns
- houses and ancillary outbuildings
- company stores
- community buildings
- private manufacturing/commercial buildings

Buildings in Incorporated Towns Associated with the Lumber Industry
- residences and ancillary outbuildings for:
  - lumber operators
  - lumber managers
  - loggers
  - railroad workers
  - railroad administrators
- private manufacturing/commercial buildings

foundations, and logging roads/trails remain. In the most isolated section of the gorge, many sites associated with lumbering operations have disappeared entirely and have virtually returned to their preindustrial state.

Three historic town sites with a lumbering past are of interest in or just outside the park, including Hamlet, Landisburg, and Meadow Creek (Marshall 1981). Hamlet represents an intact historic archeological site that appears to be eligible for listing on the National Register (Stahlgren et al. 2007). Meadow Creek, while still an active community in the gorge, has an extensive although still undocumented sawmill. Other mall undocumented sawmill ruins are located on the Gwinn property on Round Bottom across from McKendree Hospital and at the mouth of Camp Branch on the east side of the New River above Hamlet.

Table 3.9

New River Gorge National River
Euro-American Settlement / Agriculture –
Known and Potential Cultural Resource Types (Unrau 1996)

Farmsteads
- farm houses
- domestic outbuildings (privies, outhouses, detached or outkitchens, wells, laundry sheds, icehouses, semi-subterranean storage cellars)
- agricultural production facilities (springhouses, barns, granaries, sheds, stables, smokehouses)
- specialized activity areas (yards, vegetable gardens, orchards, fields and pastures, woodlots, and trash dumps with associated with fences or stone walls)

Agricultural Processing Facilities
- gristmills
- carding/woolen/fulling mills
- tanneries
- slaughterhouses
- limekilns
- distilleries

Transportation Facilities
- farm roads
- farm-related convevances

- **Euro-American Settlement / Agriculture Historic Context**

Euro-American Settlement / Agriculture Development in the Park. Following the Revolutionary War early settlers, mostly of English, German, and Scotch-Irish descent, moved into the rugged New River Gorge region. Early settlement patterns were informal and haphazard as most were squatters without legal title to the land. Typically pioneers would claim a site near a spring, deaden some trees, enclose a clearing, and plant some corn. A maximum of 400 acres could be taken under a "corn" right, but the settler could also be entitle to an adjoining 1,000 acres if he built a cabin and began farming the acreage.

One of the first recorded settlements within the park boundaries was Bowyers Ferry establihed in 1978 at the confluence of the New River and Manns Creek, which crosses east to west through Babcock State Park. The ferry was situated along the route of what later became the Old State Road that connected the Midland or Buffalo Trail to the east to the Paint Creek Trail further to the west. Another early settlement established within the park boundaries in 1798 across from modern-day Sandstone, was the Richmond Farm. The Richmond family obtained the land in compensation for their service during the Revolutionary War, and has farmed the land for six generations. Their original land grant extended up the New River to Richmond Bottom. In addition to their farming, the family operated a ferry and built a grist mill operation at Sandstone Falls, which Chief Justice Marshall encountered and mapped during his 1812 survey of the New, Greenbrier, and Jackson Rivers (Marshall 1981). Other settlers moved slowly into the rugged and isolated region, first taking up land where there was enough bottom land to establish widely scattered subsistence farmsteads. The valley floor settlements gradually filled with each generation. As newcomers moved in and families expanded, people moved farther up the hollows where valleys were narrow and fields small.

The road system in the gorge began as a network of narrow paths that followed natural contours. Gradually the roads improved, bringing a better means of

transportation for farmers' produce and livestock, mail delivery, trade goods, and improved comforts. Construction of new roads and turnpikes stimulated settlement of the region, which became more systematic around 1850. The increasing settlement resulted in the need for more effective local governments. Fayette County was established in 1831, Raleigh county in 1850, and Summers County in 1871. By the time of the Civil War the New River region had a well-developed agriculture-based economy – although it remained thinly settled. The agricultural economy continued to expand until the coming of industrialization during the 1870s.

Farmers of the New River gorge area were "mountaineers" who combined subsistence farming with timbering, hunting, and other forest-related occupations. The mountain homesteads – or family farms – established by these mountaineers in New River Gorge, as well as much of West Virginia, were the backbone of the pre-industrial 19th century Appalachian economy. Each mountain homestead functioned as a nearly self-contained economic unit, depending upon the land and the energy of a single family to provide food, clothing, shelter, and the other necessities of life. Unlike agrarian sections of the Midwest and non-mountain south that had moved steadily toward dependence on a single cash crop, mountain family farms remained essentially diversified and independent, producing primarily for their own use. During the mid-to-late 19th century, Appalachia contained a greater concentration of noncommercial family farms than any other area of the nation.

The typical mountain farm in Appalachia, including most of those in New River Gorge, during the pre-industrial period, consisted of a disparate mixture of bottomland and rugged mountainside. The average farm had about 2 percent of it land in cultivation, 20 percent in cleared pasture, and the remainder in woodland (Unrau 1996). Daily operation of the farm centered on the growing of all the vegetables and grain crops that the family used. Planting, cultivating, and harvesting were done by hand and with draft animals, since simple tools and traditional agricultural techniques proved most practical on the mountainous terrain. Mountain residents were largely self-sufficient and seldom received cash for their surplus products. Barter virtually became the sole means of exchange centered on the local merchant who exchanged retail commodities for surplus agricultural products and extended credit. Everything about the mountain homestead, including what has come to be referred to as its vernacular architectural style, reflected a society that had adapted to and harmonized with its surroundings by making effective use of local resources and by altering traditional cultural patterns to fit new physical conditions. Within this environment emerged a regional culture with strong attachments to the land and a profound sense of place. Today, although the "fingerprint" for these homesteads is hard to identify, examples are found above Sewell along the Old State Road and on Irish Mountain.

Completion of the C&O Railroad through the gorge in 1873 had a significant impact on the settlement and land use patterns in the region. Railroad construction

occurred in the narrow bottomlands and the coal resources opened up by railroad access were concentrated along the valleys and up the hollows. Mountain family farmers, some of whom had tilled the land for generations, were driven toward the ridges, thus exaggerating the pattern set by population pressures which had historically pushed them to increasingly marginal lands.

The railroads not only opened the gorge to development, but they also provided a transportation system that enabled the shipment of large quantities of agricultural products from the Midwest to the previously isolated region. The farm products from the Midwest were larger in quantity, more extensive in variety, and cheaper in cost compared with the produce of the small-family farms in the gorge and surrounding region. The local farmers simply could not compete with the incoming agricultural produce. In time the mountain farms willingly sold their land to land, mineral, and timber speculators, frequently with little notion of the true value of the resources on their properties, and were happy to receive whatever price the sale might bring.

In the end industrialization had its greatest effect on the transformation of the traditional way of mountain life. Not only did agriculture decline, but wild game was driven back into the hills, thus reducing subsistence hunting. Industrialization also sparked an increase in education that changed folkways and culture, and caused members of the once tightly knit clans to scatter. In addition the labor force brought in to work the mines, maintain the railroads, and harvest the lumber overcame the local mountain population.

By the late 19th and early 20th centuries agriculture had declined in relative importance as a significant component of the economy. During World War I and the postwar years, agriculture continued to be an important although secondary, component of the gorge's regional economy. Gradually part-time farming with agricultural income supplemented by other employment became the norm as the self-sustaining family farm became a relic of the past.

Euro-American Settlement / Agriculture-Related Cultural Resources in the Park. Most early farmsteads, agricultural processing industries, and transportation facilities along the New River and its tributaries in the gorge region have disappeared or become historic archeological sites. While a few remnant examples of late 19th and early 20th century historic farmsteads remain in the ridge and plateau areas of the gorge, visible traces of agricultural sites have become less well defined and most have been reclaimed at least in part by the forest and dense vegetation as agricultural activity has declined and farmsteads have been abandoned in recent decades.

Most of the park's surviving historic settlement/agriculture resources are located in the upper Gorge between Hinton and Sandstone Falls (see Figure 3.8). Trump-Lilly Farmstead is a rare surviving site representative of a late 19th and early 20th century

Coal Resources

SIGNIFICANCE	Non-Ruins	Ruins-Good	Ruins-Medium	Ruins - Poor
High	1	3	1	N/A
Medium	N/A	N/A	5	1
Low	3	1	8	25

Railroading Resources

SIGNIFICANCE	Non-Ruins	Ruins-Good	Ruins-Medium	Ruins - Poor
High	4	N/A	2	N/A
Medium	2	1	N/A	N/A
Low	1	N/A	N/A	2

Agriculture Resources

SIGNIFICANCE	Non-Ruins	Ruins-Good	Ruins-Medium	Ruins - Poor
High	4	N/A	N/A	N/A
Medium	2	N/A	1	2
Low	1	N/A	1	1

Other Historic Resources

SIGNIFICANCE	Non-Ruins	Ruins-Good	Ruins-Medium	Ruins - Poor
High	3	N/A	N/A	1
Medium	3	1	N/A	2
Low	7	N/A	N/A	18

PROSPERITY
BRADLEY
BECKLEY
PINEY VIEW
MOUNT HOPE
Bank of Glen Jean
FAYETTE COUNTY
BEAVER
STANAFORD
OAK HILL
DANIELS
FAYETTEVILLE
ANSTED
Army Camp
Terry
McCreery
Terry Junction
Stone House
Estuary School
Royal
Stretcher Neck Tunnel
Prince
L. Gwinn Farm
McKendree Hospital
Grandview
Harrah Homestead
Quinnimont
Meadow Fork
Newlyn
Riverview
South Boyd
Cadle Ridge
Southside Junction
Wee Win
Thurmond
Erskine
Dun Glen
Dimmock
Rush Run
Farm (Hazard Bragg)
Stone Cliff
Last Hope
Claremont
Beechwood
Alaska
Hope
Thayer
Hazard Bragg Farm
Dundee
Ephraim
Beury
Red Ash
Fire Creek
Brooklyn / Finlow P.O.
East Sewell
Pennbrook
Sewell
Sewell Top (Ledonia)
Bowyer's Ferry
Mincar
South Caperton
Caperton
Elverton
South Nuttall / Brown
Nuttalburg
Keeneys Creek
Keeneys Creek Branch Railroad
Whitney
Sunnyside
Wolf Creek Bridge and Dam
Ames / Elmo
Michigan
Carver
Newlyn
South Fayette
Fayette
Kaymoor
Hamlet
Railroad Piers
Glade / Krise P.O.
Glade Ferry
Export
Backus
Thomas School
Glendale School
Bennett Farm
Sawmill
Harrah School
Panther Branch Mill
Irish School
Babcock State Park
Babcock State Park Lake Number One Dam
Lumberman
St. Colman's Roman Catholic Church and Cemetery
Meadow Creek
Brandt Farm (Gwinn)
Phillips Farmstead
Bragg School
Westfall Farm
Sandstone Falls State Park
Trump-Lilly Farm
Big Branch Mill
Brooks Island
Richmond Mill
Richmond School
Hinton Historic District
Hinton Depot
Cochrane Farm
Camp Brookside
Richmond Farm
Richmond Ferry
Sandstone Elementary School
New Richmond
Beurytown
Secoma (Steinback)
HINTON
Vallandingham House
Richmond-Hamilton Farm
Claypool / Humoco P.O.
Tina
MEADOW BRIDGE
SUMMERS COUNTY

Map Notations

1. *Symbol shape indicates the type of cultural resource.*
2. *Symbol size indicates the extent to which the resource is intact (the larger the symbol the more intact the resource)*
3. *Symbol color indicates historic significance (the lighter the color the more significant the resource)*

- NPS land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

Figure 3.8

HISTORIC RESOURCES

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

traditional self-sufficient/subsistence farm. However, only about 10 percent of the farm is now cleared and the agricultural system seen today is small by comparison to the agrarian activities once undertaken at the site. Significant farmstead resources include Richmond-Hamilton Farm, Vallandingham Farm, Cochran Farm, Phillips Farm, and Westfall Farm. Other sites are found on Irish Mountain and along the Old State Road above Sewell.

Because of the self-sufficient, subsistence nature of most agricultural activity in the gorge area, few if any, agricultural processing facilities that can be identified are extant in the park. A few examples include grist mills at Sandstone Falls, Panther Run, Camp Brookside, and Bowyers' Ferry. Other examples of such enterprises may survive, however, in nearby towns and service centers.

Historic farm road remnants are extant in some parts of the gorge, especially in the ridge and plateau areas away from industrial sites. The integrity of some road fragments, however, has been impacted by nearby coal, lumber, or railroad operations.

- **Recreation/State Parks Historic Context**

Recreation/State Park Development in the Park. When New River Gorge National River was established in 1978, three units of the West Virginia state park system were located within its authorized boundaries. The three parks – Babcock, Grandview, and Sandstone Falls – formed the basis of established public recreation facilities and opportunities in the new park. Babcock State Park and Grandview State Parks were established as units of the initial West Virginia state park system and developed using New Deal emergency funding and Civilian Conservation Corps (CCC) enrollees for conservation and were among initial group of state parks developed during the 1930s that were dedicated to recreation, preservation, and conservation of West Virginia's natural resources and scenic beauty. The two concepts of recreational development and conservation of resources that provided the rationale for establishment of the state parks at Grandview and Babcock foreshadowed the underlying purposes for creating New River Gorge National River as a unit of the National Park Service.

In the early 20th century a growing nationwide conservation and state parks movement that contributed to development of the recreational potential of West Virginia's natural resources and establishment of an extensive state park system. As the nation's natural resources were being exploited to meet the demands of an increasingly urbanized and industrialized society during the late 19th and 20th centuries, the conservation movement began to protect and develop the country's physical resources in a more orderly and rational manner. During the 1920s a state parks movement gathered momentum, resulting in establishment of numerous state park systems throughout the nation. In 1925 the West Virginia State Forest, Park and Conservation Commission recommended that lands having outstanding scenic

Table 3.10

New River Gorge National River
Recreation/State Parks – Known and Potential Cultural Resource Types (Unrau 1996)

Primary Outdoor Recreation Activity Facilities
- bathhouses, boathouses
- pavilions (outdoor picnic and function shelters)
- overlooks, lookouts
- comfort stations
- group social/educational meeting structures
- amphitheatres
- specialized activity areas (children's playground/play equipment areas, picnic areas, tennis courts, badminton courts, horseshoe pits, shuffleboard courts)

Secondary Recreational Support Facilities
- park administrative/management-related structures (staff offices, personnel residences, visitor centers, contact facilities)
- park maintenance structures (offices, shops, garages, warehouses)
- concessions operations structures (restaurants, snack shops, gift and souvenir shops)

Overnight Visitor Accommodations
- cabins
- lodges

Private Retreat Development
- company retreats
- church camps
- special youth camps

Engineering Structures and Landscape Features
- infrastructure buildings
- dams (functional and decorative)
- bridges
- stone retaining walls, culverts, drainage ditches, curbs, spring basins, walkways, hearths, steps, water fountains, trails)
- directional signs or markers, benches
- man-made lakes, streams, waterfalls, pools
- fencing
- machinery

Transportation Facilities
- roads and roadway structures/features (bridges, culverts, drains, turnouts)
- vehicle facilities (parking lots)

and natural qualities should be acquired by the state and administered as units of a state parks system. In 1933 West Virginia established a state parks division. Using funds and personnel from the CCC and from other New Deal public works, as well as funds appropriate by the state legislature, the new state parks division in 1934 acquired some 17,085 acres for park lands, including Babcock and Hawks Nest State Parks. Five years later 52 acres were acquired in Raleigh County for Grandview State Park for development as a day-use park.

CCC camps were established in or near the new state parks. Planning, design, and development of the parks commenced under the direction of the National Park Service and the US Forest Service. Two CCC camps were established at Babcock, which also provided personnel for the development of Hawks Nest State Park. Development of these areas was guided by a "state park concept" formulated by the Conservation Commission. This concept guided development of West Virginia state parks until the late 20th century. Park development was directed toward development of convenience and accessibility selected portions of the parks, with attention to minimizing impacts on the natural environment. Where possible large areas were left untouched to ensure propagation of wildlife and protect natural conditions. Construction of family vacation cabins in natural settings was given high priority in the early years, and the popularity of the cabins soon evolved into the need for inns, lodges, restaurants, trading posts, and other visitor-related services.

Babcock State Park opened to the public in 1937 and Grandview State Park opened in 1941. Another former state park at Sandstone Falls was transferred to NPS during the 1980s. The CCC camps at Camp Washington Carver adjacent to Babcock State Park and at the current 4-H Camp near Little Beaver State Park several miles south of Grandview continued work at the state parks until 1942, when they were closed due to US entry into World War II. Both parks became popular and well-known areas in the state park's system and Grandview became one of the most heavily visited day-use parks in the state.

Recreation/State Park-Related Cultural Resources in the Park. Babcock is one of the finest West Virginia state parks. It represents the pinnacle of New Deal-Era CCC constructed state parks. It retains many of the original design elements, such as the entrance station, landscaping, stone work, parking lots, and overlooks. Its cultural landscape, however, has not been documented to determine whether it warrants listing on the National Register.

Grandview State Park lacks much of the naturalistic character exhibited by many other West Virginia New Deal-era CCC parks. Yet there are many CCC design element present, although many of its extant resources such as the picnic shelters date to the 1950s period of renovation and development.

3.3.3 Historic Archeological Resources

- **Historic Archeological Resources**

Many of the park's cultural resources are the ruins of the New River communities – mostly "ghost towns" today – where the thousands of miners and their families worked and lived in the gorge during its industrial heyday from 1880 to 1930. These communities and related industrial sites now abandoned and generally in ruins, are largely archeological sites. Because they post-date the arrival of Europeans in the New World and are supported by documentary records, they are historic archeological sites. With few exceptions these historic archeological resources are complexes or localities – rather than individual sites – where clusters of domestic and industrial sites related to mining, railroading, lumbering, and farming can be found (Marshall 1981; Unrau 1996; Workman et al. 2005; Stahlgren et al. 2007).

The historic significance of the "ghost towns" of New River Gorge differs based upon the number of archeological resources present that represent the full gamut of essential community functions. For example, a New River coal-mining community with archeological remains of dwelling houses, a company store, a school, church and cemetery, recreational facilities, along with the full array of primary and secondary production facilities, including a mine opening, tipple or preparation plant, headhouse, include or conveyor, shops, railroad sidings, and coke ovens, possesses a high level of integrity (Unrau 1996).

NPS has completed preliminary inventories and field studies for many of the park's historic site complexes. The most comprehensive is the recently completed *Historic Resource Study* (Workman et al. 2005) that included a literature review, additional research, and field reconnaissance of 34 site complexes in the park. Findings from this study concluded that all of the sites likely contain historic archeological resources, although they vary dramatically in terms of the potential significance of the resources. Three (3) site complexes were found to be potentially nationally significant, possessing a high level of integrity, and intrinsically important to the mission of the park: Nuttallburg, Thurmond, and Babcock State Park (Workman et al. 2005). Twenty-four (24) sites were found to be potentially significant on the regional or local level and/or to lack high integrity; they may be intrinsically important to the mission of the park. Seven (7) sites were found to be of lower potential significance and integrity and are not important to the park's mission. Many other smaller sites with potential for intact archeological resources occur throughout the park – including community sites as well as individual sites. Sites have been documented only through limited archival research and field survey.

TABLE 3.11 Sites with Known or Suspected Historic Archeological Resource Potential

			National Register Status				
Name	**Ownership**	**Condition**	Listed	Eligible	Potentially Eligible	Not Determined	Determined Not Eligible
Coal Industry-Related Resources							
Alaska[1]	NPS/private	poor				■	
Ames/Elmo	NPS/private	medium				■	
Beechwood	private	poor				■	
Beury[1]	NPS	medium				■	
Brooklyn/Finlow P.O.	NPS	medium				■	
Cadle Ridge	NPS	poor				■	
Caperton[1]	NPS	good				■	
Carver	NPS	poor				■	
Claremont[1]	NPS	poor				■	
Dimmock	NPS	poor				■	
East Sewell	NPS	poor				■	
Elverton	NPS	medium				■	
Ephraim-Dundee[1]	NPS	medium				■	
Erskine	private	poor				■	
Estuary School	NPS	poor				■	
Export	NPS	poor				■	
Fire Creek[1]	NPS	medium				■	
Hope	NPS	poor				■	
Kaymoor[1]	NPS	good	■				
Kenney Creek	NPS	poor				■	
Last Hope	NPS	poor				■	
Meadow Fork	NPS	poor				■	
McKendree[1]	NPS	medium			■		
Michigan[1]	NPS	poor				■	
Mincar	NPS	poor				■	
Newlyn (north end)	NPS	poor				■	
Newlyn (Dun Loop Cr.)	NPS	poor				■	
Nuttallburg[1]	NPS	good	■				
Pennbrook	NPS	medium				■	
Quinnimont Furnace[1]	NPS	medium			■		
Red Ash[1]	NPS	medium				■	
Royal[1]	NPS	medium				■	
Rush Run[1]	NPS	medium				■	
Sewell[1]	NPS/private	good				■	
Sewell Top (Ledonia)	private	poor				■	
South Boyd	private	poor				■	
South Caperton	NPS	medium				■	

TABLE 3.11 Sites with Known or Suspected Historic Archeological Resource Potential

Name	Ownership	Condition	National Register Status				
			Listed	Eligible	Potentially Eligible	Not Determined	Determined Not Eligible
South Nuttall/Browntown	NPS	poor				■	
Stone Cliff[1]	NPS	medium				■	
Sunnyside	NPS	poor				■	
Terry Junction	NPS/private	poor				■	
Thayer[1]	NPS/private	variable				■	
Tina	private	poor				■	
Wee	NPS	medium				■	
Whitney	private	poor				■	
Railroad Industry-Related Resources							
Dun Glen Hotel Site	NPS	good	■				
Fayette/South Fayette[1]	NPS	poor				■	
Hinton Historic District[1]	private	good	■				
Kenney Creek Br Right[1]	NPS/private	good		■			
Prince[1]	NPS/private	good					
Quinnimont[1]	NPS/private	good				■	
Riverview[1]	NPS	poor				■	
Southside Junction	NPS	medium				■	
Thurmond[1]	NPS/private	good				■	
Lumber Industry-Related Resources							
Hamlet[1]	NPS	medium			■		
Hughart House	state	good	■				
Landisburg[1]	state	poor				■	
Meadow Creek[1]	NPS/private	variable				■	
Euro-American Settlement/Agriculture-Related Resources							
Bennett Farm	NPS	poor				■	
Bowyer's Ferry[1]	NPS/private	poor				■	
Brandt Farm	private	poor				■	
Cochran Farm	NPS	good				■	
Gwynn Farm	private	medium				■	
Hazard Bragg Farm	NPS	medium				■	
McCreery/Batoff Mt. [1]	NPS	poor				■	
New Richmond[1]	private	poor				■	
Phillips Farmstead	NPS	fair				■	
Richmond Farm	private	good		■			
Richmond-Hamilton Farm	NPS	fair		■			
Trump-Lilly Farm[1]	NPS	fair/good	■				
Vallandingham Farm	NPS	good				■	
Westfall Farm	private	poor				■	

TABLE 3.11 Sites with Known or Suspected Historic Archeological Resource Potential

			National Register Status				
Name	**Ownership**	**Condition**	Listed	Eligible	Potentially Eligible	Not Determined	Determined Not Eligible
State Park/Recreation-Related Resources							
Army Camp[1]	NPS	poor				■	
Babcock State Park[1]	state	good			■		
Camp Brookside[1]	NPS	good			■		
Grandview State Park[1]	NPS	good			■		
Other Resources							
Brooks Island	NPS	poor				■	
Glade/Krise P.O.	NPS/private	medium				■	
Glade Ferry	NPS/private	poor				■	
Glendale School	private	poor				■	
Harrah School	private	poor				■	
Irish School	NPS	poor				■	
Lumberman	private	poor				■	
Mill	NPS	poor				■	
Panther Branch Mill	NPS	poor				■	
Richmond Ferry	private	poor				■	
Richmond Mill	NPS	poor				■	
Sandstone Elem. School	NPS	poor				■	
Secoma	NPS	poor				■	
Stone House	private	poor				■	
Thomas School	private	poor				■	
Wolf Creek Bridge/Dam	NPS	poor				■	

[1] *Site complexes assessed in Historic Resources Study (Workman et al. 2005).*

[2] *Scores assigned by the Institute for the History of Technology and Industrial Archeology (IHTTIA) at West Virginia (Workman et al. 2005):*
1 – *sites that are nationally significant and intrinsically important to the mission of the park; these sites are potentially eligible for or nominated to the National Register of Historic Places*
2 – *sites that are significant on a regional or local level and/or lack the highest level of integrity; these sites may also be intrinsically important and qualify for listing on the National Register depending on their scarcity, accessibility, and potential to convey a story related to the park's historic contexts*
3 – *sites that are of lower significance and integrity and are not intrinsically important to the park's mission; these sites are not potentially eligible for the National Register*

[3] *Significance ranks assessed by NPS cultural resource specialists based on findings from other archival investigations, research, and field surveys.*

[4] *IHTIA score not assigned; further research required.*

- **Historic Archeological Resource Management Concerns**

Gaps in Knowledge. Additional research is needed to document the archeological resources of all the historic site complexes including further archival research and archeological investigations are needed to discern the full extent of sites, site field surveys, and mapping.

National Register Nominations. As significant historic archeological sites are identified in the park, they should be nominated for listing in the National Register of Historic Places.

3.3.4 Cultural Landscapes

- **Cultural Landscapes**

The park's cultural landscapes are the geographic areas – including both cultural and natural resources – that are associated with the historic events and activities in the park's past and/or with the people who have lived and worked in the park and that are integral to its significance. A cultural landscape inventory of historic properties currently owned by the NPS identified 13 cultural landscapes representative of four of the park's five historic contexts (NPS 2005a). Of these 13 sites ten retain the integrity needed to convey their significance as cultural landscapes:

- **Kaymoor Mine and Kaymoor**, an industrial site representative of the New River coal field industrial complex and related company town in operation from 1899 through 1962; a few industrial structures still standing (state significant; listed on the National Register as an historic district)
- **Nuttallburg Mining Complex and Nuttallburg**, one of the most complete early 20th century coal related industrial sites in the United States; remaining standing structures include the Nuttall Mine headhouse, conveyor, tipple, and power house (nationally significant; listed on the National Register as an historic district)
- **Thurmond**, a railroad town in the heart of New River Gorge and the primary railroad center for the New River Gorge coal field during its peak production period the late 1890s through the 1920s (state significant; portions of town site listed on the National Register as an historic district; cultural landscapes determined eligible for the National Register)
- **Cochran Farm**, ca. 1910, a former farm representative of pre-industrial subsistence farming, including a farm lane and remains of two sheds
- **Harrah Homestead**, ca. 1910, a former homestead representative of a regional housing type, including a house and outbuildings (locally significant)

Table 3.12

New River Gorge National River
Cultural Landscapes
(on property currently owned by NPS)
(NPS 2005a) –

Coal Industry-Related Landscapes
- Kaymoor Mine and Kaymoor
- Nuttallburg Mining Complex and Nuttallburg*

Railroad Industry-Related Landscapes
- Thurmond*

Euro-American Settlement/Agriculture Landscapes
- Cochran Farm
- Harrah Homestead*
- Richmond-Hamilton Farm*
- Trump-Lilly Farm*
- Vallandingham House*

State Park/Recreation Landscapes
- Camp Brookside*
- Grandview State Park*

* *Sites for which a cultural landscape inventory or a cultural landscape report is available*

- **Richmond-Hamilton Farm**, ca. 1902, a former farm representative of subsistence farming, including largely unaltered farmhouse and outbuildings associated with the early Richmond family that originally settled the area in the 18th century (regionally significant; determined eligible for the National Register)
- **Trump-Lilly Farm**, ca. 1880s, a former farm, representative of pre-industrial subsistence farming, including largely unaltered farmhouse and outbuildings originally owned by the 3rd generation of the Richmond family that originally settled the area in the 18th century (listed on the National Register)
- **Vallandingham House**, ca. 1870, a former farm representative of pre-industrial subsistence farming, including a log cabin and outbuildings (locally significant; house determined not eligible for the National Register by the WV State Historic Preservation Officer)
- **Camp Brookside**, ca. 1945, including 30 acres on a river terrace above the New River near Hinton, developed in the 1940s by the Union Carbide Company as one of seven summer camps for children of its employees (state significant; determined potentially eligible for the National Register by the WV State Historic Preservation Officer)
- **Grandview**, ca. 1939, previously a West Virginia state park developed by the NPS using Civilian Conservation Corps labor, including typical design features from that era (likely state significant; potentially eligible for the National Register)

- **Cultural Landscape Management Concerns**
  - **Gaps in Knowledge**. Additional research is needed to document the cultural landscapes.
  - **National Register Nominations**. As significant cultural landscapes are identified in the park, they should be nominated for listing in the National Register of Historic Places.
  - **Invasive Vegetation**. Many of the park's cultural landscapes have been affected by the spread of invasive noxious weeds. These plants – such as kudzu – have caused detrimental harm to the cultural resources on these landscapes and if let unmanaged have the potential to completely obscure or irreparably harm these resources. Limited staffing and funds do not allow for the consistent routine vegetative maintenance that is required at each of these sites.

- **Theft and Vandalism**. Because many sites are remote, vandalism and theft have resulted in their degradation. These potential impacts are likely to continue into the future.

- **Erosion**. Minor to extensive damage may occur across these cultural landscapes because of natural processes and/or human altered conditions that increase erosion potential. Evaluation of erosion issues and necessary corrective action plans are needed.

3.3.5 Historic Structures

- **Historic Structures**

Buildings and structures found in the park are a reflection of its industrial, cultural, and building arts heritage, as well as the rugged terrain of the gorge. Notable historic structures include industrial structures related to coal mining and railroading and the communities that housed the people who worked the mines, cut the timber, and operated the railroad. Notable structures also include the farmsteads and community buildings built in the gorge by settlers and their descendents prior to and during the period of industrialization.

Structures on the park's List of Classified Structures (NPS 2006b) all evidence local and state significance, except for one – the Nuttallburg Coal Mining Complex and Town Historic District – which has been determined by the West Virginia State Historic Preservation Officer and the Keeper of the National Register to be of national significance. Further documentation could, however, reveal that some additional sites have national significance.

Four historic districts wholly or partially within the park are listed on the National Register of Historic Places:

- **Hinton Historic District**, located in downtown Hinton, representative of the major building booms of the 1880s to 1920s, composed of commercial and residential buildings with minimum contemporary architecture (only the Hinton Depot is located within the park boundary)

- **Thurmond Historic District**, a railroad town in the heart of New River Gorge and the primary railroad center for the New River Gorge coal field during its peak production period the late 1890s through the 1920s; significant for its association with the C&O Railroad and the coal mining industry and for its railroad architecture, vernacular worker housing, and simple commercial buildings typical of a West Virginia boomtown during the 1884 to 1950 industrial period

- **Kaymoor Historic District**, a significant industrial site representative of the New River coal field industrial complex and related company town in

TABLE 3.13. Historic Structures, Historic Districts, and Site Complexes with Historic Structures

			National Register Status			
Name	Ownership	Condition	Eligible	Potentially Eligible	Not Determined	Determined Not Eligible
Coal Industry-Related						
Bank of Glen Jean	NPS	good				
Beurytown[1]	NPS/private	fair			■	
Glen Jean Historic Dist.	NPS/private	fair				
Kaymoor Historic Dist. [1]	NPS	good				
Little Rock Assembly Ch.	NPS	good				
Nuttallburg Historic Dist. [1]	NPS	good				
Terry[1]	NPS/private	poor			■	
Thayer[1]	NPS/private	variable			■	
Railroad Industry-Related						
Beury Monument	private	good		■		
Hinton Depot	private	good				
Hinton Historic District[1]	private	good				
Kenney Creek Br. Line[1]	NPS/private	good	■			
Prince[1]	NPS/private	good			■	
Prince Depot	private	good		■		
Prince Brothers Store	NPS	good				
Quinnimont[1]	NPS/Private	good			■	
Stretcher Neck Tunnel	private	good			■	
Thurmond Historic Dist. [1]	NPS/private	variable				
Thurmond Commercial Row NPS		fair				
Thurmond Depot	NPS	good				
Thurmond 1st Baptist Ch.	NPS	good		■		
Lumber Industry-Related						
Meadow Creek[1]	NPS/private	variable			■	
Euro American and Agriculture-Related						
Cochran Farm	NPS	good			■	
New Richmond[1]	private	poor			■	
Phillips Farmstead	NPS	fair			■	
Richmond Farm	private	good			■	
Richmond-Hamilton Farm	NPS	fair	■			
Trump-Lilly Farm[1]	NPS	fair/good				
Vallandingham Farm	NPS	good				■
Westfall Farm	private	poor			■	
State Park/Recreation-Related						
Babcock State Park[1]	state	good		■		
Camp Brookside[1]	NPS	good		■		
Grandview[1]	NPS	good		■		

TABLE 3.13. Historic Structures, Historic Districts, and Site Complexes with Historic Structures

Name	Ownership	Condition	National Register Status: Eligible	Potentially Eligible	Not Determined	Determined Not Eligible
Other-Related						
Backus	private	unknown			■	
Berry Cabin	private	good	■			
Bragg School	private	good			■	
Claypool/Humoco P.O.	private	fair	■			
Richmond School	private	good	■			
River Road Stone Wall	private	good	■			
St. Colman's RC Church and Cemetery	private	good				

[1] *Site complexes assessed in Historic Resources Study (Workman et al. 2005).*

Scores assigned by the Institute for the History of Technology and Industrial Archeology (IHTTIA) at West Virginia (Workman et al. 2005):

1 – *sites that are nationally significant and intrinsically important to the mission of the park; these sites are potentially eligible for or nominated to the National Register of Historic Places*

2 – *sites that are significant on a regional or local level and/or lack the highest level of integrity; these sites may also be intrinsically important and qualify for listing on the National Register depending on their scarcity, accessibility, and potential to convey a story related to the park's historic contexts*

3 – *sites that are of lower significance and integrity and are not intrinsically important to the park's mission; these sites are not potentially eligible for the National Register*

[3] *Significance ranks assessed by NPS cultural resource specialists based on findings from other archival investigations, research, and field surveys.*

[4] *Historic structure listed as contributing to the historic district.*

- operation from 1899 through 1962; a few industrial structures still standing

- **Nuttallburg Coal Mining Complex and Town Historic District**, one of the most complete early 20th century coal related industrial sites in the United State; owned by Henry Ford during the 1920s, the complex is nationally significant for its association with Ford's revolutionary experiment to streamline and vertically integrate all levels of industrial production; largely unaltered since that time; remaining standing structures include the Nuttall Mine headhouse, conveyor, tipple, and power house

Individual properties listed on or determined eligible for the National Register of Historic Places and the more significant individual structures within the historic districts include:

- **St. Colman's Roman Catholic Church**, ca. 1877, the only visible remains of the once thriving Irish community in Raleigh County; now owned by the Roman Catholic Diocese of Wheeling-Charleston

Table 3.14

New River Gorge National River
Settlement Chronology –

Prior to 1670
Native American Habitation

The Fort Ancient peoples and later the Shawnee people and other Native Americans inhabited the gorge

1670 – 1873
Exploration and Early Settlement

Scotch-Irish, German, and English settlers homesteaded the gorge; some African-Americans brought in as slaves

Mid 18th to mid 19th Century
Industrialization and Prosperity

Eastern and southern European and African-American immigrants were brought in to work on the railroads and in the timber and mining industries

Mid to Late 20th Century
Post Industrial Recession

Outmigration of all groups from gorge communities occurred as the timber and mining industries declined and railroad technology changed; many African-American and immigrant families moved to neighboring communities

Early 21st Century
Contemporary Settlement

Descendants of African-American and immigrant families continue to reside in the gorge's communities near the gorge and throughout southern West Virginia

- **Prince Brothers General Store (Berry Store)**, ca. 1900, a frame commercial building that housed a grocery and dry goods business, and served as the local post office for decades until its closing in 1984; once of the last surviving commercial buildings in the gorge from the New River coal industrial period; now owned by the NPS and vacant

- **Hinton Depot**, ca. 1906, former C&O depot; now owned by the city of Hinton; two-story brick structure; in active operation by AMTRAK

- **Thurmond Depot**, ca. 1905, former C&O Railroad depot and offices of the C&O Railroad; two-story frame structure; now owned by the NPS, restored and used as a park visitor center and museum; also serves as an AMTRAK "flagstop"

- **Thurmond Commercial Row**, including the two remaining buildings in Thurmond's commercial "main street"; composed of the three-story brick Mankin-Cox Building (ca. 1904) and the four-story brink National Bank of Thurmond (ca. 1917); now owned by the NPS and vacant

- **Glen Jean Bank**, ca. 1909 and 1917, an excellent example of a period small town bank, was the center of financial activity for development of the town of Glen Jean and other nearby communities; architecturally one of the most significant structures in the Glen Jean Historic District; now owned by the NPS and used for park offices

Many other structures are found throughout the park that are significant for their association with the events and lives of people who have lived in the gorge, for their ability to inform our understanding of the park's history, or that are excellent examples of a particular type, period, or method of construction (see Table 3.13).

- **Historic Structures Management Concerns**

Structure Stabilization. Historic structures are threatened by continued deterioration and loss due to weathering, decay, vandalism, salvage, and the destructive effects of rapid and dense vegetation growth. Management actions are needed as appropriate to protect remaining historic structures that are found as a result of further research to be significant, to possess a high level of integrity, and to be intrinsically important to the park's mission.

Remediation of Lead and Asbestos Contamination. Some historic structures – such as commercial row at Thurmond – have lead and asbestos contamination that must be remediated as part of their stabilization and before they can be reused.

3.3.6 Ethnographic Resources

- **The Park's Traditionally Associated People and Groups**[1]

The human use and settlement of the New River region is characterized by waves of settlement and a unique intermingling of distinct ethnic groups. The sequence can be summarized generally: first Native Americans inhabited the area; then Scotch-Irish, German, and English settlers homesteaded the region in the 18th century, and then in the late 19th and early 20th centuries, eastern and southern European and African-American immigrants were brought in to work on the railroads and in the timber and mining industries. Mine operators strategically hired different ethnic groups and segregated mining communities by race and ethnicity to prevent union organization. Many of the immigrant and settlers' families and descendents established southern West Virginia as their home and continue to reside in communities adjacent to the park. These groups intermingled over time and established unique relationships with the landscape, which allowed them to survive despite the hardships of the mining industry and the fluctuations in paying jobs. Today, they define themselves in part by their relationship with the New River area, its resources they use, and the cemeteries and home places of their ancestors that they visit.

Euro-American Frontier Family Descendents. These families originally moved into the area in the 18th century and their descendents continue to live in communities just outside the gorge. They became intimately familiar with the natural resources and cycles because their livelihood depended upon such awareness. They passed this knowledge on to their descendants through oral tradition, demonstration, and active teaching. Such traditional ecological knowledge includes where, when, and how to sustainably harvest and use ginseng, hellgrammites, morel mushrooms, ramps, different species of fish, and many other wild herbs, roots, animals, and plants. Today, these people highly value the original 'home place' where their ancestors established themselves in the region. Family members who have moved away return several times each year for reunions where they reunite with their kinship network and celebrate their connection to the New River landscape.

African American Individuals and Groups. African-Americans were first brought into the region prior to the Civil War, but great number came later to work in the railroads and in the mines. African Americans were disproportionately used on dangerous jobs and many died as a result. Segregation in the company towns led to creation of tight-knit African-American mining communities, schools, and churches. During the early 20th century, 48 communities in Fayette County had all-black schools. These families supplemented their incomes with locally gathered and cultivated plants. They eventually collaborated with other ethnic groups to establish unions. They became attached to the New River landscape and stayed after the

[1] *Text excerpted from Campbell 2006.*

mining declined. Although West Virginia as a state has a three percent black population, the black population of Fayette and Raleigh Counties is approximately 25 percent of the total population. Sizeable black communities are reported to have resided in Quinnimont, Kaymoor, Elverton, Ames, Nuttallburg, Fire Creek, Winona, Edmond, Claremont, Thurmond, and Hinton.

Descendents of Immigrant Miners. Beginning around 1890, foreign immigrants began to arrive in the coal fields. They were from many distant locales, but primarily from southern and eastern Europe. Many were recruited 'right off the boat' to southern West Virginia mining towns and made their permanent homes in the area. They were moved from mining town to mining town as mines 'worked out,' or relocated in search of better living conditions. Upon the closure of the major mines, many residents left the area but others stayed on because of their attachment to the place. The descendents of these immigrants live in neighboring communities and may place cultural significance on industrial ruins, cemeteries, or communities where they lived in the park. Local resource use was an important adaptive strategy in their continuity through difficult economic times.

Federally Recognized Shawnee Tribes. The Shawnee people traditionally utilized the New River Gorge region as a residence area where groups camped, hunted, and fished. They are recognized by most experts as at least one descendent of the Fort Ancient peoples who occupied the region prior to European settlement. Contemporary Shawnee tribes potentially consider the New River Gorge region of cultural and traditional significance to their tribe because of their potential affiliation with the Fort Ancient peoples and because of the historic significance of their battles (and raids) with the British and American troops and European settlers in the area. The Eastern Shawnee currently list West Virginia as part of their traditional homeland on their tribal website, which may indicate a potential interest in the resources of New River Gorge.

- **Traditional Ethnographic Cultural and Natural Resources**

Comprehensive studies have not been completed in the park area that identify its specific traditional ethnographic cultural and natural resources. However, the recently completed *Ethnographic Overview and Assessment of the New River Gorge National River* (Hufford et al. 2006) concluded that there are places within the park boundaries that have great significance for the park's traditionally associated people and groups (as previously described). The ethnographic resource identified as vital is the landscape of the mixed mesophytic forest and associated forests in association with the collective memory – the stories – that animate and are animated by the landscape (Hufford et al. 2006). It is possible that this landscape today forms one of the most intact examples of a community forest and watershed to be found in North America (Hufford et al. 2006). Further research and study will identify the connections between the park's traditionally associated people and

groups and the park's specific cultural and natural resources found within the park's mixed mesophytic watershed.

- **Ethnographic Resource Management Concerns**

Gaps in Knowledge. Better identification of ethnographic resources is needed for effective management of park natural and cultural resources. There is currently no specific documentation of the myriad park resources that traditionally associated people and groups currently use and used historically. Oral histories need to be collected more intensely and systematically. Traditional use studies are needed to analyze traditional resource use and management regimes regarding:

- subsistence practices by the traditional Euro-American population who continues to harvest natural resources for subsistence purposes
- historical and contemporary associations that local African-American communities, families, and individuals have with park structures, landscapes, and other historic and cultural resources

The data compiled will inform interpretive programs, help determine the suitability different forms of protection, and enable the NPS to assess the effects of management decision on traditional user.

3.4 Scenic Resources

3.4.1 Character of Scenic Resources

The topography of New River Gorge, the waters that shaped it, the forest that blankets it, and the remnants of past human settlement hidden within it, combine to create a scenic landscape that is New River Gorge National River. Collectively these are the park's scenic resources that provide the visual context for the park and that define the dramatic and extraordinary views that visitors experience. Briefly summarized these scenic resources include:

- the **New River** – flowing for 53-miles through the park, at times wide and tranquil and frequently violent and turbulent
- the **New River Gorge** – cut by the New River through the rocks of the Appalachian Plateau, wide and pastoral in the south while in the north narrow and treacherous reaching a depth of almost 1,000 feet with frequent near vertical cliff walls
- the expanse of **unfragmented forest** – stretching out through the gorge and on the Allegheny Plateau, composed of a near continuous span of mixed deciduous forest with very few roads, trails, utility corridors, or modern developed land uses
- the **scenic cultural landscapes** – the places scattered throughout the gorge where people once lived and worked, providing a glimpse into the park's early settlement years of the late 18th and early 19th centuries and

New River Gorge National River
Park Significance Statement 5

New River Gorge National River has diverse and extraordinary scenic resources and views accessible to visitors from the river, rocky overlooks, trails, and rural roads throughout the park.

Fundamental Resources and Values

- panoramic views of the New River, its gorge, and the other landforms shaped by the New River as it cuts through the Appalachian Plateau
- cultural landscapes that reflect settlement and industry influenced by a rugged and isolated setting

Other Important Resources and Values

- natural visibility and lightscape, both in daytime and at night

the industrial era of the late 19th and early 20th centuries when coal mining, lumbering, and railroading dominated the gorge

- the **tributary streams of the New River** – including mountain streams flowing through deeply incised rocky channels with numerous picturesque waterfalls and rock formations

In addition to these scenic resources the New River Bridge itself – owned and maintained by the WV Division of Highways – is a major scenic attraction in the park that most visitors seek to view by either driving across it, by passing beneath it, or by viewing it from an overlook.

3.4.2 Views of Scenic Resources

Visitors experience dramatic and extraordinary views of scenic resources from three primary types of vantage points within the park:

- from the river or river banks while paddling or fishing the New River
- from trails and roads while exploring the park by foot, bicycle, horse, or vehicle
- from overlooks and points of interest

Computer modeling of viewsheds reveals the areas within and near the park that are visible from each of these vantage points (Figure 3.9). This analysis shows that from many locations within the park the experience that visitors have is defined by scenic resources in and around the gorge that are both within the current park boundary as well as outside the current park boundary. In many locations visitors have expansive views of the park and the adjoining Appalachian Plateau extending well beyond the park.

Views from the River. Most of the park's rugged topography and forested lands is visible from the river and along its banks when paddling, fishing, or sightseeing. Boaters generally see the expanse of the forested gorge walls, although they cannot see up tributary valleys such as the Glade Creek, Dunloup Creek, or Arbuckle Creek valleys. From the river they typically are unable to view scenic resources above the rim or on the plateau.

In general views from the river encompass scenic resources within the park boundary, except in the upper gorge where boaters looking to river right can see well beyond the park boundary as they float from Hinton to Sandstone.

Views from Trails and Roads. From trails and roads visitors generally experience enclosed views of the forest, interspersed with more expansive views where breaks occur in the forest cover. Visitors also experience views of the park's cultural landscapes where they come upon them while hiking, biking, or riding trails or when driving park roads. Glade Creek Road in the park is designated by the state as a scenic "backway" significant for visual setting.

KEY

NERI Boundary

Vantage Points

New River

Trails and Roads

Overlooks and Points of Interest

Viewsheds

Areas within View from the River

Areas within View from Trails and Roads (includes some but not all of the areas within view from the river)

Areas within View from Overlooks and Points (includes some but not all of the areas within view from the river and within view from trails and roads)

BECKLEY
PINEY VIEW
MOUNT HOPE
STANAFORD
OAK HILL
FAYETTEVILLE
ANSTED
McCreery
Terry
Grandview
Prince
McKendree
Quinnimont
Thayer
Glade Creek
Stone Cliff
Dun Glen
Thurmond
Fayette Station
Kaymoor
Nuttallburg
Cunard
Bragg
Backus
Meadow Creek
Danese
New Richmond
HINTON
MEADOW BRIDGE

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

Figure 3.9

VANTAGE POINTS AND VIEWSHEDS

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

Views from Overlooks and Points of Interest. From overlooks and points of interest, visitors experience broad views of the river, the gorge, and the forest. From many overlooks the views extend well beyond the park boundaries (Figure 3.9).

- **Scenic Resource Management Concerns**

Several management concerns relate to the protection of scenic resources and views of those resources at the park:

- some local communities have recently approved major new private development within the park boundary and adjoining (but outside of) the park boundary that will adversely impact the park's scenic resources and the views that visitors experience from vantage points on the river, from roads and trails, and from overlooks and points of interest; development pressure is expected to grow in the three-county area around the park, increasing the likelihood that additional development projects will be proposed with further potential for adverse impacts on the park's scenic resources and scenic views
- new bridge construction is proposed by WV DOH in the next few years that has the potential to adversely impact the scenic character of the river corridor
- private lands in the park and on adjoining lands are subject to current and future timber harvesting and utility corridor development
- invasive species have the potential to adversely impact the park's scenic forest resources by:
  - outcompeting native shrubs and reducing regeneration of forest species
  - obscuring cultural landscapes that are historically located in open areas
- disturbances such as fire and major storm events can cause scenic landscapes to revert to early successional habitats

3.5 Socio-Economic Environment

3.5.1 Regional Overview

Historically the coal industry has driven the region's economy. Although it continues to be the driving force in the economy, communities throughout the region have experienced dramatic job and population losses since the 1960s when the coal industry began its decline across the state of West Virginia. Today the post-coal regional economy is shifting to one based not only on coal but on destination tourism and retirement living.

The region's appeal as a tourism destination has been growing over the past 35 years. Its natural beauty and the opportunities for outdoor recreation are the major attractions to vacationers and adventurers. The region has long marketed itself as having "America's Best Whitewater". Southern West Virginia offers many other types of outdoor activities as well – hiking, rock climbing, fishing, hunting, birding, mountain biking, skiing, and ATV riding. Extensive public lands are available for visitor use, such as the Monongahela National Forest, Babcock State Park, Hawks Nest State Park, Pipestem State Park, numerous state wildlife management areas, and three units of the national park system – the Gauley River National Recreation Area, Bluestone National River, and New River Gorge National River.

In recent years the coal heritage stories told at the historic coal-boom era towns and abandoned industrial sites throughout the region are attracting visitors interested in Appalachian cultural and industrial history. Most of the southern West Virginia region is within the National Coal Heritage Area authorized by Congress in 1996, recognizing it as a distinctive landscape that tells a nationally important story.

Scenic touring is another component of the region's tourism economy. Two National Scenic Byways attract visitors to the area – the Midland Trail and the Coal Heritage Trail. The New River Gorge Bridge – the highest bridge in North America – is a scenic attraction and the site of the annual Bridge Day, which draws more than 100,000 visitors to the area each October.

The two primary visitor service hubs in the region are Beckley and Fayetteville. Beckley is home to Tamarack, a showcase for West Virginia's art, crafts, music, and food. Beckley also contains a large concentration of hotels, restaurants, shopping and other visitor services. The Fayetteville area has become a major lodging, dining, and shopping destination for whitewater enthusiasts because of its close proximity to the renowned whitewater stretches of the New River and the Gauley River – considered by paddlers to be among the most challenging whitewater in the United States.

3.5.2 The Park's Community Neighbors

New River Gorge National River – located in the heart of the southern West Virginia region – encompasses portions of Summers, Raleigh, and Fayette Counties and adjoins Nicholas County. Several larger communities within or near the park are gateways to the park (see Table 3.16). In addition are numerous small communities and settlement areas within the park, some of which function also function as gateways to the park (see Table 3.16).

- **Four-County Area Socio-Economic Profile**

Four-County Population Profile. In 2006 approximately 165,899 people lived in the four-county area surrounding the park (U.S. Census). The population base has not been growing – its growth rate from 1990 to 2006 was just 0.1 percent, and its

TABLE 3.15 Four-County Population Characteristics, 1990 to 2005/2006

	Fayette County	Nicholas County	Raleigh County	Summers County	Total
Population					
1990	47.952	26,775	76,819	14,204	165,750
2000	47,479	26,562	79,220	12,999	166,360
2006 Estimated	46,610	26,442	79,302	13,531	165,889
Numerical Change	-1,342	-329	2,483	-673	139
Percent Change	-2.8%	-1.2%	3.2%	-4.7%	0.1%
Housing					
1990	20,841	11,235	33,278	6,769	72,123
2000	21,616	12,406	35,678	7,331	77,031
2005 Estimated	22,204	12,822	36,439	7,450	78,915
Numerical Change	1,363	1,587	3,161	681	6,792
Percent Change	6.5%	14.1%	9.5%	10.1%	9.4%
Employment					
1990	13,010	9.050	30,980	2,640	55,680
2006	12,255	8,572	32,327	2,642	55,796
Numerical Change	(755)	(478)	1,347	2	116
Percent Change	-5.8%	-5.3%	4.3%	0.1%	0.2%

Source: U.S. Bureau of the Census

population has not grown at all since 2000. Population is dispersed throughout the area, with few population centers. Beckley, the largest city is located in Raleigh County and had a 2000 population of 17,254. The next largest community, Oak Hill is in Fayette County and had 7,272 residents in 2006.

The four-county area's population is fairly old – three of the counties have median ages of about 39.5 years and the fourth, Summers County, has a median age of 43.4 years. These figures exceed the state (38.9 years) and national (35.3 years) median figures. Despite the older median age, there is a strong base of younger residents. About 30 percent of the area's population is under the age of 25. But those over the age of 55 represent 26 percent of all residents, leaving small numbers of people in the middle of the age profile.

The four-county area contains few minority residents. More than 92 percent of residents are White. About six percent are Black, and less than one percent are Asian, American Indian, other races, or multiracial. Those of Hispanic origin compose less than one percent of the area's population.

Educational attainment is low in all four counties. Seventy percent of adults over the age of 25 have high school diplomas and just 11 percent have degrees from four-year colleges.

Four-County Economic Profile. As of June 2007, the area's labor force contained 67,730 workers, representing about 41 percent of the area's total population. The unemployment rate at that time was 4.6 percent, down significantly from 7.4 percent at the beginning of 2004. Fayette County's unemployment rate has fallen sharply in recent years, from 8.4 percent at the beginning of 2004 to 4.9 percent as of June 2007.

Labor and unemployment vary somewhat by season in the area. At the seasonal peak in July, 2006 there were 68,620 people in the area's labor force compared with about 64,240 in January of that year. Fayette County, where the summertime labor force grows by about 2,000 people, is most affected by the season. Unemployment varies with the season as well, typically peaking in January or February and bottoming out in September or October.

More than half of the area's jobs are in services, leisure, and hospitality and retail trade – industries that do not generally pay well. Another 20 percent of jobs are in the government sector, indicating that the area is heavily dependent on public spending. The natural resources and mining sector – once the dominant employer in the area – now only accounts for six percent of jobs in the four-county area.

Employment in the area is heavily concentrated in Raleigh County, where 58 percent of the jobs in the four counties are located. Beckley and the surrounding area clearly forms the economic heart of the area and, outside of other locations along the U.S. 19 corridor, economic opportunity is very limited. Raleigh County has shown the most job growth since 2000, adding more than 1,300 jobs from 2000 to 2006. Though Fayette County lost more than 750 jobs from 2000 to 2006, most of the job losses occurred in the manufacturing sector early in the decade. Since 2001 Fayette County has rebounded, adding approximately 500 jobs. Employment growth included a 67 percent growth in the natural resources and mining sector and a doubling of jobs in the financial activities (which includes real estate), indicative of the influx of developers, realtors, and lenders. During the same period in Fayette County there was stagnation in the leisure and hospitality sector, the county's largest employment sector.

The four-county area's income levels are quite low, with 48 percent of households in the area earning less than $25,000 per year. The area's median household income as of 2000 was about $26,000, compared with $29,700 for West Virginia and $42,000 for the United States as a whole. Just 22 percent of the resident base earns over $50,000 per year and only 9 percent earns over $75,000 per year. In 2000, 20.0 percent of the area's residents were living below the poverty line (US Census figure).

■ **Socio-Economic Profile of Communities near the Park**

Population Profile of Communities near the Park. Of the six large communities near the park, three grew in population from 1990 to 2000 and three lost population (see Table 3.16). During the 1990s Fayetteville grew by 27 percent, Summerville grew by 22.9 percent, and Oak Hill grew by 10.2 percent. Conversely, during the 1990s Hinton lost 17.4 percent of its population, Mt. Hope lost 6 percent, and Beckley lost 5.8 percent. In general, the communities had a larger population over age 65 when compared to the area as a whole. Mt. Hope had a larger population under age 18 than the rest of the area, while Fayetteville and Oak Hill had fewer people under age 18.

Economic Profile of Communities near the Park. In 2000 owner-occupied housing units were highest in Fayetteville (82%), where median household income was also highest ($35,043). Owner-occupied housing units were lowest in Mt. Hope (72.8%) where median income was also lowest ($28,122). The percentage of households living below the poverty level was relatively high in all six communities ranging from 11.7 percent in Fayetteville to 36 percent in Mt. Hope (compared to 14.7% statewide and 11.3% nationally).

TABLE 3.16 Communities within and near the Park

	Large Communities	Small Communities	Named Settlement Areas
Communities within the Park	none	Highland Meadow Creek Thurmond Prince	Brooks Backus Quinnimont Terry Thayer
Communities near the Park	Beckley* Fayetteville* Hinton* Oak Hill* Mt. Hope* Summersville	Meadow Bridge Grandview Glen Jean Winona Lansing Sandstone* Piney View Cunard Lookout Ansted*	Abraham Brooklin Barksdale Minden Red Star/Harvey Brooklyn Clifftop Edmond Ames Heights Layland

* Communities that currently function as "gateways" to the park offering commercial services used by visitors

3.5.3 Land Use

■ **Housing**

Despite the stagnant population levels, strong growth has occurred recently in the area's housing inventory. From 1990 to 2005, the net change in housing units was 6,792, a growth rate of 9.4 percent over fifteen years. A large part of the reason for stronger housing unit growth than population growth is declining household size. In 1990, the area's average household size was 2.58 persons; by 2000 it had fallen

TABLE 3.17 Population Characteristics of Large Communities near the Park, 1990 to 2000

	Hinton	Beckley	Mt. Hope	Oak Hill	Fayetteville	Summersville
Population						
1990	3,433	18,296	1,573	6,812	2,182	2,666
2000	2,835	17,425	1,478	7,509	2,771	3,276
Numerical Change	(598)	(871)	(95)	697	589	610
Percent Change	-17.4%	-4.8%	-6.0%	10.2%	27.0%	22.9%
Households						
1990	1,578	7,754	627	2,835	827	1,167
2000	1,327	7,645	630	3,225	1,157	1,475
Numerical Change	(251)	(109)	(95)	390	330	308
Percent Change	-15.9%	-1.4%	-6.0%	13.8%	39.9%	26.4%
Average Household Size						
1990	2.21	2.25	2.48	2.34	2.46	2.24
2000	2.10	2.21	2.35	2.28	2.30	2.18
Housing Units						
1990	1,774	8,917	765	3,157	915	1,266
2000	1,567	8,736	750	3,606	1,256	1,562
Numerical Change	(207)	(181)	(15)	449	341	296
Percent Change	-11.7%	-2.0%	-2.0%	14.2%	37.3%	23.4%
Age Profile. 2000						
Under 18	22.5%	22.0%	26.5%	19.4%	20.2%	21.6%
18-24	7.7%	8.5%	8.5%	8.3%	7.3%	9.3%
25-34	7.4%	10.2%	12.1%	12.2%	12.6%	8.5%
35-44	15.9%	15.1%	13.3%	14.4%	13.2%	15.0%
45-54	11.1%	14.8%	15.1%	16.6%	17.1%	15.3%
55-64	11.0%	8.5%	8.4%	8.9%	10.0%	11.5%
65+	24.3%	20.9%	16.2%	20.2%	19.7%	18.7%
Income Profile, 2000						
Under $25,000	59.4%	45.1%	60.0%	50.3%	38.2%	42.0%
$25,000 - $49,999	24.2%	28.5%	26.2%	31.0%	26.7%	28.2%
$50,000 - $74,999	9.9%	13.0%	10.7%	12.9%	20.4%	16.2%
$75,000 or more	6.5%	13.4%	3.2%	5.8%	14.7%	13.5%
Median HH Income	$20,323	$28,122	$18,375	$24,792	$35,043	$29,783
% below Poverty	27.6%	20.9%	36.0%	17.7%	11.7%	12.7%
Housing Tenure						
Owner Occupied	67.8%	63.7%	60.2%	72.8%	82.2%	70.2%
Renter Occupied	32.2%	36.3%	39.8%	27.2%	17.8%	29.8%
Seasonal Units as % of Total Housing Units	1.7%	0.7%	4.0%	1.6%	2.9%	0.7%

Source: U.S. Bureau of the Census

to 2.40 persons. This mirrors a national trend in falling household sizes. In 1990, the area's average household size was 2.58 persons; by 2000 it had fallen to 2.40 persons. This mirrors a national trend in falling household sizes.

Development of seasonal housing units is the other major cause of housing growth. In 1990, there were 1,898 housing units reported as being used for "seasonal, recreational, or occasional use" in the area, representing less than three percent of all housing units. By 2000, there were 3,233 seasonal units, representing nearly seven percent of all dwelling units. Continued vacation home development in the area is expected in the future. In the past three years Fayette County has approved almost 2,500 new housing units, most of which are expected to be seasonal homes and most of which are planned for the Fayetteville area in the vicinity of New River Gorge National River.

- **Commercial and Industrial Development**

Commercial and industrial development in the past few years has been strongest in Raleigh County in and around the city of Beckley. The Beckley Higher Education Center recently opened in a new 67,000 square foot facility. The Raleigh County

Memorial Airport Industrial Park recently expanded by 325 acres. New technology parks are being developed at the Woodlands on the east side and at Pinecrest Business and Technology Park. In downtown Beckley there has been recent reinvestment interest, and the Beckley Inter-modal project is under construction which will provide underground parking, a cultural center, and farmers market. Restaurant and lodging development has continued in the vicinity of the Harper Road Exit on the West Virginia Turnpike. Other major commercial developments in the past few years include Cranberry Plaza and a second Wal-Mart store.

In Fayette County recent new commercial development has concentrated in the U.S. Route 19 corridor with major investment near Fayetteville where Wal-Mart and Lowes have recently built new stores. Wolf Creek Park is a major new mixed-use business park under development.

In Summers County the city of Hinton recently opened the 38,000 square foot Hinton Technology Center, designed for high technology office use.

- **Community Planning and Growth Management**

West Virginia law requires that all communities must have a comprehensive plan (see Section 1.10.2 above). Fayette County has adopted a detailed plan addressing future land use and provision of facilities and services in the county (Fayette County 2001). Summers County has developed a long-range vision (Summers County 2002) and is in the process of preparing a more detailed comprehensive plan to achieve the vision. Zoning is in effect in Fayette County, Raleigh County, Beckley, Fayetteville, and Hinton.

Table 3.18

New River Gorge National River
Three National Parks in Southern West Virginia - Annual Economic Impact (2005)
(New River Gorge National River accounts for approximately 80% of total)

Impact	Annual Amount
Jobs	3,550
Earnings (from new jobs)	$49,524,450
NPS Spending in the Region	$7,208,400
Recreational Visitor	$79,401,000
Local and Regional Spending (as a result of new jobs)	$43,408,090
Taxes Generated	$9,394,467

Source: Versel 2006

Table 3.19

New River Gorge National River
Three National Parks in Southern West Virginia - Visitor Spending Breakdown by County

County	Percent
Fayette	25%
Nicholas	7.5%
Raleigh	50%
Summers	17.5%

Source: Versel 2006

3.5.4 Economic Impact of the Park

A recent study of the economic impact of the three national park units in southeastern West Virginia – including New River Gorge National River, the Gauley River National Recreation Area, and the Bluestone National Scenic River – indicated that the parks generated approximately 3,550 jobs with $49.5 in annual earnings, $130 million in annual spending, and $9,400,000 in annual taxes (see Table 3.18) (Versel 2006). New River Gorge National River accounted for approximately 80 percent of the total impact of the three parks.

- **Jobs and Earnings Generated**

The 3,550 jobs generated by the parks included (1) the NPS employees who operated the park (138 jobs), (2) the directly related jobs in the tourism industry that provided the goods and services desired by visitors (2,350 jobs), and (3) the indirectly related jobs in the local and regional communities that provided the goods and services desired by the NPS and tourism industry employees (1,062 jobs) (Versel 2006). The combined 2005 annual earnings from these jobs was estimated to be $49,254,450 (Versel 2006).

- **Recreational Visitor Spending**

Visitors to the three national park units in 2005 spent about $79.4 million in Fayette, Nicholas, Raleigh, and Summers Counties (Versel 2006). The average travel party visiting the parks spent $399 during its visit (NPS 2006e). About half of these expenditures were for lodging (25%) or food (23%) expenses (NPS 2006e). Guide fees were the next largest category, representing 19 percent of all visitor spending, despite the fact that three-quarters of visitors did not use guide services (NPS 2006f). Visitors who did use guides spent more for their services.

- **Local and Regional Spending as a Result of New Jobs**

Local residents employed by the NPS at the park or working in the tourism industry spend most of their earnings in local communities or within southern West Virginia. In 2005 the total spending in the region by these residents was estimated at $43.4 million (Versel 2006).

- **Taxes Generated**

State and local taxes paid in 2005 as a result of economic activity related to the three parks were estimated at $9.4 million (Versel 2006). These taxes included state sales taxes, state lodging taxes, state income taxes, local property taxes, and payments in lieu of taxes (PILOT). PILOT payments totaling $90,000 were made by the NPS to the four counties in lieu of property taxes because federally-owned land is not directly taxable to local jurisdictions. Actual taxes paid in 2005 would be higher if local utility taxes paid by park and tourism related homes and businesses were included in the estimate.

3.5.5 Socio-Economic Environment Concerns

- **Community Awareness and Attitudes toward the Park**

Within the broad community in and around the park there are highly varied views, perspectives, and attitudes regarding the park. Many people do not understand that New River Gorge National River is a unit of the national park system and its significance to all citizens of the United States. Respect for the park and an appropriate level of stewardship is not always evident in the local community. A complaint from long-time residents of the area is that federal ownership of land within the park boundary has resulted in loss of access to recreational activities that were previously permitted on private property, such as unrestricted hunting, ATV riding, and camping.

- **Development within and adjoining the Park**

Local community planning and land development activities are directly and indirectly impacting park resources and visitor experiences. Approval of residential development projects in recent years will enable future development of homes within the park boundary in highly visible locations along the rim and on the gorge walls. In some jurisdictions private land in the park is not subject to zoning regulations increasing the potential for future development that could adversely impact park resources.

- **The Park's Role in the Regional Tourism Market**

Economic development interests in the southern West Virginia region have expressed the need to work cooperatively to develop a shared vision for the future of the region and a plan for marketing the region to accomplish that vision. The NPS is a key partner in this effort given the park's role as the major tourism attraction in the region. Some people have suggested that a "great lodge" should be developed as a regional attraction in or near the park.

3.6 Visitor Experience and Visitor Use

3.6.1 Visitation and Visitor Use Overview

- **Visitation and Visitor Profile**

Annual Visitation. During the early years of New River Gorge National River – from 1984 to 1993 – the number of visitors to the park grew rapidly from about 0.2 million to 1.0 million people per year (see Table 3.20). Since 1993 annual visitation has hovered around 1.0 to 1.2 million, with slightly more visitors coming to the park in the late 1990s and early 2000s when compared to recent years since 2002.

It is worth noting that actual visitation to the park is probably higher than officially recorded by the NPS because visitor counting procedures do not include visitor use in remote areas of the park used for various adventure sports

New River Gorge National River
Park Significance Statement 6

New River Gorge National River provides visitors with exceptional opportunities for exploration, adventure, discovery, solitude and community.

Fundamental Resources and Values

- experience and enjoyment visitors derive from the direct interaction with the outstanding scenic, natural, and cultural resources through a variety of recreational activities

Other Important Resources and Values

- experience of a tranquil setting characterized by largely natural sounds

Table 3.20

New River Gorge National River
Park Total Visitation
(1984 – 2007)

Year	Total Visits
1984	231,295
1985	263,021
1986	395,159
1987	437,871
1988	400,802
1989	412,275
1990	379,115
1991	773,702
1992	952,979
1993	1,020,224
1994	1,088,102
1995	1,165,437
1996	1,225,345
1997	1,215,861
1998	1,183,853
1999	1,173,151
2000	1,117,657
2001	1,218,783
2002	1,203,404
2003	1,113,561
2004	1,154,181
2005	1,048,212
2006	1,127,086
2007	1,180,411

Source: NPS 2008a

Table 3.21

New River Gorge National River
Seasonal Visitation
(2007)

Month	Monthly Visits
January	17,887
February	21,858
March	50,269
April	68,084
May	135,348
June	165,189
July	230,682
August	201,840
September	96,571
October	122,474
November	38,654
December	31,555

Source: NPS 2008a

Seasonal Visitation. Summer is the time of year when the most people visit New River Gorge National River (see Table 3.21). Approximately 51 percent of the visitation occurs in June, July, and August, with July being the busiest month. Larger numbers of visitors also come to the park during the spring (May) and the fall foliage season (October). Visitation is lowest in the winter months from December through February, with the quietest time during January.

Visitor Profile. Visitation to the New River Gorge region can be generally divided into three distinct visitor markets:

- **local residents** who make regular use of the park and who live in the four-county region of Fayette, Nicholas, Raleigh, and Summers Counties
- **regional residents** who take daytrips to the park and who live within 100 miles of Beckley but outside the our resident counties
- **non-resident tourists** who either stay overnight or visit as part of longer trips and who live outside the 100-mile radius of Beckley

The current base of non-resident tourists is estimated to be the number of counted visitors to New River Gorge who either stayed overnight or passed through. In 2004 these two groups accounted for 74 percent of all visitation. Applying this figure to the 1.18 million estimated 2007 annual visitors to New River Gorge, about 874,000 non-resident tourists visit New River Gorge each year. These visitors are better educated and more affluent than the local resident base. In addition to being the target audience for tourism in the area, these individuals are increasingly becoming the target market for vacation and retirement home developments in Southern West Virginia.

The age distribution of visitors to the park reflects national age profiles. The largest share of visitors (35%) is in the baby boom generation from age 41 to 60 (Manni et al. 2005). Just 12 percent of visitors are age 61 or older, suggesting that there may be more opportunities to draw older visitors in the future (Manni et al. 2005).

Visitors to the park tend to be better educated than the overall traveling public. Nearly half of visitors to New River Gorge have at least a college education, indicating a well-educated (and affluent) visitor base (Manni et al. 2005). Eighteen percent of visitors have graduate degrees and another 29 percent have bachelor degrees.

First-Time Versus Repeat Visitors. Almost half of the visitors to New River Gorge have been there before. Ten (10) percent have visited the park from 5 to 10 times before and 14 percent have been there 11 times or more (Manni et al. 2005). About a quarter of the park's visitors have previously made 2, 3 or 4 visits to the park. For slightly over half of visitors it is the first time that they have been to New River Gorge.

TABLE 3.22 New River Gorge National River – Visitor Use Statistics (1998 – 2007)

Location / Visitor Use	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Change (1998-2007)
Canyon Rim VC	450,623	405,060	378,363	460,308	440,855	341,193	362,053	321,888	360,633	405,348	-10.0%
Sandstone VC	0	0	0	0	0	20,281	51,850	52,345	53,056	53,720	--
Grandview VC	168,968	233,475	203,690	250,558	208,928	329,653	338,703	268,405	275,368	243,563	44.1%
Thurmond VC	20,120	14,086	15,600	11,178	11,052	13,290	12,594	7,804	7,233	7,527	-62.6%
Glen Jean Bank	2,654	3,187	3,494	3,805	3,523	3,253	3,209	2,630	1,884	1,701	-36%
Sandstone Falls	113,540	95,970	71,148	82,813	86,768	78,748	90,310	79,290	76,250	88,490	-22.1%
Glade Creek[1]	124,763	122,733	131,590	128,933	132,328	27,008	475	30,105	62,033	86,520	-30.7%
Outfitted Paddlers[2]	124,616	124,616	124,616	124,616	124,616	124,616	124,616	124,616	124,616	124,616	--
	158,771 (DNR)	155,543 (DNR)	157,070 (DNR)	147,497 (DNR)	154,063 (DNR)	131,752 (DNR)	140,518 (DNR)	138,836 (DNR)	129,166 (DNR)	126,629 (DNR)	-20.2%
Private Paddlers[3]	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466	--
Tent/RV Campers	17,433	17,765	21,783	18,998	19,555	10,415	11,048	9,613	10,558	10,710	-38.6%
Trail Users	74,939	70,025	79,839	55,247	85,734	77,243	71,626	66,750	67,635	67,897	-9.4%
Climbers	6,653	6,208	9,549	13,343	13,620	12,797	15,552	14,661	13,796	15,894	239%
Bus Visitors	23,680	27,160	24,120	24,120	22,560	21,200	18,280	16,240	14,160	14,560	-38.6&
Special Events	22,000	19,000	20,000	11,000	20,000	20,000	20,000	20,000	26,000	26,000	18%
Non-Rec Visitors	2,398	2,400	2,399	2,398	2,399	2,398	2,399	2,399	2,398	2,399	0%
Total	1,183,853	1,173,151	1,117,657	1,218,783	1,203,404	1,113,561	1,154,181	1,048,212	1,127,086	1,180,411	-0.3%

1. Closures of the Glade Creek Road from 2003 have made the site less accessible for vehicles; the road reopened on January 8, 2008.
2. DNR estimates for the same years provided.
3. Actual estimates of private paddlers calculated in 1995 to be 31,466 (based on 1994 data); the same estimate has been used since then.

Source: NPS 2008a

Visitor Group Size and Travel Party Type. Groups visiting the park tend to be large, with 34 percent of parties containing five or more people and an overall average of 5.5 persons per party (Manni et al. 2005). However, 36 percent were parties of one or two people.

About two-thirds of visitors came in family groups or in groups composed of families and friends. Just 20 percent came as friends, demonstrating the family-oriented appeal of the area. Only 12 percent came to visit friends or family, unlike other parts of West Virginia where this market segment is near 40 percent of all visitors.

For about half of park visitors, New River Gorge is their primary travel destination and for about a third it is one of several travel destinations on their trip. About 20 percent of visitors arrive at the park without having planned to do so.

Visitor Length of Stay. Visitors to the park are transient by comparison to other national park units, many while "stopping by" spontaneously while on a road trip to other destinations. A part of one day is all that most visitors currently spend at New River Gorge (Manni et al. 2005). Visits lasting less than an hour are typical for about 25 percent of visitors. Only about 25 percent of visitors spend more the five

hours in the park. For those staying more than one day, 66 percent are there for two days and about 10 percent spend more than five days in the park.

3.6.2 Opportunities for Exploration, Adventure, Discovery, Solitude, and Community

The dramatic New River Gorge landscape and the whitewater recreation opportunities of the New River attract most first-time visitors to the park. Those new to the park quickly discover that within the spectacular gorge landscape and along the river are hidden the remains of dozens of towns that tell the stories of West Virginia's coal, lumber and railroading industries that flourished in New River Gorge during the late nineteenth and early twentieth century. For most visitors the spectacular terrain of the gorge, the free-flowing New River, and the tranquil setting – interspersed with the remnants of the gorge's human history – offer appealing opportunities for a variety of recreation and learning experiences.

- **New River Gorge's Classic Visitor Experiences**

A few experiences at New River Gorge are "classic" because they showcase the park's most significant natural and cultural resource. These experiences occur in a few specific places where visitors go most often – where they know they will most easily experience the best of the gorge and typically where the NPS has facilitated access and provides visitor services and interpretation.

Canyon Rim. From Canyon Rim, visitors experience dramatic rim-to-river views of the gorge, the New River Bridge, and the broader Appalachian Plateau. At the Canyon Rim Visitor Center the NPS orients visitors to the park and tells the park's stories through exhibits and interpretive programs. More people visit Canyon Rim than any other site in the park because of the views, the visitor center facilities and services, proximity to the New River Bridge, and its easy regional access from US Route 19. In 2007 approximately 405,300 people – or 34 percent of all park visitors – stopped at the Canyon Rim Visitor Center.

Grandview. At Grandview, visitors have a traditional family recreation experience, including picnicking, playing, hiking, and outdoor theatre. The site also provides access to spectacular rim-to-river views in the Turkey Spur area. Grandview opened for public use in 1941 as one of the state's early state parks, built by the NPS and the Civilian Conservation Corps. Since that time several generations of West Virginians have grown up visiting Grandview and return on a regular basis to participate in family reunions which occur every weekend throughout the warm months in the Grandview picnic pavilions. A small visitor center provides visitors with information about the park and interpretive programs. Grandview is the second most visited site in the park. In 2007 approximately 243,560 people – or 21 percent of all park visitors – spent time at Grandview.

Sandstone Falls. Sandstone Falls provides visitors the opportunity to experience the sights, sounds, and smells of the river. A boardwalk enables visitors to get very

close to the river at the site of the park's largest waterfall and to experience the adjoining rare Appalachian flatrock community. As a former settlement site in the upper gorge the site also offers also learn about the area's early history. Visitor facilities include a picnic area, interpretive waysides, a fishing beach, and a river access (below the falls). In 2007 approximately 88,490 people – or 7.5 percent of all park visitors – experienced the river at Sandstone Falls.

Sandstone Visitor Center. Approximately 50,000 visitors stop in at the Sandstone Visitor Center each year to get information about the park – its resources and stories and the experiences available. Views of the upper gorge provide visitor with a sense of the power of the river and the rugged forested terrain.

Endless Wall. A cliff top trail takes visitors through a beautiful pine forest and rhododendron thickets to the top of the sandstone outcrop known as the Endless Wall. The Endless Wall Trail takes visitors to Fern Point, Diamond Point, and numerous vantage points from which they experience the open expanse of the gorge and spectacular views of the Appalachian Plateau and the New River some 1000 feet below. From these vantage points visitors experience the power of the river evidenced by the gorge and the sheer rock walls it has carved.

Kaymoor and Nuttallburg. Visitors learn about the park's industrial heritage at Kaymoor and Nuttallburg. Those in good physical condition can hike down the 900 stairs to the former Kaymoor town site. Planned improvements will facilitate visitor access to the nationally significant Nutallburg Mining Complex and Town Site and enhance the visitor experience through new waysides and interpretive programs.

Fayette Station Road. Visitors can experience travel through the gorge as it was before the New River Bridge was built in 1977. The 100-year old Fayette Station Road winds down to the bottom of the gorge, crosses the river on a narrow bridge, and winds back up the gorge wall to the rim. Wayside exhibits describe the history of mining, transportation, and life in the gorge. Along the way visitors can stop at the sites of historic coal mining communities, view rock climbers, see the New River Bridge from below, get close to the river, and view paddlers as they pass through the Fayette Station Rapid.

Thurmond. At Thurmond visitors learn about the history and culture of New River Gorge during its industrial heyday. Thurmond – once a classic boomtown deep in the gorge – today remains surprisingly untouched except by the forces of nature seeking to reclaim the site. Now largely owned by the NPS, the town site is open for visitors to explore the ruins and remaining historic buildings stabilized by the NPS. The Thurmond Depot is now a small park visitor center where visitors are oriented to Thurmond through exhibits and interpretive programs. In 2007 approximately 7,500 people – or <1 percent of all park visitors – stopped at the Thurmond Depot Visitor Center.

RIVER TRIPS

New River (upstream) — **New River (downstream)**

A	B	C	D	E	F	G
Upstream - Hinton (Private)	Sandstone Falls (Public)	Glade Creek (Public)	McCreery (Public) Grandview Sandbar (Public)	Stone Cliff (Public)	Cunard (Public)	Teays Landing (Private) Fayette Station (Public)

- Canoe, Fish, Batteau (Class I – II+ Rapids)
- Private Paddle (Class I – II+ Rapids)
- Fishing Float (Class I – II+ Rapids)
- Family Float (Class I – III Rapids)
- Adventure Float (Class III – IV Rapids) (<4,500 CFS)
- Adventure Float (Class III – IV Rapids) (>4,500 CFS)
- Family Float (Class I – III Rapids)

RALEIGH COUNTY · BEAVER · DANIELS · SHADY SPRING · STANAFORD · OAK HILL · FAYETTE COUNTY · FAYETTEVILLE · ANSTED · HINTON · SUMMERS COUNTY · MEADOW BRIDGE · Bragg · Backus · Danese · New Richmond · Babcock State Park

Powerline Site · Army Camp · Terry Road · Shoals · Hidden · Flieshman's · Sandy Beach · White House · Upper Dowdy Creek · Lower Dowdy Creek · McKendree · Rt. 41 Site · Royal Pullout · Grandview Sandbar walk-in · Grandview Sandbar · Lower Mill Creek · Upper Mill Creek · Grassy Shoals · Glade Creek Walk-In · Glade Creek · Quinnimont · Apple Orchard · Depot Beach · Dowdy Creek Tunnel · Upper McKendree · Middle McKendree · Lower McKendree · Ledges · Silo · Appalachian Wildwater · Stone Cliff · Lower Stone Cliff · Arbuckle Creek · Dun Glen · Adventures Mtn River · Lower Thurmond · Rush Run · Fire Creek Hilton · Below Surprise River Left 2 · Below Surprise RL 1 · Brooklyn · Red Ash Island Beach · Lower Todd Beach · Middle Todd Beach · Upper Todd Beach · Fire Creek · Below Surprise River Right 1 · Buzzards Bend/ Ephraim Creek · Below Surprise River Right 2 · Below Surprise River Right 3 · Thayer · Lower Railroad · AW Launch · Railroad · Indigestion · Manns Creek · AW Lunch Area 2 · AW Lunch Area 1 · Upper Cunard · Sewell Beach · Upper Sewell Beach · Above Millers Folly · Below Dudleys Dip · Above Dudleys Dip · Middle Keeneys RL · Big Rock · Ender Waves/ Elverton · Swimmers · Caperton · Middle Keeneys Beach · Rope Swing · Lower Keeneys Amphitheater · Lower Kaymoor · Greyhound · Above Hook 99 · Short Creek · Teays · Jump Rock Beach · Bridge 3 · Bridge 2 · Bridge 1 · Bennett Hole · Shell Beach · Across from Meadow Creek · Meadow Creek Island · River Chase Upstream from Meadow Creek · I-64 Public · I-64 Private · Berry Campground · Upper Tug Creek · Hellems Beach · Bass Lake

State Roads
- Primary State Road (Paved)
- Secondary State Road (Paved)
- State Maintained Gravel Road
- Not Maintained Road

National Park Service Roads
- NPS Maintained Gravel Road
- NPS Official Trail

Private Roads
- Private Road
- Other Trails

Land Ownership
- NPS land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

Existing Visitor Use
- High Visitor Use
- Moderate Visitor Use
- Low Visitor Use

Level of Development
- U Undeveloped
- S Semi-Developed
- D Developed

Existing Visitor Opportunities
- Camping - Minimum Development
- Picnicking
- Fishing
- Group Camping
- Boating - River Access

Ownership
- Private (All others Public)

N

0 mi. · 1.5 mi. · 3 mi. · 6 mi. · 9 mi. · 12 mi. · 15 mi.

Figure 3.10

RIVER TRIPS, RIVER LUNCH STOPS, AND RIVER CAMPING

New River Gorge National River

WEST VIRGINIA

National Park Service · US Department of the Interior

Table 3.23

New River Gorge National River
Whitewater Use River Sections

Upper New 1
- Hinton to Prince (McCreery)

Upper New 2
- Prince (McCreery) to Cunard

Lower New
- Cunard to below Fayette Station Rapid

Table 3.24

New River Gorge National River
River Trip Summary
(see Figure 3.11)

Upper New 1
Canoe, Fish, Batteau Float
- Class I – II+ Rapids
- Upstream Hinton to Sandstone Falls
- high level of use

Upper New 1
Fishing Float
- Class I – II+ Rapids
- Meadow Creek to McCreery (or Grandview Sandbar)
- low level of use

Upper New 1
Beginning Paddler Float
- Class I – II+ Rapids
- Glade Creek to McCreery (or Grandview Sandbar)
- high level of use

Upper New 2
Family Float
- Class I – III Rapids
- McCreery (or Grandview Sandbar) to Stone Cliff (or at lower flows Stone Cliff to Cunard)
- moderate level of use

Lower New
Adventure Float – high water
- Class III – IV Rapids
- Stone Cliff to Fayette Station (or Teays Landing
- high level of use

Lower New
Adventure Float – summer flows or express trips
- Class III – IV Rapids
- Cunard to Fayette Station (or Teays Landing)
- high level of use

■ Whitewater Paddling

The New River attracts paddlers of all abilities seeking the thrill, exhilarating rush, and social bonding of the whitewater experience. Some of these visitors are extreme adventurists who paddle the Class IV rapids of the lower gorge in rafts and kayaks. Most are outfitted paddlers riding the river with experienced guides in organized commercial trips. Increasingly families are making guided and unguided river trips with teenage children or in family flotillas, preferring the more gentle rapids of the upper gorge. Collectively the whitewater paddlers – including the **outfitted paddlers** who ride with commercial outfitters and the **private paddlers** who ride on their own – compose one of the largest groups of visitors to the park. In 2007 approximately 124,620 outfitted paddlers and 31,470 private paddlers – or over 13 percent of all park visitors – floated the New River.

The New River from Hinton to Brooks Falls/Sandstone Falls is wide and shallow and popular with recreational paddlers in canoes or fishermen in john boats with small outboard motors (Figure 3.10). The stretch from Sandstone Falls to Glade Creek (or Grandview Sandbar) is popular with fishermen and duck hunters in small motorized boats, and private paddlers in canoes. The stretch from Glade Creek to Grandview Sandbar is popular with an increasing number of beginning private paddlers because of the easy road-side shuttle, which enables visitors to make several runs in one day. The 13-mile stretch from McCreery to Stone Cliff contains many Class I to Class III rapids and is a popular one-day run for beginning kayakers and rafters. The stretch from Stone Cliff/Dun Glen to Cunard at normal water levels is the first half of the Lower New one-day trip and contains one very large Class III rapid and several long pools. Since development of the Cunard access in 1990, paddlers have had the option to skip the first half and instead put in at the beginning of the Class III to Class IV rapids. Commercial outfitters have accordingly developed this option into an express half-day trip. By far the most popular one-day or express whitewater run for all paddlers is the Lower New, either starting at Stone Cliff/Dun Glen during high water flows or starting at Cunard at normal or low water levels and ending at Fayette Station.

Outfitted Paddling Overview. Whitewater paddling is the largest sector of the state's outdoor recreation economy. The state of West Virginia Department of Natural Resources regulates commercial whitewater use (outfitted paddling). Since 1992 the state has limited the maximum daily commercial use on the Lower New to 3,875 outfitted paddlers. Limits are not in place for the Upper New.

Paddling on the New River – as elsewhere in the state – grew dramatically in the 1980s and 1990s, peaking in 2002. Since 1996 outfitted paddling has experienced a decline in volume statewide of some 55,000 trips. At New River Gorge, in 2007 approximately 106,109 outfitted paddlers rode the Lower New. While this was the highest paddling volume on the state's commercial whitewater rivers, it represented

TABLE 3.25 West Virginia Commercial Rafting Industry Performance by River Segment, 1996 – 2007 (thousand paddlers)

River Section	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Change (1996-2007)
Upper New	22.8	20.5	24.7	22.7	23.8	31.7	24.7	28.4	24.7	23.4	23.9	20.5	-2.3
Lower New	134.2	125.2	133.7	132.9	133.2	116.4	129.3	105.8	111.5	113.7	103.7	106.1	-28.1
Upper Gauley	41.4	35.3	40.9	38.0	38.9	35.9	36.3	31.9	28.4	30.4	30.0	30.5	-10.9
Lower Gauley	21.4	20.6	23.0	21.1	23.5	24.0	22.2	24.1	18.3	16.2	17.8	16.3	-5.1
Cheat	12.1	9.7	8.3	4.3	7.1	6.9	4.0	6.6	5.3	3.8	3.5	5.0	-7.1
Shenandoah	19.2	13.0	18.3	7.9	22.9	22.9	5.9	25.1	21.8	21.6	21.0	17.7	-1.5
Total	251.1	224.2	248.8	226.9	249.4	237.2	223.0	221.8	210.1	209.1	199.8	196.1	-55.0

1. Separate counts for Upper New 1 and 2 were only kept following the 1997 season. Upper New segment changes reflect from 1998
2. Tygart was excluded from data

Source: DNR Annual Whitewater Summary, 2002-2006; ERA 2007

a 21 percent decline (-28,090 paddlers) when compared to 1996. In contrast, approximately 20,520 paddlers rode the Upper New in 2007, representing a 10 percent decrease (-2,280 paddlers) when compared to 1996.

Outfitted paddler whitewater use of the New River begins on weekends in mid-March and builds into April to include some mid-week spring break business. While commercial whitewater use extends March through April, almost 90 percent of the total yearly visitor use occurs in the four-month period of May through August. Even though the New River has sufficient water levels to run river trips in September and October, most commercial whitewater use shifts to the nearby Gauley River National Recreation Area for the scheduled fall releases from Summersville Lake. Outfitted paddler use then shifts back to the New River for the last two weekends in October, including Bridge Day, and occasionally for a day or two in November.

Outfitted paddler trips on the New River are directly related to water levels and the available public river accesses (see Table 3.26).

Private Paddling Overview. Private paddlers float the New River in a variety of boats depending on the section of the river, the water level, and the paddler's skill level - including kayaks, canoes, shredders, duckie boats, and specially designed watercraft. Annual non-commercial use is estimated to be 31,466 private paddlers per year and generally occurs from mid-April through September, with a peak during the warm summer months (NPS 1995d) (Table 3.27).

Whitewater kayaking on the New River has changed tremendously with the development of new kayaks, equipment, and extreme paddling skills. Experienced kayakers are more likely to paddle throughout the year and at higher water levels than kayakers from ten years ago. Rodeo kayaks were developed to surf large river hydraulics and to perform tricks. These paddlers generally like to stay at one play

TABLE 3.26 New River Outfitted Paddler Typical Trip Options

River Section	River Flow	Trip Length	Put-In	Take-Out
Upper New (Family Floats)	high (spring)	full day	Grandview Sandbar (NPS) or Prince (private)	Stone Cliff (NPS) or Stone Cliff (private)
	low (summer)	<full day	Stone Cliff (NPS) or Thurmond (private)	Cunard (NPS) or Cunard (private)
Lower New (Adventure Floats)	high (spring)	full day	Stone Cliff (NPS) or Thurmond (private)	Fayette Station (NPS) or Teays Landing (private)
	high[1] (spring)	1/2 day[1] (no lunch)	Cunard (NPS) or Cunard (private) [1]	Fayette Station (NPS) or Teays Landing (private) [1]
	low (summer)	<full day	Cunard (NPS) or Cunard (private)	Fayette Station (NPS) or Teays Landing (private)
	low (summer)	1/2 day (no lunch)	Cunard (NPS) or Cunard (private)	Fayette Station (NPS) or Teays Landing (private)

Source: WVPRO 2005

Table 3.27

New River Gorge National River
Annual Estimated Private Paddler Use

Month	Private Paddlers
April	776
May	4,606
June	7,001
July	8.510
August	7.394
September	3,179
Total	**31,466**

spot on the river for long periods of time and avoid the commercial raft traffic by generally starting their trip much later in the day. Some rodeo boaters start at Cunard, paddle to the first play spot, paddle for a few hours, and then carry their boats back upstream along the railroad tracks to the Cunard parking area. This type of stationary use is expected to increase in the Kenney Creek area with the recently improved state road access. Creek boats are generally short but high volume kayaks developed to navigate narrow rocky streams with large vertical drops. Creek boaters like to paddle the steep tributary creeks, like Glade, Piney, Mann and others during periods of high water runoff. These paddlers are very skilled and have very different access needs and user preferences.

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to whitewater paddling in the park:

- parking facilities are inadequate for private paddlers and other visitors at some public river accesses on peak visitation days
- crowding at river accesses and on the river occurs as a result of outfitted paddler trip logistics, suggesting the need to consider (1) adding a river access above Cunard, and (2) opening Glade Creek to outfitted paddler use
- changing stations and sanitary facilities are inadequate at some river accesses

- **Camping**

Camping Overview. Visitors to the park seek opportunities to camp in the frontcountry and backcountry as part of a variety of outdoor experiences. Camping

use is greatest from May through September. Campsites are generally full on weekends from Memorial Day through Labor Day. Four types of camping are available:

- **Public Campgrounds**. The state of West Virginia operates a developed public campground at Babcock State Park with full services for recreational vehicles and tent camping.

- **Primitive Campgrounds**. The NPS provides opportunities for primitive camping at 9 locations (see Table 3.28). These are used by a wide variety of visitors – families, paddlers, hikers, bikers, climbers, etc. Access is via driving, hiking, and/or paddling (see Table 3.28). Most sites are located adjacent to the New River. Facilities include designated campsites, each with a parking area, fire ring, and picnic table. Vault or portable toilets are available but there is no potable water. There is no fee for camping, but campers are required to register with a ranger at the earliest opportunity and stays in the same area are limited to no more than 14 days within a 28-day period within any park campground and/or camping area.

- **Group Campgrounds**. The park has two group camping areas. Burnwood is located off U.S. Route 19 across from the Canyon Rim Visitor Center. Dun Glen is located along the New River across from Thurmond. Access is by driving. Facilities include designated campsites, with a parking area, fire ring, and picnic tables. Comfort stations are available but there is no potable water. Both sites require a special use permit.

  Camping by commercial groups at the group campgrounds is permitted only from October 1 through the third Friday in May. This policy is in effect to eliminate conflicts between user groups and to eliminate the safety hazard and visitor experience impacts associated with commercial vehicle traffic on the narrow Glade Creek during the peak summer visitation period.

- **Undesignated Backcountry Camping**. Areas suitable for backcountry camping occur throughout the park at walk-in or boat-in sites generally along the river and adjacent to trails. Backcountry sites are not designated, although camping is not permitted within 100' of water sources, 25' of park and public roads, park buildings, official trails, developed river access sites, and developed day-use areas. Other backcountry camping prohibitions are specifically identified in the *Superintendent's Compendium* (NPS 2007). The most heavily used backcountry sites are along the Glade Creek Road, Brooklyn-Southside Junction Trail, and Stone Cliff Trail. Although use of backcountry sites in remote locations is not well documented, periodic ranger patrols have identified approximately 39 undeveloped sites along the river that receive regular use. Some of the most popular sites are

Table 3.28

New River Gorge National River
Camping Facilities

Location	Campsites
Public Campgrounds	
Babcock State Park	52 campsites 28 cabins
Primitive Campgrounds (drive-in)	
Army Camp	11 campsites
Grandview Sandbar	10 campsites
Glade Creek	5 campsites
Hellems Beach	4 campsites
Primitive Campgrounds (walk-in)	
Glade Creek	6 campsites
Grandview Sandbar	4 campsites
War Ridge	6 campsites
Hylton Strip	6 campsites
Thayer	4 campsites
Stone Cliff	8 campsites
Brooklyn	3 campsites
Group Campgrounds	
Dunglen	variable
Burnwood	variable
Undesignated Backcountry Campsites	
boat-in only sites	along the length of the river
hike-in only sites	adjacent to trails
boat-in or hike-in sites	scattered sites

Table 3.29

New River Gorge National River
Campground Use

Location	Use
Primitive Campgrounds	
Army Camp	high
Glade Creek	high
Grandview	high
Hellems Beach	high
Thayer	moderate
Stone Cliff	high
Brooklyn	moderate
Group Campgrounds	
Burnwood	moderate
Dunglen	low

occupied most nights during the summer season. These generally include sites at Quinnimont, Route 41, Upper Mill Creek, McKendree, Sewell Beach, Upper Sewell Beach, Ender Waves, and Apple Orchard. Several boat-in and walk-in sites, such as Arbuckle Creek, Manns Creek, and Indigestion, are owned by outfitters and receive heavy use as the overnight camp for their 2-day trips.

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to camping in the park:

- the supply of drive-to developed camping does not meet demand
- the supply of non-designated primitive campsites (particularly boat-in and drive-to sites along the river) does not meet demand
- camping facilities are not available in the vicinity of climbing areas
- non-designated primitive camping can lead to resource degradation and visitor conflicts
- the increasing size of disturbed areas and the amount of litter at popular undesignated campsites with corresponding adverse environmental impacts and loss of aesthetic appeal
- the lack of a campsite reservation system makes it hard to plan trips to the park

- **Picnicking (NPS Developed Facilities)**

Picnicking Overview. Visitors enjoy opportunities for picnicking at developed NPS facilities and at undesignated picnic sites in both the frontcountry and the backcountry.

Table 3.30

New River Gorge National River
Developed Picnicking Facilities

Location	Use
Ames	low
Brooks Falls	low
Hellems Beach	moderate
Sandstone Falls	moderate
Glade Creek	high
Dunglen	low
Babcock State	high
Canyon Rim	high
Burnwood	high

- **Developed Picnicking Facilities**. Day-use facilities for picnicking (off the river) at the park are available at nine locations (see Table 3.30). Grandview is the most popular picnicking site in the park. Its five picnic shelters – with combined capacity for almost 600 people per day – are used from the end of May through mid-October, primarily for family or class reunions and company picnics. Reservations for the shelters on summer weekends are generally filled months in advance. Other popular picnic facilities in the park are Glade Creek and Canyon Rim, as well as the two picnic areas at Babcock State Park that the state of West Virginia operates.

- **River Lunch Stops**. A highlight of most river trips or backcountry fishing trips is a picnic on the bank of the New River or on one of the river's many beaches or bars (see Figure 3.11). Approximately 14 sites on the river experience heavy visitor use as lunch stops, all primarily by outfitted

paddlers; 10 of these sites are owned by the NPS and 4 are owned by outfitters. Another 16 sites experience moderate use, also primarily by outfitted paddlers; 14 of these sites are owned by the NPS and 2 are owned by outfitters. Private paddlers tend to use smaller sites along the river avoiding sites used by outfitted paddlers, such as Big Rock, Bennett Hole, and Middle Kenney Beach. No facilities are provided at any of these sites for trash collection or for visitor sanitary waste collection.

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to picnicking in the park:

- there are not enough opportunities for picnicking at the river level
- heavy use of river lunch stops may adversely impact natural resources
- there generally are no paddler waste collection facilities at river lunch stops
- the increasing size of disturbed areas and the amount of litter at popular river lunch stops with corresponding adverse environmental impacts and loss of aesthetic appeal
- the nicest river lunch stops are generally not available to private paddlers

- **Climbing**

Climbing Overview. The hard sandstone walls of New River Gorge offer some of the best climbing opportunities in the eastern United States and in recent years has become one of the most popular climbing areas in the country. Climbers most heavily use the Nuttall Sandstone cliffs which extend for five miles upstream and three miles downstream of the New River Bridge. The cliffs range from 30 to 120 feet in height and are highly fractured, offering an abundance of crack and face routes. Approximately 1670 climbing routes provide a good variety of traditional and sport climbing routes, although most routes favor the more advanced and expert climber. About 1000 routes are traditional climbs, where the climber places protection from falls as they climb, and about 670 routes are "sport" climbs, where the protection is fixed in place using bolts and hangars (Cater 2006). The majority of routes are a 5.9 and harder, and most sport routes are in the 5.10 to 5.12 range. First time visitors and those looking for roped climbs concentrate in the Bridge Buttress area.

In 2007 approximately 15,900 visitors climbed the rock walls of the gorge, the largest number since NPS began counting climbers in 1994 (see Table 3.22). The number of climbers in the park annually has tripled since 1994. Visitors climb privately or with commercial outfitters. In 2007 the park issued commercial use authorizations to 14 commercial outfitters in the park, who provided guide services to 6,676 visitors (42% of total climbers); about 51 percent of the guided climbers were relatively inexperienced and used routes in the Bridge climbing area.

Table 3.31

New River Gorge National River
River Lunch Stops Heavily Used by Outfitted Paddlers
(see Figure 3.11)

Location	Ownership
Middle Keeney Beach	Public
Ender Waves	Public
Swimmers	Public
Indigestion	Private
Manns Creek	Private
AW Launch	Private
Sewell Beach	Public
U. Sewell Beach	Public
Below Surprise RR	Public
Below Surprise RL	Public
McKendree	Public
Dowdy Cr. Tunnel	Private
Upper Dowdy Cr.	Public
Upper Mill Cr.	Public

Table 3.32

New River Gorge National River
Climbing Use by Area (non-commercial) (2007)

Climbing Area	Visitation
Bubba City	moderate
Bridge Buttress	high
Sunshine Buttress	low
Ambassador Buttress	low
Butcher Branch	high
Kaymoor	moderate
Diamond Foot/Cirque	moderate
South Nuttall	low
Beauty Mountain	moderate

Table 3.33

New River Gorge National River
Climbing Use by Outfitters (2007)

Climbing Area	Visitors
Bridge Buttress	3,01
South Bridge	218
Reed Wall	925
Junkyard	1,069
Rams Head (Beauty	468
Endless Wall	795

Table 3.34

New River Gorge National River
NPS Official Hiking Trails
(2007)

Trail	mi.	Trail Standard
High Use Trails		
Kaymoor	8.6	frontcountry/ admin road
Glade Creek	5.6	frontcountry/ admin road
Long Point	1.6	frontcountry
Rend	3.4	admin road
Sandstone Falls Boardwalk	0.2	fully accessible
Southside	7.0	frontcountry/ admin road
Fayetteville	4.0	backcountry
Park Loop	1.1	backcountry
Timber Ridge	1.0	backcountry
Brooklyn Mine	2.7	admin road
Grandview Rim	1.6	developed/ frontcountry
Burnwood	1.2	frontcountry
Canyon Rim Boardwalk	0.1	fully accessible/ developed
Bridge Buttress	0.2	frontcountry
Endless Wall	2.4	frontcountry
Grandview Walkways	1.5	fully accessible/ developed
Tunnel	0.5	frontcountry
Sandstone Falls Overlook	0.1	developed
Junkyard	0.3	climbing spur
Medium Use Trails		
Kaymoor Miners	0.9	backcountry
Castle Rock	0.6	backcountry
Big Branch	2.0	backcountry
Butcher Branch	0.8	backcountry
Arbuckle Connector	0.3	backcountry
Island Loop	0.5	frontcountry
Big Buck	0.9	frontcountry
Craig Branch	2.4	admin road
Low Use Trails		
Church Loop	0.1	backcountry
Little Laurel	2.7	admin road
Kates Plateau	5.1	backcountry
Stone Cliff	2.7	admin road
Gwinn Ridge	1.5	backcountry
New River Br.	0.9	backcountry
Woodland Loop	0.6	frontcountry
Polls Plateau	4.9	backcountry
Kenney Creek	3.0	admin road
Nuttall Mine	0.5	admin road
Nuttallburg Tipple	0.8	admin road
Kates Falls	0.2	backcountry
Terry Top	1.7	admin road

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to climbing in the park:

- climbing may adversely impact sensitive cliff habitats and species
- crowding occurs in climbing areas, particularly in the Bridge Buttress area
- how NPS will designate group climbing areas is unclear
- there is a proliferation of unauthorized trails to climbing areas
- parking is inadequate at trailheads used for climbing access
- planned replacement of fixed anchors and how that will occur
- need for more ranger patrols in climbing areas

Most stakeholders acknowledged that these issues will be addressed as the park's *Climbing Management Plan* (NPS 2005b) is implemented.

■ Hiking

Hiking Overview. Approximately 76 miles of official NPS trails provide visitor access to the park's frontcountry and backcountry areas (see Table 3.34). Trails vary from easy to difficult in terrain and from 0.1 mile to 8.6 miles in length. Many of the park's trails were preexisting at the time the NPS acquired property and follow the alignments of now abandoned roads and railroad grades from the park's industrial era. The NPS has constructed several new trails, most notably the Fayetteville trail complex – including the Fayetteville Trail, the Town Park Loop, and the Timber Ridge Trail – which was designed and built with assistance from volunteers and the International Mountain Bike Association (IMBA).

In 2007 approximately 67,900 hikers were counted on the park's official trails. Visitor use of hiking trails in the park is highest in the north end of the park and in the Glade Creek area. Trails at Grandview and at Sandstone Falls are also heavily used.

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to hiking in the park:

- the park's trail system does not provide a diversity of trail types that enable different visitor experiences for people of all ages and physical conditions
- the park does not have a clearly defined opportunity for multi-day through the park or loop trail backpacking trip on backcountry trails
- many overlooks that provide dramatic views are not accessible by official park trails or park roads
- the CSX Corporation rights-of-way with active rail traffic block safe and legal visitor access to the river throughout much of the park

- many visitors interested in hiking prefer the experience of hiking on single-track trails to hiking on administrative roads
- adequate parking is not available at trailheads
- in the future trail cooperative trail planning and development by NPS and others should provide for future trail connections from the park to adjoining communities, Babcock State Park, Hawks Nest state Park, the Gauley River National Recreation Area, and other regional trails

Table 3.35

New River Gorge National River
Generalized Trail Standards (for NPS Official Trails)

Trail Type	Standard
Backcountry	generally low use; highly experienced hikers; 18 to 24" width; roots/rocks possible
Frontcountry	medium use; broad range of users; 30 to 36" width; may be uneven surface
Developed	heavy use; less experience hikers; 48 to 60" width; hard surface
Administrative Road	vehicle, biking, and hiking use; 8' width on straight sections; may be gravel
Fully-Accessible	even tread to allow all pedestrian use; 60 to 72" hard surface
Climbing Spur	climbing access trails; 12 to 18" width natural surface
Railroad Grade	railroad bed and existing ties; 48 to 60" crushed stone surface

- **Biking**

Biking Overview. Portions of nine trails are open to bicycles, providing access to a variety of places such as overlooks, the New River, and historic sites in the lower gorge (see Table 3.36). Opening additional new or existing trails to bicycle use will require park-specific planning and the promulgation of a special regulation.

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to biking in the park:

- many bicyclists identified the need for additional single-track trails and areas with loop biking trails
- development of new bike trails in the park's rugged terrain will require careful well-planned construction in order to sustain bike traffic with minimum environmental impacts and reduce long-term maintenance needs

Table 3.36

New River Gorge National River
Trail Segments Open for Biking

	mi.
Kaymoor, between the junction of Craig Branch Trail and Butchers Branch	2.2
Craig Branch	2.4
Southside Junction, from Brooklyn Trailhead to Red Ash Island *(now Southside)*	1.4
Thurmond-Minden *(now Rend)*	3.4
Keeney Branch Railroad	3.4
Royal *(now Little Laurel)*	2.6
Nuttall Mine	0.5
Nuttallburg Tipple	0.8
Terry Top	1.7

- **Horseback Riding**

Horseback Riding Overview. Exploring the park by horse or with pack animals occurs only on trails where stock use will not present a safety hazard or other user group conflicts. The 2.7-mile Brooklyn Mine Trail is the only trail in the park that is open to horses and pack animals. The trailhead is at the top of Cunard Road. From the trailhead it ascends via a park administrative road along a section of old strip mine to the former coal mining site of Brooklyn. From Brooklyn the trail continues on to the Brooklyn-Red Ash Trail Trailhead.

Other areas in the park boundary where horses are used include Babcock State park and on private land owned by outfitters.

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to horseback riding in the park:

- the park has only one official trail that allows horses and pack animals
- horse use on the park's trails in rugged terrain causes increased soil erosion, muddiness, and gradual trail widening
- development of new equestrian trails in the park's rugged terrain will require careful well-planned construction in order to sustain horse traffic

with minimum environmental impacts and reduce long-term maintenance needs

- **Watching Wildlife**

Watching Wildlife Overview. Opportunities for watching wildlife occur throughout the park from trails, overlooks, park roads, and the river. The most popular wildlife viewing is bird watching, an activity that has become increasingly popular in recent years in the park. The park is globally significant in providing critical habitat for neotropical migratory birds, especially for wood warblers. The bird diversity attracts birders from around the world who come to the park primarily during the spring. Birders seek out diverse habitat within the park to maximize the number of species seen, typically looking for places where they can get to different elevations along rim-to-river routes. The most popular area for birding is the lower gorge from Kenney Creek to the Teays Landing river access, with the greatest concentration of birders visiting the Fayette Station Road corridor.

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to wildlife watching in the park:

- better interpretive guides are needed for birders and those interested in watching wildlife in the park
- more facilities that provide rim-to-river hiking and driving experiences would increase opportunities for visitors to view the park's diverse wildlife
- additional trails in the Birds Eye View area would provide better opportunities for birding

- **Fishing**

Fishing Overview. Fishing is one of the most popular activities on the New River. Its fish diversity makes the New River an excellent warm-water fishery (see Section 3.2.5 above). Spring and fall are the best times of the year to fish the New River, when the water is cooler and most fish species are more aggressively feeding. Anglers regularly fish the New River upstream of Sandstone Falls by wading or from the banks or from boats. The New River from the I-64 bridge at Sandstone to Grandview Sandbar is designated "catch and release" for smallmouth bass, largemouth bass, and spotted bass, and is generally fished from boats since there is little road access to the river upstream of Glade Creek. Fishing in the New River downstream of Glade Creek is very popular wherever road access allows fishermen to either hike in or launch a boat, such as along Glade Creek Road or at the river accesses at Brooklyn, Cunard, Fayette Station, and Teays Landing.

Trout fishing occurs in several tributaries to the New River. WV DNR stocks several tributaries with trout (see Table 3.38) and the local chapter of Trout Unlimited stocks the upper stretch of Glade Creek. Upper Glade Creek, including the 3-mile

Table 3.37

New River Gorge National River
New River Fishery

New River Warmwater Fishery – Species Typically Caught by Anglers

- smallmouth bass
- largemouth bass
- spotted bass
- walleye
- muskellunge
- crappie
- bluegill
- carp
- channel catfish

Table 3.38

New River Gorge National River
Annual Trout Stocking Summary

New River Tributaries Stocked Annually by WV DNR with Golden, Rainbow, Brook and Brown Trout

- Meadow Creek
- Glade Creek[1]
- Dunloup Creek
- Glade Creek (at Babcock State Park)
- Mann Creek (at Babcock State Park)
- Mill Creek

[1] *Upper Glade Creek is also stocked by the Glade-Pinch Trout Association*

stretch above the pedestrian bridge, receives heavy put-n-take fishing pressure, especially following stocking. Lower Glade Creek, including the 3-mile stretch from the pedestrian bridge to the New River, has an apparently self-maintaining population of brown trout and is designated "catch and release". Buffalo Creek, which is designated "fly-fishing only", has an apparently self-maintaining population of brook trout.

Visitors can access the river and its tributaries for fishing from the river bank anywhere within the park where the land is owned by the NPS or the state; elsewhere visitors must receive permission from private landowners. Access onto the river for fishing is possible from any of the NPS or state public river accesses within the park. Anglers in the upper gorge most frequently use the Akers, Tug Creek, Hellems Beach, and Camp Brookside public river accesses. Additional popular walk-in fishing spots along the river include Lower Kenney Creek, Middle Kenney Beach, Short Creek, Todd Beach, Lower Stone Cliff, and Bennett Hole.

Fishermen regularly cross over or walk along the active railroad tracks to reach their favorite spots. The upper New between Hinton and Cunard provides many large pools that are often fished from shore, from john boats, and by wading in the river. Fishermen often camp at the established primitive camping areas and also at many undeveloped sites along the river, sometimes for several days. Trout fishing in the tributaries is generally a day use activity. The state currently licenses approximately 60 commercial guides/outfitters to operate on the New River. Commercial outfitters primarily use guided rafts/boats on several sections between Sandstone Falls and Fayette Station.

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to fishing in the park:

- introduction of nonnative species of fish and crayfish through bait bucket dumping may threaten native fish populations
- potential impacts of trout stocking on natural fish communities
- the increasing size of disturbed areas and the amount of litter at popular fishing spots with corresponding adverse environmental impacts and loss aesthetic appeal
- existing river accesses do not provide enough fishing access, particularly along the river stretch from Hinton to Sandstone Falls
- the CSX Corporation rights-of-way with active rail traffic block safe and legal visitor access to the river throughout much of the park

- **Hunting**

Hunting Overview. New River Gorge National River when combined with the Bluestone National Scenic River and the Gauley River National Recreation Area

forms the largest public hunting area in southern West Virginia. Hunting is permitted within most of the New River Gorge National River, but is restricted from the former Grandview State Park area and other high use areas. Much of the land still in private ownership within the park boundary is leased to private hunting clubs and is restricted to club member use only.

No research is available describing hunting patterns and hunter intensity at New River Gorge National River (Mahan 2004). However, national and state trends suggest that big game hunting is more likely to occur than small game hunting within the park boundaries (Hooper et al. 2006). Deer hunting probably is the most popular activity, based in part on historical and current hunter numbers, days afield hunting, and hunting expenditures (Hooper et al. 2006). National and state trends also suggest that squirrel hunting is the most popular small game activity (Hooper et al. 2006). Due to small sample sizes within the national surveys, existing information is not sufficient to make firm conclusions about preferences or intensity of migratory bird hunting and other animal hunting within the park boundaries (Hooper et al. 2006).

Recent study of the impacts of hunting in the park indicates that hunting in accordance with applicable state regulations has not caused adverse effects on any of the species of mammals or birds which are or may be hunted and that currently occur within the park boundaries (Hooper et al 2006). Recent study further indicates that no evidence exists to support the position that any other species found within the park boundaries have been affected adversely by hunting (Hooper et al 2006).

Empirical information from park ranger patrols provides an overview of hunting preferences and locations where hunting occurs in the park. Archery and general firearms seasons appear to be more popular deer hunting activities than are antlerless and muzzleloader seasons. There has been a perceived increase in bear, squirrel, grouse, turkey, and rabbit hunting in the park. Upland plateaus and gentler slopes have become increasingly popular as the NPS has acquired additional lands and opened them to the public for hunting. Areas where hunting is concentrated include Highland Mountain, Backus Mountain, Beury Mountain, and the Glade Creek watershed.

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to hunting in the park:

- the park offers an opportunity to hunt in an area of the state where hunting lands are disappearing – hunters have expressed interest in keeping portions of the park open for hunting so that the opportunity for this traditional use can be maintained
- additional vehicular access is needed into some areas of the park that are open for hunting

- poor boundary marking in some areas makes it difficult for hunters to know when they are on public land in the park
- during hunting season safety hazards exist in areas of the park where other visitor use is high and hunting is permitted
- the negative impacts of not hunting deer on vegetative communities and some species of birds are far more likely to be significant than are the impacts attributed to hunting deer (Hooper et al. 2006)
- while recreational hunting at this time has negligible impacts on the park's vegetation and wildlife communities, additional research and management planning is needed to assess and monitor wildlife populations that are subject to hunting (Hooper et al. 2006)

- **Driving Scenic Roads**

Driving Scenic Roads Overview. For those who visit the park by private vehicle or bus there are a number of driving opportunities on roads that provide access to the park's scenic resources, as well as take visitors to points of interest where other experiences are offered. Scenic drives in the park follow along the rim, along the river, and from the rim to the river. Vistas from the rim drives offer views of the sandstone walls of the gorge and the river below. At the bottom of the gorge views from the river level drives come and go as visitors travel in and out of forested areas and move to and from the river's edge.

The NPS has designated five roads in the park as scenic drives that it recommends to visitors wanting to see the park by vehicle (see Table 3.39).

Management Concerns. During the GMP scoping process the public and the NPS identified several concerns related to opportunities for driving the park's scenic roads:

- many additional roads in the park are scenic but they are either closed or the public is not encouraged to use them because of safety concerns
- the state of West Virginia has primary authority for four of the five scenic drives, as well as others within the park, and may not always have adequate funding for maintenance and repairs (see Section 3.7 below Park Access)
- maintaining the park's scenic roads – and re-opening scenic roads that are now closed – is difficult and costly due to the rugged terrain and has the potential to cause adverse environmental impacts

- **Discovering Historic Sites**

Discovering History Overview. The opportunity for cultural discoveries at New River Gorge is extraordinary. Park visitors no matter how they explore the park –

Table 3.39

New River Gorge National River
Scenic Drives

WV Route 82 (Fayette Station Road) Rim-to-River through the Lower Gorge

- a 7.5-mile rim-to-rim scenic route along historic Fayette Station Road below Canyon Rim including scenic views of the river, the gorge walls, cliff faces in the Bridge and Sunshine Buttress areas, Wolf Creek, the historic New River Bridge, and the modern New River Bridge (from below)

WV Route 25 to Thurmond

- a 6-mile rim-to-river scenic route from park headquarters at Glen Jean to Thurmond; the road closely parallels Dunloup Creek through the forest, with views of the stream and the forest with a beautiful rhododendron understory

WV Route 41 Rim-to-Rim through the Middle Gorge

- a 61-mile rim-to-river scenic route from park headquarters at Glen Jean to Danese; approximately six miles of the drive are through the park as the route follows the narrow winding Batoff Creek drainage down to the New River at McCreery and Prince and then climbs out of the gorge up the Laurel Creek drainage

Glade Creek Road

- a 6.3-mile gravel road paralleling the New River from WV Route 41 to Glade Creek; passes the scattered foundations of the town of Royal; day use and camping facilities are located at Grandview Sandbar and at Glade Creek, respectively

WV Route 20 to Hinton/WV Route 26 (River Road) to Sandstone Falls

- a 22.5-mile drive from I-64 Exit 139 over Chestnut Mountain to Hinton, across the New River, and along River Road to Sandstone Falls; overlooks of the river and day-use areas are located along the route

Table 3.40

New River Gorge National River
Accessible Facilities

Facilities
Administrative Offices
▪ Park Headquarters Complex
▪ Glen Jean Bank
▪ Burnwood Complex
▪ Grandview Complex
▪ Dunglen Complex
▪ Ranger Stations
▪ Fire and Rescue Caches
Visitor Centers
▪ Canyon Rim Visitor Center
▪ Sandstone Visitor Center
▪ Thurmond Visitor Center
▪ Grandview Visitor Center
Restrooms
▪ all comfort stations at developed park facilities
▪ Sandstone Falls portable toilet
Overlooks
▪ New River Bridge Overlook
▪ Main Grandview Overlook*
Boardwalks
▪ Canyon Rim Visitor Center
▪ Sandstone Falls
Trails
▪ Kenney Branch*
▪ Thurmond-Minden (Thurmond end)
River Access
▪ most NPS developed river access sites*
Sites of Interest
▪ Theatre West Virginia (Grandview)
Developed Campgrounds
▪ 2 accessible sites each at Army Camp and Grandview Sandbar
▪ 2 accessible site to be added at all developed campgrounds
Developed Picnicking Facilities
▪ hardened surface, accessible picnic tables, and accessible grills available at all developed picnicking facilities
Parking Facilities
▪ all parking areas at developed park facilities

** These facilities are marginally accessible and may require assistance from other visitors to reach desired destination*

by car, by foot, by bicycle, or by boat – have opportunities to discover history at sites throughout the park in its remaining communities, in its abandoned town and industrial sites, and in places that are hidden within the forest and scattered throughout the gorge. Most sites are ruins of former industrial and settlement sites that have the potential to tell the park's stories related the coal, lumbering, railroading, and early settlement.

Management Concerns. Concerns identified during the GMP scoping process related to visitor opportunities for discovering the park's historic sites include:

- poor access restricts or prohibits potential cultural resource discoveries in remote areas of the park
- opportunities for visitors to learn from cultural resource discoveries in remote areas of the park are limited due to lack of interpretive materials
- unrestricted visitor access to cultural resources in remote areas of the park has the potential to expose resources to damage and/or vandalism and to attract visitors to potentially hazardous situations

3.6.3 Opportunities for Visitors with Disabilities

■ Accessibility Overview

The NPS is committed to implementing all practicable efforts to make NPS facilities, programs, services, employment, and meaningful work opportunities accessible and usable by all people, including those with disabilities. Accordingly, most administrative offices, some overnight visitor accommodations, and most interpretive and visitor service facilities will be accessible (NPS 2006a). Undeveloped areas, such as those outside the immediate influence of buildings and roads, will not normally be modified (NPS 2006a).

In accordance with NPS policy, the park has made numerous improvements to park facilities in recent years to enhance accessibility. Today, most developed visitor facilities at New River Gorge are generally accessible to visitors and employees with disabilities (see Table 3.40). While river access is generally possible for disabled paddlers and fishermen, the uneven surface of the boat ramps inhibits wheelchair access and generally requires disabled visitors to be assisted when getting onto boats. Floodproofing required for structures along the river's edge severely limits improvements that can be made to enhance disabled access for fishing.

■ Accessibility Management Concerns

Concerns identified during the GMP scoping process related to accessibility include:

- few opportunities exist for disabled visitors to access the river for fishing and camping

- few opportunities exist for disabled visitors to experience safe river trips of different lengths and levels of difficulty
- visitor center exhibits are not currently accessible for the seeing- and hearing-impaired
- limited vehicular access in some parts of the park reduces the areas where disabled visitors can hunt

3.6.4 Special Events and Special Uses

- **Bridge Day**

Bridge Day is an annual festival that began in 1977 and has evolved into one of the largest festivals in West Virginia. The Bridge Commission hosts the event on the 3rd Saturday of October. Each year as many as 100,000 people crowd onto the New River Bridge to view approximately 450 BASE jumpers propelling themselves from the bridge and landing in or near the New River flowing 876 feet below. During the festival the bridge and most of Fayette Station Road is closed to the general public for motor vehicle traffic.

- **Theatre West Virginia**

Theatre West Virginia has presented outdoor summer theatre at the Cliffside Amphitheatre at Grandview since 1960. The organization was founded by concerned citizens from the Raleigh County region who desired to present West Virginia's unique culture to as wide an audience as possible. The theatre is known for its traditional performances of the *Hatfields & McCoys* and *Honey in the Rock*, and in recent years for special performances of Phil Dirt and the Dozers. In 2007 approximately 24,400 visitors attended the various Theatre West Virginia shows (15 percent fewer than attended in 2005).

- **Races**

Since the late nineties various groups have hosted adventure races, triathlons, downriver races, and bike races in the park. Adventure races typically include around-the-clock orienteering with hiking, biking, paddling, and rappelling. Five to ten races have occurred per year, ranging in size from approximately 30 to 200 athletes. In 2007 seven races occurred involving approximately 1,155 total athletes.

- **Commercial Use Permits and Special Use Permits**

In 2007 the NPS processed 42 requests for short-term commercial uses and issued 26 authorizations. Most were for climbing (15), biking (3), and hiking (3). Approximately 8,000 people visited the park as a result of the authorizations.

In 2007 the NPS processed 135 requests for short-term special use permits and issued 83 permits. Most were for camping (28), group climbing (18), demos (7), and races (6). Approximately 48,000 people visited the park as part of the

Table 3.41

New River Gorge National River
Activities Requiring a Special Use or Commercial Use Permit

Activities
▪ non-commercial group climbing (>10)
▪ non-commercial group biking (>10)
▪ non-commercial group hiking (>10)
▪ non-commercial group horseback riding (>10)
▪ non-commercial group tours (>10)
▪ group camping at Burnwood and Dunglen
▪ picnic shelter use at Burnwood, Dunglen, and Grandview
▪ events involving staging support personnel along the route
▪ events charging a fee for participation
▪ demos/training sessions
▪ races and/or marathons
▪ weddings
▪ first amendment activities
▪ agricultural use
▪ rights-of-way

permitted uses (exclusive of Bridge Day visitors). NPS also has a few long-term special use permits for driveway access to private property and for entrance through locked gates to family cemeteries. There is currently one long-term special permit for agricultural use (haying).

- **Special Events Management Concerns**

Concerns identified during the GMP scoping process related to special events include:

- special events and commercial/special uses often require substantial commitments from personnel to process permits, manage, and monitor events
- special events and commercial/special uses can lead to resource impacts and conflicts with other visitors

3.6.5 Visitor Orientation, Interpretation, and Education

- **Pre-Visit Information and Orientation**

Visitors planning their first trip to New River Gorge National River primarily rely on information obtained from friends and relatives who have been to the park, the internet, and travel guides and tour books (Manni et al. 2005). Other sources of information used less frequently include commercial outfitters, the West Virginia travel center, and newspaper and magazine articles (Manni et al. 2005). The park website used by approximately 18 percent of visitors in advance of a trip provides directions to the park and includes a variety of information useful for trip planning, such as park activities, interpretive programs, downloadable maps, and general park management news.

- **On-Site Information and Orientation**.

Visitor Centers. The park Interpretation Division manages four visitor contact facilities. Canyon Rim and Sandstone are open year round, seven days a week, except for Christmas and New Years Day. In the summer, from June to August and on weekends through October smaller visitor centers are open at the Thurmond Depot and at Grandview when staff is available. At the visitor centers visitors see exhibits, shop at the park stores, and learn about activities, such as ranger-led tours, self-guided tours, and recreation opportunities. Approximately 43 percent of the park's visitors use the information available at the visitor centers from the information desk and exhibits to become oriented to the park (Manni et al. 2005).

Park Publications. Most visitors to the park rely on the park brochure for basic information on attractions, recreation opportunities, and travel directions. The *Three Rivers Review*, the park visitor guide features articles on resource management projects, current events, maps, and other information helpful to those planning a visit or already at the park. Pamphlets address the needs of mountain bikers, rock climbers, campers, and fishermen. The staff also compiles and prints

lists of area outfitters and accommodations. A full-color, four-panel brochure is offered to visitors at state welcome centers and tourism locations throughout the region.

Park Bulletin Boards and Information Boards. Boards located throughout the park include standardized "You are Here" map boards and more than forty large bulletin boards and kiosks, as well as fifty smaller "birdhouse" bulletin boards and brochure racks.

Signage. Visitors come to the park on many regional and local roads, many of which are narrow winding mountain roads. The NPS and WV Division of Highways have cooperated to provide signage on regional roadways and on local roads that provide access to heavily used visitor facilities. Many areas remain poorly signed causing confusion for some visitors not familiar with the area.

- **Interpretive Media**

Visitor Center Exhibits. The park's visitor centers offer a variety of permanent interpretive exhibits as well as rotating seasonal exhibits. The native plant gardens at Sandstone and Canyon Rim Visitor Center greatly improve the aesthetic appearance of the areas, naturally promoting the value and beauty of native plants in landscaping.

Wayside Exhibits. Wayside exhibits are in place at Kaymoor, Canyon Rim, Thurmond, Grandview, Sandstone Falls, along Fayette Station Road, and in Glen Jean.

Publications. A variety of publications provide interpretive information for natural resource areas, historic sites, and scenic resources. These include: a scenic driving tour brochure; brochures for the Sandstone Falls, Grandview, and Fayette Station areas; trail brochures for different parts of the park; a walking tour brochure for the Thurmond Historic District; and, an audio guide to Fayette Station Road, available on loan in CD or tape formats.

- **Interpretive Programs**

Walks and Talks. Ranger walks and talks are held mostly in the spring through fall seasons, and are publicized on the park website and in the local media. Some programs are held indoors and others on the grounds of visitor centers or out on trails or by the river. Topics include archeology, endangered species, water quality, wildflowers, bird walks, as well as basic armchair introductions to popular recreational activities, such as whitewater boating and climbing. Sessions are held on Leave No Trace ethics, and what to do if you're lost in the woods. Popular programs feature former coal miners talking about living and working in the gorge. Astronomy walks draw audiences appreciative of the park's night sky. Ranger on a Rock and Ranger's Choice are informal programs that adapt to the audience. They

capture interpretive moments with visitors who might not be inclined to attend a more formal presentation.

The Interpretation Division offers natural and cultural resources education programs to school groups and community organizations as an onsite visit or as an outreach program in the classroom. The programs provide hands-on opportunities for learning and promote the protection of natural and cultural resources within the park and the environment as a whole. All programs support the Instructional Goals and Objectives for West Virginia Schools.

Junior Ranger Program. The Junior Ranger Program is available for students and families who visit the park. The booklets can be picked up at any park visitor center and provide youngsters ages 6-12 an enjoyable and meaningful way to explore the resources and history of the park. Upon completion of the program, junior rangers receive a certificate and patch.

Special Request Out-of-the-Park Programs. These programs include seasonal weekly Bluestone Walks at Pipestem Resort State Park, Wildflower Weekend, at Babcock State Park; Tellebration, an annual national storytelling event, and Kultural Kinnikinnick, an all-day celebration for National American Indian Heritage Month, both presented at Tamarack; participation in the area Migratory Bird Festival, as well as night sky and endangered wildlife programs presented at nearby state parks. West Virginia Conservation Camp provides teenagers with skills and interdisciplinary career contacts with rangers and managers from many agencies. The Division of Interpretation also participates in local parades, designing floats for specific parade themes and highlighting the NPS connection to local communities. Other special activities included the creation and staffing of displays for National Park Week, Earth Day and National Trails Day at the State Capitol.

Informal Contacts. Informal contacts with rangers occur during Bridge Day, on the New River Train fall foliage excursion trips, and Railroad Days. These are excellent opportunities to increase visitor understanding and appreciation of the park. For example, over 1,000 people a day interact with park rangers on each of the four New River Train trips each fall. Roving contacts are also made within the park throughout the year, on trails, in parking lots, and river access areas. The Ranger on the Rock prior to Theater West Virginia performances is another opportunity for visitor contact.

- **Educational Programs**

K-5th Grade Environmental Education. Environmental education is offered directly in the classroom and incorporates concepts taught at each grade level. Programs focus on the natural history or cultural heritage of the New River Gorge and southern West Virginia. A park ranger visits each classroom of participating elementary schools in the fall and again in the spring to present a one-hour

program. Topics are national parks (K), habitats (grade 1), communities (grade 2), ecosystems (grade 3), West Virginia history (grade 4), United States history and preservation (grade 5), and responsible action (grade 6).

Water Resources Program. The Water Resources Program promotes appreciation of water with a focus on current and critical issues related to water quality within the New River watershed. The six-week program includes a weekly ranger presentation with curriculum activities for the following units: the New River watershed, water and people, point and non-point source pollution, water quality, aquatic species, and protecting our water resources.

Environmental Education in the Park. This program includes the annual Children's Water Festival in September. Students from local schools and colleges come to the park for hands-on water quality education and experience. All programs support the Instructional Goals and Objectives for West Virginia Schools.

Several other programs are schedule by request periodically and are intended primarily for a young adult and older audience. For example, several multi-day Leave No Trace Train-the-Trainer courses have been taught to local scout leaders, NPS and state park employees, and river and rock climbing outfitters. The park is currently working with the West Virginia Outfitters to develop and present a guide training seminar and resources materials.

3.7 Park Access

3.7.1 Road Access

- **Regional Road Access to the Park Vicinity**

Visitors to New River Gorge National River use a number of interstate highways to reach southern West Virginia, where they connect to smaller US roads and/or state roads that take them to Fayette, Raleigh, and Summers Counties. Interstate 79 (I-79) provides access from Pennsylvania and western Maryland. Visitors from Baltimore, Washington, and Virginia arrive in West Virginia on Interstate 64 (I-64). Those coming from Ohio and Charleston, WV, use I-77.

- **Local Road Access to Park Facilities**

Local Access Overview. Within the park's 53-mile river corridor a network of public and private roads provide access to the park from adjoining areas of Fayette, Raleigh, and Summers Counties (see Figure 3.11 and Appendix F, Table F.4). Many lead to areas above the river on the plateau and rim. Less common are river level roads, which largely occur in the Upper Gorge on river right from Hinton to Meadow Creek and on river left from Hinton to I-64, as well as in the Middle Gorge along river left from Glade Creek to Terry. Roads open for public use that travel from the rim to the river are least common.

Most roads in the park are WV state and county roads and are generally paved or gravel maintained (see Appendix F, Table F.4). NPS has only a few official park roads that are open to the public (see Appendix F, Table F.4 and Figure 3.11); most NPS roads are administrative roads used for maintenance and emergency access open to the public only for hiking and some biking. Glade Creek Road, the Cunard Access Road, and the Turkey Spur Overlook Road at Grandview are the most heavily used NPS official roads.

Planned highway improvements in the next five years to state and federal roads within the park include routine maintenance to the New River Bridge, resurfacing of I-64, reconstruction of the New River bridges at Thurmond and Prince (WV State Route 41), and reconstruction of the Dunloup Creek Bridge (WV County Route 25) (WV DOT 2005, 2005 – 2006, and 2007). Construction of the New River Parkway on river left from above Sandstone to Hinton, including a bridge across the New River, is currently in final engineering design.

Local Access Management Concerns. Despite the availability of roads in many areas, access is perceived by many visitors to be poor and to limit where they can go and the experiences they can have in the park. Constrained access is largely the result of the difficulty in building and maintaining safe roads in the gorge:

- roads in rugged terrain are susceptible to recurring damage from slumping and slides and roads at river level are susceptible to recurring damage from flooding
- new road construction and routine road maintenance in rugged terrain has the potential for adverse impacts to natural resources and is costly
- existing roads in rugged terrain are typically narrow and steep with rough surface conditions making them difficult to drive and potentially hazardous to visitors not experienced with driving in mountainous areas
- steep gradients, tight turns, and narrow travel lanes on some state and park roads is hazardous for large vehicles, such as buses, vans, and equipment trucks
- some WV county roads pose particular safety threats because they are no longer maintained by the state yet some visitors continue to use them

Additionally, many visitors to the park – particularly local residents – would like to use ATVs for access but ATVs are not permitted on NPS-owned lands or on NPS roads. Under current state law, within the park boundary visitors may operate ATVs on state roads and on private property (with the owner's permission), but visitors rarely make that distinction frequently leading to impacts on park resources.

KEY

State Roads
- Primary State Road (Paved)
- Secondary State Road (Paved)
- State Maintained Gravel Road
- Not Maintained Road

Private Roads
- Private Road

National Park Service Roads
- NPS Maintained Gravel Road

Trails
- NPS Official Trail
- Other Trail

New River Gorge Scenic Drives
- New River Gorge Scenic Drives

Parking
- Existing Public Parking (meets demand 80% of the time)
- Existing Public Parking (does not meet demand 80% of the time)
- Other Locations where Visitors Park (no facilities provided)

Visitor Use Sites Where Legal Access Currently Does Not Exist
- Visitor Access Requires Crossing Active Rail Lines or Private Property

Land Ownership
- NPS land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

BECKLEY
PROSPERITY
BRADLEY
PINEY VIEW
MOUNT HOPE
STANAFORD
OAK HILL
FAYETTE COUNTY
FAYETTEVILLE
ANSTED
CSX Railroad
McCreery River Access
Terry Army Camp
Thurmond/Minden Trailhead
Southside Junction Parking Area
Dun Glen Camping & River Access
Thurmond Depot Visitor Center
Stone Cliff Camping & River Access
Grandview Overlook & Trailhead
Prince
McKendree
Mill Creek
Glade Creek Trailhead
Quinnimont
Grandview Sandbar River Access
Thayer River Access
Glade Creek
Glade Creek Campground
Bragg
Backus
Brooklyn-Southside Junction Trailhead
Cunard Trailhead Parking Area
Cunard River Access
Cunard Fishing Access Parking
Bridge Trailhead
Wolf Creek Trailhead
Bridge Trailhead
Bridge Buttress Parking
Longpoint Trailhead
Fayette Station River Access
Burnwood Overlook
Kaymoor Top Trailhead
Kaymoor Mine Site
Kaymoor
Canyon Rim Visitor Center
Fern Creek Parking Area
Nuttall Parking Area
Nuttallburg
Meadow Creek River Access
Sandstone Falls Takeout
Sandstone Falls River Access
Sandstone Falls Overlook
Hellems Beach River Access
Brooks Falls Day Use Area
Tug Creek River Access
Camp Brookside River Access
Gwinn Ridge Trailhead
Sandstone Visitor Center
New Richmond
Danese
HINTON
Akers River Access
SUMMERS COUNTY
MEADOW BRIDGE

Figure 3.11

PARK ACCESS

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

3.7.2 Trail Access

- **Hiking, Biking, and Equestrian Trails in the Park**

Section 3.6.2 above – Opportunities for Exploration, Adventure, Discovery, and Solitude – provides an overview of the park's existing hiking, biking, and equestrian trails and related management concerns.

- **Connections to Trails Outside the Park**

The NPS has cooperated with the town of Fayetteville to provide trail connections from the town to the park in the vicinity of Fayetteville Town Park. This is the only location where official NPS trails make connections to trails outside the park that connect to adjoining communities or other attractions.

3.7.3 Parking

- **Visitor Parking Overview**

The NPS provides parking at all developed visitor use facilities (see Figure 3.11). In remote locations where visitors access the park for hunting, fishing, hiking, and backcountry camping the NPS provides designated parking where publicly-owned land is available within the park boundary and where site conditions make development of parking feasible.

- **Visitor Parking Management Concerns**.

Many locations within or adjoining the park used by visitors for access have no parking facilities or do not have adequate parking to meet visitor demand more than 80 percent of the time (Figure 3.11).

The NPS faces three primary parking challenges in providing adequate parking in these locations:

- the park's rugged topography makes it impossible to develop more parking
- land suitable for parking remains in private ownership
- land suitable for parking is located near the park but outside the boundary

One or more of these conditions exist at most locations where parking is not available or inadequate to meet demand.

3.7.4 State-Designated Scenic Byways and Backways

WV DOT has designated six scenic byways and seven scenic backways across the state, including the Glade Creek Road Scenic Backway in New River Gorge National River. Byways and backways provide access to numerous cultural, historical, natural, recreational and scenic sites. Typically popular activities along byways and backways include hiking, camping, picnicking, biking, fishing, viewing historic sites, and scenic driving. A scenic backway is similar to a byway but offers a slower pace, in a more intimate relationship with the land.

3.7.5 Transit Access to the Park

■ Mass Transit Overview

Private bus companies, schools, commercial outfitters, and visitor user groups provide mass transit access to the park. In 2007 approximately 1.2 percent of the park's visitors – or 14,560 people - traveled to the park by tour bus. Many others arrived in small vans and buses owned and operated by church groups, scout troops, and other groups visiting the park. Visitors using commercial guiding services for paddling, climbing, and biking mostly traveled to and from outfitter base camps via bus. In 2007, 9.0 percent of the park's visitors – or 106,109 people – traveled by bus with whitewater outfitters to and from the park's public river accesses.

■ Mass Transit Management Concerns

Three primary challenges to the use of mass transit exist in the park:

- rugged topography and narrow roads limit the areas where mass transit vehicles can safely operate
- rugged topography constrains the space suitable for maneuvering and parking mass transit vehicles at heavily used sites
- the seasonal nature of the potential demand for mass transit probably limits the feasibility of commercial shuttle services in the park to summer weekends and to very few locations, such as the Fayette Station area

These issues are most problematic at river access facilities – particularly McCreery, Cunard, and Fayette Station – and in climbing access areas. Two locations where the NPS is exploring potential use of mass transit for rim-to-river travel to alleviate crowding on peak visitation days are from Cunard Top to the Cunard River Access and from Canyon Rim to Fayette Station.

Table 3.42

New River Gorge National River
CSX Corporation Rail Lines through the Park

Rail Lines
▪ **CSX Mainline** –
- along the New River, on river right through the park
- along the New River, on river left from Cunard downstream
▪ **CSX Corman Line**, along Dunloup Creek from Mt. Hope to Southside Junction
▪ **CSX Meadow Creek Line**, along Meadow Creek from Meadow Bridge to Meadow Creek
▪ **CSX Piney Creek Spur Line**, along Pine Creek from WV State Route 61 to Glade Creek Road

3.7.6 Freight and Passenger Rail Service

■ Freight and Passenger Rail Service Overview

The CSX Corporation owns several railroad rights-of-way through the park and operates frequent freight service on most of them (see Table 3.42). The CSX Mainline runs at the river level through the entire park on river right as well as on river left from Cunard downstream. Frequent freight and coal trains move daily on the Mainline through the park. Trains also frequently stop in the park at sidings at Thurmond and Meadow Creek and at yards at Hinton and Quinnimont.

AMTRAK uses the CSX Mainline tracks to provide passenger service three times a week on the Cardinal from New York to Chicago via Charlottesville, with regular stops at Prince and Hinton and a flag stop at Thurmond.

On two weekends in October the Collis P. Huntington Railroad Historical Society operates fall foliage trips for visitors on the New River Train using CSX tracks from Huntington to Hinton, typically with stops at Thurmond and Prince.

- **Freight and Passenger Rail Service Management Concerns**

Four primary issues relate to freight and passenger rail service through the park:

- legal pedestrian and vehicular access across the CSX right-of-way exists only where public roads cross the tracks
- at many locations in the park visitors frequently illegally cross the CSX right-of-way on foot at many locations to reach the river, exposing themselves to potential injury from passing trains (see Figure 3.11)
- freight trains transport hazardous materials through the park that would endanger park resources and visitors in the event of a spill
- at this time passenger train service is infrequent and does not afford a viable means for visitor travel to the park

3.8 Park Operations

3.8.1 Operational Staffing and Funding

The U.S. Government Accountability Office (GAO), in its report *Major Operational Funding Trends and How Selected Park Units Responded to those Trends for Fiscal Years 2001 through 2005* (US GAO 2006), noted that " . . . each [National Park] unit experienced an increase in daily operations allocations, but most experienced a decline in inflation-adjusted terms. " Congress later confirmed the GAO findings, noting in the House Report for Fiscal Year 2007 Appropriations Bill for the NPS that "Unfortunately, because of inadequate budget requests, the parks have had to absorb $61,000,000 over the last six years in mandatory pay costs. This figure is exclusive of other costs impacts cited by GAO including unfunded retirement and health benefit increases, and mandates for homeland security and information technology security."

New River Gorge National River has experienced these trends just as other parks have, and therefore the park has not been able to replace staff vacancies that have arisen over the past several years. In addition, inflation on fixed costs items, such as utilities, supplies and materials have also meant that permanent and seasonal staff has been reduced. Of the 160 full-time employees (FTE) in the park's approved organizational chart, only 118 FTE are currently filled. All functions have been operating with declining numbers of staff as well as inadequate funding for non-personnel expenses. The unfilled positions are needed to staff, protect and maintain the trails, campgrounds, visitor centers, and grounds comprising the park, and work needed complete necessary science, resource management and stewardship work. A complicating factor is that New River Gorge National River, by

legislation, also manages the Gauley River National Recreation Area and the Bluestone National Scenic River. Although there is separate funding for these parks, the funding does not cover their costs of operation, and the New River Gorge National River budget subsidizes them. In 2008, the budget for the three units was $8,024,944.

3.8.2 Operations Facilities and Infrastructure

- **Overview of Operations Facilities and Infrastructure**

Park Headquarters Complex. The park superintendent, deputy superintendent, and senior management staff direct overall park operations from the Glen Jean Park Headquarters Complex. The headquarter complex includes administrative offices, operations offices, a water quality lab, storage buildings, garages, and outdoor storage areas. The rehabilitated Glen Jean Bank is located adjacent to the headquarters complex and provides additional office space, a community meeting room, and storage for the park's collection.

Interpretation and Visitor Services Facilities. The Chief of Interpretation and supporting administrative staff manage the park interpretive and visitor services from park headquarters. Park rangers manage programs in the Southern Division and the Northern Division from the Canyon Rim Visitor Center and the Sandstone Visitor Center, where most interpretive staff are based. The park's four visitor centers are the primary visitor contact facilities and include administrative and storage facilities to support the park's interpretive programs.

Visitor and Resource Protection Facilities. The Chief Ranger manages the visitor and resource protection staff from administrative offices at park headquarters. Protection operations in the field are managed from the Southern Division Office at Grandview and the Northern Division Office at Burnwood. Rangers and river patrols operate from ranger stations at Camp Brookside, Grandview, Dun Glen, and Burnwood. Rescue caches with boats, motors, and swiftwater rescue equipment are maintained at Camp Brookside, McCreery (Orville Store), Dun Glen, and Burnwood. Fire-fighting operations are administered from the Grandview Fire Office, with fire caches maintained at Grandview and Glen Jean.

Operations Facilities. The Chief of Maintenance manages the park's maintenance operations from park headquarters. The park's road and trail crews are also based at Glen Jean where facilities supporting their operations include offices, storage buildings, garages, and outdoor storage areas. Other routine maintenance operations are managed from the Southern Division Office at Grandview and the Northern Division Office at Burnwood. At Dun Glen an additional maintenance complex supports specialized maintenance needs, including the park's auto shop, welding shop, carpenters shop, and painters shop. The Sandstone Visitor Center complex includes a small maintenance building that is used during summer months as a base for seasonal staff working in the south end of the park.

Park Housing. Housing for park staff includes six dormitory rooms in a building adjoining the Dun Glen Maintenance Complex. Seasonal employees and NPS staff temporarily training at the park use the rooms.

Water Supply and Wastewater Treatment Facilities. The park operates three wells and small water distribution systems for NPS use at the Sandstone Visitor Center, the Thurmond Depot Visitor Center, and the Dun Glen Maintenance Complex and dormitory. An NPS tertiary wastewater treatment facility at Burnwood treats wastewater from the Canyon Rim Visitor Center and facilities at Burnwood, including the group picnic site and operations and visitor protection facilities.

Park Roads and Parking Facilities. (See Sections 3.7.1 and 3.7.2 above.)

- **Operations Facilities Management Concerns**

Two considerations inform management decisions regarding operations facilities and infrastructure, referred to as "assets" by park managers:

- the asset's relative importance (assessed in relation to the park's purpose and expressed through the its asset priority index (API))
- the asset's condition (assessed at a particular point in time and expressed through its facility condition index (FCI))

The relationship between the two considerations defines the appropriate actions needed to protect each asset. In general, assets fall into one of four categories (see Table 3.43). NPS policy regarding future public investment is generally: 1) to focus on the highest priority assets that are in the poorest condition (Category 2 assets), and 2) conversely, to avoid further public investment in low priority assets, particularly if they are in poor to serious condition (Category 4 assets).

Table 3.43

New River Gorge National River
Generalized Park Asset Analysis Categories

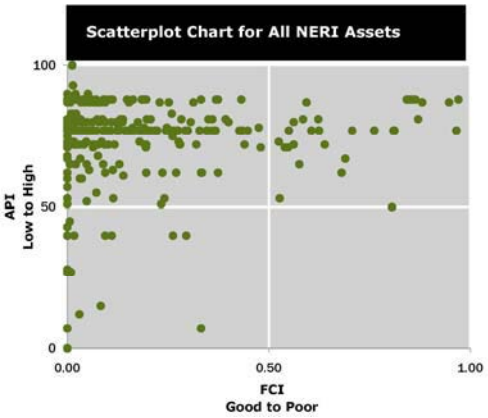
	Priority*	Condition
1	high to moderate	good
2	high to moderate	fair to poor
3	fair to poor	serious
4	low	all conditions

** Priority expressed in relation to the park's purpose*

Figure 3.12 presents a graphic summary of the findings from the analysis of park assets. Following are the major findings from the analysis:

Figure 3.12

New River Gorge National River
Park Asset Analysis – Summary of Findings



Finding 1. Most of the park's buildings, trails, river access points, and other assets have a high relative importance and are in fairly good condition. The park recently decommissioned and removed structures with low importance and poor condition, which improved the overall condition of the park's asset portfolio.

Finding 2. Some of the assets with low importance but relatively good condition are storage buildings used to stockpile boats and emergency equipment in various locations throughout the park. Although the sheds themselves do not have a high priority, the function they serve is important to the park's emergency operations. Most of the remaining low importance assets are federally-owned lots without structures in some of the communities within the park.

Finding 3. Assets with a high importance but in poor condition are of various

types, and include some of the park's most historic structures, such as historic structures at Nuttallburg.

Finding 4. The park is completing emergency and short-term stabilization work on assets at Nuttallburg which will improve their condition. Other assets at Thurmond, Camp Brookside, and the Harrah Homestead compose most of the remaining assets with a high importance but in poor condition. The NPS has funding to improve the condition of three of these structures so that they can be used for park housing. Strategies for use of the balance of assets in poor condition are under consideration by park managers.

3.8.3 Partnerships

- **Entities who Help the NPS Achieve its Mission at New River Gorge**

New River Gorge National River has many successful partnerships with organizations, state and local governments, and other federal agencies that help to accomplish the park's mission (see Table 3.45). Through these relationships the park has received valuable assistance in the form of educational programs, visitor services, living history demonstrations, emergency services, habitat restoration, scientific and scholarly research, and other benefits.

Table 3.44

New River Gorge National River
Volunteers In Park Program Participation

	Volunteers	Hours Donated
2007	282	9,760
2006	240	8,676
2005	249	7,840
2004	271	5,456
2003	227	5,323

- **Volunteers**

Volunteering is an American tradition that the NPS recognizes is vital to the success of its parks. At New River Gorge National River the Volunteers In Parks (VIP) program coordinates voluntary help and services from the public. In 2007 approximately 280 volunteers donated approximately 10,000 hours of service to the park. Site volunteers provided assistance with a variety of park functions, such as: maintenance of the park's curatorial collection; resource management projects (e.g., the peregrine falcon reintroduction, bird banding, bat surveys, environmental monitoring, archeological site documentation); the Adopt-A-Trail maintenance program; oral history interviewing; environmental education programs; the Park Ambassador Program at visitor centers and day use areas; and facilities maintenance.

Several issues relate to the use of volunteers in the park. NPS supervisory staff need to better define the tasks that could be performed by volunteers in the park as well as make time available to train volunteers. Very limited park housing is available for individual volunteers wanting to work in the park for several months. It is difficult to find local, long-term volunteers wiling to commit to a regular work schedule.

Table 3.45 Entities that Help the NPS Accomplish its Mission at New River Gorge National River

Entity	Type of Agreement and General Provisions
■ **Eastern National**	Eastern National provides visitor services for the park by helping to operate a bookstore in four of the park's visitor centers. Sales generated from the bookstores enable Eastern National to make donations to the NPS.
■ **National Parks Conservation Association**	NPCA is a non-profit organization whose mission is to protect and enhance America's national parks for present and future generations. From its West Virginia Field Office in Fayetteville, NPCA works to strengthen the relationships between the park and its neighboring gateway communities with the goal of working cooperatively and proactively to protect park resources and community character.
Emergency Service Providers	
■ **Law Enforcement** - **WV State Police** - **County Sheriffs** - **Local Police Departments** - **Trilateral Drug Enforcement Network Team (TRIDENT) Task Force** - **WV Department of Natural Resources (WV DNR)**	New River Gorge National River is a concurrent jurisdiction park. NPS has enforcement jurisdiction on federal land. NPS, WV State Police, WV DNR, and local police departments have agreements to assist one another when needed. The WV State Police and the county sheriffs retain rights to police and operate inside the park and have enforcement jurisdiction on all private property. NPS provides emergency law enforcement on federal land inside the park and on private land inside and outside the park when assistance is requested or if there is a bona fide emergency situation. TRIDENT Task Force provides federal drug law enforcement. WV DNR Law Enforcement is responsible for enforcement of the state's game and fish laws and rules and laws relating to littering, pleasure boating, and whitewater rafting.
■ **Emergency Services/Search and Rescue** - **Local Ambulance Companies** - **HealthNet Aeromedical Services**	NPS and local volunteer and paid professional ambulance companies have mutual aid agreements to provide emergency medical services and search and rescue services in the park. HealthNet Aeromedical Services provides 24-hour emergency air transport services support the local emergency medical service providers serving the park.
■ **Fire Protection/Search and Rescue/Hazardous Material Incidents** - **Local Volunteer and Paid Professional Fire Companies**	NPS and local volunteer and paid professional fire companies have mutual aid agreements to provide fire protection and search and rescue services in the park. Local providers fight all structural fires in the park. NPS fights wildland fires with assistance when needed from local providers. NPS relies on local fire departments to handle hazardous materials incidents inside the park.
Economic Development and Tourism Organizations	
■ **Economic Development** - **Region 1 Planning and Development Council** - **Region 4 Planning and Development Council** - **4-C Economic Development Authority (4-C EDA)**	Region 1 (Summers and Raleigh Counties) and Region 4 (Fayette County) Planning and Development Councils provide comprehensive planning of all types to communities, coordinate federal and state funding, provide technical assistance to local government, and promote regional cooperation. The 4-C EDA's mission is to assist with the expansion and diversification of the economic base in Summers, Raleigh, Fayette and Nicholas Counties. The PDCs, the 4-C EDA, and the NPS work cooperatively to promote public awareness of the park as a unit of the national park system, to attract visitors to the region, to provide information to visitors, and to promote public understanding of the positive impacts of the park on the quality of life in local communities.
■ **Tourism** - **Southern WV Convention and Visitors Bureau** - **Local Chambers of Commerce and Visitors Bureaus**	The NPS works cooperatively on many initiatives with local chambers of commerce and convention and visitors bureaus. Initiatives focus on improving awareness of the park as a unit of the national park system, attracting visitors to the region, providing information to visitors, improving wayfinding from local communities to the park, and developing visitor support services in gateway communities.

Table 3.45 Entities that Help the NPS Accomplish its Mission at New River Gorge National River

Entity	Type of Agreement and General Provisions
■ **Coal Heritage** - **National Coal Heritage Authority (NCHA)** - **National Coal Heritage Trail (NCHT)**	NCHA and the NPS are partners in planning and implementing coal heritage area activities through a cooperative agreement that identifies mutually shared goals. NPS is on the NCHT's interpretive planning development team and serves as the legal vehicle through which federal funds are passed to the NCHA.
■ **Tamarack Foundation**	Tamarac and the NPS work cooperatively to promote public understanding of West Virginia's cultural heritage and awareness of New River Gorge as a unit of the national park system. Tamarack makes information about the park available to travelers and frequently hosts NPS special events and interpretive programs.
■ **Bridge Day Commission**	The Bridge Day Commission hosts the annual Bridge Day base jumping event in cooperation with the NPS, the Fayette County Chamber of Commerce, and other local, state, and federal agencies that provide services supporting the event. Bridge Day attracts over 100,000 visitors and helps promote awareness and understanding of the park as a unit of the national park system.
Natural Resource Organizations	
■ **National Committee on the New River (NCNR)**	NCNR is dedicated to protecting and enhancing the natural and cultural resources of the New River throughout its watershed. The NCNR's Land Trust Program and the NPS are exploring the potential for NCNR to work with landowners to secure conservation easements on private lands within the park boundaries.
■ **Water Quality Management Groups** - **West Virginia Rivers Coalition (WVRC)** - **Plateau Action Network (PAN)** - **Dunloup Creek Watershed Association (DCWA)** - **Piney Creek Watershed Association (PCWA)**	WVRC seeks to conserve and restore West Virginia's exceptional rivers and streams. PAN is a non-profit citizens coalition working with the community to promote responsible economic development and environmental management in Fayette County. DCWA is committed to improving the lives of residents of the Dunloup watershed who are impacted by flooding along Dunloup Creek. PCWA's goal is to improve and protect the water resources within the Piney Creek watershed by educating the community about water quality issues and by performing service projects. WVRC, PAN, DCWA, PCWA, and the NPS work cooperatively by sharing data, discussing positions on, and potential solutions to, relevant issues, and working to generate support of actions that improve water quality and water-related quality of life.
■ **Glade-Pinch Trout Association**	The Glade-Pinch Trout Association assists the NPS and the WV DNR with trout stocking in Glade Creek, typically including eight spring and two fall trout stockings.
■ **Birding Groups** - **Three Rivers Aviation Center (TRAC)** - **Bibbee Nature Club** - **Partners In Flight (PIF)** - **Brooks Bird Club**	TRAC is a bird rehabilitation and education center which provides support to the park's Interpretation and Resource Management Division via educational programs and technical expertise on avian health and falcon restoration. The Bibbee Nature Club is a membership organization whose purpose is to provide an opportunity to enjoy, protect, and respect the natural world in southeastern West Virginia. The Club members volunteer in the park on the falcon restoration project. The Brooks Bird Club is promotes the study and enjoyment of birds and other elements of the natural world. The club undertakes population and breeding bird surveys in the park area and its members volunteer on the falcon restoration project. PIF is a cooperative effort involving partnerships among federal, state, and local government agencies, philanthropic foundations, professional organizations, conservation groups, industry, the academic community, and private individuals. Its mission is to help species at risk, to keep common birds common, and to promote voluntary partnerships for birds, habitats, and people. PIF works with the NPS to enhance neotropical migrants in the park via annual meetings and research.

Table 3.45 Entities that Help the NPS Accomplish its Mission at New River Gorge National River

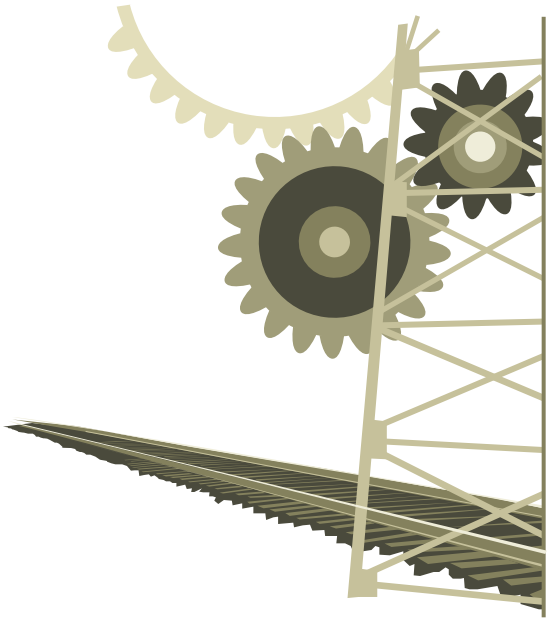
Entity	Type of Agreement and General Provisions
Cultural Resource Organizations	
■ **Collis P. Huntington Railroad Historical Society (CPH), the New River Train, and the City of Hinton Railroad Days**	Each fall the CPH sponsors the New River Train which travels from the Huntington C&O Depot to the Hinton C&O Depot, including the rail section through New River Gorge. The New River Train operates on Saturday and Sunday for two weekends during the peak fall foliage period. At Hinton, the city hosts the Hinton Railroad Days festival to coincide with the train's schedule. NPS participates in the Railroad Days festival offering interpretive programming. These events help to promote awareness and understanding of the park as a unit of the national park system. CPH has also assisted the NPS with railroading exhibits at the Thurmond Visitor Center.
User Group Organizations	
■ **WV Professional River Outfitters (WVPRO)**	WVPRO is the professional organization that represents the commercial whitewater industry, coordinating marketing and public relations with tourism entities throughout the state and taking the lead in developing and implementing industry improvement solutions. WVPRO also provides members and their employees with training and development opportunities. WVPRO works cooperatively with the NPS to enhance recreation opportunities in the park, to enhance paddler safety, to better interpret the park's resources for paddlers, and to protect the park's resources.
■ **American Whitewater and WV Wildwater Association (WVWA)**	American Whitewater works to conserve and restore America's whitewater resources and to enhance opportunities to enjoy them safely. WVWA is the local paddling club affiliate in West Virginia. WVWA's mission is to help others enjoy, understand, and appreciate the joy of paddling the wild and scenic rivers of West Virginia and the surrounding Appalachian area. At New River Gorge the WVWA sponsors clinics for new boaters throughout the year, schedules trips during the paddling season, and works to keep paddlers aware of conservation and access concerns.
■ **New River Community Partners (NRCP)**	NRCP, the NPS, the US Army Corps of Engineers and various state agencies in Virginia and North Carolina are working through a cooperative agreement to promote the New River Blueway on the New River by the use of a common logo on signs and media.
■ **Access Fund and the New River Alliance of Climbers (NRAC)**	The Access Fund represents climbers nationwide with the goal of keeping climbing areas open and conserving the climbing environment. NRAC – the local Access Fund affiliate – is organized to preserve and promote climber access in the New River Gorge and surrounding areas, with a primary purpose of monitoring and maintaining the safety of fixed anchors. NRAC has assisted the NPS with maintaining anchors on fixed climbing routes, installing ladders, and removing trash. NRAC also assisted the NPS with development of the park's new *Climbing Management Plan* (NPS 2005).
■ **International Mountain Bikers Association (IMBA)**	IMBA is a non-profit educational association whose mission is to create, enhance and preserve trail opportunities for mountain bikers by encouraging low-impact riding, volunteer trail work, cooperation among different types of trail users, and innovative trail management solutions. IMBA and the NPS have a partnership agreement nationwide to bring mountain bikers and park officials together to develop models for future collaboration. IMBA provides technical and volunteer assistance to national park units that are interested in improving their off-road cycling opportunities. At New River Gorge IMBA has recently assisted with development of biking trails in the Fayetteville area.
■ **Theatre West Virginia**	Theatre West Virginia has provided the programming and performances at the Grandview Amphitheatre since 1971. Nightly during the summer season an NPS ranger provides an informal "Ranger on the Rock" talk at the main Grandview overlook prior to the performance. An NPS ranger also introduces the show on stage, making contact with approximately 24,000 visitors each year. Park maintenance staff assists with improvements to the theatre's infrastructure.

Table 3.45 Entities that Help the NPS Accomplish its Mission at New River Gorge National River

Entity	Type of Agreement and General Provisions
Colleges and Universities	
■ **Concord University**	Concord University and the NPS are working cooperatively to assess the feasibility of joint future use of Camp Brookside as a research and educational facility.
Federal, State, and Local Agencies	
■ **WV Whitewater Commission and WV Division of Natural Resources (WV DNR)**	Pursuant to the park's enabling legislation, the state of West Virginia regulates commercial recreation watercraft services in the park through a cooperative agreement with the NPS. The Whitewater Commission establishes use limits for the river which are administered by the WV DNR. The park superintendent is a non-voting member of the Whitewater Commission.
■ **WV Division of Natural Resources (WV DNR)**	WV DOW has management responsibility for the fish and wildlife resources of the state. Currently, hunting is permitted in most areas of the park in accordance with state regulations. WV DNR and the NPS jointly manage fishing access to the New River near Camp Brookside through a cooperative agreement.
■ **WV State Parks and Forests** - **Hawks Nest State Park**	Hawks Nest State Park and the NPS work cooperatively to protect the scenic resources in and around the gorge and make information available to visitors about each park. Many NPS visitors make use of lodging accommodations at Hawks Nest.
■ **WV State Historic Preservation Officer (SHPO)**	The WV SHPO and the NPS work cooperatively to identify, preserve, and protect the cultural resources representative of West Virginia's heritage that are found in the park.
■ **US Army Corps of Engineers and the US Geological Survey (USGS)**	Pursuant to the park's enabling legislation, the NPS and the Corps work cooperatively to adjust flows from Bluestone Lake during periods of low flow to enhance the quality of the recreational experience in the New River below the lake as well as to protect the biological resources of the river. The USGS maintains a gauging station with NPS support on the New River that provides information needed for managing flows and used by park visitors to plan river trips.
■ **Federal Highway Administration (FHWA)**	The FHWA is the entity responsible for repairs to official park roads that are damaged by flooding (e.g., Glade Creek and Cunard Access Roads). FHWA is also the lead agency for construction of the New River Parkway. The NPS and FHWA have entered into a memorandum of understanding defining responsibilities for mitigating impacts to park resources related to parkway development.
■ **WV Division of Highways (WV DOH)**	The WV DOH and the NPS work cooperatively to place signage along public roads directing visitors to the park and to plan improvements to state roads and bridges within the park's boundary. The WV DOH also administers the state byways and backways program and makes grants for road enhancements and protection of resources in designated roadway corridors (such as the Glade Creek Backway).
Local Communities	
■ **Local Governments**	The NPS works cooperatively with the local governments in and adjacent to the gorge, including Fayette, Raleigh, and Summers County and the incorporated areas of Hinton, Beckley, Mount Hope, Oak Hill, Fayetteville, and Ansted. Pursuant to the park's enabling legislation the NPS seeks to assist and consult with appropriate local officials and government employees in establishing policies and programs which will assist in protecting park resources and values.
■ **Town of Fayetteville**	The NPS and the town of Fayetteville work cooperatively through a general agreement to provide access and maintain trails and foot paths on NPS and town properties near the Fayetteville Town Park.

Table 3.45 Entities that Help the NPS Accomplish its Mission at New River Gorge National River

Entity	Type of Agreement and General Provisions
Other Organizations	
■ **Citizens Conservation Corps of West Virginia (WVCCC)**	WV CCC conducts projects and programs that: 1) strengthen and revitalize communities in West Virginia, and 2) that provide self-esteem, educational enhancements, and employment opportunities through meaningful work experiences for both youth and adults. WV CCC manages the youth program in the park that utilizes Public Land Grant Funding to support seasonal workers who assist with a variety of construction and maintenance projects.
■ **Operation Lifesaver**	Operation Lifesaver is an international non-profit education and awareness program dedicated to ending tragic collisions, fatalities, and injuries at highway-rail grade crossings and on railroad rights-of-way. Operation Lifesaver assists the NPS with developing and implementing strategies to improve the safety of railroad crossings in the park, enhancing public awareness about the dangers around rails, and strategies for working with the CSX Corporation.
■ **CSX Transportation Police**	The CSX Corporation and the NPS have a Memorandum of Agreement (MOA) to enforce certain federal regulations on CSX property within New River Gorge National River in a manner consistent with the NPS mission.



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4 Environmental Consequences

Rare surviving examples of the 19th century subsistence farms.

Historic structures and ruins associated with more than 50 company-owned towns.

New River Gorge National River contains a large, outstanding, and representative group of historic places that testify to the experiences of those diverse people who settled and developed this part of Appalachia between the 19th and mid-20th centuries.

Opposite side: Places where the ancestors of families long associated with the New River lived and worked.

4.0 Environmental Consequences

4.1 Introduction

The National Environmental Policy Act (NEPA) requires the National Park Service (NPS) to analyze the beneficial, adverse, and unavoidable adverse environmental impacts associated with implementing the five long-term management alternatives under consideration for New River Gorge National River. The analysis of impacts provides the basis for comparing the alternatives. The impact topics considered reflect the issues and concerns raised during the GMP/EIS project scoping process – as described above in Section 1.9 (see Table 4.1). As required by the National Historic Preservation Act (NHPA) the impact topics must include consideration of the effects on cultural resources.

Because general management plan alternatives are long-range management strategies that are programmatic and long-term in nature, the analysis of impacts is qualitative. Impacts are assessed by identifying and evaluating the general types of actions required to move from existing condtions toward desired resource conditions and visitor opportunity conditions in specific areas of the park. For the purposes of this analysis in the GMP/EIS, it is assumed that all of the actions proposed in the alternatives (as described in Sections 2.3 through 2.9 above) would occur during the life of the plan. Since this is a programmatic analysis of impacts, if and when specific development projects or other actions are proposed subsequent to this GMP/EIS, appropriate detailed environmental and cultural resource compliance documentation will be prepared in accordance with NEPA and NHPA.

The impacts of the action alternatives describe the *difference between* the continuation of current management (Alternative 1) and the implementation of the action alternatives (Alternatives 2, 3, 4, and 5). To understand the complete nature of the impacts of implementing any of the action alternatives, the reader must therefore also take into consideration the impacts that would occur under Alternative 1: Continuation of Existing Management. The analysis of impacts associated with Alternative 1 does not include an analysis of impacts of future actions associated with funded projects in the park, that have not yet been implemented, but for which NEPA compliance has been completed, including the Nuttallburg Visitor Use Area, the Burnwood Center, and New River Parkway.[1]

This chapter begins with a description of the methods and assumptions for each impact topic. Impact analysis discussions are organized by alternative and then by impact topic under each alternative. Each alternative discussion also addresses cumulative impacts and presents a Section 106 summary (for cultural resources), a conclusion, and an impairment determination.

New River viewed from Brooks Falls ▲

Table 4.1

New River Gorge National River
Impact Topics Retained for Further Analysis

Topics
■ Physiography, Geology and Soils
■ Floodplains
■ Water Quality
■ Vegetation
■ Aquatic Wildlife
■ Terrestrial Wildlife
■ Rare, Threatened, and Endangered Species
■ Scenic Resources
■ Archeological Resources
■ Cultural Landscapes
■ Historic Structures
■ Ethnographic Resources
■ Regional and Local Economy
■ Communities
■ Visitor Use and Visitor Experience
■ Park Access
■ Park Operations

[1] *NEPA compliance activities for the Nuttallburg Visitor Use Area, the Burnwood Center, and New River Parkway have previously resulted in Findings of No Significant Impact or a Record of Decision (NPS 2008c; NPS 1988a; USDOT FHWA and WV DOH 2004).*

At the end of each alternative there is a brief discussion of unavoidable adverse impacts; irreversible and irretrievable commitments of resources; and the relationship or short-term uses of the environment and the maintenance and enhancement of long-term productivity. Table 2.38 briefly summarizes the impacts of each alternative.

4.2 Methods and Assumptions for Analyzing Impacts

4.2.1 Impact Indicators

Impacts for each topic are identified and characterized based on impact type, context, duration, and intensity, as summarized in Table 4.2.

4.2.2 Mitigation Measures

Mitigation measures would be taken during implementation of all the alternatives. All impacts are assessed assuming that mitigating measures have already been implemented.

4.2.3 Methods for Analyzing Impacts and Impact Thresholds

The GMP Planning Team has based the impact analysis and the conclusions in this chapter primarily on review of existing literature and studies, information provided by experts in the NPS and other agencies, and staff insights and professional judgment. For each impact topic the analysis focused on describing the consequences of management actions related to:

- natural and scenic resources
- cultural resources
- public use, enjoyment, and experience
- park operations
- land protection
- partnership and community collaboration

Where impacts do not occur for a management action category in a given topic, the category is not addressed in the discussion for that topic.

Further explanation of the analysis methodology used for each impact topic is presented below.

Table 4.2 Impact Indicators and Impact Indicator Definitions

Impact Indicator	Impact Indicator Definition
■ **Type**	Impact types include beneficial or adverse: **Beneficial** – A beneficial impact would be a positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition. **Adverse** – An adverse impact would be a change that declines, degrades, and/or moves the resource away from a desired condition or detracts from its appearance or condition. **Direct** - Direct impacts on the resource actually caused by the proposed action, generally at the same time and place of the proposed action. Direct impacts can extend into the future and are often permanent, but can be temporary. An example of a direct impact would be clearing second growth forest, which would immediately cause habitat loss at that location. **Indirect** - Indirect impacts generally occur as a result of a "side-effect" of a direct impact, but occur removed in time or space from the proposed action. An indirect impact could result from silt flowing downstream, creating turbid conditions, and adversely affecting water quality.
■ **Context**	Context is the affected environment within which an impact would occur, such as the affected region or locality. Context is variable and depends on the circumstances involved with each impact topic. In this document, natural and cultural resource impacts are: **Site Specific** – the impact would affect the project site **Local** – the impact would affect the park (except for economic impacts where local is defined as encompassing Fayette, Raleigh, Summers, and Nicholas Counties) **Regional** – the impact would affect the nine-county Southern West Virginia region
■ **Duration**	Duration is the time period for which the impacts are evident. The planning horizon for this GMP/EIS is 15 to 20 years. Unless otherwise specified, the following terms are used to described impact durations: **Short-term** – The impact would be temporary, lasting a year or less, such as impacts associated with construction. For purposes of the socio-economic analysis, short-term impacts would last less than one year. **Long-term** – The impact would last more than one year and could be permanent in nature (although an impact may only occur for a short duration at one time, if it occurs regularly over time the impact may be considered to a long-term impact). For purposes of the socioeconomic analysis, long-term impacts would last more than one year and may be permanent.
■ **Intensity**	Intensity is a measure of the severity of an impact. The intensity of an impact may be negligible, minor, moderate, or major. Impact intensity definitions are defined for each impact topic in Table 4.2. Because this is a programmatic document, the intensities are expressed qualitatively.

■ Physiography, Geology, and Soils

General categories of resource management actions that would seek to protect the park's physiography, geology, and soils are identified and qualitatively evaluated for their impact. Likely cultural resource management actions and improvements to visitor use facilities are evaluated for their potential soil disturbance and ensuing erosion and sedimentation; for this analysis it is assumed that during final design best management practices (BMPs) for erosion and sedimentation control would be identified and that use of BMPs at all construction and restoration sites would maintain erosion and sedimentation at rates close to existing conditions. Land protection actions and partnership actions that would potentially affect physiography, geology, and soils are identified and qualitatively evaluated.

New River Gorge National River
Regulations and Guidelines Related to Physiography, Geology, and Soils

- Clean Water Act of 1977, as amended
- Federal Farmland Protection Act of 1980 and 1995
- Analysis of Impacts of Prime and Unique Agricultural Lands in Implementing NEPA
- Surface Mining Control and Reclamation Act of 1977, as amended
- Federal Cave Resources Protection Act
- *...add Director's Order*
- NPS 2006 Management Policies

New River Gorge National River
Regulations and Guidelines Related to Floodplains

- Executive Order 11988 – Protection of Floodplains
- Watershed Protection and Flood Prevention Act
- Director's Order 72-2 – Floodplain Management
- NPS 2006 Management Policies

■ Floodplains

General categories of resource management actions that would seek to protect, preserve, and restore the natural resources and functions of floodplains are identified and qualitatively evaluated for their impact. Likely cultural resource management actions and improvements to visitor use facilities are identified that would be in close proximity to or within the 100-year floodplain of the New River; for this analysis it is assumed that during final design the NPS would complete necessary studies to accurately determine the extent of the floodplain and that facilities would be located outside of the floodplain where they are not functionally dependent on proximity to water. Park operations, land protection actions, and partnership actions that would potentially affect floodplains are identified and qualitatively evaluated.

New River Gorge National River
Regulations and Guidelines Related to Water Quality

- Clean Water Act of 1977, as amended
- Federal Water Pollution Control Act of 1972, as amended
- Fish and Wildlife Coordination Act of 1934, as amended
- Safe Drinking Water Act
- Water Resources Planning Act of 1965
- Watershed Protection and Flood Prevention Act
- Executive Order 12088 – Federal Compliance with Pollution Control Standards

■ Water Quality

General categories of resource management actions that would seek to maintain water quality in the park in its natural condition free of pollutants are identified and qualitatively evaluated for their impact. Likely cultural resource management actions and improvements to visitor use facilities are evaluated for their potential water quality impacts due to potential soil disturbance and ensuing erosion and sedimentation; for this analysis it is assumed that during final design best management practices (BMPs) for erosion and sedimentation control would be identified and that use of BMPs at all construction and restoration sites would maintain erosion and sedimentation at rates close to existing conditions. Impervious surface removal and resulting benefits to water quality are qualitatively assessed. Potential impacts to water quality associated with leasing fields at early settlement farm sites for agricultural use are qualitatively assessed. Land protection actions and partnership actions that would potentially affect water quality are identified and qualitatively evaluated.

New River Gorge National River
Regulations and Guidelines Related to Vegetation

- Executive Order 13112 – Invasive Plants
- Endangered Species Act of 1973, as amended
- NPS 2006 Management Policies

■ Vegetation

General categories of resource management actions that would seek to maintain the park's native plants and natural landscapes are identified and qualitatively evaluated for their impact. Likely cultural resource management actions and improvements to visitor use facilities are evaluated for their potential disturbance to existing vegetation. Actions to protect sensitive, rare, or significant vegetation communities from visitor use impacts are identified and qualitatively evaluated. The impacts of a shift in management of wildland fire on ecosystem health and native vegetation diversity in fire-dependent forest communities is generally assessed. Land protection actions and partnership actions that would potentially affect vegetation are identified and qualitatively evaluated.

- **Aquatic Wildlife**

General categories of resource management actions that would seek to maintain and restore natural stream ecosystems with hydrologic features supporting a full range of natural aquatic organisms are identified and qualitatively evaluated for their impact. Potential impacts to water quality associated with leasing fields at early settlement farm sites for agricultural use are qualitatively assessed. Likely improvements to visitor use facilities are evaluated for potential physical disturbance to aquatic habitats in the near shore area of the New River and in tributary streams as a result of facility development and ongoing visitor use; for this analysis it is assumed that during final design field studies would confirm the presence of sensitive or rare aquatic habitat and dependent species and that mitigation measures would be identified and implemented as appropriate to avoid or mitigate adverse impacts to those species. Land protection actions and partnership actions that would potentially affect aquatic wildlife are identified and qualitatively evaluated.

New River Gorge National River
Regulations and Guidelines Related to Aquatic Wildlife

- Endangered Species Act of 1973, as amended
- NPS 2006 Management Policies

- **Terrestrial Wildlife**

General categories of resource management actions that would seek to maintain the park's native animals are identified and qualitatively evaluated for their impact. Likely cultural resource management actions and improvements to visitor use facilities are evaluated for potential physical disturbance to terrestrial wildlife as a result of facility development and ongoing visitor use; for this analysis it is assumed that during final design field studies would confirm the presence of sensitive or rare terrestrial habitat and dependent species and that mitigation measures would be identified and implemented as appropriate to avoid or mitigate adverse impacts to those species. Potential impacts to terrestrial wildlife associated with leasing fields at early settlement farm sites for agricultural use are qualitatively assessed. Land protection actions and partnership actions that would potentially affect terrestrial wildlife are identified and qualitatively evaluated.

New River Gorge National River
Regulations and Guidelines Related to Terrestrial Wildlife

- Endangered Species Act of 1973, as amended
- NPS 2006 Management Policies

- **Rare, Threatened, or Endangered Species and Their Habitats**

General categories of resource management actions that would seek to generally increase populations of rare, threatened, or endangered species in the park are identified and qualitatively evaluated for their impact. Likely cultural resource management actions and improvements to visitor use facilities are identified that could potentially affect rare, threatened, or endangered species if they are present on a site; for this analysis it is assumed that during final design field studies would confirm the presence of rare, threatened, or endangered species and dependent species and that mitigation measures would be identified and implemented as appropriate to avoid or mitigate adverse impacts to those species, including Section 7 Consultation and coordination with the WV DNR, as appropriate. Park operations actions, land protection actions, and partnership actions that would potentially

New River Gorge National River
Regulations and Guidelines Related to Rare, Threatened, or Endangered Species and Their Habitats

- Endangered Species Act of 1973, as amended
- NPS 2006 Management Policies

affect rare, threatened, or endangered species are identified and qualitatively evaluated.

New River Gorge National River
Regulations and Guidelines Related to Scenic Resources

- NPS 2006 Management Policies

- **Scenic Resources**

Resource management actions are described in terms of the extent to which management zoning and related management prescriptions would protect a range of views in all areas of the park, allowing visitors to experience the extent of the gorge, the river, the forest, and the rim. Impacts of cultural resource management actions are summarized on the basis of how they would protect and/or enhance views of cultural landscapes that are fundamental to the park. Public use management actions are evaluated with respect to how development of new or improved visitor use facilities would alter the park setting and potentially affect scenic resources. Park operations actions, land protection actions, and cooperative efforts with partners are qualitatively considered in terms of how they would generally protect scenic resources.

New River Gorge National River
Regulations and Guidelines Related to Archeological Resources

- 36 CFR 79 – Curation of Federally-Owned and Administered Archaeological Collections
- Advisory Council on Historic Preservation implementing regulations regarding the "Protection of Historic Properties" (36 CFR Part 800)
- Archaeological Resources Protection Act of 1979, as amended
- National Historic Preservation Act of 1966, as amended
- Native American Graves Protection and Repatriation Act of 1990
- Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (1966)
- Executive Order 13007 – American Indian Sacred Sites
- Director's Order 28 – Cultural Resources Management Guidelines
- Director's Order 28a – Cultural Resources Management Guidelines
- NPS-28 – Cultural Resource Management Guideline Release No. 5
- NPS 2006 Management Policies

- **Cultural Resources (Archeological Resources, Cultural Landscapes, Historic Structures and Ethnographic Resources)**

In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act (36 CFR Part 800, *Protection of Historic Properties*), effects to cultural resources are identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected National Register-eligible or listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations a determination of either *adverse effect* or *no adverse effect* must also be made for affected National Register-eligible or listed cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the National Register.

- **Regional and Local Economy**

Regional and local economic impacts are described in terms of the direct and indirect impacts that result from increased park visitation and from development of visitor facilities and on-going operation and management of park resources. Direct economic impacts are generally those that occur when the NPS purchases goods

and services and park visitors from outside the region spend money in the regional and local economies. They are measured in terms of NPS spending, visitor spending, and earnings from new jobs that are created. Indirect economic impacts occur from the multiple cycles of circulation of the direct impacts (visitor spending, NPS spending, and new earnings) through the area's economy; these are measured through the use of economic multipliers obtained from the U.S. Bureau of Economic Analysis. For purposes of the analysis the local area is defined as Fayette, Raleigh, Summers, and Nicholas Counties and the regional area is defined as the Southern West Virginia region.

- **Communities**

Management actions that would potentially affect communities within the park and the park's gateway communities are assessed for a variety of potential impacts. Natural resource management actions considered include those related to wildland fire management and maintenance of natural flooding management. Cultural resource management actions considered include those related to restoration and rehabilitation of cultural resources in the vicinity of communities that could attract visitors to an area or otherwise impact local residents. The analysis of public use impacts addresses the potential impacts of developing new visitor facilities in or near communities as well as the impacts of providing new or enhanced linkages between communities and the park. Park operations actions considered relate primarily to wastewater management. The analysis of land protection impacts addresses NPS land acquisition policies and the potential impacts of an enhanced stewardship program. Partnerships and community collaboration considers numerous actions related to local appreciation and understanding of the park, sustaining communities in the park, working with gateway communities, and working with regional tourism partnerships.

- **Visitor Experience and Visitor Use**

Management actions are generally assessed in terms of how they enhance or detract from the potential for visitors to experience the "classic" park experiences and the experiences that visitors "should have" in the park. Resource management actions are described in terms of the extent to which management zoning and related management prescriptions would preserve the wild character of the park and enhance visitor perception of the park's wildness. Cultural resource management actions are described in terms of the opportunities they provide for visitors to appreciate the human history story of life in the gorge. Public use management actions are evaluated with respect to how they would help orient visitors to the park and enable them to experience the power of the river, the park's scenic beauty, and its wildness. Also evaluated is how well improvements to visitor facilities would address existing visitor experience and visitor use management issues. Park operations actions, land protection actions, and cooperative efforts

New River Gorge National River
Regulations and Guidelines Related to Cultural Landscapes and Ethnographic Resources

- Advisory Council on Historic Preservation implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800)
- Antiquities Act of 1906
- National Historic Preservation Act of 1966, as amended
- Executive Order 11593 – Protection and Enhancement of Cultural Environment
- Director's Order 28 – Cultural Resources Management Guidelines
- NPS 2006 Management Policies

New River Gorge National River
Regulations and Guidelines Related to Historic Structures

- Advisory Council on Historic Preservation implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800)
- Antiquities Act of 1906
- Historic Sites, Buildings, and Antiquities Act of 1935, as amended
- National Historic Preservation Act of 1966, as amended
- Secretary of the Interior's Standards for Treatment of Historic Properties (1966)
- Executive Order 11593 – Protection and Enhancement of Cultural Environment
- Director's Order 28 – Cultural Resources Management Guidelines
- NPS 2006 Management Policies

New River Gorge National River
Regulations and Guidelines Related to Visitor Experience and Visitor Use

- NPS 2006 Management Policies

with partners are qualitatively considered in terms of how they would generally enhance visitor use and visitor experience.

- **Park Access**

Impacts associated with resource management actions are described in terms of the extent to which management zoning and related management prescriptions would affect the location of roads, trails, and parking facilities in the park.

Impacts associated with public use, enjoyment, and experience management actions are evaluated qualitatively in terms of 1) anticipated changes to existing vehicle trips on local state roads and park roads that provide access to the park, 3) the extent to which new trail development would enhance access to interior portions of the park; 4) where and how river access would be improved; and 5) the extent to which existing parking problems would be addressed and future parking demand would be met at visitor use areas, trailheads, and river accesses.

Park operations actions, land protection actions, and cooperative efforts with partners are qualitatively evaluated in terms of how they would potentially enhance or limit access to and within the park.

- **Park Operations**

Impacts associated with park operations and facilities are described in terms of the extent to which they would be noticeable to staff and visitors. During public meetings and planning workshops, the range of public comments included the numbers and types of visitor facilities, a desire for increased educational and volunteer programs, and the desire for greater communication and physical connection between NPS and other agencies, groups, organizations and the public. The effects of each alternative on these and other issues were estimated by comparing the anticipated park operation for each alternative to the existing condition.

Although increased staffing and funding are proposed, it should be noted that implementation of the approved plan will depend on future funding and servicewide priorities. The approval of a general management plan does not guarantee that funding and staffing needed to implement the plan will be forthcoming. Funding for capital improvements is not currently shown in the National Park Service Construction Programs, and it is not likely that all potential capital improvements arising from an approved plan will be implemented during the life of this general management plan. Larger capital improvements may be phased over several years, and the full Implementation of the general management plan could be many years in the future.

Table 4.3 Impact Threshold Definitions

Impact Topic	Negligible	Minor	Moderate	Major
Physiography, Geology, and Soils	Management actions would result in impacts on geologic features, geologic processes, or soils that would not be detectable or would be at the lowest level of detection.	**Adverse impact** – Management actions would result in a detectable change in geologic features, geologic processes, or soils, but the change would be slight and localized. There could be changes in a soil's profile in a relatively small area, but the change would not increase the potential for erosion or mass movement. If mitigation were needed to offset adverse impacts, it would be relatively simple to implement would likely be successful.	**Adverse impact** – Management actions would result in a clearly detectable change in geologic features, geologic processes, or soils. There could be a loss or alteration of the topsoil in small areas, or the potential for erosion or mass movement to remove small quantities of additional soil or rock would increase. Mitigation measures would probably be necessary to offset adverse effects and would likely be successful.	**Adverse impact** – Management actions would result in the permanent loss or alteration of geologic features, geologic processes, or soils in relatively large areas, or there would be a strong likelihood for erosion or mass movement to remove large quantities of additional soil or rock as a result of the action. Mitigation measures to offset adverse effects would be necessary, extensive, and their success could not be guaranteed.
		Beneficial impact – Management actions would preserve or restore geologic features, geologic processes, or soil resources in a small area.	**Beneficial impact** – Management actions would preserve or restore geologic features, geologic processes, or soil resources in moderately sized areas.	**Beneficial impact** – Management actions would preserve or restore geologic features, geologic processes, or soil resources in relatively large areas.
Floodplains	Management actions would have no measurable or perceptible consequences on the use of the floodplain, risks to human health and property, and/or natural floodplain values.	**Adverse impact** – Management actions would include use of the floodplain, increase risks to human health and property, and/or adversely affect natural floodplain values; the impact would be slight and localized with few measurable adverse consequences.	**Adverse impact** – Management actions would increase use of the floodplain, increase risks to human health and property, and/or adversely affect natural floodplain values; the impact would be readily apparent with measurable adverse consequences.	**Adverse impact** – Management actions would increase use of the floodplain, increase risks to human health and property, and/or adversely affect natural floodplain values; the impact would be readily apparent with severe measurable adverse consequences.
		Beneficial impact – Management actions would reduce use of the floodplain, reduce risks to human health and property, and/or enhance natural floodplain values; the impact would be slight and localized with few measurable benefits.	**Beneficial impact** – Management actions would reduce use of the floodplain, reduce risks to human health and property, and/or enhance natural floodplain values; the impact would be readily apparent with measurable benefits.	**Beneficial impact** – Management actions would reduce use of the floodplain, reduce risks to human health and property, and/or enhance natural floodplain values; the impact would be readily apparent with significant measurable benefits.
Water Quality	Management actions would result in impacts on water quality that would not be detectable or if detected, would have effects that would be considered slight, local, and short-term.	**Adverse impact** – Management actions would result in water quality impacts that would be measurable and adverse, but the change would be slight, localized with few measurable consequences; if	**Adverse impact** – Management actions would result in water quality impacts that would be readily measurable, adverse, and relatively localized with measurable consequences; mitigation	**Adverse impact** – Management actions would result in water quality impacts that would be readily measurable, would have substantial consequences, and noticed on a regional scale; extensive

Table 4.3 Impact Threshold Definitions

Impact Topic	Negligible	Minor	Moderate	Major
		mitigation measures would be necessary to offset adverse impacts it would likely be successful. Water quality impacts could include increased loads of sediment, debris, chemical, or toxic substances, or pathogenic organisms.	measures would be necessary to offset adverse impacts, and would likely be successful. Water quality impacts could include increased loads of sediment, debris, chemical, or toxic substances, or pathogenic organisms. The impact could be visible to visitors.	mitigation measures would be necessary to offset adverse impacts and their success would not be assured. Water quality impacts could include increased loads of sediment, debris, chemical, or toxic substances, or pathogenic organisms. The impact could be easily visible to visitors.
		Beneficial impact – Management actions would include implementation of restoration projects and/or best management practices that would slightly to significantly improve water quality in one of more of the park's tributaries.	**Beneficial impact** – Management actions would include implementation of restoration projects and best management practices that would slightly to significantly improve local water quality in several tributaries in the park; overall effect would be clearly detectable.	**Beneficial impact** – Management actions would include implementation of restoration projects and best management practices that would slightly to significantly improve water quality in most tributaries in the park, as well as the New River; overall effect would be clearly detectable.
Vegetation	Management actions would result in impacts on vegetation that would not be detectable or would be at the lowest level of detection. The abundance, distribution of individuals, or extent of fragmenting features would not be affected or would be slightly affected. Ecological processes and biological productivity would not be affected.	**Adverse impact** – Management actions would result in a detectable change in a vegetation community, but the change would be slight and have only a local effect on the community. This would include changes in the abundance, distribution, fragmenting features, or composition of individual species in a local area, but not include changes that would affect the viability of local or regional populations or communities. Changes to local ecological processes would be minimal.	**Adverse impact** – Management actions would result in a clearly detectable change in a vegetation community that could have an appreciable adverse effect on the community. This could include changes to a local population sufficient to cause a change in the abundance, distribution, fragmenting features, or composition of local vegetation communities, but not changes that would affect the viability of regional populations or communities. Changes to local ecological processes would be of limited extent.	**Adverse impact** – Management actions would result in a clearly detectable change in a vegetation community that could have severely adverse effect on the community. The impacts would be substantial and highly noticeable and could result in widespread change. This could include changes in the abundance, fragmenting features, distribution, or composition of a local vegetation community or regional plant population to the extent that it would not be likely to recover. Significant ecological processes would be altered, and r changes would be expected.
		Beneficial impact – Management actions would restore or preserve vegetation and/or unfragmented forest blocks in a small portion of the park.	**Beneficial impact** – Management actions would restore or preserve vegetation and/or unfragmented forest blocks in many areas of the park.	**Beneficial impact** – Management actions would restore or preserve vegetation and/or unfragmented forest blocks throughout much of the park.

Table 4.3 Impact Threshold Definitions

Impact Topic	Negligible	Minor	Moderate	Major
Aquatic Wildlife	Management actions would result in impacts on aquatic wildlife that would be short-term, and the changes would be so slight that they would not be or any measurable of perceptible consequence to the species' population.	**Adverse impact** – Management actions would result in a detectable effect that would be localized, small, and of little consequence to the species' population. Mitigation measures, if needed to offset adverse effects, would be simple and successful.	**Adverse impact** – Management actions would result in a clearly detectable effect that would be localized, with consequences at the population level. Mitigation measures, if needed to offset adverse effects, would be extensive and likely successful.	**Adverse impact** – Management actions would result in an obvious detectable effect that would have substantial consequences to aquatic wildlife populations at the regional level. The change could result in a severely adverse and possible permanent consequence upon the species. Extensive mitigation would be needed to offset any adverse effects, and their success would not be guaranteed.
		Beneficial impact – Management actions would help to restore or preserve aquatic wildlife populations in a relatively small area. This could include changes in the abundance, distribution, or composition of a local aquatic wildlife population.	**Beneficial impact** – Management actions would help to restore or preserve aquatic wildlife populations in a substantial area of the park. This could include changes in the abundance, distribution, or composition of a local aquatic wildlife population.	**Beneficial impact** – Management actions would restore or preserve aquatic wildlife populations in large portions of the park, This could include changes in the abundance, distribution, or composition of local aquatic wildlife populations
Terrestrial Wildlife	Management actions would result in impacts on terrestrial wildlife that would be short-term, and the changes would be so slight that they would not be or any measurable of perceptible consequence to the species' population.	**Adverse impact** – Management actions would result in a detectable effect that would be localized, small, and of little consequence to the species' population. Mitigation measures, if needed to offset adverse effects, would be simple and successful.	**Adverse impact** – Management actions would result in a clearly detectable effect that would be localized, with consequences at the population level. Mitigation measures, if needed to offset adverse effects, would be extensive and likely successful.	**Adverse impact** – Management actions would result in an obvious detectable effect that would have substantial consequences to terrestrial wildlife populations at the regional level. The change could result in severely adverse and possible permanent consequence upon the species. Extensive mitigation would be needed to offset adverse effects, and their success would not be guaranteed.
		Beneficial impact – Management actions would help to restore or preserve terrestrial wildlife populations in a relatively small area. This could include changes in the abundance, distribution, or composition of a local terrestrial wildlife population.	**Beneficial impact** – Management actions would help to restore or preserve terrestrial wildlife populations in a substantial area of the park. This could include changes in the abundance, distribution, or composition of a local terrestrial wildlife population.	**Beneficial impact** – Management actions would restore or preserve aquatic wildlife populations in large portions of the park, This could include changes in the abundance, distribution, or composition of local terrestrial wildlife populations

Table 4.3 Impact Threshold Definitions

Impact Topic	Negligible	Minor	Moderate	Major
Rare, Threatened, and Endangered Species	Management actions could result in a change to a population or individuals of a listed or protected species or designated critical habitat, but the change would be so small that it would not be of any measurable or perceptible consequence. The change would result in a *no effect* opinion from the U.S. Fish and Wildlife Service.	**Adverse impact** – Management actions could result in a change to a population or individuals of a listed or protected species or designated critical habitat. The change would be discountable, insignificant, and of little consequence, and would result in a *not likely to adversely affect* opinion from the U.S. Fish and Wildlife Service.	**Adverse impact** – Management actions could result in some change to a population or individuals of a listed or protected species or designated critical habitat. The change would be meaningfully measured, detected or evaluated, and of consequence, but would most likely result in a *not likely to adversely affect* opinion from the U.S. Fish and Wildlife Service.	**Adverse impact** – Management actions could result in a noticeable change to a population or individuals of a listed or protected species or designated critical habitat. The change would be substantial and highly noticeable and would most likely result in a *likely to adversely affect* opinion from the U.S. Fish and Wildlife Service.
		Beneficial impact – Management actions would protect a population or individuals of a listed or protected species or enhance designated critical habitat. The level of protection would be measurable but small, localized, and of little consequence.	**Beneficial impact** – Management actions would protect a population or individuals of a listed or protected species or enhance designated critical habitat. The level of protection would be measurable and of consequence.	**Beneficial impact** – Management actions would protect a population or individuals of a listed or protected species or enhance designated critical habitat. The level of protection would be of significant consequence.
Scenic Resources	Management actions would result in impacts that would be either barely detectable or would have impacts that would be considered slight and localized.	**Adverse impact** – Management actions would have measurable impacts on scenic resources. Small changes would occur to the park's cultural and natural landscapes that would contribute to the deterioration of scenic resources.	**Adverse impact** – Management actions would have clearly detectable impacts on scenic resources. Noticeable changes could occur to the park's cultural and natural landscapes that would deteriorate scenic resources and could be detected by visitors.	**Adverse impact** – Management actions would have substantial impacts on scenic resources. Highly noticeable changes could occur to the park's cultural and natural landscapes that would result in the loss of fundamental scenic resources that could be easily detected by visitors.
		Beneficial impact – Management actions would have measurable impacts that would maintain or preserve scenic resources.	**Beneficial impact** – Management actions would have clearly detectable impacts that would maintain, enhance, or preserve scenic resources.	**Beneficial impact** – Management actions would have substantial impacts that would preserve and/or enhance the park's scenic resources.
Archeological Resources	Impact is at the lowest level of detection, barely measurable, with no perceptible consequences, either adverse or beneficial. The Section 106 determination would be *no adverse effect*.	**Adverse impact** – Management actions would have a measurable or perceptible effect, but it would be slight and affect a limited area of a site or group of sites. Slight alteration(s) to any of the characteristics that qualify the site(s) for	**Adverse impact** – Management actions would have a measurable or perceptible effect on a site or group of sites. The effect would change one or more of the characteristics that qualify the site(s) for inclusion in the National Register and	**Adverse impact** – Management actions would have a substantial, noticeable, and permanent effect on a site or group of sites. The action would severely change one or more characteristics that qualify the site(s) for inclusion in

Table 4.3 Impact Threshold Definitions

Impact Topic	Negligible	Minor	Moderate	Major
		inclusion in the National Register may diminish the integrity of the site(s). For purposes of Section 106, the determination of effect would be *adverse effect.*	would diminish the integrity of the site(s), but would not jeopardize the National Register eligibility of the site(s). For purposes of Section 106, the determination of effect would be *adverse effect.*	the National Register, diminishing the integrity of the site(s) to such an extent that it would no longer be eligible for listing in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect*.
		Beneficial impact – Management actions would result preservation of small areas of the site or group of sites.	**Beneficial impact** – Management actions would noticeably enhance the preservation and protection of the site or group of sites.	**Beneficial impact** – Management actions would substantially enhance the protection and preservation of the site or group of sites.
Cultural Landscapes	Management actions would result in impacts at the lowest levels of detection, barely measurable, with no perceptible consequences, either adverse or beneficial. The Section 106 determination would be no adverse effect.	**Adverse impact** – Management actions would result in an effect that is measurable or perceptible, but would be slight and affect a limited area of the landscape or few of its patterns or features. Slight alteration(s) to any of the characteristics that qualify the landscape for inclusion in the National Register may diminish the integrity of the site. For purposes of Section 106, the determination of effect would be *adverse effect.*	**Adverse impact** – Management actions would result in an effect on the patterns and features of the landscape that would be measurable and perceptible. The effect would change one or more of the characteristics that qualify the landscape for inclusion in the National Register and would diminish the integrity of the landscape, but would not jeopardize the landscape's National Register eligibility. For purposes of Section 106, the determination of effect would be *adverse effect.*	**Adverse impact** – Management actions would result in an effect on the cultural landscape, its patterns and features that would be substantial, noticeable, and permanent. The action would severely change one or more characteristics that qualify the landscape for inclusion in the National Register, diminishing the landscape's integrity to such an extent that it would no longer be eligible for listing in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect.*
		Beneficial impact – Management actions would result in preservation of small areas of the cultural landscape.	**Beneficial impact** – Management actions would noticeably enhance the preservation and protection of the landscape as a cohesive entity.	**Beneficial impact** – Management actions would substantially enhance the protection and preservation of the landscape.
Historic Structures	Management actions would result in impacts at the lowest levels of detection, barely measurable, with no perceptible consequences, either adverse or beneficial, to the resources. The Section 106 determination would be no adverse effect.	**Adverse impact** – Management actions would result in an effect that would be measurable or perceptible, but it would be slight and affect a limited area of a structure or group of structures. Slight alteration(s) to any of the characteristics that would qualify the structure(s) for inclusion in the National Register	**Adverse impact** – Management actions would result in an effect that would be measurable and perceptible. The effect would change one or more of the characteristics that qualify the structure(s) for inclusion in the National Register and would diminish the integrity of the	**Adverse impact** – Management actions would result in an effect on the structure(s) that is substantial, noticeable, and permanent. The action would severely change one or more characteristics that qualify the structure(s) for inclusion in the National Register, diminishing the integrity of the site(s) to

Table 4.3 Impact Threshold Definitions

Impact Topic	Negligible	Minor	Moderate	Major
		may diminish the integrity of the structure(s). For purposes of Section 106, the determination of effect would be *adverse effect*.	structure(s), but would not jeopardize the National Register eligibility of the structure(s). For purposes of Section 106, the determination of effect would be *adverse effect.*	such an extent that it would no longer be eligible for the National Register. For purposes of Section 106, the determination of effect would be *adverse effect*.
		Beneficial impact – Management actions would result in preservation of small areas of the structure(s).	**Beneficial impact** – Management actions would noticeably enhance the preservation and protection of the structure(s).	**Beneficial impact** – Management actions would substantially enhance the protection and preservation of the structure(s).
Ethnographic Resources	Management actions would result in impacts that would be barely perceptible and would neither alter resource conditions, such as traditional access or site preservation, nor the relationship between the resource and the affiliated group's body of practices and beliefs. The determination for Section 106 would be *no adverse effect*.	**Adverse impact** – Management actions would result in slight but noticeable impacts that would not appreciably alter resource conditions, such as traditional access or site preservation, or the relationship between the resource and the affiliated group's body of practices and beliefs. The determination for Section 106 would be *no adverse effect*.	**Adverse impact** – Management actions would result in apparent impacts and would alter resource conditions. Something would interfere with traditional access, site preservation, or the relationship between the resource and the affiliated group's practices and beliefs, even though the group's practices and beliefs would survive. The determination for Section 106 would be *adverse effect*.	**Adverse impact** – Management actions would result in apparent impacts and would alter resource conditions. Something would block or greatly affect traditional access, site preservation, or the relationship between the resource and the affiliated group's body of practices and beliefs, to the extent that the survival of a group's practices and/or beliefs would be jeopardized. The determination for Section 106 would be *adverse effect*.
		Beneficial impact – Management actions would allow access to and/or accommodate a group's traditional practices or beliefs.	**Beneficial impact** – Management actions would facilitate traditional access and/or accommodate a group's practices or beliefs.	**Beneficial impact** – Management actions would encourage traditional access and/or accommodate a group's practices or beliefs.
Visitor Use and Visitor Experience	Management actions would result in impacts that would be barely detectable, or would occasionally affect the experience of few visitors in the applicable setting.	**Adverse impact** – Management actions would result in impacts that would be slight but detectable; could be perceived as negative by visitors or would inhibit visitor experience. Impacts would negatively affect the experience of some visitors in the applicable setting.	**Adverse impact** – Management actions would result in impacts that would be readily apparent and perceived as somewhat negative. Impacts would negatively affect the experience of many visitors in the applicable setting.	**Adverse impact** – Management actions would result in impacts that would be highly negative, affecting the experience of a majority of visitors in the applicable setting.
		Beneficial impact – Management actions would positively affect the experience of some visitors in the applicable setting.	**Beneficial impact –** Management actions would positively affect the experience of many visitors in the applicable setting.	**Beneficial impact –** Management actions would positively affect the experience of a majority of visitors in the applicable setting.

Table 4.3 Impact Threshold Definitions

Impact Topic	Negligible	Minor	Moderate	Major
Regional and Local Economy	The action would produce no measurable impacts on the area's economy, employment base, labor force, or housing market.	**Adverse impact –** The action would result in small, but detectable, changes to economic conditions. Only a small number of businesses and/or a small portion of the population would be affected. The impact would be slight and not detectable outside of one or more gateway communities	**Adverse impact -** The action would result in readily apparent changes to economic conditions. Any impacts would be localized within the three-county area.	**Adverse impact** – The action would result in readily apparent changes to economic conditions. Measurable changes in social or economic conditions at the regional level would occur. The impact would be severely adverse or within the region.
		Beneficial impact - The action would result in small, but detectable, positive changes to economic conditions. Only one or more gateway communities would be affected.	**Beneficial impact -** The action would result in readily apparent, positive changes to economic conditions. Impacts would be confined to the three-county area.	**Beneficial impact –** The action would result in readily apparent, positive changes to economic conditions. Impacts would occur throughout the region.
Communities	Management actions would result in impacts on adjacent landowners, neighbors, communities, businesses, agencies, etc., which would be nonexistent, barely detectable, or detectable only through indirect means and with no discernible impact on local social conditions.	**Adverse impact** – Management actions would result in impacts on adjacent landowners, neighbors, businesses, agencies, etc., that would be small but detectable, localized in terms of geographic area, affect a small number of people, comparable in scale to typical year-to-year or seasonal variations, and would not be expected to substantially alter established social structure over the long-term. Most people or groups would accept or generally recognize the above-described conditions as diminishing social welfare either in general or for a specific group of people, businesses, organizations, or institutions.	**Adverse impact** – Management actions would result in impacts on adjacent landowners, neighbors, businesses, agencies, etc., which would be readily apparent or observable across a large geographic area, affect many people, and could have noticeable effects on the established social structure over the long-term. Most people or groups would accept or generally recognize the above-described conditions as diminishing social welfare either in general or for a specific group of people, businesses, organizations, or institutions.	**Adverse impact** – Management actions would result in impacts on adjacent landowners, neighbors, businesses, agencies, etc., that would be readily detectable or observable, affect a large segment of the population, extend across a community or region, and have a substantial influence on the established social structure over the long-term. Most people or groups would accept or generally recognize the above-described conditions as diminishing social welfare either in general or for a specific group of people, businesses, organizations, or institutions.
		Beneficial impact – Most people or groups would accept or generally recognize the above-described conditions as improving social welfare either in general or for a specific group of people, businesses, organizations,	**Beneficial impact –** Most people or groups would accept or generally recognize the above-described conditions as improving social welfare either in general or for a specific group of people, businesses, organizations,	**Beneficial impact –** Most people or groups would accept or generally recognize the above-described conditions as improving social welfare either in general or for a specific group of people, businesses, organizations,

Table 4.3 Impact Threshold Definitions

Impact Topic	Negligible	Minor	Moderate	Major
		or institutions.	or institutions.	or institutions.
Park Access	Management actions would result in impacts on park access that would be barely detectable to visitors and to park staff.	**Adverse impact** – Management actions would result in impacts that would be slight but detectable; could be perceived as negative by visitors because they could inhibit the achievement of visitor experience by making access to some park resources and experiences slightly more difficult.	**Adverse impact** – Management actions would result in impacts that would be readily apparent; would likely be perceived as negative by visitors because they would inhibit the achievement of visitor experience by making access to many park resources and experiences more difficult.	**Adverse impact** – Management actions would result in impacts that would be readily apparent; would likely be perceived as highly negative by visitors because they would seriously inhibit the achievement of visitor experience by making access to most park resources and experiences very difficult.
		Beneficial impact – Management actions would result in impacts that would be slight but detectable; likely to be perceived as positive by visitors because they could enhance the visitor experience by making access to some park resources and experiences slightly easier.	**Beneficial impact** – Management actions would result in impacts that would be readily apparent; would likely be perceived as positive by visitors because they would enhance the visitor experience by making access to many park resources and experiences much easier.	**Beneficial impact** – Management actions would result in impacts that would be readily apparent; would likely be perceived as highly positive by visitors because they would obviously enhance the visitor experience by making access to most park resources and experiences very easy.
Park Operations	Management actions would result in impacts on park operations and park facilities that would be barely detectable to park staff and visitors.	**Adverse impact** – Management actions would result in adverse impacts to park operations and facilities that would be small, but would be noticeable to staff, but probably not to visitors.	**Adverse impact** – Management actions would result in adverse impacts to park operations and facilities that would be readily apparent to staff and possibly to visitors.	**Adverse impact** – Management actions would result in adverse impacts to park operations and facilities that would be readily apparent to staff and visitors, and would result in substantial, widespread changes.
		Beneficial impact – Management actions would result in beneficial impacts to park operations and facilities that would be small, but would be noticeable to staff, but probably not to visitors.	**Beneficial impact** – Management actions would result in beneficial impacts to park operations and facilities that would be readily apparent to staff and possibly to visitors.	**Beneficial impact** – Management actions would result in beneficial impacts to park operations and facilities that would be readily apparent to staff and visitors, and would result in substantial, widespread changes.

4.2.4 Cumulative Impact Analysis

Assessment of cumulative impacts is required in the decision-making process for all federal projects. Cumulative impacts are defined as follows (40 CFR 1508.7):

> *Cumulative impacts are incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively moderate or major actions that take place over a period of time.*

Cumulative impacts were considered for each alternative for all impact topics. These impacts were determined by combining the impacts of the alternatives with the impacts of other past, present, and reasonably foreseeable future actions. To do this, the NPS GMP Planning Team identified other such projects or actions at New River Gorge National River and in the surrounding Fayette, Raleigh, and Summers Counties (see Table 4.4). The geographic area of interest for the cumulative impact analysis varied, depending on the impact topic (see Table 4.5). The timeframe of the analysis was within approximately 5 to 7 years of 2009.

In defining the contribution of each alternative to cumulative impacts, the following terminology is used:

- **Imperceptible**. The incremental effect contributed by the alternative to overall cumulative impacts is such a small increment that it is impossible or extremely difficult to discern.

TABLE 4.4 Actions Included in the Cumulative Impact Scenario

Actions	Summary Description
NPS Projects	■ Sandstone Visitor Center (2003) - Visitor Center for New River Gorge National River, located near the I-64/ WV 20 interchange (Summers County) ■ Burnwood Center (future) – Multi-use facility composed of an environmental education center and a maintenance and operations facility, located on US 19 just north of the New River Bridge (Fayette County)
Development	■ Hinton Technology Center (2006) – two-story 38,000 square feet technology center in downtown Hinton (Summers County) ■ Beckley Higher Education Center (2007) – 67,000 square feet of building on 33-acre campus (Fayette County) ■ Harper Road/I-77 Interchange Area (ongoing) – Lodging, restaurant, and other commercial services development in the vicinity (Raleigh County) ■ US 19 Commercial Corridor (ongoing) – various commercial developments in the US 19 between Oak Hill and Fayetteville, recently including Wal-Mart Supercenter, Lowes, and other retailers (Fayette County) ■ Woodlands Business Park (ongoing) – 1,000-acre industrial park (Raleigh County) ■ Raleigh County Airport Industrial Park (Phase II ongoing since 2005) – two phase industrial park (Phase 1 – 214 acres; Phase II – 300 acres) (Raleigh County)

TABLE 4.4 Actions Included in the Cumulative Impact Scenario

Actions	Summary Description
Development (continued)	■ Pinecrest Business and Technology Park (ongoing since 2004) – 1000-acre industrial park (Raleigh County) ■ Wolf Creek Park (ongoing since 2005) – mixed use development on 300 acres, including 21 manufacturing sites, 5 acres of commercial development and 100 residences, located on US 19 near Appalachian Drive (Fayette County) ■ Fayetteville Area Residential Development (ongoing) – anticipated development of recently approved residential developments, including approximately 2.830 single-family residential units at River Edge Estates, Roaring River, and Bridgeview Estates (Fayette County)
Transportation System Improvements	■ US 19 Loghelly Interchange (2007) – grade-separated interchange near Appalachian Drive (Fayette County) ■ Beckley Inter-Modal Project (future) – joint transportation and economic development improvement project in downtown Beckley, including a new city hall, cultural center, and inter-modal facilities (with a 3-level underground parking) ■ East Beckley Bypass (future) – partially controlled access five-lane facility from Eisenhower Drive in Beckley to US 19 in Bradley (Raleigh County) ■ WV Turnpike (I-77) Widening (future) – addition of one lane in each direction between I-64 and US 19 (Raleigh County) ■ Shady Springs Interchange and Connector (future) – new 3-mile roadway connection from I-77 to US 19 at WV 3 (Raleigh County) ■ Bridge Replacements (future) – Lilly Bridge (WV 20) (Summers County), Big Bridge (WV 121 (Raleigh County), Mill Creek Bridge (Fayette County), Kanawha Falls Bridge (Fayette County); Thomas Burford Pugh Memorial Bridge (WV 41) (Raleigh and Fayette Counties); Thurmond Bridge (WV 25/2) (Fayette County) ■ Shawnee Parkway (future) – 18-mile reconstruction of WV 48 (Raleigh County) ■ Beckley Z-Way (future) – 10.3 mile new roadway connection from Shade Springs to Van Kirk Drive (Raleigh County) ■ New River Parkway (future) – reconstruction of River Road near Hinton as a 10-mile parkway through New River Gorge National River in the vicinity of Hinton to WV 20, including a new bridge crossing of the New River (Raleigh and Summers Counties)
Municipal Utilities and Infrastructure	■ Fayette County Regional Water and Distribution System (ongoing since 1995) – regional water plant and distribution system (Fayette County)
Mined Land Reclamation	■ Claremont Reclamation Project – 80-acre reclamation project within the park including destruction and burial of concrete structures, recontouring of existing gradient, reestablishing and stabilizing drainageways, revegetation, and treatment of acid mine drainage ■ Other Reclamation Projects – numerous mined land reclamation projects in Raleigh and Fayette County including a variety of activities similar to those for the Claremont Reclamation Project (see above)

- **Noticeable**. The incremental effect contributed by the alternative, while evident and observable, is still relatively small in proportion to the overall cumulative impacts.
- **Appreciable**. The incremental effect contributed by the alternative constitutes a large portion of the overall cumulative impact. Because some of these actions are in the early planning stages, the evaluation of the cumulative impact is based on a general description of the project. The cumulative impact is considered for all alternatives and is presented at the end of each impact topic discussion.

4.2.5 Impairment Determinations

The *NPS Management Policies* (NPS 2006a) and *Director's Order 12: Conservation Planning, Environmental Impacts Analysis, and Decision-Making* (NPS 2001a), also require analysis of potential impacts to determine if actions would impair resources and values at New River Gorge National River. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid or minimize to the greatest degree practicable adverse impacts on park resources and values. However, these laws give NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress gives NPS discretion to allow certain impacts in parks, discretion is limited by statutory requirement that the NPS must leave park resources and values unimpaired, unless a law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. Impairment may result from NPS park management activities, as well as from visitor activities or activities undertaken by concessionaires, contractors, and others operating in the park. Whether an impact meets the definition of impairment depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact to any park resource or value may constitute impairment. However, an impact would more likely constitute impairment to the extent it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the New River Gorge National River, or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of New River Gorge National River, or

Table 4.5

New River Gorge National River
Cumulative Impact Analysis – Area of Impact

Topic	Impact Area
■ physiography, geology and soils ■ floodplains ■ vegetation ■ water quality ■ aquatic wildlife ■ terrestrial wildlife ■ rare, threatened and endangered species	watershed of the New River in Fayette, Raleigh and Summers Counties
■ scenic resources	the park viewshed in Fayette, Raleigh, and Summers Counties
■ archeological resources ■ cultural landscapes ■ historic structures ■ ethnographic resources	New River Gorge National River
■ economy ■ communities	Fayette, Raleigh, and Summers Counties
■ park access	area within three miles of the park boundary
■ visitor use and visitor experience	New River Gorge National River
■ park operations	New River Gorge National River

- identified in the park's general management plan or other relevant NPS planning documents as being of significance

Impairment could result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park, but this would not be a violation of the Organic Act unless the NPS was in some way responsible for the action.

In this GMP/EIS an impairment determination is made in the conclusion section under most impact topics selected for detailed analysis. When it is determined that an action(s) would have a moderate to major adverse effect, a justification for nonimpairment is made. Impacts of only negligible or minor intensity would by definition not result in impairment. An impairment determination is not made for the regional and local economy, communities, park access, and park operations topics because impairment findings relate back to park resources and values and these impact topics are not generally considered to be a park resource or value. An impairment determination is not made for the visitor use and visitor experience topic because, according to the Organic Act, enjoyment cannot be impaired in the same way that an action can impair park resources and values.

4.3 Environmental Consequences of Alternative 1 (Continuation of Current Management)

4.3.1 Physiography, Geology, and Soils (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to protect the park's physiography, geology, and soil resources by:

- generally allowing physiography, geology, and soil resources that are disturbed by natural phenomena – such as landslides – to recover naturally
- restoring/reclaiming physiography, geology, and soil resources altered by human activity – such as mining (in cooperation with WV DEP)
- protecting park resources from potential impacts associated with natural gas/oil production or mining activities that are permitted by valid oil, gas, and mineral rights (and that may be conducted within the park in compliance with appropriate state permits and Section 9b Regulations pursuant to the Surface Mining Control and Reclamation Act) (in cooperation with WVDEP)
- reducing soil erosion and sedimentation by restoring disturbed areas (such as areas disturbed by ATVs), as funding permits

Impacts of natural resource management actions on physiography, geology, and soil resources would be local long-term minor and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact soil resources. Conceptual planning suggests that treatment actions at cultural resource sites would disturb approximately four acres of previously disturbed soils. Disturbances would be associated with removal of modern structures a two early settlement farms (see Table 4.6). During the treatment period erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Soil loss would be at or near current levels. Following the treatment period disturbed areas would be revegetated with native species. Impacts on soil resources would be local short-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact physiography, geology, and soil resources. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately three acres of previously disturbed soils. Disturbances would be associated with improvements to Turkey Spur Road at Grandview and installation of water and wastewater facilities at Thurmond. During the construction period

erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Soil loss would be at or near current conditions. Short-term impacts on soil resources would be negligible.

Following construction approximately 1.5 acres would be replanted with native grass species and 1.5 acres would be permanently developed (Turkey Spur Road paving). Potential soil loss from these areas would be minimal. Impacts on soil resources would be negligible.

Visitor use at existing facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails, leading to increased potential for soil erosion. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on soils would be local long-term minor and adverse.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources. The lease would specify use of farming methods that would minimize soil exposure and the potential for conveyance of sediment-laden stormwater to waterways. It would also restrict use of fertilizers, herbicides, and pesticides consistent with NPS objectives reflected in the park's *Integrated Pest Management Plan* (NPS 2003a). Impacts on soils would be local long-term minor and adverse.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on physiographic and geologic resources would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

Partnership and Community Collaboration Actions. NPS would continue to work collaboratively with WV DEP to facilitate reclamation of areas disturbed by mining and to protect park resources from the potential impacts of mineral resource extraction on lands adjoining or near the park. Impacts on physiography, geology, and soil resources would be local long-term minor and beneficial.

NPS would continue to work with communities and others on an as-needed basis to address erosion and sedimentation issues impacting the park as a result of stormwater discharges originating beyond the park boundary. Impacts on physiography, geology, and soil resources would be negligible.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on physiography, geology, and soil resources are identified in Section 4.2.4 (see Table 4.4). Throughout the watershed, land development and road building in mountainous terrain generally involves clearing forest followed by cutting, filling, and site grading. Large areas of exposed soils characterize many development sites. Rock excavation and blasting is commonly used to remove road at or near the surface that interferes with site leveling. In the past, few controls over these construction activities have existed, resulting in high historic rates of erosion and sedimentation. Recently, through the National Pollutant Discharge Elimination System (NPDES) program the state of West Virginia has begun regulating stormwater containing sediment flowing from construction sites into the state's waters. This has and will continue to reduce erosion and sedimentation losses from construction sites throughout the watershed. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on physiography, geology, and soil resources. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in negligible to local long-term minor beneficial impacts and local long-term minor adverse impacts on physiography, geology, and soil resources. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on physiography, geology, and soil resources. There would be no impairment of park resources or values related to physiography, geology, and soil resources.

4.3.2 Floodplains[1] (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to protect, preserve and restore the natural resources and functions of floodplains by:

- maintaining natural floodplain vegetation (assuming continued lack of periodic maximum floods on the New River)
- removing debris from floodplains following flooding events

[1] *Floodplains with a recurrence interval of 100 years*

- restoring natural drainage patterns on lands disturbed by mining (in cooperation with WV DEP as part of mined land reclamation projects)

Impacts on floodplains would be local long-term minor and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Use of the floodplain would continue as it is today. Water-dependent uses including river access launching facilities and some related day-use facilities would remain in the floodplain. In addition, existing campgrounds located within the floodplain would remain at Hellems Beach, Stone Cliff, and Dun Glen. Impacts on floodplains as a result of continuing these uses would be local long-term minor and adverse.

Park Operations Actions. Data describing floodplains and natural flow regimes in the New River and its tributaries within the park would continue to be generalized or not available. Lacking adequate information it would continue to be difficult to protect and/or restore floodplain values, reduce use of the floodplain, and eliminate flood risks to human health and property. Impacts on floodplains would be local long-term minor and adverse.

The park headquarters and operations facilities at Glen Jean would remain within the floodplain of Dunloup Creek. If and when the facility is flooded and the buildings rendered unserviceable, the NPS would review options for relocating the park headquarters complex to an alternative site. Until such time the existing local long-term minor and adverse impact on the floodplain would continue.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on floodplains would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

Partnership and Community Collaboration Actions. The NPS would continue to seek to prevent actions by others that would place new structures within the New River channel that would obstruct flood flows. As is in the past, the NPS would not collaborate with transportation planning, permitting, and resource management agencies to reduce existing obstructions to flood flows within the river channel that no longer provide functional benefits to others. Impacts to floodplains would be local long-term minor and beneficial and local long-term minor and adverse.

NPS would continue to work collaboratively with communities and others on an as-needed basis to address stormwater management issues in the park and in

watersheds draining into the park that result in alterations to natural rainfall-runoff dynamics. The impact on floodplains would be local long-term minor and beneficial.

As in the past the NPS and the US Army Corps of Engineers would not coordinate to evaluate the feasibility and desirability of permitting periodic maximum floods to help maintain natural floodplain vegetation. Potential benefits to floodplain vegetation of restoring periodic maximum floods would not occur. Impacts to floodplains would likely be local long-term moderate and adverse.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on floodplains are identified in Section 4.2.4 (see Table 4.4). These generally include development on private property, public development projects, and transportation system improvements involving placement of fill or structures in floodplains resulting in increased risks to human health and safety, and/or disturbance or removal of natural floodplain vegetation resulting in loss of floodplain values. Flooding is a problem for property owners throughout the watershed. Until recent years, few regulations existed that limited construction in floodplains. As a result considerable private development occurred historically within the watershed involving placement of fill and structural development within the 100-year floodplain. These actions resulted in loss of floodplain values, increased flood levels, and risks to human health and property along the New River and its tributaries. Today Summers, Raleigh, and Fayette Counties have regulations of some type that require development to be located outside the 100-year floodplain or to elevate the first habitable floor of structures above the 100-year flood elevation and demonstrate that downstream flood elevations would not be increased. As a result the extent of new impacts to floodplains has declined. In the future regulations are likely to further regulate new development once results of recent detailed floodplain mapping becomes available for public use and the three counties are encouraged by the state to adopt its more protective model floodplain ordinance. Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on floodplains. Alternative 1 would contribute an imperceptible beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor beneficial impacts and local long-term minor to moderate adverse impacts on floodplains. Alternative 1 would contribute an imperceptible beneficial impact and a minor adverse impact to the total cumulative long-term moderate adverse impact on floodplains. There would be no impairment of park resources or values related to floodplains.

4.3.3 Water Quality (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain water quality in its natural condition free of pollutants generated by human activity by:

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions

Impacts on water quality would be local long-term moderate and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact water quality. Conceptual planning suggests that treatment actions at cultural resource sites would disturb approximately three acres of previously disturbed soils (Table 4.6). During the treatment period use of best management practices (BMPs) would mitigate water quality impacts associated with potential sediment-laden stormwater discharges from disturbed areas, in accordance with requirements of the WV NPDES Stormwater Program. Following the treatment period sites would be revegetated with native species. Impacts on water quality would be negligible.

Permanent removal of impervious surfaces associated with modern structures at two early settlement farms would enhance on-site infiltration of stormwater and reduce site runoff. Impacts on water quality would be negligible.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact water quality. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately three acres of previously disturbed soils. During the construction period use of best management practices (BMPs) would mitigate potential water quality impacts associated with sediment-laden stormwater discharges from disturbed areas, in accordance with requirements of the WV NPDES Stormwater Program. Impacts on water quality would be negligible.

Following construction approximately 1.5 acres would be replanted with native grass species and 1.5 acres would be paved (Turkey Spur Road). Permanent stormwater management measures would be used to reduce pollutants in stormwater discharged from the reconstructed Turkey Spur Road. Impacts on water quality would be negligible.

Visitor use at existing facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails, leading to increased potential for erosion and subsequent sedimentation in streams and the river. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on water quality would be local long-term minor and adverse.

Park Operations Actions. The park's existing monitoring program would continue to provide ambient water quality data for the New River and many of its tributaries. These data would document existing conditions, help identify probable sources of contamination, and assist with determining appropriate management actions. Impacts on water quality would be local long-term moderate and beneficial.

Adequate sewage treatment and disposal would be provided in most areas of the park:

- Safe and clean restroom facilities would be available where visitor use would be concentrated including visitor contact facilities, educational facilities, major and minor river accesses, developed day-use areas, and developed and primitive campgrounds. Facilities would include a combination of conventional restrooms, comfort stations, and vault toilets, with some use of portable toilets. Impacts on water quality would be local long-term moderate and beneficial.
- River rest stops and other sites in remote areas would continue to have few or no sanitary facilities. Impacts on water quality would be local long-term moderate and adverse.
- At Thurmond, wastewater collection and treatment would be provided for existing visitor facilities and currently occupied houses. Impacts on water quality would be local long-term minor and beneficial.

The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 Physiography, Geology and Soils (Alternative 1) above). Impacts on water quality would be local long-term minor and adverse.

Land Protection Actions. There would continue to be no stewardship program to provide public education or technical assistance to owners of private land within the park. Residential landowners in areas where fecal coliform counts are high – and the suspected source is malfunctioning on-site wastewater disposal systems (OSDSs) – would not receive information and assistance related to OSDS maintenance. Impacts on water quality would be local long-term minor and adverse.

Partnership and Community Collaboration Actions. NPS would continue to work with communities and others on an as-needed basis to address stormwater management and water quality issues impacting the park as a result of stormwater discharges and pollutants originating on private lands within the park and beyond the park boundary. Impacts on water quality would be negligible.

NPS would seek to protect the upper reaches of high quality streams that extend beyond the boundary of the park. Efforts would focus on working with landowners to mitigate potential impacts of land use activities on water quality. Efforts would also focus on working with local governments to seek to involve NPS as an interested party early on in the development review process when lands near upper reaches of high quality streams are proposed for development. Assuming these collaborative efforts would be effective, impacts on water quality would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on water quality are identified in Section 4.2.4 (see Table 4.4). These generally include development on private property, public development projects, and transportation system improvements that have resulted in or could result in discharge of pollutants to waterways. Primary sources of pollutants from these activities have historically included urban runoff, erosion and sedimentation, combined sewer overflows, and improperly functioning on-site disposal systems (OSDS). In the future pollutant loading from these sources will continue, although at reduced levels when compared to the past. OSDSs and sewer overflows will decrease somewhat as municipal sewers are installed and combined sewers are eliminated. This benefit will be somewhat offset by new development in the watershed that occurs outside of sewer service areas, requiring use of OSDSs that have historically provided inadequate treatment due to poor maintenance. Future stormwater runoff and erosion and sedimentation from construction sites greater than one acre would be reduced by mitigation measures required pursuant to water pollution control permits of the WV NPDES Stormwater Program. Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on water quality. Alternative 1 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate beneficial impacts and local long-term minor to moderate adverse impacts on water quality. Alternative 1 would contribute a minor beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on water quality. There would be no impairment of park resources or values related to water quality.

4.3.4 Vegetation (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native plants and natural landscapes by:

- generally allowing natural landscapes that are disturbed by natural phenomena – such as landslides, floods, and fire – to recover naturally
- implementing a full suppression response to wildland fire
- using prescribed fire on a very limited basis to promote ecosystem health and native vegetation diversity in fire-dependent forest communities
- restoring natural landscapes altered by human activity, such as logging, mining, agriculture, transportation, and utilities
- preserving and restoring native plant populations and the communities in which they occur (particularly rare or significant plant communities)
- aggressively treating invasive exotic plant and insect pest species

Impacts of natural resource management actions on vegetation resources would be local long-term moderate and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact native plants and plant communities. Conceptual planning suggests that cultural resource management actions would affect approximately 3 acres of previously disturbed land where historic buildings would be rehabilitated and/or modern buildings would be removed from potentially significant cultural landscapes. Affected vegetation would generally include a mix of ornamental trees and shrubs, non-native plants, and old field successional species. Following the treatment period, building sites would be revegetated with native grasses and other plants. The remaining 2.5 acres would be converted to agricultural production, along with existing adjoining fields. Impacts on vegetation would be negligible.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact native plants and plant communities. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately three acres of previously disturbed land. Affected ground cover would include asphalt (Turkey Spur Road) and vegetation composed primarily of grasses with some ornamental trees and shrubs and non-native plants in the vicinity of historic buildings at Thurmond. Following construction approximately 1.5 acres would be replanted with native grass species and 1.5 acres finished with asphalt (Turkey Spur Road). Impacts on vegetation would be negligible.

Visitor use throughout the park would have the potential to impact native plants and plant communities – particularly sensitive, rare, or significant vegetation communities. Visitor use in sensitive, rare, or significant vegetation communities would continue as is, with few restrictions on fires, camping, hiking access, and day-use of river rest stops. Existing impacts on vegetation in riparian areas, river bars, clifftop communities, and flatrock communities would continue. Impacts on vegetation would be local long-term moderate and adverse.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on vegetation resources would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

Partnership and Community Collaboration Actions. NPS and its partners that share concurrent jurisdiction for fire-fighting within the park would continue to collaborate regarding responses to wildfires in the park. In general full suppression would be the primary response to wildfire. Impacts to fire-dependent vegetation communities would be local long-term moderate and adverse.

NPS would continue to seek to protect significant unfragmented forest blocks on privately-owned lands in and around the gorge that are outside but near the park boundary. Efforts would continue to focus on working with landowners to mitigate potential impacts of new development projects on forest resources. Efforts would also continue to focus on working with local governments to seek to involve NPS as an interested party early on in the development review process when lands with outstanding forest resources are proposed for development. Assuming these collaborative efforts would be effective, the impact on vegetation would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on vegetation are identified in Section 4.2.4 (see Table 4.4). These generally include development on private property, public development projects, and transportation system improvements that have resulted in or could result in loss of vegetation or general degradation of vegetation communities. Loss of vegetation has occurred through clearing and grading and subsequent conversion of natural lands to developed uses. Fragmentation, non-native species introduction, drainage alterations, erosion and sedimentation, introduction of contaminants from

urban runoff, and loss due to herbicide drift, have adversely impacted remaining areas of natural vegetation adjoining developed lands. Historically high impacts on vegetation have occurred because in the past there were few controls over land development intended to protect vegetation. Reasonably foreseeable actions that would have impacts on vegetation would be subject to recently adopted local community and state regulations requiring stormwater management, erosion and sedimentation control, and replanting with native species. Compliance with these regulations would reduce the extent of impacts of foreseeable actions on vegetation, although impacts would continue to occur at a reduced level. Impacts of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on water quality. Alternative 1 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate and beneficial impacts and local long-term moderate adverse impacts on vegetation. Alternative 1 would contribute a minor beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on vegetation. There would be no impairment of park resources or values related to vegetation.

4.3.5 Aquatic Wildlife (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain and restore natural stream ecosystems with hydrologic features supporting a full range of natural aquatic organisms by:

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions
- maintaining natural floodplain vegetation (assuming continued lack of periodic maximum floods on the New River)
- removing debris from floodplains following flooding events
- restoring natural drainage patterns on lands disturbed by mining (in cooperation with WV DEP as part of mined land reclamation projects)

Impacts on aquatic habitat and dependent wildlife would be local long-term minor and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would continue to seek to avoid or minimize direct and indirect impacts on aquatic habitat and dependent wildlife associated with existing visitor use facilities and visitor use.

Existing physical modifications to aquatic habitat caused by development of visitor use facilities would remain where they support water-dependent visitor use. These have occurred where water-dependent uses required location of facilities along the river bank and in the near-shore area making some degree of past physical modification to aquatic habitat unavoidable. Previously impacted areas include existing river accesses where river launches provide boater access to the river, historically requiring limited site grading and some degree of bottom hardening to provide a safe surface for walking and to protect the bank and river bottom from erosion due to visitor use. In general, launch areas have been previously confined to the smallest possible area needed to accommodate average daily visitor demand. Impacts of visitor facilities on aquatic habitat and dependent wildlife would be continue to be local long-term minor and adverse.

Visitor use impacts on aquatic habitat and dependent wildlife would continue to occur throughout the park where visitors have uncontrolled access to the New River, tributary streams, and special aquatic habitat and dependent wildlife. Indirect impacts would continue to result from trampling of riparian vegetation, subsequent soil exposure, erosion, and sedimentation. Direct impacts would continue to occur where visitors cross streams while hiking, walk in streams or the river while fishing, or disturb the river bottom while swimming, launching boats, or stopping at river rest stops. Impacts on aquatic habitat and dependent wildlife would continue to be local long-term minor and adverse.

Park Operations Actions. Data identifying, locating, and describing aquatic habitats and dependent wildlife would continue to be incomplete. Lacking adequate information it would continue to be difficult to develop best management practices and individual protection plans for aquatic resources. Impacts on aquatic habitat and dependent wildlife would be local long-term moderate and adverse.

Adequate sewage treatment and disposal at most public use and administrative facilities would reduce human-induced nutrient loading and associated impacts on aquatic habitat and dependent wildlife, although river rest stops and other sites in remote areas of the park would continue to have few or no sanitary facilities (see Section 4.3.3 Water Quality (Alternative 1) above). Impacts on aquatic habitat and dependent wildlife would be local long-term moderate and beneficial and local long-term moderate and adverse.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous

acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on aquatic habitat and dependent wildlife would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

Partnership and Community Collaboration Actions. NPS would continue to minimally collaborate with the CSX Corporation, utility companies, and WVDOH regarding use of pesticides and herbicides to maintain rights-of-way within the park where such use could be conveyed in stormwater runoff to surface waters and damage aquatic habitat and dependent wildlife. Existing treatments by others within the park would generally continue as they do today. Impacts on aquatic habitat and dependent wildlife would be local long-term minor and adverse.

NPS would continue to work collaboratively with communities and others on an as-needed basis to address stormwater management issues in the park and in watersheds draining into the park that result in alterations to natural rainfall-runoff dynamics and associated adverse impacts to aquatic habitat and dependent wildlife. The impact on aquatic habitat and dependent wildlife would be local long-term minor and beneficial.

As in the past the NPS and the US Army Corps of Engineers would not coordinate to evaluate the feasibility and desirability of permitting periodic maximum floods to help maintain natural floodplain vegetation and aquatic habitat and dependent wildlife. Potential benefits to aquatic habitat and dependent wildlife of restoring periodic maximum floods would not occur. Impacts to aquatic habitat and dependent wildlife would be local long-term moderate and adverse.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on aquatic habitats and dependent wildlife are identified in Section 4.2.4 (see Table 4.4). These generally include development on private property, public development projects, and transportation system improvements that have resulted in or could result in construction in waterways or discharge of pollutants and sedimentation to waterways that could adversely impact aquatic habitats and dependent wildlife. Primary sources of pollutants from these activities have historically included urban runoff, erosion and sedimentation, combined sewer overflows, and improperly functioning on-site disposal systems (OSDS). In the future pollutant loading from these sources will continue, although at reduced levels when compared to the past. OSDSs and sewer overflows will decrease somewhat as municipal sewers are installed and combined sewers are eliminated. This benefit will be somewhat offset by new development in the watershed that occurs outside

of sewer service areas, requiring use of OSDSs that have historically provided inadequate treatment due to poor maintenance. Future stormwater runoff and erosion and sedimentation from construction sites greater than one acre would be reduced by mitigation measures required pursuant to water pollution control permits of the WV NPDES Stormwater Program. Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on aquatic habitats and dependent wildlife. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor beneficial impacts and local long-term minor to moderate adverse impacts on aquatic habitat and dependent wildlife. Alternative 1 would contribute an imperceptible beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on aquatic wildlife. There would be no impairment of park resources or values related to aquatic habitat and dependent wildlife.

4.3.6 Terrestrial Wildlife (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native animals. Actions would generally focus on the following:

- perpetuating native animal life as part of the park's natural ecosystem by maintaining or restoring natural processes to the extent practically feasible
- relying on natural processes to control populations and habitats of native species to the greatest extent possible

Impacts on terrestrial habitat and dependent species would be local long-term moderate and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact terrestrial habitat and dependent species. Conceptual planning suggests that cultural resource management actions would likely disturb approximately four acres of previously disturbed land at six sites. Field survey prior to treatment actions would determine species present in the vicinity of each site and appropriate protection measures. Following the treatment period cover conditions on 1.5 acre would be returned to the pre-treatment condition, likely resulting in a negligible impact on terrestrial habitat and dependent species. The remaining 2.5 acres would be converted from non-native grasses, ornamentals, and modern buildings to agricultural production.

Public Use, Enjoyment, and Experience Management Actions. Development of new facilities – and visitor use of those facilities – would have the potential to disturb or displace wildlife or cause areas to be avoided by wildlife. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately three acres of previously disturbed land. Affected ground cover would include asphalt (Turkey Spur Road) and vegetation composed primarily of grasses with some ornamental trees and shrubs and non-native plants in the vicinity of historic buildings at Thurmond. Following construction approximately 1.5 acres would be replanted with native grass species and 1.5 acres finished with asphalt (Turkey Spur Road). During the treatment period wildlife would be expected to migrate into adjacent habitat areas; following the treatment period they would likely migrate back to restored sites, although there would be some loss of habitat due to road widening. Impacts on terrestrial habitat and dependent species would likely be local short-term minor and adverse.

Hunting within the park would continue as it occurs today on most NPS-owned land in the park in accordance with the hunting and fishing regulations of the state of West Virginia. Recent study of the impacts of hunting in the park indicates that hunting in accordance with applicable state regulations has not caused adverse effects on any of the species of mammals or birds which are or may be hunted and that currently occur within the park boundaries (Hooper et al 2006). Recent study further indicates that no evidence exists to support the position that any other species found within the park boundaries have been affected adversely by hunting (Hooper et al 2006). Continuation of hunting in the park would therefore continue to have a negligible impact on terrestrial habitat and dependent species.

The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 above). Maintenance of open fields and forest edge along their perimeter would enhance wildlife habitat diversity locally in the park. The impact on terrestrial habitat and dependent species would be local long-term minor and beneficial.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on terrestrial habitat and dependent species would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

There would continue to be no stewardship program to provide public education or technical assistance to owners of private land within the park. Owners of lands with significant terrestrial habitat and dependent species that are fundamental or otherwise important to the park – particularly owners of sites along the river that are heavily used as river rest stops – would not receive information and assistance with identifying significant habitats and with implementing best management practices to generally protect those habitats and avoid, minimize, and/or mitigate visitor use impacts on them. Impacts on terrestrial habitat and dependent species would be local long-term minor and adverse.

Partnership and Community Collaboration Actions. NPS would continue to cooperate with the WV DNR regarding regulation of hunting on NPS-owned property within the park boundary in accordance with applicable regulations and policies. Cooperation would not include development of a cooperative game management plan for designated hunt units within the park. Impacts on terrestrial habitat and dependent species would be negligible.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on terrestrial wildlife are identified in Section 4.2.4 (see Table 4.4). These generally include development on private property, public development projects, and transportation system improvements that have resulted in or could result in loss of terrestrial habitat or general degradation of terrestrial habitat. Loss of terrestrial habitat and dependent species has occurred as a result of clearing and grading and subsequent conversion of natural lands to developed uses. Fragmentation, non-native species introduction, drainage alterations, erosion and sedimentation, introduction of contaminants from urban runoff, and loss due to herbicide and pesticide drift, have adversely impacted remaining areas of natural vegetation adjoining developed lands. Increased human activity and addition of traffic to roadways has resulted in movement of wildlife out of the area and loss of wildlife due to death caused by vehicles, domestic animals, and other disturbances. Historically high impacts on habitats have occurred because in the past there were few controls over land development intended to protect vegetation. Reasonably foreseeable actions that would have impacts on terrestrial habitat and dependent species would be subject to recently adopted local community and state regulations requiring stormwater management, erosion and sedimentation control, and replanting with native species. Compliance with these regulations would reduce the extent of impacts of foreseeable actions on terrestrial habitat and dependent species, although impacts would continue to occur at a reduced level. Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on terrestrial wildlife. Alternative 1 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate beneficial impacts, local short-term minor adverse impacts, and local long-term minor adverse impacts on terrestrial wildlife. Alternative 1 would contribute a minor beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on terrestrial wildlife. There would be no impairment of park resources or values related to terrestrial wildlife.

4.3.7 Rare, Threatened, and Endangered Species (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to generally increase the populations of rare, threatened, or endangered species in the park and to secure sufficient, suitable habitat to "recover" species designated as threatened or endangered. Actions would generally focus on the following:

- managing habitat of threatened and endangered species to maintain their value for species recovery
- managing habitat of state-listed species to maintain their value for species maintenance to the greatest extent possible
- managing other native species of special management concern to the park to maintain their natural abundance and distribution
- controlling detrimental non-native species impacts on rare, threatened, or endangered species

Impacts on rare, threatened, and endangered species would be local long-term moderate and beneficial.

Cultural Resource Management Actions. Conceptual planning suggests that cultural resource management actions would likely disturb approximately four acres of previously disturbed land at six sites. One site is known to have occurrences of the federally-designated species of concern Allegheny woodrat (*Neotoma magister)*. Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

Public Use, Enjoyment, and Experience Management Actions. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately three acres of previously disturbed land. Affected ground cover would include asphalt (Turkey Spur Road) and vegetation composed primarily of grasses with some ornamental trees and shrubs and non-native plants in the vicinity of historic buildings at Thurmond. Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

The ongoing program to stabilize and gate mine portals where rare, threatened, and endangered species are present would continue. Gates would block human access to mines eliminating potential disturbances to rare, threatened, or endangered species. Gates would not interfere with daily and seasonal movements of species inhabiting mine portals and mines. Impacts on rare, threatened or endangered species would be local long-term moderate and beneficial.

No additional areas within the park would be limited to day-use only in order to protect rare, threatened, or endangered species.[1] As a result designated species in the Rush Run, Sewell, Beauty Mountain, Endless Wall, Sunshine Buttress, and Ames areas would continue to be subject to potential nighttime disturbances. Impacts on rare, threatened, or endangered species would be local long-term moderate and adverse.

Park Operations Actions. Data describing the occurrences of many of the park's rare, threatened, or endangered species would continue to be generalized or not available. Lacking adequate information it would continue to be difficult to protect, restore, and maintain habitats of rare, threatened, or endangered species in the park. Impacts on rare, threatened, and endangered species would be local long-term moderate and adverse.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their

[1] *Visitor use in the Nuttallburg Visitor Use Area would also be limited to day-use only pursuant to the Nuttallburg Visitor Use Area DCP/EA (NPS 2008c)*

significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on rare, threatened, or endangered species would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

There would continue to be no stewardship program to provide public education or technical assistance to owners of private land within the park. Owners of lands with rare, threatened, or endangered species habitat that are fundamental or otherwise important to the park would not receive information and assistance with identifying significant species and their habitats and with implementing best management practices to generally protect them and to avoid, minimize, and/or mitigate visitor use impacts on them. Impacts on rare, threatened, and endangered species would be local long-term moderate and adverse.

Partnership and Community Collaboration Actions. NPS would continue to seek to protect rare, threatened, and endangered species and their habitat on privately-owned lands in and around the gorge that are outside but near the park boundary. Efforts would continue to focus on working with landowners to mitigate potential impacts of new development projects on designated species habitat. Efforts would also continue to focus on working with local governments to seek to involve NPS as an interested party early on in the development review process when lands with designated species habitat are proposed for development. Assuming these collaborative efforts would be effective, the impact on rare, threatened, or endangered species would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on rare, threatened, and endangered species are identified in Section 4.2.4 (see Table 4.4). These generally include development on private property, public development projects, and transportation system improvements that have resulted in or could result in loss or general degradation of terrestrial or aquatic habitats that are used by rare, threatened, and endangered species.

Loss of terrestrial habitats and dependent species including threatened, rare, or endangered species has occurred as a result of clearing and grading and subsequent conversion of natural lands to developed uses. Fragmentation, non-native species introduction, drainage alterations, erosion and sedimentation, introduction of contaminants from urban runoff, and loss due to herbicide and pesticide drift, have adversely impacted remaining areas of natural vegetation adjoining developed lands. Increased human activity and addition of traffic to roadways has resulted in movement of wildlife out of the area and loss of wildlife due to death caused by vehicles, domestic animals, and other disturbances. Historically high impacts on

habitats have occurred because in the past there were few controls over land development intended to protect vegetation at development sites. Reasonably foreseeable actions that would have impacts on terrestrial habitat and dependent species including rare, threatened, and endangered species would be subject to recently adopted local community and state regulations requiring stormwater management, erosion and sedimentation control, replanting with native species, and depending on the designated species potentially affected specific mitigation measures to reduce or avoid impacts. Compliance with these regulations would reduce the extent of impacts of foreseeable actions on rare, threatened, and endangered species, although impacts would continue to occur at a reduced level.

Adverse impacts to aquatic habitats and dependent species including threatened, rare, or endangered species has occurred as a result of development projects that have resulted in or could result in construction in waterways or in discharge of pollutants and sedimentation to waterways that could adversely impact aquatic habitats and dependent wildlife. Primary sources of pollutants from these activities have historically included urban runoff, erosion and sedimentation, combined sewer overflows, and improperly functioning on-site disposal systems (OSDS). In the future pollutant loading from these sources will continue, although at reduced levels when compared to the past. OSDSs and sewer overflows will decrease somewhat as municipal sewers are installed and combined sewers are eliminated. This benefit will be somewhat offset by new development in the watershed that occurs outside of sewer service areas, requiring use of OSDSs that have historically provided inadequate treatment due to poor maintenance. Future stormwater runoff and erosion and sedimentation from construction sites greater than one acre would be reduced by mitigation measures required pursuant to water pollution control permits of the WV NPDES Stormwater Program.

In addition, recent past and future lead agencies for projects using state and federal funds (including most transportation system improvements) have been or would be required to complete Section 7 Consultation with the U.S. Fish and Wildlife Service and/or with the WV DNR, resulting in specific mitigation measures to avoid or mitigate adverse impacts on rare, threatened, or endangered species.

Alternative 1 in conjunction with the impacts of these past, present, and reasonably foreseeable actions would result in a cumulative long-term moderate adverse impact on rare, threatened, and endangered species. Alternative 1 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate beneficial impacts and local long-term minor to moderate adverse impacts on rare, threatened, and endangered species. Alternative 1 would contribute a minor beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on rare, threatened, and endangered species. There would be no impairment of park resources or values related to rare, threatened, and endangered species.

4.3.8 Scenic Resources (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Resource management actions would seek to protect a range of views in all areas of the park, allowing visitors to experience the extent of the gorge, the river, the forest, and the rim by:

- removing non-native plants at sites where they cause a major scenic or aesthetic intrusion
- reclaiming abandoned mine lands at sites throughout the park (in cooperation with the WV DEP)

Impacts on scenic resources would be local long-term moderate and beneficial.

Cultural Resource Management Actions. Removal of modern structures at three sites would enhance the scenic quality of potentially significant early settlement cultural landscapes that are scenic resources fundamental to the park (see Section 4.3.10 Cultural Landscapes (Alternative 1) above). Impacts on scenic resources would be local long-term moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New facilities would include installation of subsurface water and wastewater lines at Thurmond and minor widening and repaving of Turkey Spur Road. Impacts on scenic resources would be negligible.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on scenic resources would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

Partnership and Community Collaboration Actions. NPS would continue to seek to protect scenic resources on privately-owned lands in and around the gorge that are outside but near the park boundary. Efforts would continue to focus on working with landowners to mitigate potential impacts of new development projects on scenic resources. Efforts would also continue to focus on working with local governments to seek to involve NPS as an interested party early on in the development review process when lands with outstanding scenic values are proposed for development. Assuming these collaborative efforts would be effective, Impacts on scenic resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on scenic resources are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). These generally include growth and development on private property, transportation system improvements, and mining and mined land reclamation. Land development and road construction in the mountainous terrain generally involves clearing forest followed by cutting, filling, and site grading. Rock excavation and blasting is commonly used to remove rock at or near the surface that interferes with site leveling. In the past few controls over clearing, excavating and grading have existed resulting in adverse effects to scenic resources. In recent years state policies and regulations have mitigated some of the impacts of land development and transportation system improvements on scenic resources, although major terrain-altering activities continue to occur. Mining at sites throughout the three counties has historically adversely impacted the scenic character of the landscape; a number mined land reclamation projects have in recent years mitigated some of the adverse impacts. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on scenic resources. Alternative 1 would contribute an imperceptible beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate beneficial impacts on scenic resources. Alternative 1 would contribute an imperceptible beneficial impact to the total cumulative long-term moderate adverse impact on scenic resources. There would be no impairment of park resources or values related to scenic resources.

4.3.9 Archeological Resources (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect and preserve archeological

resources against natural destruction wherever practicable by eliminating and avoiding natural resource impacts, stabilizing sites and structures, and monitoring conditions. Management actions including removal of vegetative overgrowth at areas of known or potential archeological resources would be preceded by research sufficient to identify and evaluate such resources. The impact on archeological resources receiving stewardship actions would be local long-term minor and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to identify and evaluate park archeological resources and to assess their condition and threats to them. Eligible archeological resources would continue to be nominated for listing in the National Register, as appropriate. Archeological resources would generally continue to be left undisturbed except where intervention could be justified based on compelling needs for research, interpretation, site protection, or park development.

Specific management actions at cultural resource sites that could potentially disturb archeological resources would include (see Table 4.6):

- maintenance or stabilization of historic structures
- removal of modern structures from two early settlement sites

All ground-disturbing activities associated with these actions would be preceded by site-specific archeological surveys and, where appropriate, subsurface testing to determine the existence of archeological resources and how best to preserve them. If National Register-listed or National Register-eligible archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the West Virginia State Historic Preservation Officer. If during construction or treatment previously undiscovered archeological resources are uncovered, then all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy could be developed in consultation with the West Virginia State Historic Preservation Officer. The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Public Use, Enjoyment, and Experience Management Actions. Ground disturbance would be associated with construction of circulation improvements at Grandview and other minor improvements to existing facilities throughout the park. Strategies to protect archeological resources would be implemented as described above for cultural resource management actions under Alternative 1. The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Table 4.6

New River Gorge National River
Alternative 1 – Site-Specific Cultural Resource Management Actions

Actions
■ **Historic Structures Maintained in Period Condition**
- Richmond-Hamilton Farm (outbuildings)
- Vallandingham Farm (outbuildings)
- Cochran Farm (outbuildings)
- Trump-Lilly Farm (outbuildings)
■ **Stabilization**
- Trump-Lilly Farm (farmhouse)
- Richmond-Hamilton Farm (farmhouse)
- Vallandingham Farm (farmhouse)
- Phillips Farm (all structures)
- Prince Brothers General Store
- Thurmond Commercial Row (including remediation of lead paint and asbestos contamination)
- Thurmond Houses
- Camp Brookside
■ **Modern Structure Removal** (if and when acquired by NPS from a willing seller)
- Westfall Farm
- Richmond Bottom
■ **Leasing Existing Farm Fields at Cultural Resource Sites**
- Richmond-Hamilton Farm
- Vallandingham Farm
- Cochran Farm
- Trump-Lilly Farm
- Westfall Farm (if and when acquired by NPS from a willing seller)
- Richmond Bottom (if and when acquired by NPS from a willing seller)

Visitor use in most areas of the park would remain largely as it is today, except at the Nuttallburg Visitor Use Area and in the Burnwood area. The impact on archeological resources at all visitor use areas would continue to generally include increased vulnerability of archeological resources to surface disturbance, inadvertent damage, and vandalism, as well as loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence. NPS staff presence would continue to discourage vandalism and inadvertent destruction of cultural remains. The impact on archeological resources would range from negligible to local long-term minor and adverse.

Park Operations Actions. Ground disturbance would be associated with construction of water supply/distribution and wastewater collection/treatment to serve occupied structures at Thurmond. Strategies to protect archeological resources from ground disturbance would be implemented as described above for cultural resource management actions under Alternative 1. The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on archeological resources would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have an impact on archeological resources are identified in Section 4.24 Cumulative Impact Analysis (see Table 4.4). These generally include development on private property, public development projects, and transportation system improvements. No local public policies or regulations are in place to protect archeological resources on private land during the land development process. Public development and transportation system projects with federal funding are required to mitigate potential adverse effects to archeological resources in accordance with Section 106 of the NHPA. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on archeological resources. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to archeological resources.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor beneficial impacts and local long-term minor adverse impacts on archeological resources. Alternative 1 would contribute an imperceptible beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on archeological resources. There would be no impairment of park resources or values related to archeological resources.

4.3.10 Cultural Landscapes (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to focus on removal of non-native plants at Thurmond and at the Nuttallburg Mining Complex and Nuttallburg Town Site as well as mowing fields at early settlement farm sites and Camp Brookside. Other cultural landscapes would continue to be at risk due to vegetation overgrowth, poor drainage, and/or landslide susceptibility. The impacts on cultural landscapes would be local long-term minor to moderate and adverse.

Cultural Resource Management Actions. Efforts would continue to include all cultural landscapes in the park's *Cultural Landscapes Inventory* (NPS 2005a), to identify and nominate eligible landscapes to the National Register, and to prepare cultural landscape reports for all cultural landscapes. Specific management actions affecting cultural landscapes would include removal of modern structures (with revegetation of demolition sites) at two early settlement sites with potentially significant cultural landscapes in the south end of the park (see Table 4.6). These actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on cultural landscapes would be local long-term minor and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Visitor use throughout the park would continue to impact cultural landscapes where they are present, particularly in remote areas where ranger patrols and NPS staff are not routinely present. Visitor use impacts would generally include inadvertent disturbance and vandalism. Impacts on cultural landscapes would be local long-term minor to moderate and adverse.

Park Operations Actions. At Thurmond new water supply/distribution and wastewater collection/treatment facilities would be provided to the Thurmond Depot Visitor Center and to structures currently used for park housing and as private

residences. Engineering design of the facilities would protect the character-defining features of the cultural landscape. Site restoration would return the cultural landscape to its preconstruction condition. During construction ground disturbance would result in a local short-term minor to moderate adverse impact to the cultural landscape. The long-term impact on the cultural landscape would be negligible to local minor and adverse.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on cultural landscapes would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on cultural landscapes are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). These generally include growth and development on private property and public development and transportation system improvements. No local public policies or regulations are in place to protect cultural landscapes on private land during the land development process. As a result past development on private land within the park boundary has occurred without consideration of cultural landscapes, resulting in adverse impacts. This could change on a site-specific basis in the future where the NPS is able to successfully cooperate with owners of remaining private land within the park boundary whose properties include significant cultural landscapes. Public development and transportation system projects with federal funding are required to mitigate potential adverse effects to cultural landscapes in accordance with Section 106 of the NHPA. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on cultural landscapes. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to cultural landscapes.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor beneficial impacts and local long-term minor to moderate adverse impacts on cultural landscapes. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on cultural landscapes. There would be no impairment of park resources or values related to cultural landscapes.

4.3.11 Historic Structures (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b). Stewardship would generally include removal of non-native plants and improvements to drainage in the vicinity of historic structures. Impacts on historic structures receiving stewardship actions would be local long-term minor and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b) and to obtain determinations of their eligibility for the National Register. Stewardship would generally include building stabilization to provide protection from weather and vandalism. Maintenance of previously stabilized structures would continue. Impacts on historic structures receiving stabilization and ongoing maintenance would be local long-term minor and beneficial.

Stewardship of historic structures would focus on maintenance and treatment of structures that are nominated to, determined eligible for, or are considered potentially eligible for the National Register. Management actions would include the following (see Table 4.6):

- Historic outbuildings at early settlement farms would be maintained in period condition.
- Historic structures not previously stabilized would be stabilized at settlement farms and at Thurmond Commercial Row (with remediation of asbestos and lead contamination).

All management actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on historic structures would generally be local long-term minor to moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Visitor use throughout the park would continue to impact historic structures where they are

present, particularly in remote areas where ranger patrols and NPS staff are not routinely present. Visitor use impacts would generally include inadvertent disturbance and vandalism. Impacts on historic structures would be local long-term minor to moderate and adverse.

Park Operations Actions. At Thurmond water supply and wastewater treatment would be provided to the Thurmond Depot Visitor Center and to all occupied structures currently used for park housing and as private residences. Many of the affected structures are resources that contribute to the significance of the Thurmond Historic District. All improvements would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on historic structures would be negligible to local long-term minor and adverse.

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on historic structures would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

Partnership and Community Collaboration Actions. NPS would continue to provide technical assistance to the city of Hinton to assess treatment options for rehabilitation and adaptive reuse of the city-owned Hinton Depot and to assist with implementation of treatment by helping to identify funding options and to develop grant applications. Impacts on historic structures would be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on historic structures are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). These generally include growth and development on private property and public development and transportation system improvements. No local public policies or regulations are in place to protect historic structures on private land during the land development process. Public development and transportation system projects with federal funding are required to mitigate potential adverse effects to historic structures in accordance with Section 106 of the NHPA. Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on historic

structures. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to historic structures.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate beneficial impacts and local long-term minor to moderate adverse impacts on historic structures. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on historic structures. There would be no impairment of park resources or values related to historic structures.

4.3.12 Ethnographic Resources (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect specific natural and cultural resources found within the park's mixed mesophytic forest that are important to the park's traditionally associated people, such as plants, animals, and sites of former towns, settlement areas, and industrial sites. These actions would protect the forest and its associated watershed which is the ethnographic resource identified as vital to the park's traditionally associated people and groups (Hufford et al 2006). Impacts on ethnographic resources would be local long-term minor to moderate and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to include appropriate studies and consultations to further document ethnographic resources and uses, traditionally associated people, and other affected groups, and cultural affiliations to park resources. Eligible ethnographic resources would continue to be nominated for listing in the National Register, as appropriate.

Cultural resource treatment at historic structures and cultural landscapes would stabilize resources that are likely to be found through further research to include significant ethnographic resources (see Table 4.6 and Sections 4.3.10 Cultural Landscapes and 4.3.11 Historic Structures above). Impacts on ethnographic resources would be local long-term minor to moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New visitor use facilities at historic structures and cultural landscapes would impact resources that are likely to be found through further research to include significant ethnographic resources (see Table 4.8 and Sections 4.3.10 Cultural Landscapes and 4.3.11

Historic Buildings above). Impacts on ethnographic resources, if determined to be present, would be local long-term minor and adverse.

Impacts associated with increased visitor use on ethnographic resources elsewhere in the park, if determined to be present, would be local long-term minor to moderate and adverse, particularly in remote areas where ranger patrols and NPS staff are not routinely present (see Sections 4.3.10 Cultural Landscapes and 4.3.11 Historic Buildings above).

Land Protection Actions. The NPS would continue to protect land within the park boundary as funding allows through acquisition of land or conservation easements from willing sellers, responding to opportunities as they arise. Under the previous acquisition program, NPS typically acquired parcels without regard to their significance or recreational potential. NPS has refocused its acquisition efforts to target limited acquisition funds to those parcels that have significant natural or cultural resources or that are needed for recreational purposes. Impacts of the acquisition program on ethnographic resources would be negligible to local long-term minor and beneficial, depending upon which properties become available in the marketplace.

Partnership and Community Collaboration Actions. The NPS would continue to consult with traditionally associated groups and Indian tribes, including those already identified and those to be identified through further studies. Consultation would assist with identifying, learning about, and developing strategies for preserving and providing access to ethnographic resources. The impact on ethnographic resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on ethnographic resources are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). These generally include growth and development on private property and public development and transportation system improvements. No local public policies or regulations are in place to protect ethnographic resources on private land during the land development process. Public development and transportation system projects with federal funding are required to mitigate potential adverse effects to ethnographic resources in accordance with Section 106 of the NHPA. Impacts of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on ethnographic resources. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to ethnographic resources.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate beneficial impacts and local long-term minor to moderate adverse impacts on ethnographic resources. Alternative 1 would contribute an imperceptible beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on ethnographic resources. There would be no impairment of park resources or values related to ethnographic resources.

4.3.13 Regional and Local Economy (Alternative 1)

In Alternative 1 – Continuation of Current Park Management – the park would continue to attract visitors at existing visitation levels from outside the region to the local area and to the Southern West Virginia region. Many visitors would also continue to come from the local area and the region itself.

Fayetteville would continue to be the gateway community for the area's whitewater rafting industry. Beckley would continue its current function as a primary lodging, dining and visitor service area in support of tourism to New River Gorge. Communities along the US 19 corridor – such as Oak Hill, Mount Hope, Bradley and North Beckley – would continue to provide limited visitor support services.

Development of New River Parkway and related recreation sites would have the single greatest impact on the region's overall socioeconomic condition. New River Parkway would be anchored by the Sandstone Visitor Center at one end and the city of Hinton at the other end. These sites plus recreation attractions along the Parkway – including the new bridge across the New River, Sandstone Falls, and various day-use areas along the New River – would attract a moderate number of visitors already traveling through the area on I-64 to take side trips along the New River to Hinton. Recreation sites along the New River Parkway – especially "the classic park experience" at Sandstone Falls – would attract visitors from the local area and elsewhere in the park, as well as those traveling through the area on I-64.

Several smaller new visitor use facilities and other management actions would induce minor increases in economic activity within local areas, but would have negligible effects on overall economic activities in the region. These would include rehabilitation of Prince Brothers General Store, development of recreational and interpretive facilities at the Nuttallburg Visitor Use Area, construction of the Burnwood Environmental Education Center, and rehabilitation and leasing of early settlement farmhouses in the New River Parkway corridor.

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Active management of the park's natural resources would continue to require expenditures by the park, its partners, and others. Some projects by others – such as reclamation of mined

lands by the WV DEP – would result in significant investment. Impacts of these investments on the economy would be regional long-term minor and beneficial.

Cultural Resource Management Actions. Stabilization and ongoing maintenance of historic structures would result in expenditures by the NPS for labor and materials. Impacts on the regional and local economy would be regional short-term minor and beneficial and regional long-term minor and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would continue to encourage economic activity in areas with active visitor use facilities and support services.

The total annual number of recreational visits to the New River Gorge National River would increase by 124,600 from the current (2007) level of 1,178,000, a 10.6 percent growth rate. Table 4.7 displays projected direct and indirect economic impacts resulting from this increased level of visitor activity. Visitation in the Upper Gorge would increase mainly due to construction of New River Parkway between I-64 and Hinton. Minor increases would occur in the Lower Gorge from development

TABLE 4.7 Alternative 1 – Continuation of Current Management – Annual Direct and Indirect Economic Impacts ($2007)

Impact Type	2005	Added as a Result of Alternative 1	2025
Visitation			
Visitors	1,178,000	124,600	1,302,600
Direct Impacts			
Jobs	2,000	217	2,217
Earnings	$28,317,960	$3,063,500	$31,381,460
NPS Spending	$7,208,400	$1,2229,400	$8,437,800
Visitor Spending	$67,910,000	$7,346,800	$75,256,800
Indirect Impacts			
Jobs	850	92	942
Earnings	$7,870,810	$851,500	$8,722,310
NPS Spending	$4,159,970	$709,530	$4,869,500
Visitor Spending	$33,568,090	$3,631,500	$37,199,590
Total Impacts			
Jobs	2,850	309	3,159
Earnings	$36,188,770	$3,915,000	$40,103,770
NPS Spending	$11,368,370	$1,938,930	$13,307,300
Visitor Spending	$101,478,090	$10,978,300	$112,456,390

2005 baseline and Impact factors per recreational visit are adapted from Versel 2006

of the visitor use area at Nuttallburg. All other visitor use areas in the park would experience very small visitation increases.

Several industries that benefit from NPS stewardship of New River Gorge, including outfitting, lodging, dining, and convenience goods, would continue to support significant levels of employment. Businesses in these industries are mostly concentrated along the US 19 corridor, particularly in Fayetteville and Beckley.

Industries that have jobs supported by NPS-related activities at New River Gorge would also continue to realize significant impacts on earnings and the housing market.

Impacts on the regional and local economy would be regional long-term minor and beneficial.

Park Operations Actions. Total recurring costs by NPS would be about $13.4 million annually, while total one-time costs would be about $16.2 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have Impacts on the regional and local economy are identified in Section 4.2.4 (see Table 4.4). These generally include development on private property, public development projects, and transportation system improvements that have resulted in or could result in changes in the intensity of economic activity. This ongoing activity will continue to produce moderate long-term growth in the overall regional economy as it shifts from the traditional mining and transportation sectors to the services (particularly leisure and recreation), construction, and real estate sectors. Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate beneficial impact on the regional and local economy. Alternative 1 would contribute an imperceptible beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in regional short-term minor beneficial impacts and regional long-term minor beneficial impacts on the regional and local economy. Alternative 1 would contribute an imperceptible beneficial impact to the total cumulative long-term moderate beneficial impact on the regional and local economy.

4.3.14 Communities (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions implemented within the park have the potential to affect natural resource conditions in communities within or near the park. These primarily include management actions that seek to protect water quality, floodplains, forest, and aquatic and terrestrial habitats and dependent species, by:

- maintaining natural flows and hydropatterns
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions
- perpetuating native animal life as part of the park's natural ecosystem by maintaining or restoring natural processes to the extent practically feasible
- relying on natural processes to control populations and habitats of native species to the greatest extent possible
- aggressively treating invasive exotic plant and insect pest species
- allowing select introduced species that may alter some process and interactions (e.g. continue WV State black fly treatments)

The impact of these management actions on natural resources in communities within and near the park would be local long-term moderate and beneficial.

Cultural Resource Management Actions. In Alternative 2, cultural resource management actions with the potential to affect resources of potential significance to residents of communities within or near the park include:

- NPS would continue to identify and evaluate park archeological resources and to assess their condition and threats to them. Archeological resources would generally continue to be left undisturbed except where intervention could be justified based on compelling needs for research, interpretation, site protection, or park development.
- NPS would continue to include all cultural landscapes in the park's *Cultural Landscapes Inventory* (NPS 2005a). Specific management actions affecting cultural landscapes would include removal of modern structures (with revegetation of demolition sites) at two early settlement sites with potentially significant cultural landscapes in the south end of the park (see Table 4.11).
- NPS would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b). Stewardship would generally include building stabilization to provide protection from weather and vandalism. Maintenance of previously stabilized structures would continue.

- NPS would continue to include appropriate studies and consultations to further document ethnographic resources and uses, traditionally associated people, and other affected groups, and cultural affiliations to park resources.

The impact of these management actions on cultural resources of potential significance to residents of communities within or near the park would be local long-term minor and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Existing opportunities for visitors – including residents of communities within or near the park – would continue as they are today. Local area residents would continue to have the classic park experiences at Sandstone Falls, Sandstone Visitor Center, Grandview, Thurmond, Nuttallburg/Kaymoor, Endless Wall, Canyon Rim, and Fayette Station Road. Other important experiences that visitors "should have" in the park would remain largely as they are today, focused on existing attractions and visitor facilities. Existing visitor experience issues would continue related to crowding at some river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few opportunities for biking and equestrian use). Impacts on residents of communities within or near the park who use the park for recreation would be local long-term minor to moderate and adverse.

Improvements at the Nuttallburg Visitor Use Area would enhance opportunities for visitors to appreciate the human history story of life in the gorge. Improvements associated with the future New River Parkway[1] would greatly enhance access, visitor facilities, and the experiences visitors have in the south end of the park. A new environmental education center at Burnwood[1] would facilitate operation and enhancement of the park's educational programs. Impacts on residents of communities within or near the park who use the park for recreation would be local long-term minor to moderate and beneficial.

Hunting within the park would continue as it occurs today on most NPS-owned land, in the park in accordance with the hunting and fishing regulations of the state of West Virginia. During hunting season safety hazards would continue to exist in areas of the park where other visitor use is high and hunting is permitted. Impacts on residents of communities within or near the park who hunt would be local long-term moderate and beneficial. Continued safety hazards would result in a local long-term minor and adverse impact on residents of communities within and near the park.

[1] *NEPA compliance activities for the Nuttallburg Visitor Use Area, the Burnwood Center, and New River Parkway have previously resulted in Findings of No Significant Impact or a Record of Decision (NPS 2008c;NPS 1988a;USDOT FHWA and WV DOH 2004).*

Park Operations Actions. Total recurring costs by NPS would be about $13.4 million annually, while total one-time costs would be about $16.2 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

At Thurmond, wastewater collection and treatment would be provided for existing visitor facilities and currently occupied houses. Impacts on the community of Thurmond would be local long-term moderate and beneficial.

Land Protection Actions. As funding permits, land protection would continue until most land remaining within the current park boundary is protected through voluntary sale of property to the NPS or through voluntary conveyance of conservation easements to the NPS or to a qualified non-profit land trust. The NPS land protection staff would continue to respond to all opportunities for negotiation with willing sellers as they arise, subject to staff capacity and availability of acquisition funds. The NPS would not take actions specifically designed to sustain the continued presence of communities that still remain in the park in the vicinity of Meadow Creek, Backus, Prince/Quinnimont, Highland, Terry, and Thayer. The NPS would continue to acquire property within these communities as they become available from willing sellers, typically removing modern structures once properties have been purchased. Acquisition of properties with demolition of structures would continue to reduce the housing stock, to contribute to population loss, and to disrupt the social fabric. The impact on communities within the park would be local long-term moderate and adverse.

There would continue to be no stewardship program to provide technical assistance to owners of private land, including those owning land within the communities that remain within the park. Owners of lands with significant natural, cultural, and scenic resources would continue to not receive information and technical assistance regarding protection and management of resources on their properties. Where landowners lack understanding of the significance of their properties there would be potential for degradation of resources of value to the broader community. The impact on communities within the park would be local long-term minor to moderate and adverse.

Partnership and Community Collaboration Actions. Actions currently implemented by the park to enhance local appreciation and understanding of the park would continue.

The NPS would continue to provide technical assistance to the city of Hinton with rehabilitation and adaptive reuse of the Hinton Depot and would continue to work cooperatively with the city to accomplish mutual goals regarding management and use of the New River waterfront area.

The small enclave of occupied private residences at Thurmond would remain as "a community within a park attraction". The level of visitor use at Thurmond would remain low and generally confined to the visitor center at the Thurmond Depot, the Commercial Row area, and the lower areas of the town where the NPS owns most of the property and houses. The NPS would continue to work cooperatively with residents to address issues associated with living in the historic town. The NPS would also develop a community water system and wastewater management system at Thurmond for NPS use; water and wastewater service would be extended to private residences in the town on a fee basis.

The NPS would continue to work cooperatively with local governments in Summers, Raleigh, and Fayette Counties, as well as the nearby communities that are the park's gateways – Hinton, Sandstone, Meadow Bridge, Beckley, Mount Hope, Glen Jean, Oak Hill, Minden, Cunard, Fayetteville, Winona, and Ansted. These relationships would remain informal, involving provision of relatively narrowly defined technical assistance with land use planning and geographic database (GIS) management, planning and design of trail connections, treatment of cultural resources, and assistance with hosting special events.

The NPS would continue to work cooperatively on many initiatives with local chambers of commerce, convention bureaus, visitors' bureaus, economic development interests, the Coal Heritage Area, and the Tamarack Foundation. These initiatives would focus on improving awareness of the park as a unit of the national park system, attracting visitors to the region, providing information to visitors, improving wayfinding from local communities to the park, developing visitor support services in gateway communities, and promoting public understanding of the positive impacts of the park on the quality of life in local communities.

The NPS would continue to collaborate with Hawks Nest State Park to protect scenic resources in and around the gorge and to make information available to visitors about each park. Babcock State Park would continue to operate independent of collaboration with the NPS.

The NPS would continue to collaborate with state and federal agencies to address specific resource management needs at the park related to treatment of cultural resources, water quality monitoring, hunting, rare and endangered species protection, fishing access, maintenance of flows in the New River, maintenance of public roads in the park, and management of whitewater use of the river.

The NPS would continue to seek input from visitor user groups with identifying visitor use issues and identification of potential solutions for consideration.

Collectively the impact of these actions on communities within and near the park would be local long-term moderate and beneficial.

New River Gorge National River
Desired Visitor Experiences

Desired Visitor Experiences

- **Important Park Experiences that Visitor should have:**
  - Appreciate life in the gorge – the human history story
  - Appreciate/experience the wildness of the landscape
  - Experience the power of the river
  - Experience scenic beauty
- **Classic Park Experiences**
  - Paddling the New River
  - Sandstone Falls
  - Grandview
  - Thurmond
  - Endless Wall
  - Canyon Rim
  - Fayette Station Road

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on communities are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). These generally include growth and development on private property, public infrastructure projects, and transportation system improvements. Collectively these actions have improved the quality of life in communities within and near the park. They have generally enhanced opportunities for education, attracted new employers to the area thereby providing new jobs, provided locations for needed commercial services, generally enhanced regional and local access, and protected public health and environmental quality by making available clean water, wastewater treatment, and other public services. Impacts of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on communities within or near the park. Alternative 1 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate beneficial impacts and local long-term minor to moderate and adverse impacts on communities within or near the park. Alternative 1 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative long-term major beneficial impact on communities within or near the park.

4.3.15 Visitor Use and Visitor Experience (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. The park's forest would continue to be managed to maintain its native plants and natural landscapes, with an emphasis on restoring disturbed areas and eliminating non-native plants. Much of the park would retain a primitive character enjoyed by visitors from the river, from a variety of trails, and developed visitor facilities dispersed throughout the forest. Existing fragmenting features would remain. Impacts on visitor use and visitor experience would be negligible.

Cultural Resource Management Actions. Places in the park where visitors have opportunities to appreciate the human history story of life in the gorge would continue to be dispersed throughout the park at a few locations, such as Thurmond and Nuttallburg. Most stories would continue to be told through visitor center exhibits, ranger walks and talks, waysides along park roads and trails, and special programs. Cultural resource management actions that would expand visitor opportunities to appreciate the human history story of life in the gorge would be limited to those planned at the Nuttallburg Visitor Use Area.[1] The impact of cultural

Table 4.8

New River Gorge National River
Alternative 1 – New Visitor Use Facilities (funded)

Actions

- **Nuttallburg Visitor Use Area**
  - trails (with four trailheads)
  - interpretive media and programs
- **Burnwood Visitor Use Area**
  - Burnwood Environmental Education Center
  - Laing Loop Nature Trail Extension
  - New picnic pavilions
- **Visitor Use Enhancements to be made as part of the New River Parkway Project (by WVDOH in cooperation with the NPS):**
  - Hellems Beach River Access improvements
  - Mermaid Beach improvements
  - Fall Branch Access improvements
  - Long Bottom Overlook improvements
  - Richmond Bottom improvements
    - ✓ Richmond-Hamilton Farm
    - ✓ Cochran Farm
    - ✓ Vallandingham Farm

[1] *NEPA compliance activities for the Nuttallburg Visitor Use Area, the Burnwood Center, and New River Parkway have previously resulted in Findings of No Significant Impact or a Record of Decision (NPS 2008c; NPS 1988a; USDOT FHWA and WV DOH 2004).*

resource management actions and related interpretive programs on visitor use and visitor experience would be local long-term minor and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Visitors would continue to have the classic park experiences at Sandstone Falls, Sandstone Visitor Center, Grandview, Thurmond, Nuttallburg/Kaymoor, Endless Wall, Canyon Rim, and Fayette Station Road. Other important experiences that visitors "should have" in the park would remain largely as they are today, focused on existing attractions and visitor facilities. Existing visitor experience issues would continue related to crowding at some river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few opportunities for biking and equestrian use). Impacts on visitor use and visitor experience would be local long-term minor to moderate and adverse.

Improvements at the Nuttallburg Visitor Use Area would enhance opportunities for visitors to appreciate the human history story of life in the gorge.[1] Improvements associated with the future New River Parkway[1] would greatly enhance access, visitor facilities, and the experiences visitors have in the south end of the park. A new environmental education center at Burnwood[1] would facilitate operation and enhancement of the park's educational programs. Impacts on visitor use and visitor experience would be local long-term moderate and beneficial.

Hunting within the park would continue as it occurs today on most NPS-owned land, in the park in accordance with the hunting and fishing regulations of the state of West Virginia. During hunting season safety hazards would continue to exist in areas of the park where other visitor use is high and hunting is permitted. Impacts on visitor use and visitor experience would continue to be local long-term moderate and beneficial and local long-term minor and adverse.

Land Protection Actions. The park's boundary would continue as it is today. Land would not be acquired from willing sellers needed to provide parking for visitor access at the Nuttallburg Visitor Use Area, at the Cunard River Access, in the Dowdy Bluff hunting area, the upper Glade Creek area, and the Ambassador Buttress and Junkyard climbing areas. Impacts on visitor use and visitor experience would be local long-term moderate and adverse.

Partnership and Community Collaboration Actions. Collaboration with WVDOH would seek to accomplish improvements to New River Parkway (existing River Road), Thurmond Bridge, and Fayette Station Road (WV 82). Improvements would address visitor safety concerns, reduce congestion by enhancing roadway capacity, and/or provide transportation-related enhancements where visitors could better experience park resources. Impacts on visitor use and visitor experience would be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on visitor use and visitor experience are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). These generally include growth and development on private property and transportation system improvements. New development and new roads in the park vicinity would detract from the visitor experience and visitor enjoyment of the park by altering the natural setting, increasing the number of people in the area, increasing traffic, increasing ambient noise, and generally reducing the wildness of the area. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on visitor use and visitor experience. Alternative 1 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate beneficial impacts and local long-term moderate adverse impacts on visitor use and visitor experience. Alternative 1 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative long-term moderate adverse impact on visitor use and visitor experience. There would be no impairment of park resources or values related to visitor use and visitor experience.

4.3.16 Park Access (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Continuation of current natural resource management would continue to permit development of park roads, trails, and parking facilities in accordance with *NPS Management Policies* (NPS 2006a) and transportation-related director's orders as needed throughout the park to meet management needs or to provide for visitor use and enjoyment.

Public Use, Enjoyment, and Experience Management Actions. Growth in park visitation over the fifteen year GMP planning period would minimally increase traffic in and around the park during both peak and off-peak visitation periods. Most state roads and park roads used by visitors would experience local long-term negligible or minor adverse impacts. Only two roads would experience local long-term moderate adverse impacts during peak periods (see Table 4.9). None would experience beneficial impacts.

Improvements to Turkey Spur Road at Grandview would enhance access to visitor use facilities at the Turkey Spur Overlook. The impact on park access would be local long-term minor and beneficial.

A few new hiking and equestrian trails, and trails providing access to climbing areas, would be developed in the park (see Table 4.10). Trailhead parking would be

provided for all new trails. The impact of these trail additions (along with trailhead parking) on park access would be local long-term minor and beneficial.

Enhancements to parking at the Stone Cliff river access would occur in conjunction with relocation of existing day-use and campground facilities at Stone Cliff to a site above the New River floodplain. The impact of these actions on access to the river would be local long-term moderate and beneficial.

TABLE 4.9 Alternative 1 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
South End of the Park			
Sandstone Falls and Visitor Attractions on River Left Future New River Parkway (under development by WVDOH)	▪ paved two-lane road with shoulders ▪ lane width adequate for safe two-way travel ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (included in Alternative 1)	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
Various Visitor Facilities on River Right below Hinton WV 20 (I-64 to Hinton)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (most non-truck traffic on WV 20 will be diverted to New River Parkway) (included in Alternative 1)	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
Sandstone Falls Visitor Center WV 7 (from I-64)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
Middle of the Park			
Grandview WV 9 (primarily from I-64)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
McCreery, Lower Glade Creek Area, Terry Beach, Army Camp WV 41 (primarily from the west)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies (pedestrian safety deficiencies exist in vicinity of McCreery river access)	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact

TABLE 4.9 Alternative 1 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
Lower Glade Creek Area Glade Creek Road (Park Road) (state scenic backway)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Thayer WV 25 (access primarily from the north, beginning at Stone Cliff New River Bridge)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
North End of the Park			
Thurmond, Dun Glen, and Stone Cliff WV 25 (from Glen Jean)	▪ paved two-lane road ▪ roadway lane width not adequate for safe two-way travel due to nine one-lane bridges (minimal to no shoulders) ▪ tight curves ▪ short stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies for small vehicles ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Thurmond Town Site various state roads	▪ one-lane Thurmond Bridge needs replacement (due to structural, capacity and safety issues) ▪ numerous one-lane paved roads ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight turns ▪ short stopping distances	▪ very poor capacity ▪ numerous roadway capacity and safety deficiencies ▪ future Thurmond Bridge replacement would address bridge deficiencies and likely include visitor parking (as mitigation) near the Thurmond Depot Visitor Center	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
Cunard Cunard Access Road (park road)	▪ one-lane gravel road ▪ constrained two-way travel (some pull-offs; minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-minor adverse impact
Nuttallburg Visitor Use Area Keeney Creek Road (WV 85/2)	▪ one-lane paved road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of new trailheads at the Nuttallburg Visitor Use Area (included in Alternative 1)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Canyon Rim Visitor Center and Burnwood Complex US 19	▪ four-lane divided highway (with shoulders) ▪ safe maximum gradients ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies in vicinity	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Fayette Station Fayette Station Road (WV 82)	▪ paved two-lane road ▪ roadway lane width not adequate for safe two-way travel (some pull-offs; minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor existing, especially on peak visitation days ▪ access constrained due to road geometry for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact

At Thurmond visitors would continue to be encouraged to park in the lot at Southside Junction and walk to Thurmond via the Thurmond Bridge. Additional parking would likely be developed in the future in conjunction with the planned WVDOH project to replace the Thurmond Bridge.

Partnership and Community Collaboration Actions. The NPS would continue to work with WVDOH on several projects (see Table 4.9) and with the city of Hinton to secure safe and legal access to the New River waterfront within the city. The NPS would also continue to work with the CSX Corporation and other property owners to acquire wherever possible legal access to popular visitor use sites. Priorities would be to secure legal crossings of CSX rights-of-way where visitors frequently illegally cross tracks at Hinton, Southside Junction, Piney Creek, Dowdy Creek, Nuttallburg, Keeney Creek, Kaymoor, and Fayette Station.

Assuming these collaborative efforts would be effective, the impact on park access would be local long-term major and beneficial.

Table 4.10

New River Gorge National River
Alternative 1 – Access Changes Needed to Achieve Desired Conditions in Visitor Use Areas

Actions

- **Internal Park Road System**
  - Turkey Spur Road improvements
- **State Road System** (NPS and WVDOH collaboration to design and implement)
  - New River Parkway
  - Thurmond Bridge Replacement
  - Fayette Station Road improvements (WV 82)
  - wayfinding signage along state roads
- **River Access Sites**
  - parking expansions at existing river access sites
    - ✓ Stone Cliff
- **Parking**
  - at Thurmond (parking to be added by WVDOH in conjunction with Thurmond Bridge Replacement)
- **New Trails (with trailheads)**
  - new trails
    - ✓ Nuttallburg Visitor Use Area trails
    - ✓ Bucklick Branch Equestrian Loop Trail
    - ✓ Laing Loop Nature Trail (no new trailhead)
    - ✓ climbing access trails (Endless Wall, Sunshine Buttress, Bubba City, and Junkyard areas)

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on park access are identified in Section 4.2.4 (see Table 4.4). Growth and development in the three counties would generate additional traffic on roads providing access to the park, resulting in long-term minor to moderate adverse impacts on park access. Planned transportation system improvements would provide additional capacity to efficiently and safely accommodate much of the traffic generated by new development, resulting in long-term minor to moderate beneficial impacts on park access. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term minor to moderate beneficial impact and a cumulative long-term minor to moderate adverse impact on park access. Alternative 1 would contribute negligibly to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term minor to moderate beneficial impacts and local long-term minor to moderate adverse impacts on park access. Alternative 1 would contribute negligibly to the total cumulative long-term minor to moderate beneficial impacts and to the cumulative long-term minor to moderate adverse impacts on park access.

4.3.17 Park Operations (Alternative 1)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. In Alternative 1 the level of natural resource management activities would generally be maintained, including actions to protect endangered species, monitor water quality, protect geology and soil resources, and maintain other biological resources. Currently, park staffing is

not adequate to meet minimum needs for natural resource management. The park would continue its program to manage existing scenic views and resources, without providing for any additions or opening of newly acquired sites for scenic purposes. NPS would continue to have difficulty adequately protecting natural and scenic resources due to limitations in the numbers of park staff. The impact on park operations would local long-term moderate and adverse.

Cultural Resource Management Actions. As recommended in the regional *Collections Management Plan* (NPS 2004a) some less frequently used items in the park's collection would be transferred to a new regional storage facility. NPS would also build a research room that meets NPS standards at the new Burnwood Operations Facility for storage of the core unexhibited collection. This would improve management of the collections, resulting in a local long-term major beneficial impact on park operations.

In Alternative 1 NPS would continue to maintain the exteriors of structures (about 100 historic buildings and several thousand coke ovens, industrial ruins and foundations) that are listed or eligible for listing on the National Register of Historic Places. Currently these structures are maintained using line item or annual funds; part of the park's staffing deficit is in permanent and seasonal staff needed to maintain these structures. In addition, the park does not have uses for many of the buildings. In Alternative 1 no partnerships with the private sector for use and maintenance of these structures would be sought. NPS would continue to house its collections and archives in the Glen Jean Bank, a structure within the 25-year flood plain, placing these items at risk. NPS would continue managing its history, ethnography, and collections programs as collateral duties, which means that little improvement in these areas can be expected. Overall, park staffing would continue to be inadequate to meet minimum needs for cultural resource management. NPS would continue to have difficulty adequately protecting cultural resources due to limitations in the numbers of park staff. Overall the impact on park operations would be local long-term major and adverse.

Public Use, Enjoyment, and Experience Management Actions. In Alternative 1 the existing level of programming, activities, enforcement and facilities would be maintained and used, with limited construction of new facilities and addition of a few new programs, especially related to children, as funds allow. Several significant facilities are included in Alternative 1, such as completion of the New River Parkway within the park, new operational and educational facilities in the northern part of the park, improved parking and access at Turkey Spur in Grandview, and visitor use facilities at Nuttallburg. The park would not provide additional hiking, biking or equestrian trails, additional river access or other facilities requested by the public as a part of the scoping for this plan. Overall new facilities would support efficient park management, resulting in a local long-term major beneficial impact on park operations.

Park Operations Actions. The park is currently functioning under a staffing deficit, and would require an additional 46 full time equivalents to fulfill enforcement, resource management, interpretation, maintenance and administrative needs. These positions are included in the park's approved organizational chart, but cannot currently be filled at existing funding levels. (The park is currently undergoing a Core Operations Plan; it is hoped that by finding efficiencies in operations this deficit in needed park staff can be reduced.) Park staffing would continue to decline as employment costs rise, while the park budget stays flat or even declines. It would become increasingly difficult to meet the park mission. There would be no new sources of funds, such as from friends groups, donations, or volunteers beyond what currently exists. Overall, the impact of these actions on park operations would be local long-term moderate and adverse.

Land Protection Actions. NPS continues to acquire land within the authorized park boundary usually without funding to provide for adequate natural and cultural resource management and law enforcement. Without adequate park zoning, park operations would continue to be hampered because there is no clear direction for the management of land currently owned and recently acquired. In addition, the current boundary is insufficient and does not provide for adequate parking for popular climbing, hunting, and camping areas within the park; this creates difficulties for neighbors who are discommoded by park user parking and concerns for law enforcement staff. The impact of continued land protection actions on park operations would be local long-term moderate and adverse.

Partnership and Community Collaboration Actions. The current level of partnerships and cooperation with local governments and private organizations would continue. However, there is an ever-increasing demand for park staff to address a variety of partnership and community relations issues which are difficult to achieve with existing staffing levels. Currently, opportunities to enhance park funding through partnerships, grants, and other sources are limited by a lack of staff to pursue them. Together, these factors and the others discussed above create a situation in which NPS is not relevant to its closest neighbors. The impacts of continuing with current partnership actions on park operations would be local long-term moderate and adverse.

- **Cumulative Impacts**

Other past, present and reasonably foreseeable actions that have had or would have impacts on park operations and facilities include the completion of the New River Parkway, continued minimum maintenance of state roads to and within the park, other transportation improvements, and continued private ownership of lands within the park, particularly in communities. The building of the New River Parkway would mean that law enforcement patrol and maintenance of the River Road area would be greatly improved; other transportation improvements might make remote areas of the park more accessible. The minimum maintenance of state roads such as

McCreery Road would continue to complicate park management efforts. Private ownership of land within the park boundaries, particularly in communities, also creates law enforcement issues and conflicts between private owners and visitors. Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term minor adverse impact to park operations. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 1 would result in local long-term major beneficial impacts and local long-term moderate to major adverse impacts on park operations. Alternative 1 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the cumulative long-term minor adverse impact on park operations.

4.3.18 Unavoidable Adverse Impacts (Alternative 1)

Unavoidable adverse impacts are major adverse impacts that cannot be fully mitigated or avoided. Alternative 1 would result in local long-term major adverse impacts on park operations.

4.3.19 Irreversible and Irretrievable Commitments of Resources (Alternative 1)

An irreversible commitment of resources is one that cannot be reclaimed, restored, or otherwise returned to its condition prior to disturbance. An irretrievable commitment of resources is a loss of something that once gone, cannot be replaced.

Proposed management actions would generally contribute to resource protection and preservation and would be expected to minimize the occurrence of irreversible or irretrievable impacts. Nevertheless some irretrievable impacts would occur:

- construction projects and park operations would use limited amounts of nonrenewable resources, including materials and energy; once these resources are committed they would be irretrievable
- negligible amounts of soil would be permanently lost as a result of soil erosion and sedimentation from areas (approximately 6 acres) disturbed by cultural resource management actions, development of new visitor use facilities, and restoration actions
- potential exists at cultural resource sites undergoing rehabilitation for an irretrievable commitment of resources as a result of any loss of undiscovered below ground resources

Surveys, avoidance through design, documentation, and other mitigation would occur before any restoration or rehabilitation begins, thereby minimizing irretrievable impacts to cultural resources.

4.3.20 Relationship between Short-Term Uses of the Environment and Long-Term Productivity (Alternative 1)

In Alternative 1 most of the park would continue to be protected in a largely natural state. The NPS would continue to manage the park to maintain ecological processes and native and biological communities, and to provide for appropriate recreational activities consistent with the preservation of natural and cultural resources. Previously disturbed areas would be restored to return these areas to productivity, as funding permits. Any actions the NPS takes in the park would be taken with consideration to ensure that uses do not adversely affect the productivity of biotic communities.

4.4 Environmental Consequences of Alternative 2

4.4.1 Physiography, Geology, and Soils (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to protect the park's physiography, geology, and soil resources (as in Alternative 1) by:

- generally allowing physiography, geology, and soil resources that are disturbed by natural phenomena – such as landslides – to recover naturally
- restoring/reclaiming physiography, geology, and soil resources altered by human activity – such as mining (in cooperation with WV DEP)
- protecting park resources from potential impacts associated with natural gas/oil production or mining activities that are permitted by valid oil, gas, and mineral rights (and that may be conducted within the park in compliance with appropriate state permits and Section 9b Regulations pursuant to the Surface Mining Control and Reclamation Act) (in cooperation with WVDEP)
- reducing soil erosion and sedimentation by restoring disturbed areas (such as areas disturbed by ATVs), as funding permits

In addition, in Alternative 2 management actions affecting physiography, geology, and soils would focus on the following:

- managing approximately two-thirds (68.5%) of the park as backcountry and one-tenth (7.7%) of the park as river corridor, with implementation of related management prescriptions that would maintain natural geologic processes and features to persist largely unaltered by further human-induced impacts
- managing the remainder of the park (23.8%) as frontcountry, historic resource, and park development zones, with implementation of related

management prescriptions that would allow natural geologic processes and features to persist with minimal human-induced impacts

- reducing threats to geologic and soil resources by identifying areas prone to landslides and locating visitor and park operations facilities outside of areas where construction would increase the potential for mass movement

Impacts of natural resource management actions on physiography, geology, and soil resources would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact soil resources. Conceptual planning suggests that management actions would likely disturb approximately 125 acres in the vicinity of cultural resource sites[1]. Most disturbances would be associated with restoration of cultural landscapes involving restoring or rehabilitating farm fields at early settlement sites, as well as with stabilization and vegetation removal at discovery sites (30 to 35 sites) (see Table 4.11). During the treatment period erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Following the treatment period sites would be planted with native species or appropriately revegetated where cultural landscapes are restored. Impacts on soil resources would be local short-term minor to moderate and adverse.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact physiography, geology, and soil resources. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 60 acres.[2] Approximately 65 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. During the construction period erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Impacts on soil resources would be local short-term minor to moderate and adverse.

Following construction approximately 25 acres would be replanted with native species and 30 acres would be stabilized through placement of crushed stone or other surface treatment for roads, parking facilities, and some trails. Minimal areas of existing undisturbed soils would be permanently developed, primarily including the sites of small visitor facilities such as vault toilets and changing stations. Impacts on soil resources would be local long-term minor and adverse.

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[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*

[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

Visitor use at existing plus new or improved facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails (including approximately 5 acres within the tread of reestablished or new trails), leading to increased potential for soil erosion. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on soils would be local long-term minor and adverse.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 Physiography, Geology and Soils (Alternative 1) above). In Alternative 2, an additional 190 acres of restored, rehabilitated, or new fields at six early settlement farms would be leased for agriculture. Impacts on soils would be negligible to local long-term minor and adverse.

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with significant physiographic or geologic features. The park's new program of working with owners of private land within the park boundary would seek to enhance stewardship of lands with significant physiographic or geologic features that are fundamental or otherwise important to the park. Impacts of land protection actions on physiographic and geologic resources would be local long-term moderate and beneficial.

Partnership and Community Collaboration Actions. NPS would continue to work collaboratively with WV DEP to facilitate reclamation of areas disturbed by mining and to protect park resources from the potential impacts of mineral resource extraction on lands adjoining or near the park (as in Alternative 1). Impacts on physiography, geology, and soil resources would be local long-term minor and beneficial.

NPS would provide ongoing technical assistance to communities within the park and others engaged in resource management activities beyond the park boundary that have the potential to positively impact the park's geologic and soil resources (common to Alternatives 2 to 5). Impacts on physiography, geology, and soil resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on physiography, geology, and soils are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the

same as those described for Alternative 1 (see Section 4.3.1 Physiography, Geology, and Soils (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on physiography, geology, and soil resources. Alternative 2 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term moderate to major beneficial impacts, local short-term minor to moderate adverse impacts, and local long-term minor adverse impacts on physiography, geology, and soil resources. Alternative 2 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on physiography, geology, and soil resources. There would be no impairment of park resources or values related to physiography, geology, and soil resources.

4.4.2 Floodplains[1] (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would seek to protect, preserve and restore the natural resources and functions of floodplains (common to Alternatives 2 to 5) by:

- maintaining natural flows and hydropatterns
- restoring natural drainage patterns on all disturbed lands (in cooperation with WV DEP when part of mined land reclamation projects)
- maintaining rainfall-runoff dynamics and sediment delivery and transport processes at natural levels in backcountry, frontcountry, and river corridor zones and at somewhat altered levels in cultural landscape and park development zones
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries
- maintaining natural floodplain vegetation and – based on further feasibility study in coordination with the U.S. Army Corps of Engineers – promoting maintenance of natural floodplain vegetation through controlled releases from Bluestone Dam that provide periodic maximum floods
- removing debris from floodplains following flooding events
- preventing placement of additional obstructions in the New River and, wherever possible, removing structures in the New River that are no longer in use – such as abandoned bridge piers

[1] *Floodplains with a recurrence interval of 100 years*

Impacts on floodplains would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. In the future visitor use facilities within the floodplain would be limited to facilities that are dependent upon locations in proximity to water and for which non-floodplain sites would not be a practicable alternative. Existing facilities to remain within the floodplain would generally include river accesses, picnic facilities, trails, and river rest stops. Improvements to existing facilities and new facilities in the floodplain would include addition expansion of the Sandstone Falls boardwalk, and addition of disabled boater access at some river accesses.

Construction of improvements in the floodplain at existing and new visitor use sites would generally occur in areas that have experienced prior disturbance and would involve minimal placement of impervious surfaces within the floodplain. Mitigation measures would minimize potential for flooding or for other adverse impacts on floodplain values associated with these improvements.

Collectively these new visitor use facilities would minimally affect natural floodplain values and minimally increase the use of the floodplain, resulting in a local long-term minor and adverse impact on floodplains.

Existing campgrounds in the floodplain at Hellems Beach, Stone Cliff, and Dun Glen would be eliminated and natural floodplain vegetation would be restored (common to Alternatives 2 to 5). Impacts on floodplains would be local long-term minor and beneficial.

Park Operations Actions. Future studies would include development of floodplain maps for lower reaches of the New River main stem and tributaries, studies of tributary stream flood characteristics, and determination of natural flow regimes for the New River (common to Alternatives 2 to 5). Findings would provide information needed to protect and/or restore floodplain values, reduce use of the floodplain, and eliminate flood risks to human health and property. Impacts on floodplains would be local long-term minor and beneficial.

Impacts of maintaining the existing park headquarters and operations facilities at Glen Jean within the 100-year floodplain would continue to be local long-term minor and adverse (common to Alternatives 1 to 5) (see Section 4.3.2 Floodplains (Alternative 1) above).

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties encompassing floodplains with sensitive riparian areas and that provide access to the river, and/or that include sites heavily used for river rest stops or backcountry camping. The park's new program of working with owners of private land within the park boundary would seek to enhance stewardship of lands with floodplain resources that are fundamental or otherwise important to the park.

Impacts of land protection actions on floodplains would be local long-term moderate and beneficial.

Partnership and Community Collaboration Actions. The NPS would continue to seek to prevent actions by others that would place new structures within the New River channel that would obstruct flood flows (as in Alternative 1). In the future, the NPS would also collaborate with transportation planning, permitting, and resource management agencies to reduce existing obstructions to flood flows within the river channel that no longer provide functional benefits to others (common to Alternatives 2 to 5). If coordination leads to a reduction in the number of piers in the river, the impacts on floodplains would be local long-term minor and beneficial.

NPS would provide technical assistance to local governments and others with maintenance of natural rainfall-runoff dynamics in watersheds draining into the park. This would focus on use of best management practices to control stormwater runoff from developed and undeveloped land (common to Alternatives 2 to 5). If technical assistance enables communities to better maintain natural runoff rates, the impacts on floodplains would be local long-term moderate and beneficial.

Coordination with the US Army Corps of Engineers would evaluate the feasibility and desirability of permitting periodic maximum floods to help maintain natural floodplain vegetation and aquatic habitat (common to Alternatives 2 to 5). If periodic maximum floods could be restored, the impacts on aquatic habitat would likely be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on floodplains are identified in Section 4.2.4 (see Table 4.4). The impacts of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.2 Floodplains (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on floodplains. Alternative 2 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts and local long-term minor adverse impacts on floodplains. Alternative 2 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on floodplains. There would be no impairment of park resources or values related to floodplains.

4.4.3 Water Quality (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain water quality in the New River and its tributaries in its natural condition free of pollutants generated by human activity (as in Alternative 1) by:

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions

In addition, in Alternative 2 management actions affecting water quality would focus on the following:

- maintaining a nearly continuous strip of natural riparian vegetation along the river where only low impact recreation would occur in locations and at levels that do not negatively impact the river (common to Alternatives 2 to 5)
- managing approximately two-thirds (68.5%) of the park as backcountry, with implementation of related management prescriptions that would generally eliminate further forest fragmentation and the potential for human-induced impacts to water quality
- managing approximately one-quarter (22.3%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce further forest fragmentation and the potential for human-induced impacts to water quality

Collectively these actions would protect natural vegetation and reduce soil disturbance and subsequent erosion and sedimentation potentially associated with forest disturbances and visitor use. Impacts on water quality would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact water quality. Conceptual planning suggests that treatment actions at cultural resource sites would likely disturb approximately 125 acres of previously disturbed soils (see Table 4.11).[1] During the treatment period use of best management practices (BMPs) would mitigate potential water quality impacts associated with sediment-laden stormwater discharges from disturbed areas in accordance with requirements of the

[1] *In addition to the approximate three acres disturbed for cultural resource treatments in Alternative 1*

WV NPDES Stormwater Program. Following the treatment period sites would be planted with native species or appropriately revegetated where cultural landscapes are restored. When restoring cultural landscapes at early settlement sites adjoining the New River, a 50- to 100-foot buffer of native riparian habitat would be maintained. Impacts on water quality would be local short-term minor to moderate and adverse.

Permanent removal of impervious surfaces associated with modern structures at two early settlement farms would enhance on-site infiltration of stormwater and reduce site runoff (as in Alternative 1). Impacts on water quality would be negligible.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact water quality. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 60 acres.[1] Approximately 65 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. During the construction period use of best management practices (BMPs) would mitigate potential water quality impacts associated with sediment-laden stormwater discharges from disturbed areas, in accordance with requirements of the WV NPDES Stormwater Program. Impacts on water quality would be local short-term minor to moderate and adverse.

Following construction approximately 25 acres would be replanted with native species and 30 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Over the long-term unpaved roads and parking areas would be subject to compaction and would have the potential to generate increased runoff and to convey pollutants from parking areas and roads to streams and the river. Permanent stormwater management measures would be used in accordance with requirements of the WV NPDES Stormwater Program to reduce pollutants in stormwater discharged from developed sites. Impacts on water quality would be local long-term minor and adverse.

Visitor use at existing plus new or improved facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails (including approximately 5 acres within the tread of reestablished trails), leading to increased potential for erosion and subsequent sedimentation in streams and the river. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on water quality would be local long-term minor and adverse.

[1] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

Park Operations Actions. Expanded water quality monitoring would provide information needed to better address management concerns (common to Alternatives 2 to 5). Sampling would occur in the New River and all of its tributaries in the park. As funding permits, the NPS would also increase the frequency and numbers of samples taken at each monitoring site – particularly for fecal coliform - as well as increase monitoring during high flows. These data would document existing conditions, help identify probable sources of contamination, and assist with determining appropriate management actions. Impacts on water quality would be local long-term major and beneficial.

Adequate sewage treatment and disposal would be provided for all public use and administrative facilities:

- In all management zones, safe and clean restroom facilities would be available where visitor use would be concentrated, including visitor contact facilities, educational facilities, major and minor river accesses, developed day-use areas, popular river rest stops, many trailheads, developed and primitive campgrounds, and designated backcountry campsite groups. Facilities would include a combination of conventional restrooms, comfort stations, and vault toilets, with some use of portable toilets (common to Alternatives 2 to 5). Facilities in remote areas would likely be prefabricated waterless units with solar-powered waste evaporation and reduction capabilities; the stable end product would be dried solids that would be removed annually, pretreated, and disposed in a municipal wastewater treatment facility. Impacts on water quality would be local long-term major and beneficial impact.
- At Thurmond, wastewater collection and treatment would be provided for existing visitor facilities and currently occupied houses (as in Alternative 1). Impacts on water quality would be local long-term minor and beneficial.
- Where practicable, the NPS would make excess capacity in park wastewater treatment facilities available for treatment of wastewater flows from private lands in adjoining neighborhoods (common to Alternatives 2 to 5). This would likely reduce contamination of surface waters from malfunctioning on-site wastewater disposal systems in areas adjoining the park. Impacts on water quality would be local long-term minor and beneficial.

The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 Physiography, Geology and Soils (Alternative 1) above). In Alternative 2, an additional 190 acres of restored, rehabilitated, or new fields at six early settlement farms would be leased for agriculture. Impacts on water quality would be local long-term minor and adverse.

Land Protection Actions. The park's new program of working with owners of private land within the park boundary would seek to provide public education and technical assistance regarding the importance of maintaining on-site wastewater disposal systems (OSDSs) (common to Alternatives 2 to 5). It would target landowners along the New River and its tributaries where fecal coliform counts are high and the suspected source is malfunctioning OSDSs. Impacts on water quality would be local long-term moderate and beneficial.

In addition, future collaboration with owners of private lands along the river that are heavily used as river rest stops – particularly where they are owned by commercial outfitters – would seek to provide and maintain adequate sanitation facilities for visitors (common to Alternatives 2 to 5). Where this collaboration is successful, impacts on water quality would be local long-term moderate and beneficial.

Partnership and Community Collaboration Actions. Expanded technical assistance to agencies, organizations, and communities involved in water quality planning and management in the park vicinity would generally assist the regional effort to improve water quality in the New River and its tributaries (common to Alternatives 2 to 5). Impacts on water quality would be local long-term moderate and beneficial.

NPS would provide technical assistance to local governments and others with maintenance of natural rainfall-runoff dynamics in watersheds draining into the park. This would focus on use of best management practices to control stormwater runoff from developed and undeveloped land (common to Alternatives 2 to 5). If technical assistance enables communities to better maintain natural runoff rates, the impacts on floodplains would be local long-term moderate and beneficial.

NPS would seek to protect the upper reaches of high quality streams that extend beyond the boundary of the park (as in Alternative 1) (see Section 4.3.3 Water Quality (Alternative 1) above). Efforts would be expanded to focus on working proactively with landowners – and their professional advisors – to provide information about the importance of high quality streams on their property, the public interest in protecting those resources, conservation options for landowners, and sustainable design for new development on properties with high quality streams (common to Alternatives 2 to 5). Impacts on water quality would be local long-term minor to moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on water quality are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.3 Water Quality (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a

cumulative long-term moderate adverse impact on water quality. Alternative 2 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts, local short-term minor to moderate adverse impacts, and local long-term minor adverse impacts on water quality. Alternative 2 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on water quality. There would be no impairment of park resources or values related to water quality.

4.4.4 Vegetation (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native plants and natural landscapes (as in Alternative 1) (exclusive of wildland fire management) by:

- generally allowing natural landscapes that are disturbed by natural phenomena – such as landslides, floods, and fire – to recover naturally
- restoring natural landscapes altered by human activity, such as logging, mining, agriculture, transportation, utilities, and exclusion of natural fire
- preserving and restoring native plant populations and the communities in which they occur (particularly rare or significant plant communities)
- aggressively treating invasive exotic plant and insect pest species

In addition, in Alternative 2 management actions affecting vegetation would focus on the following:

- managing approximately two-thirds (68.5%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated impacts to diversity and vertical understory structure
- managing approximately one-quarter (22.3%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure
- maintaining a nearly continuous strip of natural riparian vegetation along the river where only low impact recreation would occur in locations and at levels that do not negatively impact riparian communities, particularly cobble and flatrock communities (common to Alternatives 2 to 5)

- removing non-water-dependent uses from the floodplain and restoring native floodplain vegetation (common to Alternatives 2 to 5)
- managing wildland fire to diminish the risk and consequences of severe wildland fires and, to the extent possible, to restore and protect the natural biological diversity and natural disturbance regime of the park (common to Alternatives 2 to 5)
- using planned ignitions to promote ecosystem health and native vegetation diversity in fire-dependent forest communities, such as rimrock pine communities and xeric oak-hickory forests (common to Alternatives 2 to 5)

Impacts of natural resource management actions on vegetation would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact native plants and plant communities. Conceptual planning suggests that cultural resource management actions would affect approximately 125 acres or previously disturbed land in the vicinity of cultural resource sites[1].

Rehabilitation of buildings and restoration of cultural landscapes would require disturbance to approximately 115 acres of previously disturbed land. Affected vegetation would generally include a mix of ornamental trees and shrubs, non-native plants, old field successional species, and forested land characterized by mixed-age stands of tulip poplar, maple, oak, and ash. Following the treatment period sites would be appropriately revegetated where cultural landscapes are restored. Where restored cultural landscapes adjoin the New River, a 50- to 100-foot buffer of native riparian habitat would be maintained. Impacts on vegetation would be local long-term minor to moderate and adverse.

Disturbance would also occur in conjunction with stabilization and protection at approximately 10 discovery sites, along with development of visitor use improvements and installation of interpretative media. The typical discovery site would encompass an area of ruins in the park's mixed mesophytic forest – approximately one acre in size or less – overgrown by a mix of variable-age trees, shrubs, and grasses, with many sites dominated by kudzu and other non-native plants. Treatment would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining resources. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that fragmentation would be minimized or would not occur. Cleared areas would be revegetated with native grasses. Impacts on vegetation would be local long-term minor and adverse.

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact vegetation. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 60 acres (see Table 4.13).[1] Approximately 65 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. Affected vegetation would primarily include grasses, weeds, successional old field species, and non-native plants. Future site planning and construction of new facilities would seek to minimize disturbance to forested land, particularly where existing unmaintained trails are improved to provide official park trails. Following construction approximately 25 acres would be replanted with native species and 30 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Approximately 5 acres would be within the tread of reestablished or new trails. Impacts on vegetation would be local long-term minor to moderate and adverse.

Visitor use throughout the park would have the potential to impact native plants and plant communities – particularly sensitive, rare, or significant vegetation communities. Management actions would protect sensitive, rare, or significant vegetation communities from visitor use impacts, as needed, generally including (common to Alternatives 2 to 5):

- in riparian areas (especially cobble and flatrock communities) – eliminate fires and overnight camping in all riparian areas; designate day-use river reststops downstream of Cunard
- on river bars – eliminate fires on most bars and close to visitor use bars with sensitive resources that are impacted by camping and day-use
- in clifftop communities – provide designated routes to climbing areas and limit access seasonally to critical cliff natural areas
- in flatrock communities – control visitor access; extend or add boardwalks to protect areas where visitor use occurs, such as at Sandstone Falls

Impacts on vegetation would be local long-term moderate and beneficial.

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with sensitive riparian areas and rare vegetation communities. The park's new program of working with owners of private land within the park boundary would seek to enhance stewardship of lands with significant vegetation resources that are fundamental or otherwise important to the park. Impacts of land protection actions on vegetation resources would be local long-term moderate and beneficial.

[1] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

Partnership and Community Collaboration Actions. A community-based approach to wildland fire issues would involve close collaboration and cooperation between the NPS, local volunteer fire departments, and the WV Division of Forestry that have a vested interest in wildland fire issues, particularly where wildland fires have the potential to damage communities or threaten the safety of private residents remaining in the park. If cooperation enables future use of prescribed fire as a management action to safely promote native vegetation diversity in fire-dependent communities, the impact on vegetation would be local long-term moderate and beneficial.

NPS would seek to protect significant unfragmented forest blocks on privately-owned lands in and around the gorge that are outside but near the park boundary (as in Alternative 1) (see Section 4.3.4 Vegetation (Alternative 1) above). Efforts would be expanded to focus on working proactively with landowners – and their professional advisors – to provide information about the importance of forest resources on their property, the public interest in protecting those resources, conservation options for landowners, and sustainable design for new development on properties with significant forest resources (common to Alternatives 2 to 5). Impacts on vegetation would be local long-term minor to major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on vegetation are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.4 Vegetation (Alternative 1) above). Alternative 2 in conjunction with the impacts of other past, present, and reasonably foreseeable actions would result in a cumulative long-term moderate adverse impact on vegetation. Alternative 2 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term moderate to major beneficial impacts and local long-term minor to moderate adverse impacts on vegetation. Alternative 2 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on vegetation. There would be no impairment of park resources or values related to vegetation.

4.4.5 Aquatic Wildlife (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain and restore natural stream ecosystems with

hydrologic features supporting a full range of natural aquatic organisms by (as in Alternative 1):

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions
- removing debris from floodplains following flooding events

In addition, in Alternative 2 management actions affecting aquatic habitats and dependent wildlife would focus on the following (common to Alternatives 2 to 5):

- maintaining natural flows and hydropatterns
- restoring natural drainage patterns on all disturbed lands (in cooperation with WV DEP when part of mined land reclamation projects)
- maintaining rainfall-runoff dynamics and sediment delivery and transport processes at natural levels in backcountry, frontcountry, and river corridor zones and at somewhat altered levels in cultural landscape and park development zones
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- maintaining natural floodplain vegetation and – based on further feasibility study in coordination with the U.S. Army Corps of Engineers – promoting maintenance of natural floodplain vegetation through controlled releases from Bluestone Dam that provide periodic maximum floods
- protecting upland wetlands and their processes
- eliminating introduction of non-native species to aquatic ecosystems
- eliminating actions to supplement or maintain selective non-native species in aquatic ecosystems (as appropriate, based on further study of non-native species impacts)
- allowing select introduced species that may alter some process and interactions (e.g. continue WV State black fly treatments)

Impacts on aquatic habitat and dependent wildlife would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would seek to avoid or minimize direct and indirect impacts on aquatic habitat and

dependent wildlife associated with improvements to visitor use facilities or addition of new visitor use facilities and new related visitor use.

Potential visitor use impacts on aquatic habitat and dependent wildlife would continue to occur throughout the park where visitors have uncontrolled access to the New River, tributary streams, and special aquatic habitat and dependent wildlife. Indirect impacts would include those resulting from trampling of riparian vegetation, subsequent soil exposure, soil erosion, and sedimentation. Direct impacts would occur where visitors cross streams while hiking, walk in streams or the river while fishing, or disturb the river bottom while swimming, launching boats, or stopping at river rest stops. Future additional impacts associated with development of new park trails (approximately 25 miles) would be mitigated by trail planning and design that minimizes the number of tributary stream crossings. Where crossings could not be avoided, footbridges would be used to avoid hiker impacts, as funding permits. In the future sensitive aquatic habitat and dependent wildlife at and in the vicinity of popular backcountry river rest stops would be closed to day-use. At river launches visitor access to the river would be restricted to the minimum area possible and riparian areas adjoining launch sites would be closed. Educational efforts would help deter visitor impacts through signage, informational materials, and interpretive programs that explain ecological values and sensitivity to disturbance of riparian areas, aquatic habitats, and dependent wildlife. Impacts on aquatic habitat and dependent wildlife would be local long-term minor and adverse.

Park Operations Actions. Future studies would expand knowledge and understanding of the range of aquatic habitat and dependent wildlife present in the park (common to Alternatives 2 to 5). These studies would identify, locate, and describe special aquatic habitat and dependent wildlife, and provide the basis for development of best management practices and individual protection plans. They would also include an assessment of the impact of non-native trout stocking on native stream ecosystems. Impacts on aquatic habitat and dependent wildlife would be local long-term major and beneficial.

Adequate sewage treatment and disposal at all public use and administrative facilities would reduce human-induced nutrient loading and associated impacts on aquatic habitat and dependent wildlife (see Section 4.4.3 Water Quality (Alternative 2) above) (common to Alternatives 2 to 5). Impacts on aquatic habitat and dependent wildlife would be local long-term major and beneficial.

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with significant aquatic habitat and dependent wildlife (common to Alternatives 2 to 5). Impacts of land protection actions on aquatic habitat and dependent wildlife would be local long-term moderate and beneficial.

The park's new private land stewardship program would seek to enhance stewardship of lands with significant aquatic habitat and dependent wildlife that are fundamental or otherwise important to the park (common to Alternatives 2 to 5). It would emphasize collaboration with owners of private lands along the river that are heavily used as river rest stops – particularly where they are owned by commercial outfitters. Education would focus on describing the sensitivity of aquatic habitat and dependent wildlife to visitor use impacts. Technical assistance would help identify where sensitive aquatic habitat and dependent wildlife occur and describe best management practices to avoid, minimize, and/or mitigate visitor use impacts on those habitats. Where these actions enable landowners to enhance stewardship of riparian areas and river rest stops, impacts on aquatic habitat and dependent wildlife would be local long-term minor and beneficial.

Partnership and Community Collaboration Actions. Future collaboration with the CSX Corporation, utility companies, and WVDOH would address use of pesticides and herbicides to maintain rights-of-way within the park where such use could be conveyed in stormwater runoff to surface waters and damage aquatic habitat and dependent wildlife (common to Alternatives 2 to 5). Collaboration would address appropriate treatments, where treatment should be administered, when it should be applied, and what strategies should be integrated for immediate and long-term results. If collaboration supports more effective integrated pest management, the impacts on aquatic habitat and dependent wildlife would be local long-term minor and beneficial.

NPS would provide technical assistance to local governments and others with maintenance of natural rainfall-runoff dynamics in watersheds draining into the park. Assistance would focus on use of best management practices to control stormwater runoff from developed and undeveloped land (common to Alternatives 2 to 5). If technical assistance enables communities to better maintain natural runoff rates the impacts on aquatic habitat and dependent wildlife would be local long-term moderate and beneficial.

Coordination with the US Army Corps of Engineers would evaluate the feasibility and desirability of permitting periodic maximum floods to help maintain natural floodplain vegetation and aquatic habitat and dependent wildlife (common to Alternatives 2 to 5). If periodic maximum floods could be restored the impacts on aquatic habitat and dependent wildlife would likely be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on aquatic habitat and dependent wildlife are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.5 Aquatic Wildlife

(Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on aquatic habitat and dependent wildlife. Alternative 2 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts and local long-term minor adverse impacts on aquatic habitat and dependent wildlife. Alternative 2 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on aquatic habitat and dependent wildlife. There would be no impairment of park resources or values related to aquatic habitats and dependent wildlife.

4.4.6 Terrestrial Wildlife (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native animals (as in Alternative 1) by:

- perpetuating native animal life as part of the park's natural ecosystem by maintaining or restoring natural processes to the extent practically feasible
- relying on natural processes to control populations and habitats of native species to the greatest extent possible

In addition, in Alternative 2 management actions affecting terrestrial habitat and dependent species would focus on the following:

- managing approximately two-thirds (68.5%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and better support a habitat mosaic supporting a diversity and abundance of native wildlife species
- managing approximately one-quarter (22.3%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and better support a habitat mosaic supporting a diversity and abundance of native wildlife species
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- preserving the high diversity of native migratory species populations – particularly neotropical birds – and their habitats inside the park and cooperating with others to ensure preservation of their populations and habitats outside the park (common to Alternatives 2 to 5)

Impacts on terrestrial habitat and dependent species would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact terrestrial habitat and dependent species. Conceptual planning suggests that cultural resource management actions would likely disturb approximately 125 acres of previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.11). Field survey prior to treatment actions would determine terrestrial wildlife species present in the vicinity of each site and appropriate protection measures needed. Treatment would generally be scheduled so that it would occur during winter when wildlife are hibernating or during the non-breeding season.

Restoration or rehabilitation of historic structures and associated cultural landscapes in the immediate vicinity of buildings would occur at seven sites and affect approximately 20 acres. Pre-treatment and post-treatment habitat conditions would be quite similar, characterized by a mix of native grasses and ornamental plantings, although non-native plants would be removed where they are currently present at some sites. Affected wildlife would generally include habitat generalists that live in close association with human habitation. During the treatment period wildlife would be expected to migrate into adjacent habitat areas; following the treatment period they would likely migrate back to restored sites. Impacts on terrestrial habitat and dependent species would likely be local short-term minor and adverse.

At six sites where the larger cultural landscape of early settlement farms would be restored or the historic extent of fields restored or rehabilitated, a total of 95 acres of successional old field vegetation and some areas of mixed-age forest would be cleared or otherwise altered. During the treatment period wildlife would be expected to migrate into adjacent habitat areas. Impacts would be negligible for species that live in close association with human habitation and agriculture. Impacts would be local long-term minor and adverse for species previously inhabiting successional old field or forest habitat that could not tolerate living in close association with human habitation and agriculture. Impacts for open grassland, pasture, meadows, and brush lands species – particularly some birds – would be local long-term minor and beneficial.

At approximately 10 discovery sites potential habitat impacts would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining resources. Most sites would encompass approximately one acre or less. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that forest fragmentation would be minimized or would not

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*

occur. Wildlife in the vicinity of each site would be expected to migrate to adjacent habitat areas. Impacts on terrestrial habitat and dependent species would likely be local long-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Development of new facilities – and visitor use of those facilities – would have the potential to disturb or displace wildlife or cause areas to be avoided by wildlife. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 60 acres, dispersed among 15 sites and 20 miles of trails (primarily existing unmaintained trails that would be improved).[1] Approximately 65 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. Affected vegetation would primarily include grasses, weeds, successional old field species, and non-native plants. Field survey prior to treatment actions would determine terrestrial wildlife species present in the vicinity of each visitor use site and the appropriate protection measures needed. Future site planning would seek to locate new facilities to avoid or mitigate impacts to wildlife, particularly when converting existing unmaintained trails to improved official park trails and developing new trail segments where they are needed. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that forest fragmentation would be minimized or would not occur. Construction would generally be scheduled so that it would occur during winter when wildlife are hibernating or during the non-breeding season. Following construction approximately 25 acres would be replanted with native plant species and 30 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Approximately 5 acres would be within the tread of reestablished or new trails. Wildlife would be expected to avoid sites during construction or would only travel through sites construction activity has abated, resulting in a local short-term minor adverse impact on wildlife and dependent species. Following construction, the permanent loss of habitat combined with disturbance, injury, or death associated with long-term visitor use and management of visitor use sites would result in a local long-term minor to moderate adverse impact on terrestrial habitat and dependent species.

Continuation of hunting in the park in accordance with all applicable regulations and policies adopted by the responsible management agencies would continue to have negligible impacts on terrestrial habitat and dependent species (as in Alternatives 1 and 3) (see Section 4.3.6 Terrestrial Wildlife (Alternative 1) above).

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 Physiography, Geology and Soils (Alternative 1) above). In Alternative 2, an

[1] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

additional 190 acres of restored, rehabilitated, or new fields at six early settlement farms would be leased for agriculture. Maintenance of open fields and forest edge along their perimeter would enhance wildlife habitat diversity locally in the park. Impacts on terrestrial habitat and dependent species would be local long-term minor and beneficial.

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with significant terrestrial habitat and dependent species (common to Alternatives 2 to 5). Impacts of land protection actions on terrestrial habitat and dependent species would likely be local long-term moderate and beneficial.

The park's new private land stewardship program would seek to enhance stewardship of lands with terrestrial habitat and dependent species that are fundamental or otherwise important to the park (common to Alternatives 2 to 5). It would emphasize collaboration with owners of private lands to monitor and manage wildlife populations and specific species of concern, including elimination of activities that adversely affect terrestrial habitat and dependent species. Technical assistance would help identify where sensitive terrestrial habitat and dependent species occur and describe best management practices to avoid, minimize, and/or mitigate impacts on those habitats. Where these actions enable landowners to enhance stewardship, impacts on terrestrial habitat and dependent species would be local long-term minor and beneficial.

Partnership and Community Collaboration Actions. NPS would continue to cooperate with the WV DNR regarding regulation of hunting. The focus would shift to management of hunting on private land within the park boundary and its impacts on game species that utilize habitat on both private and NPS-owned land (where hunting would no longer be permitted). Impacts on terrestrial habitat and dependent species would be negligible.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on terrestrial habitat and dependent species are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.6 Terrestrial Wildlife (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on terrestrial habitat and dependent species. Alternative 2 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts, local short-term minor adverse, and local long-term minor to moderate adverse impacts on terrestrial wildlife. Alternative 2 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on terrestrial wildlife. There would be no impairment of park resources or values related to terrestrial wildlife.

4.4.7 Rare, Threatened, and Endangered Species (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to generally increase the populations of rare, threatened, or endangered species in the park and to secure sufficient, suitable habitat to "recover" species designated as threatened or endangered (as in Alternative 1). Actions would generally focus on the following:

- managing habitat of threatened and endangered species to maintain their value for species recovery
- managing habitat of state-listed species to maintain their value for species maintenance to the greatest extent possible
- managing other native species of special management concern to the park to maintain their natural abundance and distribution
- controlling detrimental non-native species impacts on rare, threatened, or endangered species

In addition, in Alternative 2 management actions affecting terrestrial habitat and dependent species would focus on the following:

- managing approximately two-thirds (68.5%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and better support a habitat mosaic supporting a diversity and abundance of native wildlife species, including rare species and communities
- managing approximately one-quarter (22.3%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and better support a habitat mosaic supporting a diversity and abundance of native wildlife species, including rare species and communities
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)

- preserving the high diversity of native migratory species populations – particularly neotropical birds – and their habitats inside the park and cooperating with others to ensure preservation of their populations and habitats outside the park (common to Alternatives 2 to 5)

Impacts on rare, threatened, and endangered species would be local long-term major and beneficial.

Cultural Resource Management Actions. Conceptual planning suggests that cultural resource management actions would likely disturb approximately 125 acres of previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.11). Restoration or rehabilitation of historic structures and associated cultural landscapes in the immediate vicinity of buildings would occur at seven sites and affect approximately 20 acres. At six sites where the larger cultural landscape of early settlement farms would be restored or the historic extent of fields reestablished, a total of 95 acres of successional old field vegetation and some areas of mixed-age forest would be cleared or otherwise altered. At approximately 10 discovery sites potential habitat impacts would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining structures on sites typically one acre in size or less.

One site is known to have occurrences of the federally-designated species of concern Allegheny woodrat (*Neotoma magister)*. Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

Public Use, Enjoyment, and Experience Management Actions. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 60 acres, dispersed among 15 sites and 20 miles of trails (primarily existing unmaintained trails that would be improved).[2] Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

Visitor use facilities at the Sandstone Falls Island day-use area would be improved, likely leading to increased visitation to Sandstone Falls. To address existing visitor use impacts to rare plants of the Appalachian flatrock community found in the Sandstone Falls vicinity – and to prevent expansion of the impacted area – the existing boardwalk trail would be expanded. The area impacted during construction would be limited to the minimum possible size. Following construction impacts on rare species would be local long-term minor and adverse.

Impacts of the ongoing program to stabilize and gate mine portals where rare, threatened, and endangered species are present would continue. Gates in abandoned mine openings throughout the park would continue to be local long-term moderate and beneficial (common to Alternatives 1 to 5) (see Section 4.3.7 Rare, Threatened, and Endangered Species (Alternative 1) above).

To protect designated species visitor use in certain areas of the park would be limited to day-use only, including Rush Run, Sewell, Beauty Mountain, Endless Wall, Sunshine Buttress, and Ames (common to Alternatives 2 to 5).[1] Impacts on rare, threatened, or endangered species would be local long-term moderate and beneficial.

Additional protections in climbing areas – including Endless Wall, Sunshine Buttress, Alabama, and Ames – would include provision of designated trails to climbing routes that would reduce the current proliferation of social trails that potentially disturb habitat of designated species (common to Alternatives 2 to 5). Impacts on rare, threatened, or endangered species would be local long-term moderate and beneficial.

Park Operations Actions. Future studies would include research to determine the occurrences of rare, threatened, and endangered species throughout the park, with emphasis on those occurring in cobble and flatrock communities, riparian habitat, abandoned mine portals, cliff communities, and rimrock communities. Critical habitats would be identified and plans implemented to monitor, restore, and maintain species as necessary. Designated threatened or endangered species

[1] *Visitor use in the Nuttallburg Visitor Use Area would also be limited to day-use only pursuant to the Nuttallburg Visitor Use Area DCP/EA (NPS 2008c)*

would receive priority for these actions. To the greatest extent possible, these actions would also be completed to manage state-listed species. Impacts on rare, threatened or endangered species would be local long-term major and beneficial.

Future landscaping at development sites throughout the park would be designed and managed to promote rare grassland bird species, where practicable (common to Alternatives 2 to 5). Impacts on rare, threatened, or endangered species would be local long-term minor and beneficial.

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with rare, threatened, or endangered species habitat (common to Alternatives 2 to 5). Impacts of land protection actions on rare, threatened, or endangered species would be local long-term moderate and beneficial.

The park's new private land stewardship program would seek to enhance stewardship of lands with rare, threatened or endangered species habitat that is fundamental or otherwise important to the park (common to Alternatives 2 to 5). Education would focus on describing the sensitivity of designated species to habitat disruption and visitor use impacts. Technical assistance would help identify where designated species habitat occurs and describe best management practices to avoid, minimize, and/or mitigate disruptions to or visitor use impacts on those habitats. Where these actions enable landowners to enhance stewardship of lands with designated species habitat, impacts on rare, threatened, or endangered species would be local long-term moderate and beneficial.

Partnership and Community Collaboration Actions. NPS would seek to protect rare, threatened, and endangered species and their habitat on privately-owned lands in and around the gorge that are outside but near the park boundary (as in Alternative 1) (see Section 4.3.7 Rare, Threatened, and Endangered Species (Alternative 1) above). Efforts would be expanded to focus on working proactively with landowners – and their professional advisors – to provide information about the importance of habitat maintenance on their property, the public interest in protecting those habitats, conservation options for landowners, and sustainable design for new development on properties with designated species habitat (common to Alternatives 2 to 5). Impacts on rare, threatened, or endangered species would be local long-term minor to major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on rare, threatened, and endangered species are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.7 Rare, Threatened, and Endangered Species (Alternative 1) above). Alternative 2 in conjunction with

the impacts of these actions would result in a cumulative long-term moderate adverse impact on rare, threatened, and endangered species. Alternative 2 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on rare, threatened, and endangered species. Alternative 2 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on rare, threatened, and endangered species. There would be no impairment of park resources or values related to rare, threatened, and endangered species.

4.4.8 Scenic Resources (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Resource management actions would seek to protect a range of views in all areas of the park, allowing visitors to experience the extent of the gorge, the river, the forest, and the rim by (as in Alternative 1):

- removing non-native plants at sites where they cause a major scenic or aesthetic intrusion
- reclaiming abandoned mine lands at sites throughout the park (in cooperation with the WV DEP)

In addition, in Alternative 2 management actions affecting scenic resources would focus on the following:

- managing approximately two–thirds (68.5%) of the park as backcountry with implementation of related management prescriptions that would protect unfragmented forest blocks and natural scenic qualities from human-induced impacts
- managing approximately one-quarter (22.3%) of the park as frontcountry with implementation of related management prescriptions that would protect natural scenic qualities by reducing human-induced disturbance
- maintaining a nearly continuous strip of natural riparian habitat along the New River, thereby also preserving its natural scenic qualities (common to Alternatives 2 to 5)
- removing non-native plants at cultural resource sites to be restored, rehabilitated, or stabilized (see below)

Impacts on scenic resources would be local long-term minor to major and beneficial.

Cultural Resource Management Actions. Restoration of cultural landscapes at six historic farms, removal of modern structures at three sites where potentially significant early settlement cultural landscapes exist (as in Alternative 1), and treatments at approximately 10 cultural resource sites (to be managed as discovery sites) would enhance scenic resources fundamental to the park (see Section 4.4.10 Cultural Landscapes (Alternative 2) above). Impacts on scenic resources would be local long-term minor to major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New visitor use facilities and expansion of existing facilities would alter the park setting in the vicinity of improvements:

- approximately 20 miles of new park trails would be developed, mostly by improving existing unmaintained trails to single-track trails approximately 24 inches in width, requiring minor alteration to the park setting
- approximately 19 small parking areas would be developed to provide trailheads for hikers, climbers, and horseback riders, mostly along existing roads on forest block perimeters, and on previously disturbed sites
- approximately 4 existing day-use facilities would be improved through minor additions or expansions, most of which would enhance the existing setting, although there could be some minimal impacts to vegetation at some sites
- approximately 5 parking areas at existing river accesses would be expanded, with minimal changes to the park setting
- one new parking area would be developed near U.S. Route 19 for satellite parking in support of a visitor shuttle system
- one new river access and related day-use area (in conjunction with a new developed campground) would be developed, requiring clearing and alteration of the riparian zone at the river edge where the river launch would be located (other facilities would be placed in an existing open field)
- two new developed campgrounds would be developed on open sites, requiring conversion of early successional old field vegetation on previously disturbed sites to developed visitor uses
- an existing primitive campground and day-use area in the floodplain would be relocated to a new site in an area of mixed vegetation where some minor clearing of trees would be required

- a new park road on the Highland-Backus Plateau would be developed through expansion of an existing unmaintained road

Overall the impacts of visitor use facilities on scenic resources would be local long-term minor and adverse.

Existing campgrounds and park operations facilities in the floodplain at Hellems Beach, Stone Cliff, and Dun Glen (campground and park operations sites) would be eliminated and natural floodplain vegetation would be restored. Impacts on scenic resources would be local long-term minor and beneficial.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture. In Alternative 2, an additional 190 acres of restored, red, or new fields at historic sites (see Table 4.11) would be leased for agriculture, subject to leasing terms that would mitigate potential farming impacts to cultural landscapes and other resources (see Section 4.3.10 Cultural Landscapes (Alternative 2) below). Farming would maintain the extent of restored or rehabilitated fields that are significant features of the park's cultural landscapes, protecting them from succession to mixed mesophytic forest. These landscapes are scenic resources considered fundamental to the park. Impacts on scenic resources would be local long-term moderate and beneficial.

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with significant scenic resources (common to Alternatives 2 to 5). The park's new program of working with owners of private land within the park boundary would seek to enhance stewardship of lands with significant scenic resources that are fundamental or otherwise important to the park. Impacts on scenic resources would be local long-term moderate and beneficial.

Partnership and Community Collaboration Actions. NPS would seek to protect scenic resources on privately-owned lands in and around the gorge that are outside but near the park boundary (as in Alternative 1). Efforts would be expanded to focus on working proactively with landowners – and their professional advisors – to provide information about the importance of scenic resources on their property, the public interest in protecting those resources, conservation options for landowners, and sustainable design for new development on properties with scenic resources (common to Alternatives 2 to 5). Impacts on scenic resources would be local long-term minor to major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on scenic resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.8 Scenic Resources (Alternative 1)

above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on scenic resources. Alternative 2 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts and local long-term minor impacts on scenic resources. Alternative 2 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on scenic resources. There would be no impairment of park resources or values related to scenic resources.

4.4.9 Archeological Resources (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect and preserve archeological resources against natural destruction wherever practicable by eliminating and avoiding natural resource impacts, stabilizing sites and structures, and monitoring conditions. Management actions including removal of vegetative overgrowth at areas of known or potential archeological resources would be preceded by research sufficient to identify and evaluate such resources. The impact on archeological resources receiving stewardship actions would be local long-term minor and beneficial.

Backcountry zoning would apply to two-thirds (68.5%) of the park. In backcountry zones potential disturbance to archeological resources resulting from park development could occur only along zone perimeters and new trails and at a few designated backcountry camping sites (Figure 2.4). The impact on archeological resources would be local long-term moderate and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to identify and evaluate park archeological resources and to assess their condition and threats to them. Eligible archeological resources would continue to be nominated for listing in the National Register, as appropriate. Archeological resources would generally continue to be left undisturbed except where intervention could be justified based on compelling needs for research, interpretation, site protection, or park development.

Specific management actions at cultural resource sites that could potentially disturb archeological resources would include (see Table 4.11):

- restoration and rehabilitation of structures at numerous cultural resource sites

Table 4.11

New River Gorge National River
Alternative 2 – Site-Specific Cultural Resource Management Actions

Actions *(in addition to Alternative 1 – see Table 4.6 above)*

- **Historic Structure Restoration**
  - Richmond-Hamilton Farm (farmhouse and outbuildings)
  - Vallandingham Farm (farmhouse)
  - Phillips Farm (log cabin and outbuildings)
  - Trump-Lilly Farm (farmhouse and outbuildings)
  - Thurmond Houses (some restored throughout and some restored on exterior only)
- **Historic Structure Rehabilitation** (with reuse through the park leasing program)
  - Camp Brookside (original camp structures)
  - Thurmond Commercial Row
  - Other Thurmond Houses (those not restored in some way)
- **Cultural Landscape Restoration** (with agricultural leasing)
  - Richmond-Hamilton Farm
  - Vallandingham Farm
  - Phillips Farm (no leasing)
  - Trump-Lilly Farm
  - Cochran Farm
  - Westfall Farm Westfall Farm (if and when acquired by NPS from a willing seller)
- **Rehabilitation of the Historic Extent of Fields at Cultural Resource Sites**
  - Richmond Bottom (if and when acquired by NPS from a willing seller) (with leasing)
  - Harrah Homestead (no leasing)
- **Discovery Site Stabilization and/or Maintenance**
  - treatment actions – at approximately 10 discovery sites – as needed to stabilize resources and/or to protect resources from potential visitor use impacts

- cultural landscape restoration or rehabilitation of farm fields at 8 early settlement farm sites
- stabilization and protection actions at approximately 10 discovery sites

Strategies to protect archeological resources would be implemented as for Alternative 1 (see Section 4.3.9 Archeological Resources above). The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Public Use, Enjoyment, and Experience Management Actions. Ground disturbance associated with development of new facilities and enhancement of existing facilities could affect archeological resources at sites throughout the park. Strategies to protect archeological resources would be implemented as for Alternative 1 (see Section 4.3.9 Archeological Resources above). The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Expanded visitor use in historic resource zones, along trails, in the vicinity of recreation sites, and at discovery sites (approximately 10 sites) would increase vulnerability of archeological resources to surface disturbance, inadvertent damage, and vandalism. Loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence could result. NPS staff or volunteer presence and emphasizing visitor education would discourage vandalism and inadvertent destruction of cultural remains. Because expanded visitor use would be concentrated in the north and south ends of the park – with the middle of the park managed for primitive outdoor recreation where visitation would be low – the potential for The impact on archeological sites would be fairly concentrated along a relatively small number of trails and at a relatively small number of sites. This would facilitate resource protection by NPS staff and volunteers. The impact on archeological resources would range from negligible to local long-term minor and adverse.

Increased use of archeological sites and resources for public education and interpretation at early settlement sites in the south end of the park and at industrial sites in the north end of the park, as well as at discovery sites, would increase awareness and appreciation of resources, thereby increasing support for their preservation, and resulting in a local long-term minor beneficial impact on archeological resources.

Park Operations Actions. Ground disturbance would be associated with construction of water supply/distribution and wastewater collection/treatment facilities to serve the Thurmond Depot Visitor Center, Commercial Row, a few newly rehabilitated houses, and structures currently used for park housing and as private residences. Strategies to protect archeological resources from ground disturbance

would be implemented as described above for cultural resource management actions under Alternative 1 (see Section 4.2.9 Archeological Resources above). The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse.

Farming would occur through an agricultural leasing program on fields at six early settlement cultural resource sites affecting approximately 190 acres (see Table 4.11). Prior to execution of a lease, an archeological survey would be undertaken as necessary to ensure that modern farming techniques would not destroy subsurface archeological resources. Leases would limit discing to the depth of historic disturbance and stipulate use of low-till or no-till methods, if practicable, to protect archeological resources. Collectively these actions would ensure that agricultural practices would result in a negligible to local long-term minor adverse impact on archeological resources, depending on the site.

Private use of rehabilitated historic structures (see Table 4.11) would occur through lease or cooperative agreement. Prior to execution of a lease and agreement, an archeological survey of lands adjoining the historic building would be undertaken as necessary to ensure that use of the property would not destroy subsurface archeological resources. Maintenance and all improvements to a property by the lessee or cooperator would be executed in accordance with applicable Secretary of the Interior's standards and guidelines and other NPS policies. The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with a known or suspected high occurrence for intact archeological resources (common to Alternatives 2 to 5). The park's new program of working with owners of private land within the park boundary would seek to enhance stewardship of lands with potential archeological resources that are fundamental or otherwise important to the park. Impacts of land protection actions on archeological resources would be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on archeological resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.9 Archeological Resources (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on archeological resources. Alternative 2 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to archeological resources.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to moderate beneficial impacts and local long-term minor adverse impacts on archeological resources. Alternative 2 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on archeological resources. There would be no impairment of park resources or values related to archeological resources.

4.4.10 Cultural Landscapes (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions in the park would be expanded to include managing vegetation at restored cultural landscapes, rehabilitated farm fields, and discovery sites. Management would seek to control invasive plants at each site on an ongoing basis. Pruning or removal of natural forest vegetation would occur regularly where it threatens to overtake cultural landscapes or jeopardizes the integrity of landscape features. Areas to remain open would be periodically mowed or leased for agriculture. Stormwater management would seek to protect landscapes from impacts of flooding, erosion, sedimentation, and landslides. Impacts on cultural landscapes would be local long-term moderate and beneficial.

Cultural landscape sites where natural resource management actions would not be implemented would continue to be at risk due to vegetation overgrowth, poor drainage, and/or landslide susceptibility (common to Alternatives 2 to 5). Impacts on cultural landscapes would be local long-term minor to moderate and adverse.

Cultural Resource Management Actions. Efforts would continue to include all cultural landscapes in the park's *Cultural Landscapes Inventory* (NPS 2005a), to identify and nominate eligible landscapes to the National Register, and to prepare cultural landscape reports for all cultural landscapes (as in Alternative 1).

Specific management actions affecting cultural landscapes would include (see Table 4.11):

- Six early settlement sites would be restored in the south end of the park. Restored landscapes would depict the features and character of the farm landscapes as they appeared in the late 19th to early 20th century. Cultural landscape restoration would occur in conjunction with restoration or rehabilitation of structures where they are present. It would generally entail removal of modern structures from one property and field restoration,

requiring some forest clearing (of varying age and condition) at all six properties. Research and preparation of a cultural landscape report would precede work on each site and would serve as the principal document used to guide restoration decisions.

- Approximately 10 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along existing and new trails in the north end of the park. Many of these sites would be ruins of historic structures at former sites of industrial activities or related settlements in the gorge. Where these sites involve cultural landscapes, maintenance activities would mitigate deterioration of the cultural landscape components by protecting their condition; stabilization would reestablish the stability of unsafe damaged or deteriorated cultural landscape components while maintaining their existing character.

All management actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on cultural landscapes would be local long-term minor to major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Impacts of new visitor facilities on cultural landscapes would include:

- New visitor use facilities would be added at the six early settlement farms in the south end of the park where the cultural landscapes would be restored to enable visitors to access the sites for interpretive experiences. Facilities at each site would include parking, paths, other structures to facilitate access, and interpretive media. A new farm loop trail would connect the farms. Design and location of contemporary facilities and structures would be considered within the context of the significance of the landscape and would minimize adverse impacts on the character and features of each cultural landscape to the maximum extent practicable. During construction ground disturbance would result in local short-term minor to moderate adverse impacts on cultural landscapes. The long-term impact on cultural landscapes would be local long-term minor and adverse.

- Where historic structures would be rehabilitated for educational use, visitor services, or housing at Camp Brookside, Prince Brothers General Store, Thurmond Commercial Row, and numerous houses at Thurmond, use modifications such as development of parking facilities and walkways, could result in local long-term minor to moderate and adverse impacts on the cultural landscape.

- Circulation system improvements at Grandview would affect the cultural landscape (common to Alternatives 2 to 5). Engineering design of the

improvements would be considered within the context of the significance of the landscape. The design would seek to avoid adversely impacting historically significant components of the circulation system and to accommodate health and safety codes in ways that minimize impacts on character-defining features of the landscape. During construction ground disturbance would result in a local short-term minor to moderate adverse impact to the cultural landscape. Following construction the impact on the cultural landscape would be local long-term minor and adverse.

- Parking improvements at Thurmond in the vicinity of Commercial Row and in the upper residential area would affect the cultural landscape. Mitigating actions and impacts would be similar to those implemented for circulation improvements at Grandview (see preceding section).

- At discovery sites (approximately 10 sites), management actions would include installation of contemporary facilities and structures to control visitor access to cultural landscape components (if present) that would be vulnerable to damage from visitor use. Design considerations would reflect considerations similar to those described above for visitor facilities in restored landscapes. During construction ground disturbance would result in local short-term minor adverse impacts on cultural landscapes. The long-term impacts on the cultural landscapes would be local long-term minor and adverse.

- Approximately 20 miles of new park trails would enhance visitor access to recreation sites and cultural resources sites in the park. Most new trails would use previously existing unmaintained trails, some of which might be determined historically significant upon further investigation and coordination with the WV SHPO. Future development of a park trail management plan would include Section 106 compliance with the WV SHPO during which historic significance would be assessed and mitigation measures incorporated into trail system design, as appropriate. The long-term impacts on cultural landscapes would be local long-term minor and adverse.

Impacts on cultural landscapes associated with increased visitor use would include:

- Restored cultural landscapes and associated structures opened to the public for interpretive experiences and programs would be susceptible to wear and tear from increased use. NPS staff or volunteer presence would reduce the potential for visitors to inadvertently damage or to vandalize resources. Impacts on cultural landscapes would be negligible to local long-term minor and adverse.

- Cultural landscapes associated with rehabilitated and leased historic structures opened to the public for educational use, visitor services, or commercial use would be susceptible to wear and tear from increased use. Lease holder or concessioner presence would reduce the potential for visitors to inadvertently damage or to vandalize resources. Impacts on cultural landscapes would be negligible to local long-term minor and adverse.

- Visitor use elsewhere in the park would continue to impact cultural landscapes, particularly in remote areas where ranger patrols and NPS staff are not routinely present. Visitor use impacts would generally include inadvertent disturbance and vandalism. Improved access to restored cultural landscapes in the south end of the park and to discovery sites (approximately 10 sites) in the north end of the park would increase the potential for visitor use impacts in those locations, although increased presence of NPS staff at these sites would help educate visitors about appropriate resource stewardship. Impacts on cultural landscapes would be local long-term minor and adverse.

Park Operations Actions. At Thurmond new water supply and wastewater treatment services would be provided to the Thurmond Depot Visitor Center, to Commercial Row, to a few newly rehabilitated houses, and to structures currently used for park housing and as private residences. During construction ground disturbance would result in a local short-term minor to moderate adverse impact to the cultural landscape. The long-term impact on the cultural landscape would be negligible to local minor and adverse.

Farming would occur through an agricultural leasing program at six early settlement cultural resource sites (190 acres) where known or potentially significant cultural landscapes exist (see Table 4.11). Management of leases would seek to protect the historic scene and significant features of the cultural landscape at each site, such as topography, field size, fences, walls, ditches, vegetation, wetlands, structures, and vistas. Leases would also protect significant landscape features and patterns from potential modifications prompted by modern farm machinery and practices, such as alteration of lanes, roads, fences, and gates, and introduction of non-historic crops, field patterns, and pruning techniques. Impacts on cultural landscapes would be negligible.

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with significant cultural landscapes (common to Alternatives 2 to 5). The park's new program of working with owners of private land within the park boundary would seek to enhance stewardship of lands with significant cultural

landscapes that are fundamental or otherwise important to the park. Impacts on cultural landscapes would local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on cultural landscapes are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.10 Cultural Landscapes (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on cultural landscapes. Alternative 2 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to cultural landscapes.

- **Conclusion**

Management actions in Alternative 2 would result in local short-term minor to moderate adverse impacts, local long-term minor to major beneficial impacts, and local long-term minor to moderate adverse impacts on cultural landscapes. Alternative 2 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on cultural landscapes. There would be no impairment of park resources or values related to cultural landscapes.

4.4.11 Historic Structures (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b) (as in Alternative 1). Stewardship would generally include removal of non-native plants and improvements to drainage in the vicinity of historic structures. The impacts to historic structures receiving stewardship actions would be local long-term minor and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b) and to obtain determinations of their eligibility for the National Register (as in Alternative 1). Stewardship would generally include building stabilization to provide protection from weather and vandalism. Maintenance of previously stabilized structures would continue. The impacts to historic structures receiving stabilization and ongoing maintenance would be local long-term minor and beneficial.

Further stewardship of historic structures beyond the actions included in Alternative 1 (see Table 4.6) would focus on maintenance and treatment of structures that are nominated to, determined eligible for, or are considered potentially eligible for the National Register. Specific management actions would include the following (see Table 4.11):

- Farmhouses and outbuildings at four historic farms would be restored in the early settlement and farming area in the south end of the park. Restored structures would accurately present the form, features, and character of the farms as they appeared in the late 19th to early 20th century. Building restoration would occur in conjunction with restoration of the cultural landscape.
- Several houses at Thurmond would be restored, accurately presenting the form, features, and character of the houses as they appeared in the early 20th century. Some houses would be restored throughout and some would be restored on the exterior only.
- Some individual structures already determined eligible for the National Register (those owned by the NPS) would be rehabilitated, including Camp Brookside, Thurmond Commercial Row (with remediation of asbestos and lead contamination), and other houses at Thurmond that would not be restored.
- Approximately 10 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along existing and new trails in the north end of the park. Some of these sites would be historic structures at former sites of industrial activities or related settlements in the gorge. Where these sites involve an historic building, maintenance activities would mitigate building deterioration by protecting its condition; stabilization would reestablish the stability of unsafe damaged or deteriorated structural components while maintaining existing building character.

All management actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on historic structures would generally be local long-term minor to major and beneficial. Where structures are rehabilitated for leasing or visitor services, concession use modifications, such as those needed to accommodate accessibility and additional means of egress, could result in local long-term minor to moderate and adverse impacts.

Public Use, Enjoyment, and Experience Management Actions. Restored structures opened to the public for interpretive experiences and programs would be susceptible to wear and tear from increased use. NPS staff or volunteer presence would reduce the potential for visitors to inadvertently damage or to vandalize

resources. Impacts on historic structures would be negligible to local long-term minor and adverse.

Historic structures leased for visitor services, educational use, or commercial use at Camp Brookside, Prince Brothers General Store, Thurmond Commercial Row, and numerous houses at Thurmond would be susceptible to wear and tear from increased use, inadvertent damage, or vandalism. Leases and agreements would seek to reduce the potential for adverse impacts on historic structures associated with their adaptive reuse including maintenance requirements to avoid or mitigate adverse impacts of visitor use. Impacts on historic structures would be local long-term minor to moderate and adverse.

Park Operations Actions. At Thurmond new water supply and wastewater treatment services would be provided to the Thurmond Depot Visitor Center, to Commercial Row, to a few newly rehabilitated houses, and to structures currently used for park housing and as private residences. Many of the affected structures are resources that contribute to the significance of the Thurmond Historic District. All improvements would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on historic structures would be negligible to local long-term minor and adverse.

Private use of rehabilitated historic structures (see Table 4.11) would occur through lease, cooperative agreement, or concession agreement. Leases or agreements would be structured to protect resources and defray the costs associated with building maintenance. They would include stipulations to ensure preservation of the property, to provide for its continued appreciation by the public, and to prevent any situation that would interfere with visitor use and enjoyment of the park. Maintenance and all improvements to the property by the lessee or cooperator would be executed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Rehabilitating Historic Buildings*, and other NPS policies, guidelines, and standards. The impact on historic buildings would range from local long term minor to moderate and beneficial to local long term minor to moderate and adverse.

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with significant historic structures (common to Alternatives 2 to 5). The park's new program of working with owners of private land within the park boundary would seek to enhance stewardship of lands with significant historic structures that are fundamental or otherwise important to the park. Impacts on historic structures would be local long-term moderate and beneficial.

Partnership and Community Collaboration Actions. NPS would continue to provide technical assistance to the city of Hinton to assess treatment options for

rehabilitation and adaptive reuse of the city-owned Hinton Depot and to assist with implementation of treatment by helping to identify funding options and to develop grant applications (as in Alternative 1). Impacts on historic structures would be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on historic structures are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.11 Historic Structures (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on historic structures. Alternative 2 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to historic structures.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on historic structures. Alternative 2 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on historic structures. There would be no impairment of park resources or values related to historic structures.

4.4.12 Ethnographic Resources (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Backcountry zoning would preserve unfragmented blocks of mixed mesophytic forest in 68.5 percent of the park, while frontcountry zoning where human-induced fragmentation would be decreased would apply to 22.3 percent of the park. This would protect the forest and its associated watershed which is the ethnographic resource identified as vital to the park's traditionally associated people and groups (Hufford et al 2006). Impacts on ethnographic resources would be local long-term moderate and beneficial.

Natural resource management actions would also protect specific natural and cultural resources found within the park's mixed mesophytic forest that are important to the park's traditionally associated people, such as plants, animals, and sites of former towns, settlement areas, and industrial sites (as in Alternative 1).

Impacts to ethnographic resources would be local long-term minor to moderate and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to include appropriate studies and consultations to further document ethnographic resources and uses, traditionally associated people, and other affected groups, and cultural affiliations to park resources. Eligible ethnographic resources would continue to be nominated for listing in the National Register, as appropriate.

Cultural resource treatment at historic structures, cultural landscapes, and discovery sites (approximately 10 sites) would restore, rehabilitate, or stabilize resources that are likely to be found through further research to include significant ethnographic resources (see Table 4.11 and Sections 4.4.10 Cultural Landscapes and 4.4.11 Historic Buildings above). Impacts on ethnographic resources would be local long-term minor to major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New visitor use facilities at historic structures, cultural landscapes, and discovery sites (approximately 10 sites) would impact resources that are likely to be found through further research to include significant ethnographic resources (see Table 4.13 and Sections 4.4.10 Cultural Landscapes and 4.4.11 Historic Buildings above). Impacts on ethnographic resources if determined to be present would be local long-term minor to moderate and adverse.

Impacts associated with increased visitor use on ethnographic resources, if determined to be present, would include the following (see Sections 4.4.10 Cultural Landscapes and 4.4.11 Historic Buildings above):

- negligible to local long-term minor adverse impacts at sites where structures and associated cultural landscapes are restored
- local long-term minor to moderate and adverse impacts at sites where structures (with associated cultural landscapes) are rehabilitated and leased for visitor services, educational use, or commercial use
- local long-term minor to moderate and adverse impacts elsewhere in the park, particularly in remote areas and in the vicinity of discovery sites (approximately 10 sites) where ranger patrols and NPS staff are not routinely present

Land Protection Actions. Future land protection would focus on purchasing property within the park boundary that includes significant resources and values – such as properties with significant ethnographic resources (common to Alternatives 2 to 5). The park's new program of working with owners of private land within the park boundary would seek to enhance stewardship of lands with significant ethnographic resources that are fundamental or otherwise important to the park.

The impact on ethnographic resources would be local long-term moderate and beneficial.

Partnership and Community Collaboration Actions. The NPS would continue to consult with traditionally associated groups and Indian tribes (as in Alternative 1) (see Section 4.3.12 Ethnographic Resources (Alternative 1) above). Impacts on ethnographic resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on ethnographic resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.12 Ethnographic Resources (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on ethnographic resources. Alternative 2 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to ethnographic resources.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on ethnographic resources. Alternative 2 would contribute a minor beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on ethnographic resources. There would be no impairment of park resources or values related to ethnographic resources.

4.4.13 Regional and Local Economy (Alternative 2)

In Alternative 2 – Themed Gorge Segments – the NPS would expand the park's contributions to the Southern West Virginia tourism industry and economic environment due to the appeal of each themed segment to varied visitor markets.

Fayetteville would continue to be the gateway community for the area's whitewater rafting industry. Beckley would continue its current function as a primary lodging, dining and visitor service area in support of tourism to New River Gorge. Communities along the US 19 corridor such as Oak Hill, Mount Hope, Bradley and North Beckley would continue to provide limited visitor support services.

Each of the three subareas would undergo improvements that would increase visitation and visitor spending:

- The Early Settlement and Farming subarea would experience a moderate increase in visitation along the New River Parkway. The restored farmsteads in this subarea would spur additional minor visitation increases

- The Primitive Outdoor Experiences subarea would experience minor increases from improved recreational and boating access. These increases would be offset by moderate decreases in visitation resulting from the ban of hunting activities in the park.

- The Industrial Gorge would experience major visitation increases at the Nuttallburg Visitor Use Area and at Thurmond, as well as a minor visitation increase from the improvements to Fayette Station Road.

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Enhanced management of the park's natural resources would result in increased expenditures by the NPS on an ongoing and special project basis (common to Alternatives 2 to 5). Management expenditures by the park's partners, and others would also likely increase (common to Alternatives 2 to 5). Impacts of these expenditures on the regional and local economy would be regional short-term minor and beneficial and regional long-term minor and beneficial.

Cultural Resource Management Actions. Restoration and ongoing maintenance of four early settlement farmhouses and several Thurmond houses, as well as rehabilitation of Camp Brookside structures, Prince Brothers General Store, Thurmond Commercial Row, and several additional Thurmond houses, would result in expenditures by the NPS for labor and materials. Impacts on the regional and local economy would be regional short-term minor and beneficial regional long-term minor and beneficial.

Adaptive reuse through the park's leasing program of Camp Brookside, Prince Brothers General Store, Thurmond Commercial Row, and several Thurmond houses for visitor services, commercial use, or educational use would bring more visitors to the Hinton area and enhance the attractiveness of the Prince and Thurmond areas to visitors. Impacts on the regional and local economy would be regional long-term moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would continue to encourage economic activity in areas with active visitor use facilities and support services.

The total annual number of recreational visits to the New River Gorge National River is projected to increase by 224,900 from the current (2007) level of 1,178,000 in this alternative, a 19.1 percent growth rate. Table 4.12 displays projected direct and indirect economic impacts resulting from this increased level of visitor activity.

The Early Settlement and Farming subarea would benefit mainly from the construction of the New River Parkway, but also from the restoration of farmsteads. The Primitive Outdoor Experiences subarea would gain visitation in and around Thurmond. The Industrial Gorge would draw added visitation to Nuttallburg and along Fayette Station Road.

Several industries that benefit from NPS stewardship of New River Gorge, including outfitting, lodging, dining, and convenience goods, would continue to support significant levels of employment. Businesses in these industries are mostly concentrated along the US 19 corridor, particularly in Fayetteville and Beckley.

Industries that have jobs supported by NPS-related activities at New River Gorge would also continue to realize significant impacts on earnings and the housing market.

Impacts on the regional and local economy would be regional long-term minor and beneficial.

TABLE 4.12 Alternative 2 – Themed Gorge Segments – Annual Direct and Indirect Economic Impacts ($2007)

Impact Type	2005	Added as a Result of Alternative 2	2025
Visitation			
Visitors	1,178,000	224,900	1.402,900 (+19.1%)
Direct Impacts			
Jobs	2,000	393	2,393
Earnings	$28,317,960	$5,532,300	$33,850,260
NPS Spending	$7,208,400	$2,632,600	$9,841,000
Visitor Spending	$67,910,000	$13,267,200	$81,177,200
Indirect Impacts			
Jobs	850	165	1,015
Earnings	$7,870,810	$1,537,700	$9,408,510
NPS Spending	$4,159,970	$1,519,230	$5,679,200
Visitor Spending	$33,568,090	$6,558,000	$40,126,090
Total Impacts			
Jobs	2,850	558	3,408
Earnings	$36,188,770	$7,070,000	$43,258,770
NPS Spending	$11,368,370	$4,151,830	$15,520,200
Visitor Spending	$101,478,090	$19,825,200	$121,303,290

2005 baseline and Impact factors per recreational visit are adapted from Versel 2006

Park Operations Actions. Total recurring costs by NPS would be about $15.6 million annually, while total one-time costs would be about $27.4 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have Impacts on the regional and local economy are identified in Section 4.2.4 (see Table 4.4). These actions would generally be the same as those described for Alternative 1 (see Section 4.3.13 Regional and Local Economy (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate beneficial impact on the regional and local economy. Alternative 2 would contribute a minor beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in regional short-term minor to moderate beneficial and regional long-term minor to moderate beneficial impacts on the regional and local economy. Alternative 2 would contribute a minor beneficial impact to the total cumulative long-term moderate beneficial impact on the regional and local economy.

4.4.14 Communities (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions implemented within the park would have the potential to affect natural resource conditions in communities within or near the park. These primarily would include management actions that seek to protect water quality, floodplains, forest, and aquatic and terrestrial habitats and dependent species, by:

- maintaining natural flows and hydropatterns
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions
- perpetuating native animal life as part of the park's natural ecosystem by maintaining or restoring natural processes to the extent practically feasible
- relying on natural processes to control populations and habitats of native species to the greatest extent possible
- aggressively treating invasive exotic plant and insect pest species

- allowing select introduced species that may alter some process and interactions (e.g. continue WV State black fly treatments)

In addition, in Alternative 2 several management actions would seek to:

- protect, preserve and restore the natural resources and functions of floodplains by (common to Alternatives 2 to 5):
  - restoring natural drainage patterns on all disturbed lands (in cooperation with WV DEP when part of mined land reclamation projects)
  - maintaining rainfall-runoff dynamics and sediment delivery and transport processes at natural levels in backcountry, frontcountry, and river corridor zones and at somewhat altered levels in cultural landscape and park development zones
  - maintaining natural floodplain vegetation and – based on further feasibility study in coordination with the U.S. Army Corps of Engineers – promoting maintenance of natural floodplain vegetation through controlled releases from Bluestone Dam that provide periodic maximum floods
- maintain and restore natural stream ecosystems supporting a full range of natural aquatic organisms by (common to Alternatives 2 to 5):
  - eliminating introduction of non-native species to aquatic ecosystems
  - eliminating actions to supplement or maintain selective non-native species in aquatic ecosystems (as appropriate, based on further study of non-native species impacts)
- maintain the park's native plants and natural landscapes by (common to Alternatives 2 to 5):
  - managing wildland fire to diminish the risk and consequences of severe wildland fires and, to the extent possible, to restore and protect the natural biological diversity and natural disturbance regime of the park
  - using planned ignitions to promote ecosystem health and native vegetation diversity in fire-dependent forest communities, such as rimrock pine communities and xeric oak-hickory forests

The impact of these management actions on natural resources in communities within and near the park would be local long-term major and beneficial.

Cultural Resource Management Actions. In Alternative 2, cultural resource management actions (in addition to those included in Alternative 1) with the

potential to affect resources of potential significance to residents of communities within or near the park include:

- Six early settlement sites would be restored in the south end of the park, accurately presenting the form, features, and character of the farm as it appeared in the late 19th to early 20th century. At two additional settlement sites – where no buildings remain – the cultural landscape would be restored.
- Several houses at Thurmond would be restored, accurately presenting the form, features, and character of the houses as they appeared in the early 20th century.
- Some individual historic structures would be rehabilitated, including the Camp Brookside building complex, Thurmond Commercial Row, and other houses at Thurmond that would not be restored.
- Approximately 10 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along existing and new trails in the north end of the park.

Cultural resource treatment at these historic structures, cultural landscapes, and discovery sites would restore, rehabilitate, or stabilize resources that are likely to be found through further research to include significant ethnographic resources of potential significance to residents of community within or near the park.

The impact of these actions on the residents of communities within or near the park would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. In Alternative 2, visitor facility improvements would address many of the visitor experience issues of concern to residents of communities within or near the park who use the park. These relate to crowding at river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few opportunities for biking and equestrian use). Impacts on visitor use and visitor experience for local residents as a result of these improvements (see Table 4.13) would be as follows:

- day-use facility improvements would result in a local long-term minor beneficial impact
- camping improvements would result in a local long-term moderate beneficial impact
- river access improvements would result in a local long-term moderate beneficial impact; some crowding would continue to occur at the Cunard

River access during peak visitation periods resulting in a local long-term moderate adverse impact

- trail improvements would result in a local long-term minor beneficial impact for hikers, bikers, and horseback riders; additional demand for biking and equestrian trails would not be satisfied resulting in a local long-term moderate adverse impact
- trailhead improvements would result in a local long-term moderate beneficial impact for climbers and hunters (made possible by boundary adjustments)

As in Alternatives 1 and 3, hunting within the park would continue as it occurs today on most NPS-owned land, in the park in accordance with the hunting and fishing regulations of the state of West Virginia. During hunting season safety hazards would continue to exist in areas of the park where other visitor use is high and hunting is permitted. Impacts on residents of communities within or near the park who hunt would be local long-term moderate and beneficial. Continued safety hazards would result in a local long-term minor and adverse impact on residents of communities within and near the park.

Park Operations Actions. Total recurring costs by NPS would be about $15.6 million annually, while total one-time costs would be about $27.4 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

At Thurmond, rehabilitation and subsequent leasing of Commercial Row would generate a sustainable income stream for long-term maintenance of the buildings. The impact on the community of Thurmond would be local long-term moderate and beneficial.

Land Protection Actions. As funding permits, land protection would continue until most land remaining within the current park boundary is protected through voluntary sale of property to the NPS or through voluntary conveyance of conservation easements to the NPS or to a qualified non-profit land trust. Unlike Alternative 1, the NPS would generally no longer seek to acquire private property within the communities that remain in the park in the vicinity of Meadow Creek, Backus, Prince/Quinnimont, Highland, Terry, and Thayer. As a result acquisition of properties with associated demolition of structures – resulting in lost housing stock, population loss, and disruption to the social fabric – would no longer occur. The impact of the changed land acquisition strategy on communities within the park would be local long-term moderate and beneficial.

The NPS would seek to protect resources on lands remaining in private ownership by implementing a new stewardship program. Owners of lands with significant natural, cultural, and scenic resources would receive information and technical assistance regarding protection and management of resources on their properties. This would enhance stewardship of resources potentially important to the broader community. An additional focus of the technical assistance effort would be to provide information on the importance of maintaining on-site wastewater disposal systems (OSDSs); this effort would target landowners in communities along the New River and its tributaries where fecal coliform counts are high and the suspected source is malfunctioning OSDSs. The impact of the new stewardship program on communities within the park would be local long-term minor and beneficial.

Partnership and Community Collaboration Actions. NPS would implement a number of actions aimed at sustaining communities within the park, focused on Hinton, Thurmond, Meadow Creek, Backus, Highland, Prince/Quinnimont, Terry, and Thayer. The focus of the actions would be as described for the Alternative 2 – Themed Gorge Segments theme, described in Section 2.5.5 through 2.5.7 above. Actions would generally seek to strengthen the connection between gateway communities, their residents, and the mission of the NPS at New River Gorge National River.

- As the park's largest gateway community located partially in the park, Hinton would receive high priority in NPS's efforts to work cooperatively with its gateway community partners. In addition the NPS and the city of Hinton would work collaboratively on several specific initiatives, In general the NPS would not seek to acquire private land within the park boundary in Hinton although it would be interested in acquiring land owned by the CSX at the Hinton Yard, if and when it is no longer required for railroad operations. Similarly, the NPS would be interested in acquiring historically significant railroad-related structures in the vicinity of the Hinton Depot and the Hinton Yard.
- The small enclave of occupied private residences at Thurmond would remain as "a community within a park attraction". The NPS would continue to work cooperatively with residents to address issues associated with living in the historic town. As in Alternative 1, actions would be implemented by the NPS to provide safe drinking water and wastewater treatment via a community water system and a community wastewater collection and treatment system. In Alternative 2 these services would be extended to all new occupied visitor facilities, houses, and commercial uses.
- The NPS would work cooperatively with local leaders and landowners in the six other communities that remain within the park boundary to define shared goals and to implement strategies to accomplish shared goals. In the future, collaboration between the NPS and these communities would

generally seek to sustain community character, protect natural and cultural resources, and encourage, as appropriate, development of visitor amenities and interpretive media.

In the future the NPS would also implement actions aimed at strengthening the connection between the public and the mission of the NPS at New River Gorge National River. By strengthening this connection, the public's sense of ownership and pride in the park should increase as should its commitment to the stewardship of the park and its resources and values. Management actions aimed at communicating the NPS mission would generally include expansion of programs already underway at the park. The NPS would aggressively build the capacity of the recently created Friends of New River Gorge group by identifying, recruiting, and providing technical support to energetic and talented local leaders with the capacity to grow the organization. The NPS would implement a new program designed to provide community leaders, businesses owners, and leaders of major stakeholder groups an inside look and greater understanding of how the park is operated, how its resources are managed, and the issues facing the park. The NPS would expand the scope and frequency of its environmental education programs to reach the local youth who will be the future stewards of the park. The NPS would seek to sponsor or cosponsor special events in communities within the park and within its gateway communities on an annual or more frequent basis. The NPS would expand public awareness of the park by producing and distributing more widely a greater variety of informational materials describing the park's significance, resources and opportunities. The NPS would seek to expand coverage of park events and issues in newspapers and on television by developing relationships with editors and managers of local media outlets and by providing stories of interest. The NPS would seek to establish information kiosks at prominent locations in communities within the park and in its gateway communities.

In the future the NPS would expand efforts to work cooperatively with the park's gateway communities – Hinton, Sandstone, Meadow Bridge, Beckley, Mount Hope, Glen Jean, Oak Hill, Minden, Cunard, Fayetteville, Winona, and Ansted. The NPS would make available technical assistance to the three counties and the park's gateway communities, as appropriate, to address issues of mutual concern. This could include innovative community planning, computer mapping and database management using ArcGIS software (in support of community planning efforts), regional planning designed to provide a seamless network of parks), watershed-based water quality management planning, transportation system planning, including assistance with enhancement of road and trail connections between gateway communities and the park and design of alternative transportation systems where they would enhance park access, documenting the significance of related cultural resources adjoining or outside the park, and securing grants for projects and/or programs that would jointly benefit the park's neighboring communities and the park itself.

In the future the NPS would expand its participation in regional economic development planning efforts underway by the various regional planning agencies and organizations in southern West Virginia. The primary goal of the NPS in these efforts will be to assist with development of a seamless network of regional parks, open spaces, trails, and heritage sites within southern West Virginia that would increase protection and enhancement of biodiversity and create a greater array of educational and appropriate recreational opportunities. Other goals of the NPS would be to generally promote sustainable and informed tourism that incorporates socioeconomic and ecological concerns and to encourage and showcase environmental leadership by the NPS and the tourism industry.

In the future the NPS would expand its collaboration with Hawks Nest State Park and Babcock State Park. Collaboration would focus on developing shared strategies for dealing with common resource management issues (e.g., invasive species control, wildfire management, water quality management, etc.). The NPS would also expand its collaboration with state and county resource management and regulatory agencies. Collaboration would focus on resource management programs, such as those pertaining to water quality management, wildlife management, air quality management, and cultural resource management. Collaboration would also focus on making state resource management programs and assistance available to owners of private land in the park and on local enforcement of state and county environmental regulations.

Collaborative partnerships with non-profit and private partners would expand the park's capacity to protect park resources and provide high quality visitor interpretation and experiences. Opportunities exist associated with restoration/rehabilitation of cultural resources where there is a potential for commercial adaptive reuse that would generate funds to support long-term sustainability of resources

In the future the NPS would expand its collaboration with organized park stakeholder groups – particularly those that are representative of major park visitor groups and that have expertise and resources to assist the NPS with providing appropriate visitor facilities, with protecting resources from adverse visitor use impacts, and with enhancing visitor safety.

Collectively the impact of these actions on communities within and near the park would be local long-term major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on communities are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.14

Communities (Alternative 1) above). Impacts of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on communities within or near the park. Alternative 2 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major and beneficial impacts and a local long-term moderate and adverse impact on communities within or near the park. Alternative 1 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative long-term moderate beneficial impact on communities within or near the park.

4.4.15 Visitor Use and Visitor Experience (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. In Alternative 2 the Primitive Outdoor Experience Area composing most of the middle of the park would be managed as backcountry forest, preserving its wild character and enhancing the perception of the park's wildness as visitors experience the park. Overall, backcountry forest blocks would compose approximately 68.5 percent of the park. Impacts on visitor use and visitor experience would be local long-term minor to major and beneficial, depending upon individual visitor reasons for visiting the park and preferences for backcountry versus frontcountry experiences.

New River Gorge National River
Desired Visitor Experiences

Desired Visitor Experiences

- **Important Park Experiences that Visitor should have:**
  - Appreciate life in the gorge – the human history story
  - Appreciate/experience the wildness of the landscape
  - Experience the power of the river
  - Experience scenic beauty
- **Classic Park Experiences**
  - Paddling the New River
  - Sandstone Falls
  - Grandview
  - Thurmond
  - Endless Wall
  - Canyon Rim
  - Fayette Station Road

Cultural Resource Management Actions. Treatment of cultural resources at sites in the park would provide numerous new opportunities for visitors to appreciate the human history story of life in the gorge (see Table 4.11).

In the Early Settlement and Farming Themed Area, visitors would learn about early Appalachian settlement by visiting historic farms where interpretive programs and exhibits would be available. The farmhouses would be restored to period condition and set within restored cultural landscapes.

In the Industrial Gorge Themed Area visitors would learn about the park's industrial history related to mining, railroading, and lumbering:

- rehabilitated, restored, and stabilized commercial and residential structures at Thurmond would enable visitors to learn about life in the gorge's historic railroading towns (see Classic Experiences above)
- stabilized mining structures and town ruins at Nuttallburg Mining Complex and the Nuttallburg town site would tell stories about life in the gorge's historic coal mining towns (as in Alternative 1)

Table 4.13

New River Gorge National River
Alternative 2 – New Visitor Use Facilities

Actions *(in addition to Alternative 1)*

- **Cultural Resource Attractions**
  - restored properties
    - ✓ Richmond-Hamilton Farm
    - ✓ Vallandingham Farm
    - ✓ Phillips Farm
    - ✓ Trump-Lilly Farm
    - ✓ Thurmond Houses (some)
  - rehabilitated properties (with non-residential adaptive reuse through leasing or other agreements)
    - ✓ Camp Brookside
    - ✓ Thurmond Commercial Row
  - discovery sites (approximately 10)
- **Day-Use Facilities**
  - improvements to existing facilities
    - ✓ Brooks Falls
    - ✓ Sandstone Falls
    - ✓ Dun Glen
    - ✓ Grandview (circulation system)
  - new day-use facilities
    - ✓ Stone Cliff (relocated)
- **Camping Facilities**
  - improvements to existing primitive campgrounds
    - ✓ Stone Cliff (relocated)
  - new developed campgrounds
    - ✓ Burnwood
- **River Access Sites**
  - parking expansions at existing river access sites
    - ✓ Brooks Falls
    - ✓ Dun Glen
    - ✓ Cunard (two areas)
    - ✓ Fayette Station
  - alternative transportation system (shuttle during peak periods of visitor use with satellite parking)
    - ✓ Fayette Station
  - new river access sites
    - ✓ J&G Site
- **Parking for Climbers and Hunters**
  - in climbing areas
    - ✓ Junkyard
    - ✓ Ambassador Buttress
    - ✓ Fern Buttress
  - in hunting areas
    - ✓ Dowdy Bluff
    - ✓ Polls
- **New Trails (with trailheads)**
  - climbing access trails
    - ✓ Endless Wall
    - ✓ Sunshine Buttress
    - ✓ Bubba City
    - ✓ Junkyard
  - Fayette Mine Trail
  - Stone Cliff Mine Trail
  - Stone Cliff Coke
  - Ovens to Stone Cliff Mine Trail
  - Thurmond to Sewell Rail Trail
  - Farm Loop Trail
  - Craig Branch Equestrian Loop Trail
  - Sandstone Falls Boardwalk Expansion

- new trails would provide visitors with access to mining resource areas where they would learn about the park's mining history
- visitors would also learn about the history of life in the gorge when they come upon and find cultural resource discovery sites along trails (approximately 10 sites)

The impact of cultural resource management actions and related interpretive programs on visitor use and visitor experience would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. The central theme underlying Alternative 2 would help visitors better understand how the park is organized, the opportunities that are available, and how to travel in the complicated network of local roads and trails in the rugged terrain. Facilities and interpretive programs would support experiences in three areas of the park (see Figure 2.3 and Table 4.13):

- the **Early Settlement and Farming Themed Area** in the south where significant cultural resources would tell the stories of early settlement and farming in the Appalachians
- the **Primitive Outdoor Experience Area** in the middle of the park where the expanse of backcountry forest would remain wild and largely unfragmented
- the **Industrial Gorge Themed Area** in the north where significant cultural resources would tell the stories of America's industrialization related to coal mining, lumbering, and railroading in the late 19th and early 20th centuries

New visitor use facilities included in Alternative 2 – consistent with its overall management concept – would enable visitors to better and more easily enjoy the experiences that they "should have" at the park. Visitors would also continue to enjoy the "classic park experiences" at Sandstone Falls, Grandview, Thurmond, Endless Wall, Canyon Rim, and Fayette Station Road. New management actions consistent with the overall management concept for Alternative 2 would enhance the visitor experience at Sandstone Falls in the south and at Thurmond in the north. The impact of these actions and related interpretive programs on visitor use and visitor experience would generally be local long-term major and beneficial.

Specific visitor facility improvements would address many of the visitor experience issues related to crowding at river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few

opportunities for biking and equestrian use). Impacts on visitor use and visitor experience as a result of these improvements (see Table 4.13) would be as follows:

- day-use facility improvements would result in a local long-term minor beneficial impact
- camping improvements would result in a local long-term moderate beneficial impact
- river access improvements would result in a local long-term moderate beneficial impact; some crowding would continue to occur at the Cunard River access during peak visitation periods resulting in a local long-term moderate adverse impact
- trail improvements would result in a local long-term minor beneficial impact for hikers, bikers, and horseback riders; additional demand for biking and equestrian trails would not be satisfied resulting in a local long-term moderate adverse impact
- trailhead improvements would result in a local long-term moderate beneficial impact for climbers and hunters (made possible by boundary adjustments)

Hunting as it occurs today on most NPS-owned land in the park, in accordance with the hunting and fishing regulations of the state of West Virginia, would continue to have long-term moderate beneficial impacts and local long-term minor adverse impacts on visitor use and visitor experience (as in Alternatives 1 and 3) (see Section 4.3.15 Visitor Use and Visitor Experience (Alternative 1) above).

Park Operations Actions. Private use of rehabilitated historic buildings at Camp Brookside, Prince Brothers General Store, Thurmond Commercial Row, and numerous houses at Thurmond would occur through lease, cooperative agreement, or concession agreement. Educational use of Camp Brookside would provide opportunities for a large number of visitors to participate in a variety of educational programs. Residential use of houses at Thurmond for park staff or private rental housing would not provide opportunities for visitors. Potential commercial use of Prince Brothers General Store and at Thurmond Commercial Row could provide visitor services in parts of the park where they are currently not available. Impacts on visitor use and visitor experience would be negligible to local long-term major and beneficial.

Land Protection Actions. Adjustments to the park boundary and subsequent acquisition of properties from willing sellers would provide sites for development of parking facilities needed for visitor access to the Nuttallburg Visitor Use Area, for expansions to private paddler parking at Cunard, for access to the Dowdy Bluff hunting area, for access to the upper Glade Creek area, and for access to the Ambassador Buttress and Junkyard climbing areas (common to Alternatives 2 to 5).

The impact of providing sites for these facilities on visitor use and visitor experience would be local long-term moderate and beneficial.

Partnership and Community Collaboration Actions. Collaboration with WVDOH would seek to accomplish improvements to New River Parkway (existing River Road), WV 25 (from Glen Jean to Southside Junction), Thurmond Bridge, and Fayette Station Road (WV 82). Improvements would address visitor safety concerns, reduce congestion by enhancing roadway capacity, and/or provide pull-outs where visitors could better experience park resources. NPS would also collaborate with WVDOH to design and install signage to enhance visitor orientation to the park and to facilitate wayfinding to park facilities. Impacts on visitor use and visitor experience would be local long-term major and beneficial.

Partnerships between the NPS and the park's gateway communities would seek to enhance the visitor experience by improving availability of information about the park in local communities and by enhancing wayfinding to the park. Impacts on visitor use and visitor experience would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on visitor use and visitor experience are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.15 Visitor Use and Visitor Experience (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on visitor use and visitor experience. Alternative 2 would contribute a moderate beneficial and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts and local long-term moderate adverse impacts on visitor use and visitor experience. Alternative 2 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on visitor use and visitor experience. There would be no impairment of park resources or values related to visitor use and visitor experience.

4.4.16 Park Access (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Park management zoning would provide the framework for decision-making as to where motorized and non-motorized access would be appropriate for visitors and administrative use (common to Alternatives 2 to 5) (see Table 4.14). The nature of permitted access would be common to Alternatives 2 to 5 in park development, historic resource, and river

corridor zones because these zones are the same for each action alternative. Differences would occur in the remainder of the park where areas are allocated to either backcountry or frontcountry zones. When considering access to the park, areas of frontcountry would have greater potential access because roads and parking facilities would be permitted in interior areas of zones. In contrast, in backcountry areas roads and parking would be limited to the perimeter of the forest blocks defined by the park's subareas (see Figure 2.4).

In Alternative 2 the impact of management zone allocations and related management prescriptions on park access would be local long-term minor and beneficial. Management actions would generally maintain existing patterns of motorized access within the park, while permitting expansion of motorized access for visitors and/or administrative use in park development zones, historic resource zones, river corridor zones, and frontcountry zones. Approximately two-thirds (68.5%) of the park would be zoned backcountry where roads and parking would be limited to zone perimeters (see Figure 2.4) and where only non-motorized access could occur in the zone interior.

Public Use, Enjoyment, and Experience Management Actions. By the year 2025 approximately 1.40 million people are projected to visit the park annually, representing a 19.1 percent increase in visitation when compared to 2007 (see Section 4.4.13 above). Most visitation would occur from June through September, with peak use happening during weekends in July and August. Most park visitors are expected to travel to many sites of the classic park experiences and to seek out the various important park experiences that visitor should have, as emphasized consistent with the overall management concept in Alternative 2 (see Table 2.14 above).

Park visitation associated with management actions would slightly increase traffic in and around the park during both peak and off-peak visitation periods (see Table 4.15). Most state roads and park roads used by visitors would experience negligible to local long-term minor adverse impacts. Six would experience local long-term moderate adverse impacts during peak periods. One would experience local long-term moderate beneficial impacts during peak periods.

As in Alternative 1, improvements to Turkey Spur Road at Grandview would enhance access to visitor use facilities at the Turkey Spur Overlook. In Alternatives 2 to 5, a number of additional improvements at Grandview would address site-specific vehicular and pedestrian circulation issues. The impact of these actions on park access at Grandview would be local long-term major and beneficial.

Table 4.14

New River Gorge National River
Backcountry, Frontcountry, and River Corridor Zones – Access Management Prescriptions
(common to Alternatives 2 to 5)

- **In Backcountry Zones**

Motorized Access. Very limited motorized access for visitors and administrative use (restricted to established state roads, administrative roads, and park roads); parking located along zone perimeters

Non-Motorized Access. Non-motorized access for visitors and administrative use via established trails and new singletrack trails (to be primarily located on existing unmaintained trails); bikes permitted only on singletrack trails; horses permitted in some upland areas in the Highland-Backus and Dowdy Creek areas; trailhead parking located along zone perimeters

- **In Frontcountry Zones**

Motorized Access. Motorized visitor and administrative access and parking in zone interiors (largely utilizing established state roads, administrative roads, and park roads); new road development to serve new visitor use areas

Non-Motorized Access. Non-motorized access via established trails and new trails of a variety of types (to be primarily located on existing unmaintained trails); bikes permitted on a variety of trail types; horses permitted in some upland areas in the Bucklick Branch and Craig Branch areas

- **In River Corridor Zones**

Motorized Access. Very limited motorized access (via established state roads, administrative roads, and park roads); new road development to serve new visitor use areas

Non-Motorized Access. Non-motorized access for hikers and bikers via existing and new trails of a variety of types (to be primarily located on existing unmaintained trails); horses not permitted

- **In Historic Resource Zones**

Motorized Access. Motorized access via state roads and park roads

Non-Motorized Access. Non-motorized access for hikers and bikers via existing and new trails of a variety of types (to be primarily located on existing unmaintained trails); horses not permitted

- **In Park Development Zones**

Motorized Access. Motorized access via state roads and park roads; motorized access via shuttle might occur in congested areas

Non-Motorized Access. Non-motorized access for hikers and bikers via existing and new trails of a variety of types (to be primarily located on existing unmaintained trails); horses not permitted

TABLE 4.15 Alternative 2 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
South End of the Park			
Sandstone Falls and Visitor Attractions on River Left Future New River Parkway (under development by WVDOH)	▪ paved two-lane road with shoulders ▪ lane width adequate for safe two-way travel ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (included in Alternative 1)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Various Visitor Facilities on River Right below Hinton WV 20 (I-64 to Hinton)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (most non-truck traffic on WV 20 will be diverted to New River Parkway) (included in Alternative 1)	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
Sandstone Falls Visitor Center WV 7 (from I-64)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Middle of the Park			
Grandview WV 9 (primarily from I-64)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
McCreery, Lower Glade Creek Area, Terry Beach, Army Camp WV 41 (primarily from the west)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies (pedestrian safety deficiencies exist in vicinity of McCreery river access)	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
Lower Glade Creek Area Glade Creek Road (Park Road) (state scenic backway)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Thayer WV 25 (access primarily from the north, beginning at Stone Cliff New River Bridge)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
North End of the Park			
Thurmond, Dun Glen, and Stone Cliff	▪ paved two-lane road ▪ roadway lane width not adequate for safe two-way	▪ no current or anticipated roadway capacity or safety deficiencies for small	▪ Peak Period – local long-term moderate adverse impact

TABLE 4.15 Alternative 2 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
WV 25 (from Glen Jean)	travel due to nine one-lane bridges (minimal to no shoulders) ▪ tight curves ▪ short stopping distances	vehicles ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Off-Peak Period – local long-term minor adverse impact
Thurmond Town Site various state roads	▪ one-lane Thurmond Bridge needs replacement (due to structural, capacity and safety issues) ▪ numerous one-lane paved roads ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight turns ▪ short stopping distances	▪ very poor capacity ▪ numerous roadway capacity and safety deficiencies ▪ future Thurmond Bridge replacement would address bridge deficiencies and likely include visitor parking (as mitigation) near the Thurmond Depot Visitor Center	▪ Peak Period – local long-term moderate adverse impact (assuming roadway improvements by the state) ▪ Off-Peak Period – local long-term minor adverse impact (assuming roadway improvements by the state)
Cunard Cunard Access Road (park road)	▪ one-lane gravel road ▪ constrained two-way travel (some pull-offs; minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-minor adverse impact
Nuttallburg Visitor Use Area Keeney Creek Road (WV 85/2)	▪ one-lane paved road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of new trailheads at the Nuttallburg Visitor Use Area (included in Alternative 1)	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Canyon Rim Visitor Center and Burnwood Complex US 19	▪ four-lane divided highway (with shoulders) ▪ safe maximum gradients ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies in vicinity	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Fayette Station Fayette Station Road (WV 82)	▪ paved one-way road ▪ some pull-offs ▪ minimal to no shoulders ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor existing capacity, especially on peak visitation days ▪ access constrained due to road geometry for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate beneficial impact (assuming implementation of peak period shuttle service from a new parking area at Fayette Station top) ▪ Off-Peak Period – local long-term moderate adverse impact

As in Alternative 1, a few new hiking and equestrian trails, and trails providing access to climbing areas, would be developed in the park (see Table 4.16). In addition, in Alternative 2 new trails would be added in the north and south ends of the park to enhance park access to cultural resource sites telling the park's early settlement and industrial history stories. Trailhead parking would be provided for all new trails. The impact of these trail additions (along with trailhead parking) on park access would be local long-term moderate and beneficial.

In Alternative 2 enhancements to parking at the Stone Cliff river access would occur in conjunction with relocation of existing day-use and campground facilities at Stone Cliff to a site above the New River floodplain. Parking would also be expanded at

Table 4.16

New River Gorge National River
Alternative 2 – Access Changes Needed to Achieve Desired Conditions in Visitor Use Areas

Actions

- **Internal Park Road System**
  - Turkey Spur Road improvements (as in Alternative 1)
  - Grandview circulation and parking improvements (common)
- **State Road System** (NPS and WVDOH collaboration to design and implement)
  - New River Parkway (as in Alt. 1)
  - Thurmond Bridge Replacement (as in Alt. 1)
  - WV 25 improvements (Glen Jean to Southside Junction) (common)
  - Fayette Station Road (WV 82) improvements (as in Alt. 1)
  - wayfinding signage along state roads (as in Alt. 1)
- **Parking**
  - at Thurmond
    - ✓ parking to be added by WVDOH in conjunction with Thurmond Bridge Replacement) (more spaces than in Alternative 1)
    - ✓ new parking at Commercial Row
  - in climbing areas (new)
    - ✓ Junkyard
    - ✓ Ambassador Buttress
    - ✓ Fern Buttress
  - in hunting areas (new)
    - ✓ Dowdy Bluff
    - ✓ Polls
  - at cultural resource sites (new)
    - ✓ Richmond-Hamilton Farm
    - ✓ Cochran Farm
    - ✓ Vallandingham Farm
- **River Access Sites**
  - parking expansions at existing river access sites
    - ✓ Brooks Falls
    - ✓ Stone Cliff
    - ✓ Dun Glen
    - ✓ Cunard
    - ✓ Fayette Station
  - alternative transportation system (shuttle during peak periods of visitor use)
    - ✓ Fayette Station
- **New Trails (with trailheads)**
  - new trails (as in Alternative 1)
    - ✓ Nuttallburg Visitor Use Area trails
    - ✓ Bucklick Branch Equestrian Loop Trail
    - ✓ Laing Loop Nature Trail (no new trailhead)
    - ✓ climbing access trails (Endless Wall, Sunshine Buttress, Bubba City, and Junkyard areas)
  - new trails
    - ✓ Fayette Mine Trail
    - ✓ Stone Cliff Mine Trail
    - ✓ Stone Cliff Coke Ovens to Stone Cliff Mine Trail
    - ✓ Thurmond to Sewell Rail Trail
    - ✓ Farm Loop Trail
    - ✓ Craig Branch Equestrian Loop Trail
    - ✓ Sandstone Falls Boardwalk Expansion

four other river access sites in the south and north ends of the park (see Table 4.16). A shuttle system would be used during peak visitation periods to alleviate crowding at the Fayette Station river access and on Fayette Station Road (WV 82). The impact of these actions on river access would be local long-term moderate and beneficial.

At Thurmond roadway, parking, and alternative transportation system improvements would enhance access. Working collaboratively with WVDOH, improvements would be made to WV Route 25 from Glen Jean to Southside Junction. Visitors would continue to be encouraged to park in the lot at Southside Junction and walk to Thurmond via the Thurmond Bridge. New parking would be provided in Thurmond at a small lot adjacent to Commercial Row. In the future additional parking would likely be developed in conjunction with the planned WVDOH project to replace the Thurmond Bridge (see Partnership and Community Collaboration Actions below).

As in Alternative 1, improvements at Nuttallburg Mining Complex and Nuttallburg would provide parking (where none is currently available) for visitors at four trailheads from which they would access trails leading to cultural resource sites at the former Nuttallburg Mining Complex and Nuttallburg town site. In Alternatives 2 to 5, parking would be added in locations where visitors now park along roads near popular climbing and hunting areas (see Table 4.16). In Alternative 2, parking would also be provided at cultural resource in the south end of the park. At Thurmond, parking would be added in conjunction with replacement of the Thurmond Bridge (as in Alternative 1) and at Commercial Row. The impact of these actions on park access would be local long-term major and beneficial.

Partnership and Community Collaboration Actions. The NPS would continue to work with WVDOH on several projects (see Table 4.16).

As in Alternative 1, the NPS would continue to work collaboratively with the city of Hinton to secure safe and legal access to the New River waterfront within the city.

As in Alternative 1, the NPS would continue to work with the CSX Corporation and other property owners to acquire wherever possible legal access to popular visitor use sites.

The NPS would also work collaboratively with its gateway community partners, state agencies, railroad companies, and private landowners to develop trail connections from the park to nearby communities and other visitor attractions, such as Hawks Nest State Park, Babcock State Park, the Gauley River National Recreation Area, Ansted, Oak Hill, Mount Hope, Beckley, and Meadow Bridge (common to Alternatives 2 to 5).

Assuming these collaborative efforts would be effective, the impact on park access would be local long-term major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on park access are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 2 would generally be the same as those described for Alternative 1 (see Section 4.3.16 Park Access (Alternative 1) above). Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term minor to moderate beneficial impact and a cumulative long-term minor to moderate adverse impact on park access. Alternative 2 would contribute negligibly to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on park access. Alternative 2 would contribute negligibly to the total cumulative long-term minor to moderate beneficial impacts and to the cumulative long-term minor to moderate adverse impacts on park access.

4.4.17 Park Operations (Alternative 2)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of natural and scenic resource protection and would guide development of targeted strategies to protect and improve nationally significant resources. Planning and research would greatly facilitate adequate resource management. Improvements to the park water quality program would help park managers better meet their responsibilities and develop the partnerships necessary to improve park water quality, the public's number one park management issue. Active management of natural resources as well as strategic use of partner organizations, grants, universities, scholars, interns, and volunteers would allow park staff to better meet the park mission and goals for natural resources. Staffing would be redirected to areas most likely to create beneficial impacts on natural and scenic resources resulting in a local long-term major beneficial impact on park operations.

In Alternative 2 much of the center portion of the park would be managed as backcountry. Law enforcement patrols and maintenance staff would rely less upon vehicles for patrol and maintenance, as existing logging and mining roads gradually recover. This would cause a minor need for additional staff, resulting in a local short-term minor adverse effect on the park budget. Overall the impact on park operations would be local long-term major and beneficial.

Cultural Resource Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of cultural resource protection and would guide development of targeted strategies to

protect and improve nationally significant resources. Planning and research would greatly facilitate adequate resource management. Active management of cultural resources as well as strategic use of partner organizations, grants, universities, scholars, interns, and volunteers would allow park staff to better meet the park mission and goals for cultural resources. Staffing would be redirected to the areas most likely to create beneficial impacts on cultural resources. As in Alternative 1, some less frequently used items in the park's collection would be transferred to a new regional storage facility and NPS would build a new small facility outside the floodplain for items that are needed at the park. This would improve management of the collections. Taken together these actions would result in a local long-term major beneficial impact on park operations.

In Alternative 2 historic farm structures would be restored and used as exhibits and associated cultural landscapes would be rehabilitated. At Thurmond some buildings would be restored to use as exhibits; others would be leased through the historic leasing program. Restoration of structures and maintaining them as exhibits in good condition would likely require additional park maintenance staff. Leasing some of the buildings would result in less need for park maintenance staff to maintain those buildings, freeing them to keep restored historic structures in good condition. Additional NPS project management staff might be needed as structures are restored. Collectively these actions would result in a local short-term minor adverse effect on the park budget and a local long-term moderate beneficial impact on park operations.

Public Use, Enjoyment, and Experience Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of interpretive and education programs in the park. Programs would be redirected to reach target and underserved audiences, particularly young people. Wastewater management improvements at public sites would limit the need for port-a-potties and the maintenance and law enforcement staff necessary to manage them, while also improving water quality. New hiking, biking and equestrian trails would improve user satisfaction with park facilities with only a minor need for additional staff. Staffing would be redirected to the areas most likely to create beneficial impacts for park audiences. These actions would result in a local long-term major beneficial impact on park operations.

Alternative 2 proposes that new trails connecting historic and cultural sites be developed, requiring minor additions to park maintenance staff. Volunteers from user groups would be encouraged to help maintain trails, creating a need for staff trained to manage volunteer services. This would be accomplished by retraining and reorganizing existing trails staff. New programs for children and adults at Camp Brookside would create the need for new staff and partnership actions. Interpretation would be focused in the Early Settlement and Farming Themed Area and the Industrial Gorge Themed Area; this would be accomplished through a

realignment of existing staff. Collectively these actions would result in a local short-term minor adverse effect on the park budget and a local long-term moderate beneficial impact on park operations.

Park Operations Actions. In Alternatives 2 to 5 new sources of funding would become available as NPS works with users and visitors to create partnerships, friends groups, and other mechanisms to support park purposes. Better partnership management and better land use management in adjacent communities would create more opportunities for beneficial working relationships between the park, the local counties and communities, and park neighbors. Enhancing the volunteer program would expand NPS' ability to maintain trails, climbing areas, cultural and natural resources. These actions would result in a local long-term major beneficial impact on park operations.

Alternative 2 calls for leasing some historic structures. Depending on the physical condition of historic structures, terms of the lease, and other factors, it is possible that leasing could provide a minor income stream for the park. This would result in a local long-term minor beneficial impact on park operations.

Land Protection Actions. In Alternatives 2 to 5 the addition of six areas and 212.5 acres to the park to provide for parking and access would improve the ability of rangers to manage these uses within the park. The park would work with neighbors to promote better stewardship of privately-owned lands within the boundary and to reduce impacts on them from park use. This would result in a local long-term moderate beneficial impact on park operations.

Alternative 2 provides for new management zoning for the park. This will make it easier for park employees to monitor and enforce use, and manage newly acquired sites. These actions will result in a local long-term minor beneficial impact to park operations.

Partnership and Community Collaboration Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would lead NPS to implement actions making to make the park more relevant to local users and park neighbors. Working with local gateway communities in collaborative and innovative ways will improve NPS' ability to serve visitors and meet natural and cultural resource protection needs. Development of friends groups, improved relationships with user groups, and working with local governments will enhance the park's ability to meet its mission. These actions are urgently needed to improve the relationships between the park and its neighbors. To better provide for partnership and community collaboration, more staff would be required. While these actions would result in a local short-term minor adverse impact to the park budget, they would also result in a local long-term major beneficial impact on park operations.

- **Cumulative Impacts**

Other past, present and reasonably foreseeable actions that have had or would have impacts on park operations and facilities include the completion of the New River Parkway, continued minimum maintenance of state roads to and within the park, other transportation improvements, and continued private ownership of lands within the park, particularly in communities. The building of the New River Parkway would mean that law enforcement patrol and maintenance of the River Road area would be greatly improved; other transportation improvements might make remote areas of the park more accessible. The minimum maintenance of state roads such as McCreery Road would continue to complicate park management efforts. Private ownership of land within the park boundaries, particularly in communities, also creates law enforcement issues and conflicts between private owners and visitors. Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term minor adverse impact to park operations. Alternative 2 would contribute an imperceptible beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 2 would result in local short-term minor adverse impacts on the park budget and local long-term minor to major beneficial impacts on park operations. Alternative 2 would contribute an imperceptible beneficial impact to the cumulative long-term minor adverse impact on park operations.

4.4.18 Unavoidable Adverse Impacts (Alternative 2)

Unavoidable adverse impacts are major adverse impacts that cannot be fully mitigated or avoided. Alternative 2 would not result in any major adverse impacts.

4.4.19 Irreversible and Irretrievable Commitments of Resources (Alternative 2)

An irreversible commitment of resources is one that cannot be reclaimed, restored, or otherwise returned to its condition prior to disturbance. An irretrievable commitment of resources is a loss of something that once gone, cannot be replaced.

Proposed management actions would generally contribute to resource protection and preservation and would be expected to minimize the occurrence of irreversible or irretrievable impacts. Nevertheless some irretrievable impacts would occur:

- construction projects, landscape restoration and reestablishment, and park operations would use limited amounts of nonrenewable resources, including materials and energy; once these resources are committed they would be irretrievable
- minor amounts of soil would be permanently lost as a result of soil erosion and sedimentation from areas (approximately 190 acres) disturbed by cultural resource management actions, development of new visitor use facilities, and restoration actions

- potential exists at cultural resource sites undergoing restoration or rehabilitation for an irretrievable commitment of resources as a result of any loss of undiscovered below ground resources
- irretrievable commitments of resources could also occur at cultural resource sites undergoing restoration to a specific time period if material from subsequent periods is lost

Surveys, avoidance through design, documentation, and other mitigation would occur before any restoration or rehabilitation begins, thereby minimizing irretrievable impacts to cultural resources.

4.4.20 Relationship between Short-Term Uses of the Environment and Long-Term Productivity (Alternative 2)

In Alternative 2 most of the park would be protected in a natural state with an emphasis on reducing existing forest fragmentation and avoiding future forest fragmentation. Approximately 68.5 percent of the park would be managed as backcountry largely unaltered by future human-induced impacts. Approximately 22.3 percent of the park would be managed as frontcountry forest with minimal future human-induced impacts. The NPS would continue to manage the park to maintain ecological processes and native and biological communities, and to provide for appropriate recreational activities consistent with the preservation of natural and cultural resources. Previously disturbed areas would be restored to return them to productivity, as funding permits. Any actions the NPS takes in the park would be taken with consideration to ensure that uses do not adversely affect the productivity of biotic communities.

Disturbance of the park's soils, water quality, vegetation, and wildlife, due to visitor use and the construction of new facilities would reduce the long-term productivity of the park in localized areas; however, overall there would likely be only a small effect on the park's long-term productivity.

4.5 Environmental Consequences of Alternative 3

4.5.1 Physiography, Geology, and Soils (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to protect the park's physiography, geology, and soil resources (as in Alternative 1) by:

- generally allowing physiography, geology, and soil resources that are disturbed by natural phenomena – such as landslides – to recover naturally
- restoring/reclaiming physiography, geology, and soil resources altered by human activity – such as mining (in cooperation with WV DEP)
- protecting park resources from potential impacts associated with natural gas/oil production or mining activities that are permitted by valid oil, gas, and mineral rights (and that may be conducted within the park in compliance with appropriate state permits and Section 9b Regulations pursuant to the Surface Mining Control and Reclamation Act) (in cooperation with WVDEP)
- reducing soil erosion and sedimentation by restoring disturbed areas (such as areas disturbed by ATVs), as funding permits

In addition, in Alternative 3 management actions affecting physiography, geology, and soils would focus on the following:

- managing approximately one-half (43.0%) of the park as backcountry and one-tenth (7.7%) of the park as river corridor, with implementation of related management prescriptions that would maintain natural geologic processes and features to persist largely unaltered by further human-induced impacts
- managing the remainder of the park (49.3%) as frontcountry, historic resource, and park development zones, with implementation of related management prescriptions that would allow natural geologic processes and features to persist with minimal human-induced impacts
- reducing threats to geologic and soil resources by identifying areas prone to landslides and locating visitor and park operations facilities outside of areas where construction would increase the potential for mass movement

Impacts of natural resource management actions on physiography, geology, and soil resources would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact soil

resources. Conceptual planning suggests that treatment actions at cultural resource sites would likely disturb approximately 31 acres of previously disturbed soils.[1] Most disturbances would be associated with stabilization and vegetation removal at discovery sites (30 to 35 sites); minor disturbance would occur in conjunction with rehabilitation of two historic structures (see Table 4.17). During the treatment period erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Following the treatment period sites would be revegetated with native grass species. Impacts on soil resources would be local short-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact physiography, geology, and soil resources. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 175 acres.[2] Approximately 70 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. Most disturbances would occur as a result of developments of new camping facilities and trails. During the construction period erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Impacts on soil resources would be local short-term minor to moderate and adverse.

Following construction approximately 80 acres would be replanted with native species and 80 acres would be stabilized through placement of crushed stone or other surface treatment for roads, parking facilities, and some trails. Minimal areas of existing undisturbed soils would be permanently developed, primarily including the sites of small visitor facilities such as vault toilets and changing stations. Impacts on soil resources would be local long-term minor and adverse.

Visitor use at existing plus new or improved facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails (including approximately 15 acres within the tread of reestablished or new trails), leading to increased potential for soil erosion. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on soils would be local long-term minor and adverse.

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

Land Protection Actions. Impacts of future land protection actions on physiography, geology, and soil resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.1 Physiography, geology, and soil resources (Alternative 2) above).

Partnership and Community Collaboration Actions. NPS would continue to work collaboratively with WV DEP to facilitate reclamation of areas disturbed by mining and to protect park resources from the potential impacts of mineral resource extraction on lands adjoining or near the park (as in Alternative 1). Impacts on physiography, geology, and soil resources would be local long-term minor and beneficial.

NPS would provide ongoing technical assistance to communities within the park and others engaged in resource management activities beyond the park boundary that have the potential to positively impact the park's geologic and soil resources (common to Alternatives 2 to 5). Impacts on physiography, geology, and soil resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on physiography, geology, and soils are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.1 Physiography, Geology, and Soils (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on physiography, geology, and soil resources. Alternative 3 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term moderate to major beneficial impacts, local short-term minor adverse impacts, and local long-term minor to moderate and adverse impacts on physiography, geology, and soil resources. Alternative 3 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on physiography, geology, and soil resources. There would be no impairment of park resources or values related to physiography, geology, and soil resources.

4.5.2 Floodplains[1] (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would seek to protect, preserve and restore the natural resources and functions of floodplains (common to Alternatives 2 to 5) by:

- maintaining natural flows and hydropatterns
- restoring natural drainage patterns on all disturbed lands (in cooperation with WV DEP when part of mined land reclamation projects)
- maintaining rainfall-runoff dynamics and sediment delivery and transport processes at natural levels in backcountry, frontcountry, and river corridor zones and at somewhat altered levels in cultural landscape and park development zones
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries
- maintaining natural floodplain vegetation and – based on further feasibility study in coordination with the U.S. Army Corps of Engineers – promoting maintenance of natural floodplain vegetation through controlled releases from Bluestone Dam that provide periodic maximum floods
- removing debris from floodplains following flooding events
- preventing placement of additional obstructions in the New River and, wherever possible, removing structures in the New River that are no longer in use – such as abandoned bridge piers

Impacts on floodplains would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. In the future visitor use facilities within the floodplain would be limited to facilities that are dependent upon locations in proximity to water and for which non-floodplain sites would not be a practicable alternative. Existing facilities to remain within the floodplain would generally include river accesses, picnic facilities, trails, and river rest stops. Improvements to existing facilities and new facilities in the floodplain would include: improvements to the existing Mermaid Beach river access; addition of river launches at Meadow Creek West, Bass Lake and Surprise; and addition of disabled boater access at some river accesses.

Construction of improvements in the floodplain at existing and new visitor use sites would occur in areas that have experienced recent prior disturbance and would involve minimal placement of impervious surfaces within the floodplain. Mitigation measures would minimize potential for flooding or for other adverse impacts on

[1] *Floodplains with a recurrence interval of 100 years*

floodplain values associated with these improvements. At the new Meadow Creek West, Bass Lake, and Surprise river accesses, mitigation measures would include the following:

- during final design, the NPS would complete topographic surveys and flood elevation studies, and a floodplain statement of findings, as appropriate
- all facilities within the floodplain would be designed to meet standards and criteria of the National Flood Insurance Program (44 CFR Part 60)
- all park roads, trails, and parking areas in the floodplain would be designed with unpaved surfaces
- all facilities not functionally dependent on proximity to water – such as toilets and overnight camping facilities – would be located above the floodplain; parking would also be located above the floodplain to the maximum extent possible
- all existing previously disturbed areas within the floodplain on the site (not needed for new facilities) would be restored

At Surprise construction of new river access facilities would impact a mature oak-tulip poplar silverbell floodplain forest on Red Ash Island. Impacts on the floodplain forest would be mitigated by limiting visitor use facilities in the floodplain to the minimum possible, including an access road, an access trail, small drop-off area, disabled river access, and launch site; the primary drop-off area, parking, staging areas, visitor changing/comfort stations, and picnic facilities would be located above Red Ash Island and outside of the floodplain at the base of the gorge wall. Collectively these new visitor use facilities would moderately affect natural floodplain values and minimally increase the use of the floodplain, resulting in a local long-term moderate adverse impact on floodplains.

Existing campgrounds in the floodplain at Hellems Beach, Stone Cliff, and Dun Glen would be eliminated and natural floodplain vegetation would be restored (common to Alternatives 2 to 5). Impacts on floodplains would be local long-term minor and beneficial.

Park Operations Actions. Impacts of floodplain management informed through findings of detailed floodplain studies would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.3.2 Floodplains (Alternative 1) above).

Impacts of maintaining the existing park headquarters and operations facilities at Glen Jean within the 100-year floodplain would continue to be local long-term minor and adverse (common to Alternatives 1 to 5) (see Section 4.3.2 Floodplains (Alternative 1) above).

Land Protection Actions. Impacts of future land protection actions on floodplains would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.2 Floodplains (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of partnership and community collaboration actions on floodplains would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.2 Floodplains (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on floodplains are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.2 Floodplains (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on floodplains. Alternative 3 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to major beneficial impacts and local long-term minor adverse impacts on floodplains. Alternative 3 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on floodplains. There would be no impairment of park resources or values related to floodplains.

4.5.3 Water Quality (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain water quality in the New River and its tributaries in its natural condition free of pollutants generated by human activity (as in Alternative 1) by:

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions

In addition, in Alternative 3 management actions affecting water quality would focus on:

- maintaining a nearly continuous strip of natural riparian vegetation along the river where only low impact recreation would occur in locations and at levels that do not negatively impact the river (common to Alternatives 2 to 5)
- managing almost one-half (43.0%) of the park as backcountry, with implementation of related management prescriptions that would generally eliminate further forest fragmentation and the potential for human-induced impacts to water quality
- managing almost one-half (47.8%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce further forest fragmentation and the potential for human-induced impacts to water quality

Collectively these actions would protect natural vegetation and reduce soil disturbance and subsequent erosion and sedimentation potentially associated with forest disturbances and visitor use. Impacts on water quality would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact water quality. Conceptual planning suggests that treatment actions at cultural resource sites would likely disturb approximately 31 acres of previously disturbed soils (see Table 4.17).[1] During the treatment period use of best management practices (BMPs) would mitigate potential water quality impacts associated with sediment-laden stormwater discharges from disturbed areas, in accordance with requirements of the WV NPDES Stormwater Program. Following the treatment period sites would be revegetated with native species. Impacts on water quality would be local short-term minor to moderate and adverse.

Permanent removal of impervious surfaces associated with modern structures at two early settlement farms would enhance on-site infiltration of stormwater and reduce site runoff (as in Alternative 1). Impacts on water quality would be negligible.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact water quality. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 175 acres.[2] Approximately 70 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. During the construction period use of best management practices (BMPs) would mitigate potential water quality impacts

[1] *In addition to the approximate three acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

associated with sediment-laden stormwater discharges from disturbed areas, in accordance with requirements of the WV NPDES Stormwater Program. Impacts on water quality would be local short-term minor to moderate and adverse.

Following construction approximately 80 acres would be replanted with native species and 80 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Over the long-term unpaved roads and parking areas would be subject to compaction and would have the potential to generate increased runoff and to convey pollutants from parking areas and roads to streams and the river. Permanent stormwater management measures would be used in accordance with requirements of the WV NPDES Stormwater Program to reduce pollutants in stormwater discharged from developed sites. Impacts on water quality would be local long-term minor and adverse.

Visitor use at existing plus new or improved facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails (including approximately 15 acres within the tread of reestablished trails), leading to increased potential for erosion and subsequent sedimentation in streams and the river. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on water quality would be local long-term minor and adverse.

Park Operations Actions. Impacts of future park operations on water quality would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.3 Water Quality (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on water quality would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.3 Water Quality (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future partnerships and collaboration on water quality would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.3 Water Quality (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on water quality are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.3 Water Quality (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on water quality. Alternative 3

would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to major beneficial impacts, local short-term minor to moderate adverse impacts, and local long-term minor adverse impacts on water quality. Alternative 3 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on water quality. There would be no impairment of park resources or values related to water quality.

4.5.4 Vegetation (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native plants and natural landscapes (as in Alternative 1) (exclusive of wildland fire management). Actions would generally focus on the following:

- generally allowing natural landscapes that are disturbed by natural phenomena – such as landslides, floods, and fire – to recover naturally
- restoring natural landscapes altered by human activity, such as logging, mining, agriculture, transportation, utilities, and exclusion of natural fire
- preserving and restoring native plant populations and the communities in which they occur (particularly rare or significant plant communities)
- aggressively treating invasive exotic plant and insect pest species

In addition, in Alternative 3 management actions affecting vegetation would include the following:

- managing almost one-half (43.0%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated impacts to diversity and vertical understory structure
- managing almost one-half (47.8%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure
- maintaining a nearly continuous strip of natural riparian vegetation along the river where only low impact recreation would occur in locations and at levels that do not negatively impact riparian communities, particularly cobble and flatrock communities

- removing non-water-dependent uses from the floodplain and restoring native floodplain vegetation (common to Alternatives 2 to 5)
- managing wildland fire to diminish the risk and consequences of severe wildland fires and, to the extent possible, to restore and protect the natural biological diversity and natural disturbance regime of the park (common to Alternatives 2 to 5)
- using prescribed fire to promote ecosystem health and native vegetation diversity in fire-dependent forest communities, such as rimrock pine communities and xeric oak-hickory forests (common to Alternatives 2 to 5)

Impacts of natural resource management actions on vegetation would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact native plants and plant communities. Conceptual planning suggests that cultural resource management actions would affect approximately 31 acres or previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.17).

Rehabilitation of two buildings would require disturbance to approximately 1 acre of previously disturbed land. Affected vegetation would generally include a mix of ornamental trees and shrubs, non-native plants, and old field successional species. Following the treatment period sites would be appropriately revegetated where cultural landscapes are restored. Impacts on vegetation would be local long-term minor to minor and adverse.

Disturbance would also occur in conjunction with stabilization and protection at approximately 30 to 35 discovery sites, along with development of visitor use improvements and installation of interpretative media. The typical discovery site would encompass an area of ruins in the park's mixed mesophytic forest – approximately one acre in size or less – overgrown by a mix of variable-age trees, shrubs, and grasses, with many sites dominated by kudzu and other non-native plants. Treatment would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining resources. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that fragmentation would be minimized or would not occur. Cleared areas would be revegetated with native grasses. Impacts on vegetation would be local long-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact vegetation. Conceptual planning suggests that development of

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*

new or improved visitor use facilities would disturb approximately 175 acres.[1] Approximately 70 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. Affected vegetation would primarily include grasses, weeds, successional old field species, and non-native plants. However, development of a new river access at Surprise would require limited clearing on Red Ash Island where a significant mature floodplain forest is present (dominant forest on the island is oak-tulip poplar/silverbell, with subdominant sycamore-ash floodplain forest and sycamore-river birch riverscour woodland). Future site planning and construction of new facilities would seek to minimize disturbance to forested land, particularly on Red Ash Island and where existing unmaintained trails are improved to provide official park trails. Following construction approximately 80 acres would be replanted with native species and 80 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Approximately 15 acres would be within the tread of reestablished or new trails. Impacts on vegetation would be local long-term minor to moderate and adverse.

Visitor use throughout the park would have the potential to impact native plants and plant communities – particularly sensitive, rare, or significant vegetation communities. Management actions would protect sensitive, rare, or significant vegetation communities from visitor use impacts, as needed, generally including (common to Alternatives 2 to 5):

- in riparian areas (especially cobble and flatrock communities) – eliminate fires and overnight camping in all riparian areas; designate day-use river reststops downstream of Cunard
- on river bars – eliminate fires on most bars and close to visitor use bars with sensitive resources that are impacted by camping and day-use
- in clifftop communities – provide designated routes to climbing areas and limit access seasonally to critical cliff natural areas
- in flatrock communities – control visitor access; extend or add boardwalks to protect areas where visitor use occurs, such as at Sandstone Falls

Impacts on vegetation would be local long-term moderate and beneficial.

Land Protection Actions. Impacts of future land protection actions on vegetation resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.4 Vegetation Resources (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of implementing a community-based approach to managing wildland fire on vegetation would be local

[1] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.4 Vegetation Resources (Alternative 2) above).

Impacts of future collaborative management actions on significant unfragmented forest blocks that are outside but near the boundary of the park would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.4 Vegetation (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on vegetation are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.4 Vegetation (Alternative 1) above). Alternative 3 in conjunction with the impacts of other past, present, and reasonably foreseeable actions would result in a cumulative long-term moderate adverse impact on vegetation. Alternative 3 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term moderate to major beneficial impacts and local long-term minor to moderate adverse impacts on vegetation. Alternative 3 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on vegetation. There would be no impairment of park resources or values related to vegetation.

4.5.5 Aquatic Wildlife (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain and restore natural stream ecosystems with hydrologic features supporting a full range of natural aquatic organisms by (as in Alternative 1):

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions
- removing debris from floodplains following flooding events

In addition, in Alternative 2 management actions affecting aquatic habitats and dependent wildlife would focus on the following (common to Alternatives 2 to 5):

- maintaining natural flows and hydropatterns
- restoring natural drainage patterns on all disturbed lands (in cooperation with WV DEP when part of mined land reclamation projects)
- maintaining rainfall-runoff dynamics and sediment delivery and transport processes at natural levels in backcountry, frontcountry, and river corridor zones and at somewhat altered levels in cultural landscape and park development zones
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- maintaining natural floodplain vegetation and – based on further feasibility study in coordination with the U.S. Army Corps of Engineers – promoting maintenance of natural floodplain vegetation through controlled releases from Bluestone Dam that provide periodic maximum floods
- protecting upland wetlands and their processes
- eliminating introduction of non-native species to aquatic ecosystems
- eliminating actions to supplement or maintain selective non-native species in aquatic ecosystems (as appropriate, based on further study of non-native species impacts)
- allowing select introduced species that may alter some process and interactions (e.g. continue WV State black fly treatments)

Impacts on aquatic habitat and dependent wildlife would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would seek to avoid or minimize direct and indirect impacts on aquatic habitat and dependent wildlife associated with visitor use facilities and visitor use.

Physical modifications to aquatic habitat and dependent wildlife caused by development of visitor use facilities would generally not occur except where they could not be avoided because a facility is water-dependent. Where water-dependent uses require location of new facilities along the river bank and in the near-shore area, some degree of physical modification to aquatic habitat and dependent wildlife would be unavoidable. This would occur at the new Meadow Creek West, Terry Beach, and Surprise river accesses where new river launches would be developed, requiring limited site grading and some degree of bottom hardening to provide a safe surface for walking and to protect the bank and river bottom from erosion due to visitor use. Launch areas would be confined to the smallest possible area needed to accommodate average daily visitor demand.

Impacts of new or improved visitor uses on aquatic habitat and dependent wildlife would be local short-term minor and adverse during construction and local long term minor and adverse following construction.

Potential visitor use impacts on aquatic habitat and dependent wildlife would continue to occur throughout the park where visitors have uncontrolled access to the New River, tributary streams, and special aquatic habitat and dependent wildlife. Indirect impacts would include those resulting from trampling of riparian vegetation, subsequent soil exposure, soil erosion, and sedimentation. Direct impacts would occur where visitors cross streams while hiking, walk in streams or the river while fishing, or disturb the river bottom while swimming, launching boats, or stopping at river rest stops. These impacts would be mitigated by designing new trails (approximately 93 miles) with the minimum number of tributary stream crossings and – where crossings could not be avoided – placement of footbridges to avoid hiker impacts, as funding permits. In the future sensitive aquatic habitat and dependent wildlife at and in the vicinity of popular backcountry river rest stops would be closed to day-use. At river launches visitor access to the river would be restricted to the minimum area possible and riparian areas adjoining launch sites would be closed. Educational efforts would help deter visitor impacts through signage, informational materials, and interpretive programs that explain ecological values and sensitivity to disturbance of riparian areas and special aquatic habitat and dependent wildlife. Impacts on aquatic habitat and dependent wildlife would be local long-term minor and adverse.

Park Operations Actions. Impacts of future park operations actions on aquatic habitat and dependent wildlife would be local long-term major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.5 Aquatic Wildlife (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on aquatic habitat and dependent wildlife would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.5 Aquatic Wildlife (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future partnership and community collaboration actions on aquatic habitat and dependent wildlife would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.5 Aquatic Wildlife (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on aquatic habitat and dependent wildlife are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.5 Aquatic Wildlife

(Alternative 1) above. Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on aquatic habitat and dependent wildlife. Alternative 3 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to major beneficial impacts and local long-term minor adverse impacts on aquatic habitat and dependent wildlife. Alternative 3 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on aquatic habitat and dependent wildlife. There would be no impairment of park resources or values related to aquatic habitats and dependent wildlife.

4.5.6 Terrestrial Wildlife (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native animals (as in Alternative 1) by:

- perpetuating native animal life as part of the park's natural ecosystem by maintaining or restoring natural processes to the extent practically feasible
- relying on natural processes to control populations and habitats of native species to the greatest extent possible

In addition, in Alternative 3 management actions affecting terrestrial habitat and dependent species would focus on the following:

- managing almost one-half (43.0%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated impacts to diversity and vertical understory structure
- managing almost one-half (47.8%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- preserving the high diversity of native migratory species populations – particularly neotropical birds – and their habitats inside the park and cooperating with others to ensure preservation of their populations and habitats outside the park (common to Alternatives 2 to 5)

Impacts on terrestrial habitat and dependent species would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact terrestrial habitat and dependent species. Conceptual planning suggests that cultural resource management actions would likely disturb approximately 31 acres of previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.17).

Habitat impacts at approximately 30 to 35 discovery sites would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining resources on sites typically one acre in size or less. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that forest fragmentation would be minimized or would not occur. Field survey prior to treatment actions would determine species present in the vicinity of each site and appropriate protection measures. Treatment would be scheduled so that it would occur during winter when wildlife are hibernating or during the non-breeding season. Wildlife in the vicinity of each site would be expected to migrate to adjacent habitat areas. Impacts on terrestrial habitat and dependent species would likely be local long-term minor and adverse.

Restoration or rehabilitation of historic structures and associated cultural landscapes in the immediate vicinity of buildings would occur at two sites and affect approximately one acre. Pre-treatment and post-treatment habitat conditions would be quite similar, characterized by a mix of native grasses and ornamental plantings, although non-native plants would be removed where they are currently present at some sites. Affected wildlife would generally include habitat generalists that live in close association with human habitation. During the treatment period wildlife would be expected to migrate into adjacent habitat areas; following the treatment period they would likely migrate back to restored sites. Impacts on terrestrial habitat and dependent species would likely be local short-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Development of new facilities – and visitor use of those facilities – would have the potential to disturb or displace wildlife or cause areas to be avoided by wildlife. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 175 acres, dispersed among 33 sites and 81 miles of trails (primarily existing unmaintained trails that would be improved).[2] Approximately 70 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. Affected vegetation would primarily include grasses, weeds,

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

successional old field species, and non-native plants. However, development of a new river access at Surprise would require limited clearing on Red Ash Island where a significant mature floodplain forest is present. Field survey prior to treatment actions would determine terrestrial wildlife species present in the vicinity of each visitor use site and the appropriate protection measures needed. Future site planning and construction of new facilities would seek to minimize disturbance to forested land, particularly on Red Ash Island and where existing unmaintained trails are improved to provide official park trails. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that forest fragmentation would be minimized or would not occur. Construction would generally be scheduled so that it would occur during winter when wildlife are hibernating or during the non-breeding season. Following construction approximately 80 acres would be replanted with native species and 80 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Approximately 15 acres would be within the tread of reestablished or new trails. Wildlife would be expected to avoid sites during construction or would only travel through sites construction activity has abated, resulting in a local short-term minor adverse impact on wildlife and dependent species. Following construction, the permanent loss of habitat combined with disturbance, injury, or death associated with long-term visitor use and management of visitor use sites would result in a local long-term minor to moderate adverse impact on terrestrial habitat and dependent species.

Continuation of hunting in the park in accordance with all applicable regulations and policies adopted by the responsible management agencies would continue to have negligible impacts on terrestrial habitat and dependent species (as in Alternative 1) (see Section 4.3.6 Terrestrial Wildlife (Alternative 1) above).

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 above). Maintenance of open fields and forest edge along their perimeter would enhance wildlife habitat diversity locally in the park. The impact on terrestrial habitat and dependent species would be local long-term minor and beneficial.

Land Protection Actions. Impacts of future land protection actions on terrestrial habitat and dependent species would likely be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.6 Terrestrial Wildlife (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of cooperation regarding hunting and game management between the NPS and the WV DNR on terrestrial habitat and dependent species would be negligible (as in Alternative 1) (see Section 4.3.6 Terrestrial Wildlife (Alternative 1) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on terrestrial habitat and dependent species are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.6 Terrestrial Wildlife (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on terrestrial habitat and dependent species. Alternative 3 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to major beneficial impacts, local short-term minor adverse, and local long-term minor to moderate adverse impacts on terrestrial wildlife. Alternative 3 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on terrestrial wildlife. There would be no impairment of park resources or values related to terrestrial wildlife.

4.5.7 Rare, Threatened, and Endangered Species (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to generally increase the populations of rare, threatened, or endangered species in the park and to secure sufficient, suitable habitat to "recover" species designated as threatened or endangered (as in Alternative 1). Actions would generally focus on the following:

- managing habitat of threatened and endangered species to maintain their value for species recovery
- managing habitat of state-listed species to maintain their value for species maintenance to the greatest extent possible
- managing other native species of special management concern to the park to maintain their natural abundance and distribution
- controlling detrimental non-native species impacts on rare, threatened, or endangered species

In addition, in Alternative 3 management actions affecting terrestrial habitat and dependent species would focus on the following:

- managing almost one-half (43.0%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated

impacts to diversity and vertical understory structure, including rare species and communities

- managing almost one-half (47.8%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure, including rare species and communities
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- preserving the high diversity of native migratory species populations – particularly neotropical birds – and their habitats inside the park and cooperating with others to ensure preservation of their populations and habitats outside the park (common to Alternatives 2 to 5)

Impacts on rare, threatened, and endangered species would be local long-term major and beneficial.

Cultural Resource Management Actions. Conceptual planning suggests that cultural resource management actions would likely disturb approximately 31 acres of previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.17). Restoration or rehabilitation of historic structures in the immediate vicinity of buildings would occur at two sites and affect approximately 1 acre. At approximately 30 to 35 discovery sites potential habitat impacts would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining structures on sites typically one acre in size or less. Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

Public Use, Enjoyment, and Experience Management Actions. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 175 acres, dispersed among 33 sites and 81 miles of trails

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*

(primarily existing unmaintained trails that would be improved).[1] Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

Impacts of the ongoing program to stabilize and gate mine portals where rare, threatened, and endangered species are present would continue. Gates in abandoned mine openings throughout the park would continue to be local long-term moderate and beneficial (common to Alternatives 1 to 5) (see Section 4.3.7 Rare, Threatened, and Endangered Species (Alternative 1) above).

To protect designated species visitor use in certain areas of the park would be limited to day-use only, including Rush Run, Sewell, Beauty Mountain, Endless Wall, Sunshine Buttress, and Ames (common to Alternatives 2 to 5).[2] Impacts on rare, threatened, or endangered species would be local long-term moderate and beneficial.

Additional protections in climbing areas – including Endless Wall, Sunshine Buttress, Alabama, and Ames – would include provision of designated trails to climbing routes that would reduce the current proliferation of social trails that potentially disturb habitat of designated species (common to Alternatives 2 to 5). Impacts on rare, threatened, or endangered species would be local long-term moderate and beneficial.

Park Operations Actions. Impacts of future park operations actions on rare, threatened or endangered species would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.7 Rare, Threatened, and Endangered Species (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on rare, threatened or endangered species would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.7 Rare, Threatened, and Endangered Species (Alternative 2) above).

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[1] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

[2] *Visitor use in the Nuttallburg Visitor Use Area would also be limited to day-use only pursuant to the Nuttallburg Visitor Use Area DCP/EA (NPS 2008c)*

Partnership and Community Collaboration Actions. Impacts of future collaborative management actions on rare, threatened, and endangered species and their habitats that are outside but near the boundary of the park would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.7 Rare, Threatened, and Endangered Species (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on rare, threatened, and endangered species are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.7 Rare, Threatened, and Endangered Species (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on rare, threatened, and endangered species. Alternative 3 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on rare, threatened, and endangered species. Alternative 3 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on rare, threatened, and endangered species. There would be no impairment of park resources or values related to rare, threatened, and endangered species.

4.5.8 Scenic Resources (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Resource management actions would seek to protect a range of views in all areas of the park, allowing visitors to experience the extent of the gorge, the river, the forest, and the rim by (as in Alternative 1):

- removing non-native plants at sites where they cause a major scenic or aesthetic intrusion
- reclaiming abandoned mine lands at sites throughout the park (in cooperation with the WV DEP)

In addition, in Alternative 3 management actions affecting scenic resources would focus on the following:

- managing approximately almost one-half (43.0%) of the park as backcountry with implementation of related management prescriptions that

would protect unfragmented forest blocks and natural scenic qualities from human-induced impacts

- managing approximately almost one-half (47.8%) of the park as frontcountry with implementation of related management prescriptions that would protect natural scenic qualities by reducing human-induced disturbance

- maintaining a nearly continuous strip of natural riparian habitat along the New River, thereby also preserving its natural scenic qualities (common to Alternatives 2 to 5)

Impacts on scenic resources would be local long-term minor to major and beneficial.

Cultural Resource Management Actions. Removal of modern structures at three sites where potentially significant early settlement cultural landscapes exist (as in Alternative 1) and treatments at approximately 30 to 35 cultural resource sites (to be managed as discovery sites) would enhance the quality of scenic resources fundamental to the park (see Section 4.5.10 Cultural Landscapes (Alternative 3) above). Impacts on scenic resources would be local long-term minor to moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New visitor use facilities and expansion of existing facilities would alter the park setting in the vicinity of improvements:

- approximately 81 miles of new park trails would be developed, mostly by improving existing unmaintained trails to single-track trails approximately 24 inches in width, requiring minor alteration to the park setting

- approximately 22 small parking areas would be developed to provide trailheads for hikers, climbers, and horseback riders, mostly along existing roads on forest block perimeters, and on previously disturbed sites

- one existing day-use facility would be improved through minor additions or expansions, most of which would enhance the existing setting, although there could be some minimal impacts to vegetation at some sites

- approximately 5 parking areas at existing river accesses would be expanded, with minimal changes to the park setting

- one new parking area would be developed near U.S. Route 19 for satellite parking in support of a visitor shuttle system

- three new river accesses and related day-use areas would be developed requiring clearing and alteration of the riparian zone at the river edge where the river launch would be located; two would be developed in

conjunction with new developed campgrounds in areas that have been previously disturbed generally converting old successional field areas to developed uses; at Surprise development of related parking facilities on the bench above the New River would alter the wooded natural setting

- four new developed campgrounds would be developed on open sites, requiring conversion of early successional old field vegetation on previously disturbed sites to developed visitor uses
- five existing primitive campgrounds would be expanded, requiring small areas of clearing for development of new campsites and road access that would slightly alter the park setting
- an existing primitive campground and day-use area in the floodplain would be relocated to a new site in an area of mixed vegetation where some minor clearing of trees would be required
- approximately ten new groups of backcountry campsites would require small clearings for campsites in clusters along park trails in the backcountry and frontcountry
- a new park road on the Highland-Backus Plateau would be developed through expansion of an existing unmaintained road and minor improvements to the existing administrative road to Surprise

Overall the impacts of visitor use facilities on scenic resources would be local long-term minor and adverse.

Existing campgrounds in the floodplain at Hellems Beach, Stone Cliff, and Dun Glen would be eliminated and natural floodplain vegetation would be restored. Impacts on scenic resources would be local long-term minor and beneficial.

Land Protection Actions. Impacts of future land protection actions on scenic resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.8 Scenic Resources (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future collaborative management actions on scenic resources that are outside but near the park boundary would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.8 Scenic Resources (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on scenic resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.8 Scenic Resources (Alternative 1)

above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on scenic resources. Alternative 3 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to major beneficial impacts and local long-term minor impacts on scenic resources. Alternative 3 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on scenic resources. There would be no impairment of park resources or values related to scenic resources.

4.5.9 Archeological Resources (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect and preserve archeological resources against natural destruction wherever practicable by eliminating and avoiding natural resource impacts, stabilizing sites and structures, and monitoring conditions. Management actions including removal of vegetative overgrowth at areas of known or potential archeological resources would be preceded by research sufficient to identify and evaluate such resources. The impact on archeological resources receiving stewardship actions would be local long-term minor and beneficial.

Backcountry zoning would apply to almost one-half (43.0%) of the park. In backcountry zones potential disturbance to archeological resources resulting from park development could occur only along zone perimeters and new trails and at a few designated backcountry camping sites (Figure 2.4). The impact on archeological resources would be local long-term moderate and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to identify and evaluate park archeological resources and to assess their condition and threats to them. Eligible archeological resources would continue to be nominated for listing in the National Register, as appropriate. Archeological resources would generally continue to be left undisturbed except where intervention could be justified based on compelling needs for research, interpretation, site protection, or park development.

Specific management actions at cultural resource sites that could potentially disturb archeological resources would include (see Table 4.17):

- historic building rehabilitation at three cultural resource sites

Table 4.17

New River Gorge National River
Alternative 3 – Site-Specific Cultural Resource Management Actions

Actions *(in addition to Alternative 1 see Table 4.6 above)*

- **Historic Structure Rehabilitation** (with reuse through the park leasing program)
  - Trump-Lilly Farm (farmhouse)
  - Richmond-Hamilton Farm (farmhouse)
  - Vallandingham Farm (farmhouse)
- **Discovery Site Stabilization and/or Maintenance**
  - treatment actions – at approximately 30 to 35 discovery sites – as needed to stabilize resources and/or to protect resources from potential visitor use impacts

- stabilization and protection actions at approximately 30 to 35 discovery sites

Strategies to protect archeological resources would be implemented as for Alternative 1 (see Section 4.3.9 Archeological Resources above). The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Public Use, Enjoyment, and Experience Management Actions. Ground disturbance associated with development of new facilities and enhancement of existing facilities could affect archeological resources at sites throughout the park. Strategies to protect archeological resources would be implemented as for Alternative 1 (see Section 4.3.9 Archeological Resources above). The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Expanded visitor use in historic resource zones, along trails, in the vicinity of recreation sites, and at discovery sites (approximately 30 to 35 sites) would increase vulnerability of archeological resources to surface disturbance, inadvertent damage, and vandalism. Loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence could result. NPS staff or volunteer presence and emphasizing visitor education would discourage vandalism and inadvertent destruction of cultural remains. Because expanded visitor use would be spread throughout the park, along the new through park trail and several other new trails, at numerous new camping facilities, and at a large number of discovery sites at or near these new facilities, the potential for The impact on archeological sites would be dispersed. This would make resource protection more difficult for NPS staff and volunteers. The impact on archeological resources would be local long-term minor and adverse.

Increased use of archeological sites and resources for public education and interpretation at discovery sites throughout the park would increase awareness and appreciation of resources, thereby increasing support for their preservation, and resulting in a negligible to local long-term minor beneficial impact on archeological resources.

Park Operations Actions. Impacts of future provision of water supply and wastewater treatment services at Thurmond on archeological resources would be negligible to local long-term minor and adverse (as in Alternative 1) (see Section 4.3.9 Archeological Resources (Alternative 1) below).

Land Protection Actions. Impacts of future land protection actions on archeological resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.9 Archeological Resources (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on archeological resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.9 Archeological Resources (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on archeological resources. Alternative 3 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to archeological resources.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to moderate beneficial impacts and local long-term minor adverse impacts on archeological resources. Alternative 3 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on archeological resources. There would be no impairment of park resources or values related to archeological resources.

4.5.10 Cultural Landscapes (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions in the park would be expanded to include managing vegetation at discovery sites. Management would seek to control invasive plants at each site on an ongoing basis. Pruning or removal of natural forest vegetation would occur regularly where it threatens to overtake cultural landscapes or jeopardizes the integrity of landscape features. Stormwater management would seek to protect landscapes from impacts of flooding, erosion, sedimentation, and landslides. Impacts on cultural landscapes would be local long-term moderate and beneficial.

Cultural landscape sites where natural resource management actions would not be implemented would continue to be at risk due to vegetation overgrowth, poor drainage, and/or landslide susceptibility (common to Alternatives 2 to 5). Impacts on cultural landscapes would be local long-term minor to moderate and adverse.

Cultural Resource Management Actions. Efforts would continue to include all cultural landscapes in the park's *Cultural Landscapes Inventory* (NPS 2005a), to identify and nominate eligible landscapes to the National Register, and to prepare cultural landscape reports for all cultural landscapes (as in Alternative 1).

Specific management actions affecting cultural landscapes would include (see Table 4.17):

- Approximately 30 to 35 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along the Through Park Trail. Many of these sites would be early settlement farms and ruins of historic structures at former sites of industrial activities or related settlements in the gorge. Where these sites involve cultural landscape components, maintenance activities would mitigate deterioration of cultural landscape components by protecting their condition; stabilization would reestablish the stability of unsafe damaged or deteriorated cultural landscape components while maintaining their existing character.

All management actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on cultural landscapes would be local long-term minor and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Impacts of new visitor facilities on cultural landscapes would include:

- Where historic structures would be rehabilitated for housing at three early settlement farmhouses, use modifications such as development of parking and walkways, could result in local long-term minor and adverse impacts on the cultural landscape.

- Circulation system improvements at Grandview would potentially affect the cultural landscape (common to Alternatives 2 to 5) (see Section 4.4.16 Visitor Access above). During construction ground disturbance would result in a local short-term minor to moderate adverse impact to the cultural landscape. Following construction the impact on the cultural landscape would be local long-term minor and adverse.

- Parking improvements at Thurmond in the vicinity of Commercial Row would affect the cultural landscape (see Section 4.5.16 Visitor Access below). Mitigating actions and impacts would be similar to those implemented for circulation improvements at Grandview (see preceding section).

- At discovery sites (approximately 30 to 35 sites), management actions would include installation of contemporary facilities and structures to control visitor access to cultural landscape components (if present) that would be vulnerable to damage from visitor use. Design and location of contemporary facilities and structures, as needed, would be considered within the context of the significance of the landscape and would minimize

adverse impacts on the character and features of each cultural landscape to the maximum extent practicable. During construction ground disturbance would result in local short-term minor adverse impacts on cultural landscapes. The long-term impacts on the cultural landscapes would be local long-term minor and adverse.

- Approximately 81 miles of new park trails would enhance visitor access to recreation sites and cultural resources sites in the park. Most new trails would use previously existing unmaintained trails, some of which might be determined historically significant upon further investigation and coordination with the WV SHPO. Future development of a park trail management plan would include Section 106 compliance with the WV SHPO during which historic significance would be assessed and mitigation measures incorporated into trail system design, as appropriate. The long-term impacts on cultural landscapes would be local long-term minor and adverse.

Visitor use throughout in the park would continue to impact cultural landscapes, particularly in remote areas where ranger patrols and NPS staff are not routinely present. Visitor use impacts would generally include inadvertent disturbance and vandalism. Improved access to cultural landscapes at discovery sites along the Through Park Trail would increase the potential for visitor use impacts in those locations, although increased presence of NPS staff along popular trails would help educate visitors about appropriate resource stewardship. Impacts on cultural landscapes would be local long-term minor and adverse.

Park Operations Actions. Impacts of future provision of water supply and wastewater treatment services at Thurmond on cultural landscapes would be negligible to local long-term minor and adverse (as in Alternative 1) (see Section 4.3.10 Cultural Landscapes (Alternative 1) above).

Land Protection Actions. Impacts of future land protection actions on cultural landscapes would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.10 Cultural Landscapes (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on cultural landscapes are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.10 Cultural Landscapes (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on cultural landscapes. Alternative 3 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to cultural landscapes.

- **Conclusion**

Management actions in Alternative 3 would result in local short-term minor to moderate adverse impacts, local long-term minor to moderate beneficial impacts, and local long-term minor to moderate adverse impacts on cultural landscapes. Alternative 3 would contribute a minor beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on cultural landscapes. There would be no impairment of park resources or values related to cultural landscapes.

4.5.11 Historic Structures (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b) (as in Alternative 1). Stewardship would generally include removal of non-native plants and improvements to drainage in the vicinity of historic structures. The impacts to historic structures receiving stewardship actions would be local long-term minor and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b) and to obtain determinations of their eligibility for the National Register (as in Alternative 1). Stewardship would generally include building stabilization to provide protection from weather and vandalism. Maintenance of previously stabilized structures would continue. The impacts to historic structures receiving stabilization and ongoing maintenance would be local long-term minor and beneficial.

Further stewardship of historic structures beyond the actions included in Alternative 1 (see Table 4.6) would include the following (see Table 4.17):

- Some individual structures already determined eligible for the National Register (those owned by the NPS) would be rehabilitated, including three early settlement farms.
- Approximately 30 to 35 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along the Through Park Trail. Some of these sites would be early settlement farms and historic structures at former sites of industrial activities or related settlements in the gorge. Where these sites involve an historic building, maintenance activities would mitigate building deterioration by protecting its condition; stabilization would reestablish the stability of unsafe damaged or

deteriorated structural components while maintaining existing building character.

All management actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on historic structures would generally be local long-term minor to moderate and beneficial. Where structures are rehabilitated for leasing or visitor services, concession use modifications, such as those needed to accommodate accessibility and additional means of egress, could result in local long-term minor to moderate and adverse impacts.

Public Use, Enjoyment, and Experience Management Actions. Historic structures leased for commercial use or housing at Prince Brothers General Store and three early settlement farmhouses would be susceptible to wear and tear from increased use, inadvertent damage, or vandalism. Leases and agreements would seek to reduce the potential for adverse impacts on historic structures associated with their adaptive reuse including maintenance requirements to avoid or mitigate adverse impacts of visitor use. Impacts on historic structures would be local long-term minor to moderate and adverse.

Park Operations Actions. Impacts of future provision of water supply and wastewater treatment services at Thurmond on historic structures would be negligible to local long-term minor and adverse (as in Alternative 1) (see Section 4.3.17 Historic Structures (Alternative 1) above).

Land Protection Actions. Impacts of future land protection actions on historic structures would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.11 Historic Structures (Alternative 2) above).

Partnership and Community Collaboration Actions. NPS would continue to provide technical assistance to the city of Hinton to assess treatment options for rehabilitation and adaptive reuse of the city-owned Hinton Depot and to assist with implementation of treatment by helping to identify funding options and to develop grant applications (as in Alternative 1). Impacts on historic structures would be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on historic structures are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.11 Historic Structures (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on historic structures. Alternative 3 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to historic structures.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to moderate beneficial impacts and local long-term minor to moderate adverse impacts on historic structures. Alternative 3 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on historic structures. There would be no impairment of park resources or values related to historic structures.

4.5.12 Ethnographic Resources (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Backcountry zoning would preserve unfragmented blocks of mixed mesophytic forest in 43.0 percent of the park, while frontcountry zoning where human-induced fragmentation would be decreased would apply to 47.8 percent of the park. This would protect the forest and its associated watershed which is the ethnographic resource identified as vital to the park's traditionally associated people and groups (Hufford et al 2006). Impacts on ethnographic resources would be local long-term major and beneficial.

Natural resource management actions would also protect specific natural and cultural resources found within the park's mixed mesophytic forest that are important to the park's traditionally associated people, such as plants, animals, and sites of former towns, settlement areas, and industrial sites (as in Alternative 1). Impacts to ethnographic resources would be local long-term minor to moderate and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to include appropriate studies and consultations to further document ethnographic resources and uses, traditionally associated people, and other affected groups, and cultural affiliations to park resources. Eligible ethnographic resources would continue to be nominated for listing in the National Register, as appropriate.

Cultural resource treatment at historic structures, cultural landscapes, and discovery sites would rehabilitate or stabilize resources that are likely to be found through further research to include significant ethnographic resources (see Table 4.17 and Sections 4.5.10 Cultural Landscapes and 4.5.11 Historic Buildings above). Impacts on ethnographic resources would be local long-term minor to moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New visitor use facilities at historic structures, cultural landscapes, and discovery sites

(approximately 30 to 35 sites) would impact resources that are likely to be found through further research to include significant ethnographic resources (see Table 4.19 and Sections 4.5.10 Cultural Landscapes and 4.5.11 Historic Buildings above). Impacts on ethnographic resources if determined to be present would be local long-term minor and adverse.

Impacts associated with increased visitor use on ethnographic resources, if determined to be present, would include the following (see Sections 4.5.10 Cultural Landscapes and 4.5.11 Historic Buildings above):

- local long-term minor to moderate and adverse impacts at sites where structures (with associated cultural landscapes) are rehabilitated and leased for commercial use or housing
- local long-term minor to moderate and adverse impacts elsewhere in the park, particularly in remote areas and in the vicinity of discovery sites (approximately 30 to 35 sites) where ranger patrols and NPS staff are not routinely present

Land Protection Actions. Impacts of future land protection actions on ethnographic resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.12 Ethnographic Resources (Alternative 2) above).

Partnership and Community Collaboration Actions. The NPS would continue to consult with traditionally associated groups and Indian tribes (as in Alternative 1) (see Section 4.3.12 Ethnographic Resources (Alternative 1) above). Impacts on ethnographic resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on ethnographic resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.12 Ethnographic Resources (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on ethnographic resources. Alternative 3 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to ethnographic resources.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to moderate beneficial impacts and local long-term minor to moderate adverse impacts on ethnographic resources. Alternative 3 would contribute a minor beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on ethnographic resources. There would be no impairment of park resources or values related to ethnographic resources.

4.5.13 Regional and Local Economy (Alternative 3)

In Alternative 3 – Through Park Trail – the NPS would expand the park's contributions to the Southern West Virginia's tourism industry and economic environment by offering a broader variety of recreational and interpretive experiences to visitors and residents.

The development the of a north-south trail system through the entire New River Gorge would positively impact the New River Gorge's appeal as a recreational destination for hikers and bikers. The trail system would be supported by the expansion of access point and camping facilities in several locations along the river. Most of the visitation increase in this alternative would occur in the middle section of the park, between the Sandstone Visitor Center and Thurmond.

The park would expand its contributions to Southern West Virginia's tourism industry and socioeconomic environment. Fayetteville would continue to be the gateway community for the area's whitewater rafting industry, Beckley would continue its current function as a primary lodging, dining and visitor service area in support of tourism to New River Gorge, and communities along the US 19 corridor such as Oak Hill, Mount Hope, Bradley and North Beckley would continue to provide limited visitor support services.

Improvements in the middle section of the park related to the through park trail, the upgrading of McKendree Road, and side trails would produce moderate visitation increases in this area. The junction of I-64 and the New River Parkway at Sandstone Visitor Center would also experience a moderate visitation increase in this alternative.

In the south end of the park, moderate visitation increases would occur along the New River Parkway, particularly in and around the restored Hinton Depot. In the park's north end a major visitation increase would occur at the restored Nuttallburg town site, and minor visitation increases would result from the through park trail and its related side trails.

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Impacts of these expenditures on the regional and local economy would be regional short-term minor

and beneficial and regional long-term minor and beneficial (common to Alternatives 2 to 5) (see Section 4.4.13 Regional and Local Economy (Alternative 2) above).

Cultural Resource Management Actions. Rehabilitation and ongoing maintenance of Trump-Lilly Farm and Prince Brothers General Store would result in expenditures by the NPS for labor and materials. These initiatives would enhance the attractiveness of these sites to visitors. Impacts on the regional and local economy would be regional short-term minor and beneficial and regional long-term minor and beneficial.

Adaptive reuse through the park's leasing program of the Prince Brothers General Store for visitor services or commercial use would potentially enhance attractiveness of the Prince area to visitors and contribute to local visitor spending (as in Alternative 1). Impacts on the regional and local economy would be regional long-term minor and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would continue to encourage economic activity in areas with active visitor use facilities and support services.

The total annual number of recreational visits to the New River Gorge National River is projected to increase by 282,900 from the current (2007) level of 1,178,000 in this alternative, a 24.0 percent growth rate. Table 4.18 displays projected direct and indirect economic impacts resulting from this increased level of visitor activity. The middle of the park would gain visitation from recreational use on the through park trail and its side trails, scenic touring along McKendree Road, and the New River Parkway. The south end of the park would attract visitors from the New River Parkway as well. The north end of the park would add visitors at Nuttallburg and along Fayette Station Road.

Several industries that benefit from NPS stewardship of New River Gorge, including outfitting, lodging, dining, and convenience goods, would continue to support significant levels of employment. Businesses in these industries are mostly concentrated along the US 19 corridor, particularly in Fayetteville and Beckley.

Industries that have jobs supported by NPS-related activities at New River Gorge would also continue to realize significant impacts on earnings and the housing market.

Impacts on the regional and local economy would be regional long-term minor and beneficial.

Park Operations Actions. Total recurring costs by NPS would be about $15.7 million annually, while total one-time costs would be about $28.7 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional

TABLE 4.18 Alternative 3 – Through Park Trail – Annual Direct and Indirect Economic Impacts ($2007)

Impact Type	2005	Added as a Result of Alternative 3	2025
Visitation			
Visitors	1,178,000	282,900	1,460,900 (+24%)
Direct Impacts			
Jobs	2,000	494	2,494
Earnings	$28,317,960	$6,958,500	$35,276,460
NPS Spending	$7,208,400	$2,740,000	$9,948,400
Visitor Spending	$67,910,000	$16,687,300	$84,597,300
Indirect Impacts			
Jobs	850	208	1,058
Earnings	$7,870,810	$1,934,100	$9,804,910
NPS Spending	$4,159,970	$1,581,230	$5,741,200
Visitor Spending	$33,568,090	$8,248,600	$41,816,690
Total Impacts			
Jobs	2,850	702	3,552
Earnings	$36,188,770	$8,892,600	$45,081,370
NPS Spending	$11,368,370	$4,321,230	$15,689,600
Visitor Spending	$101,478,090	$24,935,900	$126,413,990

2005 baseline and Impact factors per recreational visit are adapted from Versel 2006

long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have Impacts on the regional and local economy are identified in Section 4.2.4 (see Table 4.4). These actions would generally be the same as those described for Alternative 1 (see Section 4.3.13 Regional and Local Economy (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate beneficial impact on the regional and local economy. Alternative 3 would contribute a minor beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in regional short-term minor to moderate beneficial and regional long-term minor to moderate beneficial impacts on the regional and local economy. Alternative 3 would contribute a minor beneficial impact to the total cumulative long-term moderate beneficial impact on the regional and local economy.

4.5.14 Communities (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions implemented within the park would have the potential to affect natural resource conditions in communities within or near the park. As in Alternative 1, these primarily include management actions that would seek to protect water quality, floodplains, forest, and aquatic and terrestrial habitats and dependent species (see Section 4.4.14 Communities (Alternative 2) above. In addition, in Alternative 3 several management actions (common to Alternatives 2 to 5) would seek to:

- protect, preserve and restore the natural resources and functions of floodplains
- maintain and restore natural stream ecosystems supporting a full range of natural aquatic organisms
- maintain the park's native plants and natural landscapes

Collectively the impact of these management actions on natural resources in communities within and near the park would be local long-term major and beneficial.

Cultural Resource Management Actions. In Alternative 3, cultural resource management actions (in addition to those included in Alternative 1) with the potential to affect resources of potential significance to residents of communities within or near the park include:

- Three early settlement farms in the south end of the park would be rehabilitated.
- Approximately 30 to 35 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along the Through Park Trail.

Cultural resource treatment at historic structures, cultural landscapes, and discovery sites would rehabilitate or stabilize resources that are likely to be found through further research to include significant ethnographic resources.

The impact of these actions on the residents of communities within or near the park would be local long-term minor and beneficial.

Public Use, Enjoyment, and Experience Management Actions. In Alternative 3, visitor facility improvements would address many of the visitor experience issues of concern to residents of communities within or near the park who use the park. These relate to crowding at river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few opportunities for biking and equestrian use). Impacts on visitor use and visitor experience as a result of these improvements (see Table 4.19) would be as follows:

- day-use facility improvements would result in a local long-term minor beneficial impact
- camping improvements would result in a local long-term major beneficial impact
- river access improvements would result in a local long-term major beneficial impact
- trail improvements would result in a local long-term major beneficial impact for hikers, bikers, and horseback riders; additional demand for biking and equestrian trails would not be satisfied resulting in a local long-term moderate adverse impact
- trailhead improvements would result in a local long-term moderate beneficial impact for climbers and hunters (made possible by boundary adjustments)

As in Alternative 1, hunting within the park would continue as it occurs today on most NPS-owned land, in the park in accordance with the hunting and fishing regulations of the state of West Virginia. During hunting season safety hazards would continue to exist in areas of the park where other visitor use is high and hunting is permitted. Impacts on residents of communities within or near the park who hunt would be local long-term moderate and beneficial. Continued safety hazards would result in a local long-term minor and adverse impact on residents of communities within and near the park.

Park Operations Actions. Total recurring costs by NPS would be about $15.7 million annually, while total one-time costs would be about $28.7 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

Land Protection Actions. Impacts of future land protection actions on communities would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.14 Communities (Alternative 2) above).

Partnership and Community Collaboration Actions. As in Alternative 2, the NPS would implement a number of actions aimed at sustaining communities within the park, focused on Hinton, Thurmond, Meadow Creek, Backus, Highland, Prince/Quinnimont, Terry, and Thayer. Partnership actions would also be focused on building relationships with gateway communities, other government agencies, economic development entities, user groups, and the park's "friends". The types of collaborative actions would be similar to those in Alternative 2 (see Section 4.4.14 Communities (Alternative 2) above), although the focus of the actions would differ with the Alternative 3 Through Park Trail theme, described in Section 2.6.5 through 2.6.7 above. Collectively the impact of these actions on communities within and near the park would be local long-term major and beneficial.

- **Cumulative Impact**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on communities are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). These generally include growth and development on private property, public infrastructure projects, and transportation system improvements. Collectively these actions have improved the quality of life in communities within and near the park. They have generally enhanced opportunities for education, attracted new employers to the area thereby providing new jobs, provided locations for needed commercial services, generally enhanced regional and local access, and protected public health and environmental quality by making available clean water, wastewater treatment, and other public services. Impacts of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on communities within or near the park. Alternative 3 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on communities within or near the park. Alternative 3 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative long-term major beneficial impact on communities within or near the park.

New River Gorge National River
Desired Visitor Experiences

Desired Visitor Experiences

- **Important Park Experiences that Visitor should have:**
  - Appreciate life in the gorge – the human history story
  - Appreciate/experience the wildness of the landscape
  - Experience the power of the river
  - Experience scenic beauty
- **Classic Park Experiences**
  - Paddling the New River
  - Sandstone Falls
  - Grandview
  - Thurmond
  - Endless Wall
  - Canyon Rim
  - Fayette Station Road

4.5.15 Visitor Use and Visitor Experience (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. The park's most intact unfragmented forest blocks would be managed as backcountry forest preserving their wild character and enhancing the perception of the park's wildness as visitors experience the park. Overall, backcountry forest blocks would compose approximately 43 percent of the park. Impacts on visitor use and visitor experience would be local long-term minor to major and beneficial, depending upon individual visitor reasons for visiting the park and preferences for backcountry versus frontcountry experiences.

Cultural Resource Management Actions. Treatment of cultural resources at sites in the park would provide numerous new opportunities for visitors to appreciate the human history story of life in the gorge (see Table 4.17):

- visitors would learn about the history of life in the gorge when they come upon and find cultural resource discovery sites located along the through park trail, other new and existing trails, and to a lesser extent along roads (approximately 30 to 35 sites)
- life in a railroading town during the park's industrial era would continue to be exemplified at Thurmond
- stabilized mining structures and town ruins at Nuttallburg Mining Complex and the Nuttallburg town site would tell stories about life in the gorge's historic coal mining towns (as in Alternative 1)

The impact of cultural resource management actions and related interpretive programs on visitor use and visitor experience would be local long-term moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. The central theme underlying Alternative 3 would help visitors better understand how the park is organized, the opportunities that are available, and how to travel in the complicated network of local roads and trails in the rugged terrain. Facilities and interpretive programs would support diverse opportunities for visitor experiences throughout the park (see Figure 2.5 and Table 4.19). A new Through Park Trail would enable visitors to explore the park from end-to-end, providing expanded access to cultural resource sites, scenic vistas, and natural features. Opportunities for recreation, scenic resource, and interpretive experiences would be expanded in the middle of the park – where few visitor facilities now exist – by addition of new trails and camping facilities at the river level and on the plateau. In cooperation with the WV Division of Highways, improvements to the McKendree Road – along with its designation as a state scenic backway – would dramatically enhance access in the middle of the park making possible a variety of new visitor experiences, including those for visitors not

physically able to explore the park by foot, bicycle, or boat. Throughout the park visitors would learn about the park's history as they explore the park on an expanded trail network and come upon cultural resource "discovery sites" where interpretive media would tell the park's stories.

New visitor use facilities included in Alternative 3 – consistent with its overall management concept – would enable visitors to better and more easily enjoy the experiences that they "should have" at the park. Visitors would also continue to enjoy the classic New River Gorge experiences at Sandstone Falls, Grandview, Thurmond, Endless Wall, Canyon Rim, and Fayette Station Road; new management actions consistent with the overall concept for Alternative 3 would enhance the visitor experience only at Thurmond. The impact of these actions and related interpretive programs on visitor use and visitor experience would generally be local long-term major and beneficial.

Specific visitor facility improvements would address many of the visitor experience issues related to crowding at river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few opportunities for biking and equestrian use). Impacts on visitor use and visitor experience as a result of these improvements (see Table 4.19) would be as follows:

- day-use facility improvements would result in a local long-term minor beneficial impact
- camping improvements would result in a local long-term major beneficial impact
- river access improvements would result in a local long-term major beneficial impact
- trail improvements would result in a local long-term major beneficial impact for hikers, bikers, and horseback riders; additional demand for biking and equestrian trails would not be satisfied resulting in a local long-term moderate adverse impact
- trailhead improvements would result in a local long-term moderate beneficial impact for climbers and hunters (made possible by boundary adjustments)

Hunting as it occurs today on most NPS-owned land in the park, in accordance with the hunting and fishing regulations of the state of West Virginia, would continue to have long-term moderate beneficial impacts and local long-term minor adverse impacts on visitor use and visitor experience (as in Alternatives 1 and 2) (see Section 4.3.15 Visitor Use and Visitor Experience (Alternative 1) above).

Park Operations Actions. Private use of three early settlement farmhouses would occur through lease, cooperative agreement, or concession agreement. Residential

Table 4.19

New River Gorge National River
Alternative 3 – New Visitor Use Facilities

Actions *(in addition to Alternative 1)*

- **Cultural Resource Attractions**
  - discovery sites (30 to 35)
- **Day-Use Facilities**
  - improvements to existing facilities
    - ✓ Grandview (circulation system)
  - new day-use facilities
    - ✓ J&G Site
    - ✓ Stone Cliff (relocated)
- **Camping Facilities**
  - improvements to existing primitive campgrounds
    - ✓ Glade Creek
    - ✓ Grandview Sandbar
    - ✓ Mill Creek
    - ✓ Army Camp
    - ✓ Thayer
    - ✓ Stone Cliff (relocated)
  - new developed campgrounds
    - ✓ Bass Lake
    - ✓ J&G Site
    - ✓ Terry Beach
    - ✓ Highland-Backus Plateau
  - new designated backcountry campsite groups
    - ✓ along Through Park Trail
    - ✓ in Highland-Backus Plateau area
- **River Access Sites**
  - parking expansions at existing river access sites
    - ✓ McCreery
    - ✓ Thayer
    - ✓ Cunard (two areas)
    - ✓ Fayette Station
  - alternative transportation system (shuttle during peak periods of visitor use with satellite parking)
    - ✓ Fayette Station
  - new river access sites
    - ✓ J&G Site
    - ✓ Bass Lake
    - ✓ Surprise
- **Parking for Climbers and Hunters**
  - in climbing areas
    - ✓ Junkyard
    - ✓ Ambassador Buttress
    - ✓ Fern Buttress
  - in hunting areas
    - ✓ Dowdy Bluff
    - ✓ Polls
- **New Trails (with trailheads)**
  - climbing access trails
    - ✓ Endless Wall
    - ✓ Sunshine Buttress
    - ✓ Bubba City
    - ✓ Junkyard
  - Fayette Mine Trail
  - Stone Cliff Mine Trail
  - Stone Cliff Coke Ovens to Stone Cliff Mine Trail
  - Thurmond to Sewell Rail Trail
  - Farm Loop Trail
  - Craig Branch Equestrian Loop Trail
  - Bucklick Branch Equestrian Loop Trail

use of farmhouses for park staff or private rental housing would not provide opportunities for visitors. Impacts on visitor use and visitor experience would be negligible to local long-term minor and beneficial.

Land Protection Actions. The impact of land protection actions on visitor use and visitor experience would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.15 Visitor Use and Visitor Experience (Alternative 2) above).

Partnership and Community Collaboration Actions. Collaboration with WVDOH would seek to accomplish improvements to New River Parkway (existing River Road), WV 25 (from Glen Jean to Southside Junction), Thurmond Bridge, McKendree Road (WV 25) (from Stone Cliff to Prince), and Fayette Station Road (WV 82). Improvements would address visitor safety concerns, reduce congestion by enhancing roadway capacity, and/or provide pull-outs where visitors could better experience park resources. NPS would also collaborate with WVDOH to design and install signage to enhance visitor orientation to the park and to facilitate wayfinding to park facilities. Impacts on visitor use and visitor experience would be local long-term major and beneficial.

Partnerships between the NPS and the park's gateway communities would seek to enhance the visitor experience by improving availability of information about the park in local communities and by enhancing wayfinding to the park. Impacts on visitor use and visitor experience would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on visitor use and visitor experience are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.15 Visitor Use and Visitor Experience (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on visitor use and visitor experience. Alternative 3 would contribute a moderate beneficial and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to major beneficial impacts and local long-term moderate adverse impacts on visitor use and visitor experience. Alternative 3 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on visitor use and visitor experience. There would be no impairment of park resources or values related to visitor use and visitor experience.

4.5.16 Park Access (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Park management zoning would provide the framework for decision-making as to where motorized and non-motorized access would be appropriate for visitors and administrative use (common to Alternatives 2 to 5) (see Table 4.14). The nature of permitted access would be common to Alternatives 2 to 5 in park development, historic resource, and river corridor zones because these zones are the same for each action alternative. Differences would occur in the remainder of the park where areas are allocated to either backcountry or frontcountry zones. When considering access to the park, areas of frontcountry would have greater potential access because roads and parking facilities would be permitted in interior areas of zones. In contrast, in backcountry areas roads and parking would be limited to the perimeter of the forest blocks defined by the park's subareas (see Figure 2.6).

In Alternative 3 the impact of management zone allocations and related management prescriptions on park access would be local long-term moderate and beneficial. Management actions would generally maintain existing patterns of motorized access within the park, while permitting expansion of motorized access for visitors and/or administrative use in park development zones, historic resource zones, river corridor zones, and frontcountry zones. Almost one-half (43.0%) of the park would be zoned backcountry where roads and parking would be limited to zone perimeters (see Figure 2.6) and where only non-motorized access could occur in the zone interior.

Public Use, Enjoyment, and Experience Management Actions. In Alternative 3, by the year 2025 approximately 1.46 million people are projected to visit the park annually, representing a 24 percent increase in visitation when compared to 2007. Most visitation would occur from June through September, with peak use happening during weekends in July and August. Most park visitors are expected to travel to many sites of the classic park experiences and to seek out the various important park experiences that visitor should have, as emphasized consistent with the overall management concept in Alternative 3 (see Table 2.19 above).

Park visitation associated with management actions in Alternative 3 would slightly increase traffic in and around the park during both peak and off-peak visitation periods (see Table 4.20). Most state roads and park roads used by visitors would experience local long-term negligible or minor adverse impacts. Five would experience local long-term moderate adverse impacts during peak periods. One would experience local long-term moderate beneficial impacts during peak periods.

As in Alternative 1, improvements to Turkey Spur Road at Grandview would enhance access to visitor use facilities at the Turkey Spur Overlook. In Alternatives 2 to 5, a number of additional improvements at Grandview would address site-

TABLE 4.20 Alternative 3 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
South End of the Park			
Sandstone Falls and Visitor Attractions on River Left (including a possible campground – if not at Bass Lake) Future New River Parkway (under development by WVDOH)	▪ paved two-lane road with shoulders ▪ lane width adequate for safe two-way travel ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (included in Alternative 1)	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
Various Visitor Facilities on River Right below Hinton (including a possible campground at Bass Lake – if not in New River Parkway corridor) WV 20 (I-64 to Hinton)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (most non-truck traffic on WV 20 will be diverted to New River Parkway) (included in Alternative 1)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Sandstone Falls Visitor Center WV 7 (from I-64)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Developed Campground (Meadow Creek West) WV 7 (from I-64)	▪ paved one-lane road ▪ restricted two-way traffic ▪ safe maximum curves ▪ poor stopping distances	▪ poor capacity to accommodate visitor traffic generated by new campground development	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Middle of the Park			
Grandview WV 9 (primarily from I-64)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
McCreery, Lower Glade Creek Area, Terry Beach, Army Camp WV 41 (primarily from the west)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies (pedestrian safety deficiencies exist in vicinity of McCreery river access)	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor impact
Lower Glade Creek Area Glade Creek Road (Park Road) (state scenic backway)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Highland-Backus Area (developed campground and new trail network) WV41 (primarily from the west)	▪ same as for McCreery and Glade Creek (see above)	▪ same as for McCreery and Glade Creek (see above)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact

TABLE 4.20 Alternative 3 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
Thayer WV 25 (access primarily from the north, beginning at Stone Cliff New River Bridge)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
North End of the Park			
Thurmond, Dun Glen, and Stone Cliff WV 25 (from Glen Jean)	▪ paved two-lane road ▪ roadway lane width not adequate for safe two-way travel due to nine one-lane bridges (minimal to no shoulders) ▪ tight curves ▪ short stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies for small vehicles ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Thurmond Town Site various state roads	▪ one-lane Thurmond Bridge needs replacement (due to structural, capacity and safety issues) ▪ numerous one-lane paved roads ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight turns ▪ short stopping distances	▪ very poor capacity ▪ numerous roadway capacity and safety deficiencies ▪ future Thurmond Bridge replacement would address bridge deficiencies and likely include visitor parking (as mitigation) near the Thurmond Depot Visitor Center	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Cunard and Surprise Cunard Road (park road)	▪ one-lane gravel road ▪ constrained two-way travel (some pull-offs; minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-minor adverse impact
Nuttallburg Visitor Use Area Keeney Creek Road (WV 85/2)	▪ one-lane paved road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of new trailheads at the Nuttallburg Visitor Use Area (included in Alternative 1)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Canyon Rim Visitor Center and Burnwood Complex US 19	▪ four-lane divided highway (with shoulders) ▪ safe maximum gradients ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies in vicinity	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Fayette Station Fayette Station Road (WV 82)	▪ paved one-way road ▪ some pull-offs ▪ minimal to no shoulders ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor existing capacity, especially on peak visitation days ▪ access constrained due to road geometry for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate beneficial impact (assuming implementation of peak period shuttle service from a new parking area at Fayette Station top) ▪ Off-Peak Period – local long-term moderate adverse impact

Table 4.21

New River Gorge National River
Alternative 3 – Access Changes Needed to Achieve Desired Conditions in Visitor Use Areas

Actions

- **Internal Park Road System**
  - Turkey Spur Road improvements (as in Alternative 1)
  - Grandview circulation and parking improvements (common)
  - new park road in Highland-Backus area
  - extension/improvement of Cunard Access Road to Surprise
- **State Road System** (NPS and WVDOH collaboration to design and implement)
  - New River Parkway (as in Alt. 1)
  - Thurmond Bridge Replacement (as in Alt. 1)
  - Fayette Station Road (WV 82) improvements (as in Alt. 1)
  - WV 25 improvements (Glen Jean to Southside Junction) (common)
  - McKendree Road Improvements (WV 25) from Stone Cliff Bridge to Prince
  - wayfinding signage along state roads (as in Alt. 1)
- **Parking**
  - at Thurmond (parking to be added by WVDOH in conjunction with Thurmond Bridge Replacement) (as in Alternative 1)
  - in climbing areas (new)
    - ✓ Junkyard
    - ✓ Ambassador Buttress
    - ✓ Fern Buttress
  - in hunting areas (new)
    - ✓ Dowdy Bluff
    - ✓ Polls
  - at existing trailheads
    - ✓ Glade Creek Trail
- **River Access Sites**
  - parking expansions at existing river access sites
    - ✓ Stone Cliff
    - ✓ McCreery
    - ✓ Thayer
    - ✓ Cunard
  - alternative transportation system (shuttle during peak periods of visitor use)
    - ✓ Fayette Station
  - new river access sites
    - ✓ J&G Site
    - ✓ Bass Lake
    - ✓ Surprise
- **New Trails (with trailheads)**
  - new trails (as in Alternative 1)
    - ✓ Nuttallburg Visitor Use Area trails
    - ✓ Bucklick Branch Equestrian Loop Trail
    - ✓ Laing Loop Nature Trail (no new trailhead)
    - ✓ climbing access trails (Endless Wall, Sunshine Buttress, Bubba City, and Junkyard areas)
  - new trails
    - ✓ Through Park Trail
    - ✓ Sandstone Visitor Center to Prince Trail
    - ✓ Davis Branch Trail
    - ✓ Highland-Backus area trails
    - ✓ Dowdy Creek to Highland Mountain Trail
    - ✓ Highland-Backus area mountain biking trail

specific vehicular and pedestrian circulation issues. In Alternative 3, a new park road would be added in the Highland-Backus area to provide access to a new developed campground and new trails; the Cunard Access Road would also be extended to a new river access at Surprise. The impact of these actions on park access would be local long-term major and beneficial.

As in Alternative 1, a few new hiking and equestrian trails, and trails providing access to climbing areas, would be developed in the park (see Table 4.21). In addition, in Alternative 3 a new through park trail would provide continuous hiker/biker access from end to end of the park and numerous new trails would be added in the middle of the park to generally improve access. Trailhead parking would be provided for all new trails. The impact of these trail additions (along with trailhead parking) on park access would be local long-term major and beneficial.

In Alternative 1, a new river access – designed primarily for use by private paddlers and fishermen – would be developed at Meadow Creek West in conjunction with construction of a new developed campground. In addition, enhancements to parking at the Stone Cliff river access would occur in conjunction with relocation of existing day-use and campground facilities at Stone Cliff to a site above the New River floodplain. In Alternative 3, two additional new river accesses would be provided and parking would be expanded at four other river access sites (see Table 4.21). A shuttle system would be used during peak visitation periods to alleviate crowding at the Fayette Station river access and on Fayette Station Road (WV 82). The impact of these actions on park access would be local long-term major and beneficial.

At Thurmond visitors would continue to be encouraged to park in the lot at Southside Junction and walk to Thurmond via the Thurmond Bridge. In the future additional parking would likely be developed in conjunction with the planned WVDOH project to replace the Thurmond Bridge (see Partnership and Community Collaboration Actions below).

As in Alternative 1, improvements at Nuttallburg Mining Complex and Nuttallburg would provide parking (where none is currently available) for visitors at four trailheads from which they would access trails leading to cultural resource sites at the former Nuttallburg Mining Complex and Nuttallburg town site. In Alternatives 2 to 5, parking would be added in locations where visitors now park along roads near popular climbing and hunting

areas (see Table 4.21). In Alternative 3, the Glade Creek Trail Trailhead – which chronically suffers from overuse – would also be expanded to meet existing and projected demand. The impact of these actions on park access would be local long-term major and beneficial.

Partnership and Community Collaboration Actions. The NPS would continue to work with WVDOH on several projects (see Table 4.21).

As in Alternative 1, the NPS would continue to work collaboratively with the city of Hinton to secure safe and legal access to the New River waterfront within the city.

As in Alternative 1, the NPS would continue to work with the CSX Corporation and other property owners to acquire wherever possible legal access to popular visitor use sites.

The NPS would also work collaboratively with its gateway community partners, state agencies, railroad companies, and private landowners to develop trail connections from the park to nearby communities and other visitor attractions, such as Hawks Nest State Park, Babcock State Park, the Gauley River National Recreation Area, Ansted, Oak Hill, Mount Hope, Beckley, and Meadow Bridge (common to Alternatives 2 to 5).

Assuming these collaborative efforts would be effective, the impact on park access would be local long-term major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on park access are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 3 would generally be the same as those described for Alternative 1 (see Section 4.3.16 Park Access (Alternative 1) above). Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term minor to moderate beneficial impact and a cumulative long-term minor to moderate adverse impact on park access. Alternative 3 would contribute negligibly to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on park access. Alternative 3 would contribute negligibly to the total cumulative long-term minor to moderate beneficial impacts and to the cumulative long-term minor to moderate adverse impacts on park access.

4.5.17 Park Operations (Alternative 3)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of natural and scenic resource protection and would guide development of targeted strategies to protect and improve nationally significant resources (see Section 4.4.17 Park Operations (Alternative 2) above). Staffing would be redirected to

areas most likely to create beneficial impacts on natural and scenic resources resulting in a local long-term major beneficial impact on park operations.

In Alternative 3 areas dispersed throughout the park would be managed as backcountry. Law enforcement patrols and maintenance staff would rely less upon vehicles for patrol and maintenance, as existing logging and mining roads gradually recover. This would cause a minor need for additional staff, resulting in a local short-term minor adverse effect on the park budget. Overall the impact on park operations would be local long-term major and beneficial.

Cultural Resource Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of cultural resource protection and would guide development of targeted strategies to protect and improve nationally significant resources (see Section 4.4.17 Park Operations (Alternative 2) above). Collectively the common management actions would result in a local long-term major beneficial impact on park operations.

In Alternative 3 historic resources would largely be managed as discovery sites along trails. At Thurmond buildings would be maintained as exhibits with exteriors only being maintained by park staff. Some structures in the southern portion of the park would be made available to the public through the historic leasing program. Restoration of structures and maintaining them as exhibits in good condition would likely require additional park maintenance staff. Leasing some of the buildings would result in less need for park maintenance staff to maintain those buildings, freeing them to keep restored historic structures in good condition. Additional NPS project management staff might also be needed as structures are restored. Collectively these actions would result in a local short-term minor adverse effect on the park budget and a local long-term moderate beneficial impact on park operations.

Public Use, Enjoyment, and Experience Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of interpretive and education programs in the park (see Section 4.4.17 Park Operations (Alternative 2) above). These actions would result in a local long-term major beneficial impact on park operations.

Alternative 3 proposes that new trails connecting the park end to end be developed, requiring minor additions to park maintenance staff. Volunteers from user groups would be encouraged to help maintain trails, creating a need for staff trained to manage volunteer services. This would be accomplished by retraining and reorganizing existing trails staff. New programs for children and adults at Camp Brookside would create the need for new staff and partnership actions. Interpretation would be focused at sites along the through the park trail where visitors would congregate. This would be accomplished through a realignment of existing staff. Collectively these actions would result in a local short-term minor

adverse effect on the park budget and a local long-term moderate beneficial impact on park operations.

Park Operations Actions. In Alternatives 2 to 5 new sources of funding would become available as NPS works with users and visitors to create partnerships, friends groups, and other mechanisms to support park purposes (see Section 4.4.17 Park Operations (Alternative 2) above). These actions would result in a local long-term major beneficial impact on park operations.

Alternative 3 calls for leasing a few historic structures. Depending on the physical condition of historic structures, terms of the lease, and other factors, it is possible that leasing could provide a minor income stream for the park. This would result in a local long-term minor beneficial impact on park operations.

Land Protection Actions. In Alternatives 2 to 5 the addition of six areas and 212.5 acres to the park to provide for parking and access would improve the ability of rangers to manage these uses within the park. The park would work with neighbors to promote better stewardship of privately-owned lands within the boundary and to reduce impacts on them from park use. This would result in a local long-term moderate beneficial impact on park operations.

Alternative 3 provides for new management zoning for the park. This will make it easier for park employees to monitor and enforce use, and manage newly acquired sites. These actions will result in a local long-term minor beneficial impact to park operations.

Partnership and Community Collaboration Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would lead NPS to implement actions making the park more relevant to local users and park neighbors (see Section 4.4.17 Park Operations (Alternative 2) above). As in Alternative 2, while these actions would result in a local short-term minor adverse impact to the park budget, they would also result in a local long-term major beneficial impact on park operations.

- **Cumulative Impacts**

Other past, present and reasonably foreseeable actions that have had or would have impacts on park operations and facilities include the completion of the New River Parkway, continued minimum maintenance of state roads to and within the park, other transportation improvements, and continued private ownership of lands within the park, particularly in communities. The building of the New River Parkway would mean that law enforcement patrol and maintenance of the River Road area would be greatly improved; other transportation improvements might make remote areas of the park more accessible. The minimum maintenance of state roads such as McCreery Road would continue to complicate park management efforts. Private ownership of land within the park boundaries, particularly in communities, also

creates law enforcement issues and conflicts between private owners and visitors. Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term minor adverse impact to park operations. Alternative 3 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 3 would result in local short-term minor adverse impacts on the park budget and local long-term minor to major beneficial impacts on park operations. Alternative 3 would contribute an imperceptible beneficial impact to the cumulative long-term minor adverse impact on park operations.

4.5.18 Unavoidable Adverse Impacts (Alternative 3)

Unavoidable adverse impacts are major adverse impacts that cannot be fully mitigated or avoided. Alternative 3 would not result in any major adverse impacts.

4.5.19 Irreversible and Irretrievable Commitments of Resources (Alternative 3)

An irreversible commitment of resources is one that cannot be reclaimed, restored, or otherwise returned to its condition prior to disturbance. An irretrievable commitment of resources is a loss of something that once gone, cannot be replaced.

Proposed management actions would generally contribute to resource protection and preservation and would be expected to minimize the occurrence of irreversible or irretrievable impacts. Nevertheless some irretrievable impacts would occur:

- construction projects, landscape restoration and rehabilitation, and park operations would use limited amounts of nonrenewable resources, including materials and energy; once these resources are committed they would be irretrievable
- minor amounts of soil would be permanently lost as a result of soil erosion and sedimentation from areas (approximately 210 acres) disturbed by cultural resource management actions, development of new visitor use facilities, and restoration actions
- potential exists at cultural resource sites undergoing restoration or rehabilitation for an irretrievable commitment of resources as a result of any loss of undiscovered below ground resources

Surveys, avoidance through design, documentation, and other mitigation would occur before any restoration or rehabilitation begins, thereby minimizing irretrievable impacts to cultural resources.

4.5.20 Relationship between Short-Term Uses of the Environment and Long-Term Productivity (Alternative 3)

In Alternative 3 most of the park would be protected in a natural state with an emphasis on reducing existing forest fragmentation and avoiding future forest fragmentation. Approximately 43.0 percent of the park would be managed as backcountry largely unaltered by future human-induced impacts. Approximately 47.8 percent of the park would be managed as frontcountry forest with minimal future human-induced impacts. The NPS would continue to manage the park to maintain ecological processes and native and biological communities, and to provide for appropriate recreational activities consistent with the preservation of natural and cultural resources. Previously disturbed areas would be restored to return them to productivity, as funding permits. Any actions the NPS takes in the park would be taken with consideration to ensure that uses do not adversely affect the productivity of biotic communities.

Disturbance of the park's soils, water quality, vegetation, and wildlife, due to visitor use and the construction of new facilities would reduce the long-term productivity of the park in localized areas; however, overall there would likely be only a small effect on the park's long-term productivity.

4.6 Environmental Consequences of Alternative 4

4.6.1 Physiography, Geology, and Soils (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to protect the park's physiography, geology, and soil resources (as in Alternative 1) by:

- generally allowing physiography, geology, and soil resources that are disturbed by natural phenomena – such as landslides – to recover naturally
- restoring/reclaiming physiography, geology, and soil resources altered by human activity – such as mining (in cooperation with WV DEP)
- protecting park resources from potential impacts associated with natural gas/oil production or mining activities that are permitted by valid oil, gas, and mineral rights (and that may be conducted within the park in compliance with appropriate state permits and Section 9b Regulations pursuant to the Surface Mining Control and Reclamation Act) (in cooperation with WVDEP)
- reducing soil erosion and sedimentation by restoring disturbed areas (such as areas disturbed by ATVs), as funding permits

In addition, in Alternative 4 management actions affecting physiography, geology, and soils would focus on the following:

- managing almost two-thirds (60.8%) of the park as backcountry and one-tenth (7.7%) of the park as river corridor, with implementation of related management prescriptions that would maintain natural geologic processes and features to persist largely unaltered by further human-induced impacts
- managing the remainder of the park (31.5%) as frontcountry, historic resource, and park development zones, with implementation of related management prescriptions that would allow natural geologic processes and features to persist with minimal human-induced impacts

Impacts of natural resource management actions on physiography, geology, and soil resources would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact soil resources. Physical disturbance associated with cultural resource management actions would impact soil resources. Conceptual planning suggests that treatment actions at cultural resource sites would likely disturb approximately 25 acres of

previously disturbed soils.[1] Most disturbances would be associated with stabilization and vegetation removal at discovery sites (20 to 25 sites); minor disturbances would also occur in conjunction with restoration and rehabilitation of historic structures (see Table 4.22). During the treatment period erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Following the treatment period sites would be revegetated with native grass species. Impacts on soil resources would be local short-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact physiography, geology, and soil resources. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 145 acres.[2] Approximately 90 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. During the construction period erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Impacts on soil resources would be local short-term minor to moderate and adverse.

Following construction approximately 75 acres would be replanted with native species and 60 acres would be stabilized through placement of crushed stone or other surface treatment for roads, parking facilities, and some trails. Minimal areas of existing undisturbed soils would be permanently developed, primarily including the sites of small visitor facilities such as vault toilets and changing stations. Impacts on soil resources would be local long-term minor and adverse.

Visitor use at existing plus new or improved facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails (including approximately 10 acres within the tread of reestablished or new trails), leading to increased potential for soil erosion. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on soils would be local long-term minor and adverse.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 Physiography, Geology and Soils (Alternative 1) above). In Alternative 4, an

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

additional 95 acres of restored, rehabilitated, or new fields at six early settlement farms would be leased for agriculture. Impacts on soils would be negligible to local long-term minor and adverse.

Land Protection Actions. Impacts of future land protection actions on physiography, geology, and soil resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.1 Physiography, geology, and soil resources (Alternative 2) above).

Partnership and Community Collaboration Actions. NPS would continue to work collaboratively with WV DEP to facilitate reclamation of areas disturbed by mining and to protect park resources from the potential impacts of mineral resource extraction on lands adjoining or near the park (as in Alternative 1). Impacts on physiography, geology, and soil resources would be local long-term minor and beneficial.

NPS would provide ongoing technical assistance to communities within the park and others engaged in resource management activities beyond the park boundary that have the potential to positively impact the park's geologic and soil resources (common to Alternatives 2 to 5). Impacts on physiography, geology, and soil resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on physiography, geology, and soils are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.1 Physiography, Geology, and Soils (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on physiography, geology, and soil resources. Alternative 4 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term moderate to major beneficial impacts, local short-term minor adverse impacts, and local long-term minor to moderate and adverse impacts on physiography, geology, and soil resources. Alternative 4 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on physiography, geology, and soil resources. There would be no impairment of park resources or values related to physiography, geology, and soil resources.

4.6.2 Floodplains[1] (Alternative 4)

Natural and Scenic Resource Management Actions. Management actions would seek to protect, preserve and restore the natural resources and functions of floodplains (common to Alternatives 2 to 5) by:

- maintaining natural flows and hydropatterns
- restoring natural drainage patterns on all disturbed lands (in cooperation with WV DEP when part of mined land reclamation projects)
- maintaining rainfall-runoff dynamics and sediment delivery and transport processes at natural levels in backcountry, frontcountry, and river corridor zones and at somewhat altered levels in cultural landscape and park development zones
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries
- maintaining natural floodplain vegetation and – based on further feasibility study in coordination with the U.S. Army Corps of Engineers – promoting maintenance of natural floodplain vegetation through controlled releases from Bluestone Dam that provide periodic maximum floods
- removing debris from floodplains following flooding events
- preventing placement of additional obstructions in the New River and, wherever possible, removing structures in the New River that are no longer in use – such as abandoned bridge piers

Impacts on floodplains would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. In the future visitor use facilities within the floodplain would be limited to facilities that are dependent upon locations in proximity to water and for which non-floodplain sites would not be a practicable alternative. Existing facilities to remain within the floodplain would generally include river accesses, picnic facilities, trails, and river rest stops. Improvements to existing facilities and new facilities in the floodplain would include: improvements to the existing Mermaid Beach river access; addition of a river launch at Meadow Creek West and at Terry Beach; and addition of disabled boater access at some river accesses.

Construction of improvements in the floodplain at existing and new visitor use facilities would occur in areas that have experienced recent prior disturbance and would involve minimal placement of impervious surfaces within the floodplain. Mitigation measures would minimize potential for flooding or for other adverse impacts on floodplain values associated with these improvements. At the new

[1] *Floodplains with a recurrence interval of 100 years*

Meadow Creek West and Terry Beach river accesses, mitigation measures would include the following:

- during final design, the NPS would complete topographic surveys and flood elevation studies, and a floodplain statement of findings, as appropriate
- all facilities within the floodplain would be designed to meet standards and criteria of the National Flood Insurance Program (44 CFR Part 60)
- all park roads, trails, and parking areas in the floodplain would be designed with unpaved surfaces
- all facilities not functionally dependent on proximity to water – such as toilets and overnight camping facilities – would be located above the floodplain; parking would also be located above the floodplain to the maximum extent possible
- all existing previously disturbed areas within the floodplain on the site (not needed for new facilities) would be restored

Collectively these new visitor use facilities would minimally affect natural floodplain values and minimally increase the use of the floodplain, resulting in a local long-term minor adverse impact on floodplains.

Existing campgrounds in the floodplain at Hellems Beach, Stone Cliff, and Dun Glen would be eliminated and natural floodplain vegetation would be restored (common to Alternatives 2 to 5). Impacts on floodplains would be local long-term minor and beneficial.

Park Operations Actions. Impacts of floodplain management informed through findings of detailed floodplain studies would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.3.2 Floodplains (Alternative 1) above).

Impacts of maintaining the existing park headquarters and operations facilities at Glen Jean within the 100-year floodplain would continue to be local long-term minor and adverse (common to Alternatives 1 to 5) (see Section 4.3.2 Floodplains (Alternative 1) above).

Land Protection Actions. Impacts of future land protection actions on floodplains would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.2 Floodplains (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of partnership and community collaboration actions on floodplains would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.2 Floodplains (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on floodplains are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.2 Floodplains (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on floodplains. Alternative 4 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial impacts and local long-term minor adverse impacts on floodplains. Alternative 4 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on floodplains. There would be no impairment of park resources or values related to floodplains.

4.6.3 Water Quality (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain water quality in the New River and its tributaries in its natural condition free of pollutants generated by human activity (as in Alternative 1) by:

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with all natural and scenic resource management actions

In addition, in Alternative 4 management actions affecting water quality would focus on:

- maintaining a nearly continuous strip of natural riparian vegetation along the river where only low impact recreation would occur in locations and at levels that do not negatively impact the river (common to Alternatives 2 to 5)
- managing almost two-thirds (60.8%) of the park as backcountry, with implementation of related management prescriptions that would generally eliminate further forest fragmentation and the potential for human-induced impacts to water quality

- managing almost one-third (30.0%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce further forest fragmentation and the potential for human-induced impacts to water quality

Collectively these actions would protect natural vegetation and reduce soil disturbance and subsequent erosion and sedimentation potentially associated with forest disturbances and visitor use. Impacts on water quality would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact water quality. Conceptual planning suggests that treatment actions at cultural resource sites would likely disturb approximately 25 acres of previously disturbed soils (see Table 4.22).[1] During the treatment period use of best management practices (BMPs) would mitigate potential water quality impacts associated with sediment-laden stormwater discharges from disturbed areas, in accordance with requirements of the WV NPDES Stormwater Program. Following the treatment period sites would be revegetated with native species. Impacts on water quality would be local short-term minor to moderate and adverse.

Permanent removal of impervious surfaces associated with modern structures at two early settlement farms would enhance on-site infiltration of stormwater and reduce site runoff (as in Alternative 1). Impacts on water quality would be negligible.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact water quality. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 145 acres.[2] Approximately 90 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. During the construction period use of best management practices (BMPs) would mitigate potential water quality impacts associated with sediment-laden stormwater discharges from disturbed areas, in accordance with requirements of the WV NPDES Stormwater Program. Impacts on water quality would be local short-term minor to moderate and adverse.

Following construction approximately 75 would be replanted with native species and 60 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Over the long-term unpaved roads and parking areas would be subject to compaction and would have the potential to generate increased runoff and to convey pollutants from parking areas and roads to streams and the river. Permanent stormwater management measures would be

[1] *In addition to the approximate three acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

used in accordance with requirements of the WV NPDES Stormwater Program to reduce pollutants in stormwater discharged from developed sites. Impacts on water quality would be local long-term minor and adverse.

Visitor use at existing plus new or improved facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails (including approximately 10 acres within the tread of reestablished trails), leading to increased potential for erosion and subsequent sedimentation in streams and the river. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on water quality would be local long-term minor and adverse.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 Physiography, Geology and Soils (Alternative 1) above). In Alternative 4, an additional 95 acres of restored, rehabilitated, or new fields at six early settlement farms would be leased for agriculture. Impacts on soils would be negligible to local long-term minor and adverse.

Impacts of other future park operations on water quality would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.3 Water Quality (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on water quality would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.3 Water Quality (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future partnerships and collaboration on water quality would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.3 Water Quality (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on water quality are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.3 Water Quality (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on water quality. Alternative 4 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial impacts, local short-term minor to moderate adverse impacts, and local long-term minor adverse impacts on water quality. Alternative 4 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on water quality. There would be no impairment of park resources or values related to water quality.

4.6.4 Vegetation (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native plants and natural landscapes (as in Alternative 1) (exclusive of wildland fire management). Actions would generally focus on the following:

- generally allowing natural landscapes that are disturbed by natural phenomena – such as landslides, floods, and fire – to recover naturally
- restoring natural landscapes altered by human activity, such as logging, mining, agriculture, transportation, utilities, and exclusion of natural fire
- preserving and restoring native plant populations and the communities in which they occur (particularly rare or significant plant communities)
- aggressively treating invasive exotic plant and insect pest species

In addition, in Alternative 4 management actions affecting vegetation would include the following:

- managing almost two-thirds (60.8%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated impacts to diversity and vertical understory structure
- managing almost one-third (30.0%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure
- maintaining a nearly continuous strip of natural riparian vegetation along the river where only low impact recreation would occur in locations and at levels that do not negatively impact riparian communities, particularly cobble and flatrock communities
- removing non-water-dependent uses from the floodplain and restoring native floodplain vegetation (common to Alternatives 2 to 5)

- managing wildland fire to diminish the risk and consequences of severe wildland fires and, to the extent possible, to restore and protect the natural biological diversity and natural disturbance regime of the park (common to Alternatives 2 to 5)
- using prescribed fire to promote ecosystem health and native vegetation diversity in fire-dependent forest communities, such as rimrock pine communities and xeric oak-hickory forests (common to Alternatives 2 to 5)

Impacts of natural resource management actions on vegetation would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact native plants and plant communities. Conceptual planning suggests that cultural resource management actions would affect approximately 25 acres or previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.22).

Rehabilitation of buildings would require disturbance to approximately 5 acres of previously disturbed land. Affected vegetation would generally include a mix of ornamental trees and shrubs, non-native plants, and old field successional species. Following the treatment period sites would be appropriately revegetated where cultural landscapes are restored. Impacts on vegetation would be local long-term minor to moderate and adverse.

Disturbance would also occur in conjunction with stabilization and protection at approximately 20 to 25 discovery sites, along with development of visitor use improvements and installation of interpretative media. The typical discovery site would encompass an area of ruins in the park's mixed mesophytic forest – approximately one acre in size or less – overgrown by a mix of variable-age trees, shrubs, and grasses, with many sites dominated by kudzu and other non-native plants. Treatment would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining resources. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that fragmentation would be minimized or would not occur. Cleared areas would be revegetated with native grasses. Impacts on vegetation would be local long-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact vegetation. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 145 acres.[2] Approximately 90 percent of the area likely to be disturbed has experienced some

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

degree of prior site disturbance. Affected vegetation would primarily include grasses, weeds, successional old field species, and non-native plants. Future site planning and construction of new facilities would seek to minimize disturbance to forested land, particularly where existing unmaintained trails are improved to provide official park trails. Following construction approximately 75 acres would be replanted with native species and 60 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Approximately 10 acres would be within the tread of reestablished or new trails. Impacts on vegetation would be local long-term minor to moderate and adverse.

Visitor use throughout the park would have the potential to impact native plants and plant communities – particularly sensitive, rare, or significant vegetation communities. Management actions would protect sensitive, rare, or significant vegetation communities from visitor use impacts, as needed, generally including (common to Alternatives 2 to 5):

- in riparian areas (especially cobble and flatrock communities) – eliminate fires and overnight camping in all riparian areas; designate day-use river reststops downstream of Cunard
- on river bars – eliminate fires on most bars and close to visitor use bars with sensitive resources that are impacted by camping and day-use
- in clifftop communities – provide designated routes to climbing areas and limit access seasonally to critical cliff natural areas
- in flatrock communities – control visitor access; extend or add boardwalks to protect areas where visitor use occurs, such as at Sandstone Falls

Impacts on vegetation would be local long-term moderate and beneficial.

Land Protection Actions. Impacts of future land protection actions on vegetation resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.4 Vegetation Resources (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of implementing a community-based approach to managing wildland fire on vegetation would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.4 Vegetation Resources (Alternative 2) above).

Impacts of future collaborative management actions on significant unfragmented forest blocks that are outside but near the boundary of the park would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.4 Vegetation (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on vegetation are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.4 Vegetation (Alternative 1) above). Alternative 4 in conjunction with the impacts of other past, present, and reasonably foreseeable actions would result in a cumulative long-term moderate adverse impact on vegetation. Alternative 4 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term moderate to major beneficial impacts and local long-term minor to moderate adverse impacts on vegetation. Alternative 4 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on vegetation. There would be no impairment of park resources or values related to vegetation.

4.6.5 Aquatic Wildlife (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain and restore natural stream ecosystems with hydrologic features supporting a full range of natural aquatic organisms by (as in Alternative 1):

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions
- removing debris from floodplains following flooding events

In addition, in Alternative 2 management actions affecting aquatic habitats and dependent wildlife would focus on the following (common to Alternatives 2 to 5):

- maintaining natural flows and hydropatterns
- restoring natural drainage patterns on all disturbed lands (in cooperation with WV DEP when part of mined land reclamation projects)
- maintaining rainfall-runoff dynamics and sediment delivery and transport processes at natural levels in backcountry, frontcountry, and river corridor

zones and at somewhat altered levels in cultural landscape and park development zones

- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- maintaining natural floodplain vegetation and – based on further feasibility study in coordination with the U.S. Army Corps of Engineers – promoting maintenance of natural floodplain vegetation through controlled releases from Bluestone Dam that provide periodic maximum floods
- protecting upland wetlands and their processes
- eliminating introduction of non-native species to aquatic ecosystems
- eliminating actions to supplement or maintain selective non-native species in aquatic ecosystems (as appropriate, based on further study of non-native species impacts)
- allowing select introduced species that may alter some process and interactions (e.g. continue WV State black fly treatments)

Impacts on aquatic habitat and dependent wildlife would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would seek to avoid or minimize direct and indirect impacts on aquatic habitat and dependent wildlife associated with visitor use facilities and visitor use.

Physical modifications to aquatic habitat and dependent wildlife caused by development of visitor use facilities would generally not occur except where they could not be avoided because a facility is water-dependent. Where water-dependent uses require location of new facilities along the river bank and in the near-shore area, some degree of physical modification to aquatic habitat and dependent wildlife would be unavoidable. This would occur at the new Meadow Creek West and Terry Beach river accesses where new river launches would be developed, requiring limited site grading and some degree of bottom hardening to provide a safe surface for walking and to protect the bank and river bottom from erosion due to visitor use. Launch areas would be confined to the smallest possible area needed to accommodate average daily visitor demand. Impacts of new or improved visitor uses on aquatic habitat and dependent wildlife would be local short-term minor and adverse during construction and local long term minor and adverse following construction.

Potential visitor use impacts on aquatic habitat and dependent wildlife would continue to occur throughout the park where visitors have uncontrolled access to the New River, tributary streams, and special aquatic habitat and dependent wildlife.

Indirect impacts would include those resulting from trampling of riparian vegetation, subsequent soil exposure, soil erosion, and sedimentation. Direct impacts would occur where visitors cross streams while hiking, walk in streams or the river while fishing, or disturb the river bottom while swimming, launching boats, or stopping at river rest stops. These impacts would be mitigated by designing new trails (approximately 58 miles) with the minimum number of tributary stream crossings and – where crossings could not be avoided – placement of footbridges to avoid hiker impacts, as funding permits. In the future sensitive aquatic habitat and dependent wildlife at and in the vicinity of popular backcountry river rest stops would be closed to day-use. At river launches visitor access to the river would be restricted to the minimum area possible and riparian areas adjoining launch sites would be closed. Educational efforts would help deter visitor impacts through signage, informational materials, and interpretive programs that explain ecological values and sensitivity to disturbance of riparian areas and special aquatic habitat and dependent wildlife. Impacts on aquatic habitat and dependent wildlife would be local long-term minor and adverse.

Park Operations Actions. Impacts of future park operations actions on aquatic habitat and dependent wildlife would be local long-term major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.5 Aquatic Wildlife (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on aquatic habitat and dependent wildlife would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.5 Aquatic Wildlife (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future partnership and community collaboration actions on aquatic habitat and dependent wildlife would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.5 Aquatic Wildlife (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on aquatic habitat and dependent wildlife are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.5 Aquatic Wildlife (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on aquatic habitat and dependent wildlife. Alternative 4 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial impacts and local long-term minor adverse impacts on aquatic habitat and dependent wildlife. Alternative 4 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on aquatic habitat and dependent wildlife. There would be no impairment of park resources or values related to aquatic habitats and dependent wildlife.

4.6.6 Terrestrial Wildlife (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native animals (as in Alternative 1) by:

- perpetuating native animal life as part of the park's natural ecosystem by maintaining or restoring natural processes to the extent practically feasible
- relying on natural processes to control populations and habitats of native species to the greatest extent possible

In addition, in Alternative 4 management actions affecting terrestrial habitat and dependent species would focus on the following:

- managing almost two-thirds (60.8%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated impacts to diversity and vertical understory structure
- managing almost one-third (30.0%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- preserving the high diversity of native migratory species populations – particularly neotropical birds – and their habitats inside the park and cooperating with others to ensure preservation of their populations and habitats outside the park (common to Alternatives 2 to 5)

Impacts on terrestrial habitat and dependent species would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact terrestrial habitat and dependent species. Conceptual planning suggests that cultural resource

management actions would affect approximately 25 acres or previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.22).

Habitat impacts at approximately 20 to 25 discovery sites would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining resources on sites typically one acre in size or less. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that forest fragmentation would be minimized or would not occur. Field survey prior to treatment actions would determine species present in the vicinity of each site and appropriate protection measures. Treatment would be scheduled so that it would occur during winter when wildlife are hibernating or during the non-breeding season. Mammals, birds, amphibians, and reptiles in the vicinity of each site would be expected to migrate to adjacent habitat areas. Impacts on terrestrial habitat and dependent species would likely be local long-term minor and adverse.

Restoration or rehabilitation of historic structures and associated cultural landscapes in the immediate vicinity of buildings would occur at four sites and affect approximately 5 acres. Pre-treatment and post-treatment habitat conditions would be quite similar, characterized by a mix of native grasses and ornamental plantings, although non-native plants would be removed where they are currently present at some sites. Affected wildlife would generally include habitat generalists that live in close association with human habitation. During the treatment period wildlife would be expected to migrate into adjacent habitat areas; following the treatment period they would likely migrate back to restored sites. Impacts on terrestrial habitat and dependent species would likely be local short-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Development of new facilities – and visitor use of those facilities – would have the potential to disturb or displace wildlife or cause areas to be avoided by wildlife. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 145 acres, dispersed among 21 sites and 58 miles of trails (primarily existing unmaintained trails that would be improved).[2] Approximately 90 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. Affected vegetation would primarily include grasses, weeds, successional old field species, and non-native plants. Field survey prior to treatment actions would determine terrestrial wildlife species present in the vicinity of each visitor use site and the appropriate protection measures needed. Future site planning and construction of new facilities would seek to minimize disturbance to forested land, particularly where existing unmaintained trails are improved to provide official park trails. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that forest fragmentation would be

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

minimized or would not occur. Construction would generally be scheduled so that it would occur during winter when wildlife are hibernating or during the non-breeding season. Following construction approximately 75 acres would be replanted with native species and 60 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Approximately 10 acres would be within the tread of reestablished or new trails. Wildlife would be expected to avoid sites during construction or would only travel through sites construction activity has abated, resulting in a local short-term minor adverse impact on wildlife and dependent species. Following construction, the permanent loss of habitat combined with disturbance, injury, or death associated with long-term visitor use and management of visitor use sites would result in a local long-term minor to moderate adverse impact on terrestrial habitat and dependent species.

Continuation of hunting as it occurs today on most NPS-owned land in the park in accordance with the hunting and fishing regulations of the state of West Virginia would continue to have negligible impacts on terrestrial habitat and dependent species (as in Alternative 1) (see Section 4.3.6 Terrestrial Wildlife (Alternative 1) above). In addition, implementation of voluntary hunter registration and end-of-season questionnaires would increase information on harvest and hunter use levels facilitating development of game management plans, potentially resulting in a local long-term minor beneficial impact on terrestrial habitat and dependent species. Other actions that would protect specific species from hunting and that would restrict use of hunting dogs would have a local minor beneficial impact on wildlife habitat and dependent species.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 Physiography, Geology and Soils (Alternative 1) above). In Alternative 4, an additional 95 acres of restored, reestablished, or new fields at six early settlement farms would be leased for agriculture. Maintenance of open fields and forest edge along their perimeter would enhance wildlife habitat diversity locally in the park. Impacts on terrestrial habitat and dependent species would be local long-term minor and beneficial.

Land Protection Actions. Impacts of future land protection actions on terrestrial habitat and dependent species would likely be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.6 Terrestrial Wildlife (Alternative 2) above).

Partnership and Community Collaboration Actions. NPS would continue to cooperate with the WV DNR regarding regulation of hunting on NPS-owned property within the park boundary in accordance with applicable regulations and policies. Cooperation would be expanded to include joint development and implementation of

a voluntary hunter registration program and game management plans for specific hunt units within the park. Impacts on terrestrial habitat and dependent species would be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on terrestrial habitat and dependent species are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.6 Terrestrial Wildlife (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on terrestrial habitat and dependent species. Alternative 4 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial impacts, local short-term minor adverse, and local long-term minor to moderate adverse impacts on terrestrial wildlife. Alternative 4 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on terrestrial wildlife. There would be no impairment of park resources or values related to terrestrial wildlife.

4.6.7 Rare, Threatened, and Endangered Species (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to generally increase the populations of rare, threatened, or endangered species in the park and to secure sufficient, suitable habitat to "recover" species designated as threatened or endangered (as in Alternative 1). Actions would generally focus on the following:

- managing habitat of threatened and endangered species to maintain their value for species recovery
- managing habitat of state-listed species to maintain their value for species maintenance to the greatest extent possible
- managing other native species of special management concern to the park to maintain their natural abundance and distribution
- controlling detrimental non-native species impacts on rare, threatened, or endangered species

In addition, in Alternative 4 management actions affecting terrestrial habitat and dependent species would focus on the following:

- managing almost two-thirds (60.8%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated impacts to diversity and vertical understory structure, including rare species and communities
- managing almost one-third (30.0%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure, including rare species and communities
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- preserving the high diversity of native migratory species populations – particularly neotropical birds – and their habitats inside the park and cooperating with others to ensure preservation of their populations and habitats outside the park (common to Alternatives 2 to 5)

Impacts on rare, threatened, and endangered species would be local long-term major and beneficial.

Cultural Resource Management Actions. Conceptual planning suggests that cultural resource management actions would likely disturb approximately 25 acres of previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.22). Restoration or rehabilitation of historic structures and associated cultural landscapes in the immediate vicinity of buildings would occur at four sites and affect approximately 5 acres. At approximately 20 to 25 discovery sites potential habitat impacts would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining structures on sites typically one acre in size or less.

Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*

impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

Public Use, Enjoyment, and Experience Management Actions. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 145 acres, dispersed among 21 sites and 58 miles of trails (primarily existing unmaintained trails that would be improved).[1] Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

Impacts of the ongoing program to stabilize and gate mine portals where rare, threatened, and endangered species are present would continue. Gates in abandoned mine openings throughout the park would continue to be local long-term moderate and beneficial (common to Alternatives 1 to 5) (see Section 4.3.7 Rare, Threatened, and Endangered Species (Alternative 1) above).

To protect designated species visitor use in certain areas of the park would be limited to day-use only, including Rush Run, Sewell, Beauty Mountain, Endless Wall, Sunshine Buttress, and Ames (common to Alternatives 2 to 5).[2] Impacts on rare, threatened, or endangered species would be local long-term moderate and beneficial.

Additional protections in climbing areas – including Endless Wall, Sunshine Buttress, Alabama, and Ames – would include provision of designated trails to climbing routes that would reduce the current proliferation of social trails that potentially disturb habitat of designated species (common to Alternatives 2 to 5). Impacts on rare, threatened, or endangered species would be local long-term moderate and beneficial.

Park Operations Actions. Impacts of future park operations actions on rare, threatened or endangered species would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.7 Rare, Threatened, and Endangered Species (Alternative 2) above).

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[1] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

[2] *Visitor use in the Nuttallburg Visitor Use Area would also be limited to day-use only pursuant to the Nuttallburg Visitor Use Area DCP/EA (NPS 2008c)*

Land Protection Actions. Impacts of future land protection actions on rare, threatened or endangered species would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.7 Rare, Threatened, and Endangered Species (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future collaborative management actions on rare, threatened, and endangered species and their habitats that are outside but near the boundary of the park would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.7 Rare, Threatened, and Endangered Species (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on rare, threatened, and endangered species are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.7 Rare, Threatened, and Endangered Species (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on rare, threatened, and endangered species. Alternative 4 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on rare, threatened, and endangered species. Alternative 4 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on rare, threatened, and endangered species. There would be no impairment of park resources or values related to rare, threatened, and endangered species.

4.6.8 Scenic Resources (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Resource management actions would seek to protect a range of views in all areas of the park, allowing visitors to experience the extent of the gorge, the river, the forest, and the rim by (as in Alternative 1):

- removing non-native plants at sites where they cause a major scenic or aesthetic intrusion
- reclaiming abandoned mine lands at sites throughout the park (in cooperation with the WV DEP)

In addition, in Alternative 4 management actions affecting scenic resources would focus on the following:

- managing approximately almost two-thirds (60.8%) of the park as backcountry with implementation of related management prescriptions that would protect unfragmented forest blocks and natural scenic qualities from human-induced impacts
- managing approximately almost one-third (30.0%) of the park as frontcountry with implementation of related management prescriptions that would protect natural scenic qualities by reducing human-induced disturbance
- maintaining a nearly continuous strip of natural riparian habitat along the New River, thereby also preserving its natural scenic qualities (common to Alternatives 2 to 5)

Impacts on scenic resources would be local long-term minor to major and beneficial.

Cultural Resource Management Actions. Restoration of the cultural landscapes at Prince Brothers General Store, removal of modern structures at three sites where potentially significant early settlement cultural landscapes exist (as in Alternative 1), and treatments at approximately 20 to 25 cultural resource sites (to be managed as discovery sites) would enhance the quality of scenic resources fundamental to the park (see Section 4.6.10 Cultural Landscapes (Alternative 4) above). Impacts on scenic resources would be local long-term minor to major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New visitor use facilities and expansion of existing facilities would alter the park setting in the vicinity of improvements:

- approximately 58 miles of new park trails would be developed, mostly by improving existing unmaintained trails to single-track trails approximately 24 inches in width, requiring minor alteration to the park setting
- approximately 24 small parking areas would be developed to provide trailheads for hikers, climbers, and horseback riders, mostly along existing roads on forest block perimeters, and on previously disturbed sites
- approximately three existing day-use facilities would be improved through minor additions or expansions, most of which would enhance the existing setting, although there could be some minimal impacts to vegetation at some sites
- approximately 5 parking areas at existing river accesses would be expanded, with minimal changes to the park setting

- one new parking area would be developed near U.S. Route 19 for satellite parking in support of a visitor shuttle system
- development of two new river accesses and related day-use areas requiring clearing and alteration of the riparian zone at the river edge where the river launch would be located; both would be developed in conjunction with new developed campgrounds in areas that have been previously disturbed generally converting old successional field areas to developed uses
- four new developed campgrounds would be developed on open sites, requiring conversion of early successional old field vegetation on previously disturbed sites to developed visitor uses
- four existing primitive campgrounds would be expanded, requiring small areas of clearing for development of new campsites and road access that would slightly alter the park setting
- one existing primitive campground and day-use area in the floodplain would be relocated to a new site in an area of mixed vegetation where some minor clearing of trees would be required
- a new park road on the Highland-Backus Plateau would be developed through expansion of an existing unmaintained road

Overall the impacts of visitor use facilities on scenic resources would be local long-term minor to moderate and adverse.

Existing campgrounds and park operations facilities in the floodplain at Hellems Beach, Stone Cliff, and Dun Glen (campground and park operations sites) would be eliminated and natural floodplain vegetation would be restored. The McCreery river access would also be closed and restored. Impacts on scenic resources would be local long-term minor and beneficial.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture. In Alternative 4, an additional 95 acres of restored, rehabilitated, or new fields at historic sites (see Table 4.22) would be leased for agriculture, subject to leasing terms that would mitigate potential farming impacts to cultural landscapes and other resources (see Section 4.3.10 Cultural Landscapes (Alternative 2) below). Farming would maintain the extent of restored or rehabilitated fields that are significant features of the park's cultural landscapes, protecting them from succession to mixed mesophytic forest. These landscapes are scenic resources considered fundamental to the park. Impacts on scenic resources would be local long-term moderate and beneficial.

Land Protection Actions. Impacts of future land protection actions on scenic resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.8 Scenic Resources (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future collaborative management actions on scenic resources that are outside but near the park boundary would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.8 Scenic Resources (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on scenic resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.8 Scenic Resources (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on scenic resources. Alternative 4 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial impacts and local long-term minor impacts on scenic resources. Alternative 4 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on scenic resources. There would be no impairment of park resources or values related to scenic resources.

4.6.9 Archeological Resources (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect and preserve archeological resources against natural destruction wherever practicable by eliminating and avoiding natural resource impacts, stabilizing sites and structures, and monitoring conditions. Management actions including removal of vegetative overgrowth at areas of known or potential archeological resources would be preceded by research sufficient to identify and evaluate such resources. The impact on archeological resources receiving stewardship actions would be local long-term minor and beneficial.

Backcountry zoning would apply to almost two-thirds (60.8%) of the park. In backcountry zones potential disturbance to archeological resources resulting from park development could occur only along zone perimeters and new trails and at a

Table 4.22

New River Gorge National River
Alternative 4 – Site-Specific Cultural Resource Management Actions

Actions *(in addition to Alternative 1 see Table 4.6 above)*

- **Historic Structure Exterior Restoration**
  - Thurmond Houses (those not rehabilitated – see below – would be restored on exterior only)
- **Historic Structure Rehabilitation** (with reuse through the park leasing program)
  - Trump-Lilly Farm (farmhouse)
  - Richmond-Hamilton Farm (farmhouse)
  - Vallandingham Farm (farmhouse)
  - Prince Brothers General Store
  - Thurmond Commercial Row
  - Thurmond Houses (those that are in good condition would be rehabilitated for park housing or visitor lodging)
- **Cultural Landscape Restoration**
  - Prince Brothers Estate
- **Discovery Site Stabilization and/or Maintenance**
  - treatment actions – at approximately 20 to 25 discovery sites – as needed to stabilize resources and/or to protect resources from potential visitor use impacts

few designated backcountry camping sites (Figure 2.4). The impact on archeological resources would be local long-term moderate and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to identify and evaluate park archeological resources and to assess their condition and threats to them. Eligible archeological resources would continue to be nominated for listing in the National Register, as appropriate. Archeological resources would generally continue to be left undisturbed except where intervention could be justified based on compelling needs for research, interpretation, site protection, or park development.

Specific management actions at cultural resource sites that could potentially disturb archeological resources would include (see 4.22):

- historic building restoration or rehabilitation at numerous cultural resource sites
- cultural landscape restoration at one site
- stabilization and protection actions at approximately 20 to 25 discovery sites

Strategies to protect archeological resources would be implemented as for Alternative 1 (see Section 4.3.9 Archeological Resources above). The impact on archeological resources would be site-specific and would range from negligible to long-term local minor and adverse, depending on the site and the type of activity.

Public Use, Enjoyment, and Experience Management Actions. Ground disturbance associated with development of new facilities and enhancement of existing facilities could affect archeological resources at sites throughout the park. Strategies to protect archeological resources would be implemented as for Alternative 1 (see Section 4.3.9 Archeological Resources above). The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Expanded visitor use in historic resource zones, along trails, in the vicinity of recreation sites, and at discovery sites (approximately 20 to 25 sites) would increase vulnerability of archeological resources to surface disturbance, inadvertent damage, and vandalism. Loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence could result. NPS staff or volunteer presence and emphasizing visitor education would discourage vandalism and inadvertent destruction of cultural remains. Because expanded visitor use would be dispersed throughout the park at river gateways, at early settlement sites, at many discovery sites, along numerous new rim to river trails and a few new trails to attractions in the vicinity of gateways, the potential for The impact on archeological sites would be dispersed. This would make resource

protection more difficult for NPS staff and volunteers. The impact on archeological resources would be local long-term minor and adverse.

Increased use of archeological sites and resources for public education and interpretation in river gateways, at early settlement sites, and at discovery sites would increase awareness and appreciation of resources, thereby increasing support for their preservation, and resulting in a local long-term minor beneficial impact on archeological resources.

Park Operations Actions. Ground disturbance would be associated with construction of water supply/distribution and wastewater collection/treatment facilities to serve the Thurmond Depot Visitor Center, Commercial Row, a few newly rehabilitated houses (some potentially used for visitor lodging), and structures currently used for park housing and as private residences. Strategies to protect archeological resources from ground disturbance would be implemented as described above for cultural resource management actions under Alternative 1 (see Section 4.3.9 Archeological Resources (Alternative 1) above). The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse.

Farming would occur through an agricultural leasing program on fields at six early settlement cultural resource sites affecting approximately 95 acres (see Table 4.22). Leases would be structured to ensure that agricultural practices would result in a negligible to local long-term minor adverse impact on archeological resources, depending on the site (see Section 4.4.9 Archeological Resources (Alternative 2) above).

Private use of rehabilitated historic structures (see Table 4.22) would occur through lease or cooperative agreement. Leases would be structured to ensure that the impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity (see Section 4.4.9 Archeological Resources (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on archeological resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.9 Archeological Resources (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on archeological resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.9 Archeological Resources (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on

archeological resources. Alternative 4 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to archeological resources.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to moderate beneficial impacts and local long-term minor adverse impacts on archeological resources. Alternative 4 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the moderate total cumulative long-term adverse impact on archeological resources. There would be no impairment of park resources or values related to archeological resources.

4.6.10 Cultural Landscapes (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions in the park would be expanded to include managing vegetation at Thurmond, at Prince Brothers General Store, and at discovery sites. Management would seek to control invasive plants at each site on an ongoing basis. Pruning or removal of natural forest vegetation would occur regularly where it threatens to overtake cultural landscapes or jeopardizes the integrity of landscape features. Stormwater management would seek to protect landscapes from impacts of flooding, erosion, sedimentation, and landslides. Impacts on cultural landscapes would be local long-term moderate and beneficial.

Cultural landscape sites where natural resource management actions would not be implemented would continue to be at risk due to vegetation overgrowth, poor drainage, and/or landslide susceptibility (common to Alternatives 2 to 5). Impacts on cultural landscapes would be local long-term minor to moderate and adverse.

Cultural Resource Management Actions. Efforts would continue to include all cultural landscapes in the park's *Cultural Landscapes Inventory* (NPS 2005a), to identify and nominate eligible landscapes to the National Register, and to prepare cultural landscape reports for all cultural landscapes (as in Alternative 1).

Specific management actions affecting cultural landscapes would include (see Table 4.22):

- The cultural landscape would be restored at the Prince Brothers Estate in the Prince/Quinnimont river gateway. The restored landscape would depict the features and character of the landscape as it appeared at the turn of the 20th century. Research and preparation of a cultural landscape report

would precede work on the site and would serve as the principal document used to guide restoration decisions.

- Approximately 20 to 25 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along rim to river trails and along trails in the vicinity of river gateways. Many of these sites would be early settlement farms and ruins of historic structures at former sites of industrial activities or related settlements in the gorge. Where these sites involve cultural landscape components, maintenance activities would mitigate deterioration of cultural landscape components by protecting their condition; stabilization would reestablish the stability of unsafe damaged or deteriorated cultural landscape components while maintaining their existing character.

All management actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on cultural landscapes would be local long-term minor to moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Impacts of new visitor facilities on cultural landscapes would include:

- Where historic structures would be rehabilitated for commercial use, visitor services, or housing at three early settlement farmhouses, Thurmond Commercial Row, and numerous houses at Thurmond, use modifications such as development of parking facilities and walkways, could result in local long-term minor to moderate and adverse impacts on the cultural landscape. Circulation system improvements at Grandview would affect the cultural landscape (common to Alternatives 2 to 5) (see Section 4.4.16 Visitor Access above). During construction ground disturbance would result in a local short-term minor to moderate adverse impact to the cultural landscape. Following construction the impact on the cultural landscape would be local long-term minor and adverse.

- Parking improvements at Thurmond in the vicinity of Commercial Row, in the upper residential area, and at restored houses to be used for housing or visitor lodging would affect the cultural landscape (see Section 4.4.16 Visitor Access below). Mitigating actions and impacts would be similar to those implemented for circulation improvements at Grandview (see preceding section).

- At discovery sites (approximately 20 to 25 sites), management actions would include installation of contemporary facilities and structures to control visitor access to cultural landscape components (if present) that would be vulnerable to damage from visitor use. Design and location of

contemporary facilities and structures, as needed, would be considered within the context of the significance of the landscape and would minimize adverse impacts on the character and features of each cultural landscape to the maximum extent practicable. During construction ground disturbance would result in local short-term minor adverse impacts on cultural landscapes. The long-term impacts on the cultural landscapes would be local long-term minor and adverse.

Impacts on cultural landscapes associated with increased visitor use would include:

- Cultural landscapes associated with rehabilitated and leased historic structures opened to the public for commercial use, visitor services, or housing would be susceptible to wear and tear from increased use. Lease holder or concessioner presence would reduce the potential for visitors to inadvertently damage or to vandalize resources. Impacts on cultural landscapes would be negligible to local long-term minor and adverse.

- Visitor use elsewhere in the park would continue to impact cultural landscapes, particularly in remote areas where ranger patrols and NPS staff are not routinely present. Visitor use impacts would generally include inadvertent disturbance and vandalism. Improved access to cultural landscapes at discovery sites (approximately 20 to 25 sites) along rim to river trails and along trails in the vicinity of river gateways would increase the potential for visitor use impacts in those locations, although increased presence of NPS staff along popular trails would help educate visitors about appropriate resource stewardship. Impacts on cultural landscapes would be local long-term minor and adverse.

- Approximately 58 miles of new park trails would enhance visitor access to recreation sites and cultural resources sites in the park. Most new trails would use previously existing unmaintained trails, some of which might be determined historically significant upon further investigation and coordination with the WV SHPO. Future development of a park trail management plan would include Section 106 compliance with the WV SHPO during which historic significance would be assessed and mitigation measures incorporated into trail system design, as appropriate. The long-term impacts on cultural landscapes would be local long-term minor and adverse.

Park Operations Actions. At Thurmond new water supply and wastewater treatment services would be provided to the Thurmond Depot Visitor Center, to Commercial Row, to a few newly rehabilitated houses (some potentially used for visitor lodging), and to structures currently used for park housing and as private residences. During construction ground disturbance would result in a local short-

term minor to moderate adverse impact to the cultural landscape. The long-term impact on the cultural landscape would be negligible to local minor and adverse.

Farming would occur through an agricultural leasing program at six early settlement cultural resource sites (95 acres) where known or potentially significant cultural landscapes exist (see Table 4.22). Leases or agreements would be structured to protect the historic scene and significant features of the cultural landscape at each site (see Section 4.4.10 Cultural Landscapes (Alternative 2) above). Impacts on cultural landscapes would be negligible.

Land Protection Actions. Impacts of future land protection actions on cultural landscapes would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.10 Cultural Landscapes (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on cultural landscapes are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.10 Cultural Landscapes (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on cultural landscapes. Alternative 4 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to cultural landscapes.

- **Conclusion**

Management actions in Alternative 4 would result in local short-term minor to moderate adverse impacts, local long-term moderate beneficial impacts, and local long-term minor to moderate adverse impacts on cultural landscapes. Alternative 4 would contribute a minor beneficial a minor adverse impact to the total cumulative long-term moderate adverse impact on cultural landscapes. There would be no impairment of park resources or values related to cultural landscapes.

4.6.11 Historic Structures (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b) (as in Alternative 1). Stewardship would generally include removal of non-native plants and improvements to drainage in the

vicinity of historic structures. The impacts to historic structures receiving stewardship actions would be local long-term minor and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b) and to obtain determinations of their eligibility for the National Register (as in Alternative 1). Stewardship would generally include building stabilization to provide protection from weather and vandalism. Maintenance of previously stabilized structures would continue. The impacts to historic structures receiving stabilization and ongoing maintenance would be local long-term minor and beneficial.

Further stewardship of historic structures beyond the actions included in Alternative 1 (see Table 4.6) would include the following (see Table 4.22):

- Several houses at Thurmond would be restored, accurately presenting the form, features, and character of the houses as they appeared in the early 20th century.
- Some individual structures already determined eligible for the National Register (those owned by the NPS) would be rehabilitated, including three early settlement farms, Prince Brothers General Store, Thurmond Commercial Row (including remediation of lead and asbestos contamination), and other houses at Thurmond that would not be restored. Houses at Thurmond would be rehabilitated for park housing and visitor lodging.
- Approximately 20 to 25 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along rim to river trails and along trails in the vicinity of river gateways. Some of these sites would be early settlement farms and historic structures at former sites of industrial activities or related settlements in the gorge. Where these sites involve an historic building, maintenance activities would mitigate building deterioration by protecting its condition; stabilization would reestablish the stability of unsafe damaged or deteriorated structural components while maintaining existing building character.

All management actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on historic structures would generally be local long-term minor to major and beneficial. Where structures are rehabilitated for leasing or visitor services, concession use modifications, such as those needed to accommodate accessibility and additional means of egress, could result in local long-term minor to moderate and adverse impacts.

Public Use, Enjoyment, and Experience Management Actions. Historic structures leased for housing, visitor services, or commercial use (including visitor lodging) at three early settlement farmhouses, Prince Brothers General Store, Thurmond Commercial Row, and numerous houses at Thurmond would be susceptible to wear and tear from increased use, inadvertent damage, or vandalism. Leases and agreements would seek to reduce the potential for adverse impacts on historic structures associated with their adaptive reuse including maintenance requirements to avoid or mitigate adverse impacts of visitor use. Impacts on historic structures would be local long-term minor to moderate and adverse.

Park Operations Actions. At Thurmond new water supply and wastewater treatment services would be provided to the Thurmond Depot Visitor Center, to Commercial Row, to a few newly rehabilitated houses (some potentially used for visitor lodging), and to structures currently used for park housing and as private residences. Many of the affected structures are resources that contribute to the significance of the Thurmond Historic District. All improvements would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on historic structures would be negligible to local long-term minor and adverse.

Private use of rehabilitated historic structures (see Table 4.22) would occur through lease, cooperative agreement, or concession agreement. Leases or agreements would be structured to protect resources and defray the costs associated with building maintenance (see Section 4.4.11 Historic Structures (Alternative 2) above). The impact on historic buildings would range from local long term minor to moderate and beneficial to local long term minor to moderate and adverse.

Land Protection Actions. Impacts of future land protection actions on historic structures would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.11 Historic Structures (Alternative 2) above).

Partnership and Community Collaboration Actions. NPS would continue to provide technical assistance to the city of Hinton to assess treatment options for rehabilitation and adaptive reuse of the city-owned Hinton Depot and to assist with implementation of treatment by helping to identify funding options and to develop grant applications (as in Alternative 1). Impacts on historic structures would be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on historic structures are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.11 Historic Structures (Alternative 1)

above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on historic structures. Alternative 4 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to historic structures.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on historic structures. Alternative 4 would contribute an minor beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on historic structures. There would be no impairment of park resources or values related to historic structures.

4.6.12 Ethnographic Resources (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Backcountry zoning would preserve unfragmented blocks of mixed mesophytic forest in 60.8 percent of the park, while frontcountry zoning where human-induced fragmentation would be decreased would apply to 30.0 percent of the park. This would protect the forest and its associated watershed which is the ethnographic resource identified as vital to the park's traditionally associated people and groups (Hufford et al 2006). Impacts on ethnographic resources would be local long-term major and beneficial.

Natural resource management actions would also protect specific natural and cultural resources found within the park's mixed mesophytic forest that are important to the park's traditionally associated people, such as plants, animals, and sites of former towns, settlement areas, and industrial sites (as in Alternative 1). Impacts to ethnographic resources would be local long-term minor to moderate and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to include appropriate studies and consultations to further document ethnographic resources and uses, traditionally associated people, and other affected groups, and cultural affiliations to park resources. Eligible ethnographic resources would continue to be nominated for listing in the National Register, as appropriate.

Cultural resource treatment at historic structures, cultural landscapes, and discovery sites would rehabilitate or stabilize resources that are likely to be found through further research to include significant ethnographic resources see Table 4.22 and Sections 4.6.10 Cultural Landscapes and 4.6.11 Historic Buildings above).

Impacts on ethnographic resources would be local long-term minor to moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New visitor use facilities at historic structures, cultural landscapes, and discovery sites (approximately 20 to 25 sites) would impact resources that are likely to be found through further research to include significant ethnographic resources (see Table 4.24 and Sections 4.6.10 Cultural Landscapes and 4.6.11 Historic Buildings above). Impacts on ethnographic resources if determined to be present would be local long-term minor and adverse.

Impacts associated with increased visitor use on ethnographic resources, if determined to be present, would include the following (see Sections 4.6.10 Cultural Landscapes and 4.6.11 Historic Buildings above):

- local long-term minor to moderate and adverse impacts at sites where structures (with associated cultural landscapes) are rehabilitated and leased for housing, visitor services, or commercial use (including visitor lodging)
- local long-term minor to moderate and adverse impacts elsewhere in the park, particularly in remote areas and in the vicinity of discovery sites (approximately 20 to 25 sites) where ranger patrols and NPS staff are not routinely present

Land Protection Actions. Impacts of future land protection actions on ethnographic resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.12 Ethnographic Resources (Alternative 2) above).

Partnership and Community Collaboration Actions. The NPS would continue to consult with traditionally associated groups and Indian tribes (as in Alternative 1) (see Section 4.3.12 Ethnographic Resources (Alternative 1) above). Impacts on ethnographic resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on ethnographic resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.12 Ethnographic Resources (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on ethnographic resources. Alternative 4 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to ethnographic resources.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to moderate beneficial impacts and local long-term minor to moderate adverse impacts on ethnographic resources. Alternative 4 would contribute a minor beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on ethnographic resources. There would be no impairment of park resources or values related to ethnographic resources.

4.6.13 Regional and Local Economy (Alternative 4)

In Alternative 4 – River Gateways and Rim to River Experiences – the NPS would expand the park's contributions to the Southern West Virginia's tourism industry and economic environment by improving the visibility and accessibility of the park's natural, recreational, and interpretive attractions from its gateway communities and the communities on the river.

Enhanced marketing, signage, and transportation would direct visitors from major regional transportation routes (I-64, US 19, US 60, and State Route 41) to river gateways. This would include a combination of road improvements, trail development with trailhead parking in high-traffic areas, shuttle service on Fayette Station Road and from Oak Hill to Cunard, and development of commercial and interpretive resources at Hinton, Prince, Thurmond, Nuttallburg and other key gateway locations.

The overall effect would be to greatly raise the visibility, profile and appeal of the New River Gorge National River to residents and visitors alike, producing increased visitor activity throughout the park, though the increases would not be uniformly distributed. Major visitation increases would occur in the gateway areas undergoing the most development: Hinton, Thurmond and Nuttallburg. Areas receiving significant access improvements (Sandstone, Prince/McCreery, and Cunard) would experience moderate increases. All other areas in the park would experience minor increases in visitation in this alternative.

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Impacts of these expenditures on the regional and local economy would be regional short-term minor and beneficial and regional long-term minor and beneficial (common to Alternatives 2 to 5) (see Section 4.4.13 Regional and Local Economy (Alternative 2) above).

Cultural Resource Management Actions. Restoration and ongoing maintenance of several Thurmond houses, as well as rehabilitation of three early settlement

farmhouses, Prince Brothers General Store, Thurmond Commercial Row, and several additional Thurmond houses, would result in expenditures by the NPS for labor and materials. These initiatives would enhance the attractiveness of these sites to visitors. Impacts on the regional and local economy would be regional short-term minor and beneficial and regional long-term minor and beneficial.

Adaptive reuse through the park's leasing program of the Prince Brothers General Store, Thurmond Commercial Row, and several Thurmond houses for visitor services, commercial use, or visitor lodging would enhance the attractiveness of the Prince and Thurmond areas to visitors. Impacts on the regional and local economy would be regional long-term moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would continue to encourage economic activity in areas with active visitor use facilities and support services.

The total annual number of recreational visits to the New River Gorge National River is projected to increase by 383,200 from the current (2007) level of 1,178,000, a 32.5 percent growth rate. Table 4.23 displays projected direct and indirect economic impacts resulting from this increased level of visitor activity. Significant visitation increases would occur at Hinton, Thurmond, and Nuttallburg, the three river gateways that are slated to undergo major commercial and/or interpretive improvements. There would be more modest increases at all other river gateways.

Several industries that benefit from NPS stewardship of the New River Gorge, including outfitting, lodging, dining, and convenience goods, would continue to support significant levels of employment. Businesses in these industries are mostly concentrated along the US 19 corridor, particularly in Fayetteville and Beckley. Since Alternative 4 emphasizes engaging visitors at key points along major transportation routes, additional business activity would be expected in the central area of US 19 between Mount Hope and Oak Hill, as well as around the Sandstone Visitor Center.

Industries that have jobs supported by NPS-related activities at New River Gorge would also continue to realize significant impacts on earnings and the housing market.

Impacts on the regional and local economy would be regional long-term moderate and beneficial.

Park Operations Actions. Total recurring costs by NPS would be about $15.6 million annually, while total one-time costs would be about $29.3 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional

TABLE 4.23 Alternative 4 – River Gateways and Rim to River Experiences – Annual Direct and Indirect Economic Impacts ($2007)

Impact Type	2005	Added as a Result of Alternative 4	2025
Visitation			
Visitors	1,178,000	383,200	1,561,200 (+32.5%)
Direct Impacts			
Jobs	2,000	669	2,669
Earnings	$28,317,960	$9,422,400	$37,740,360
NPS Spending	$7,208,400	$2,632,600	$9,841,000
Visitor Spending	$67,910,000	$22,596,000	$90,506,000
Indirect Impacts			
Jobs	850	282	1,132
Earnings	$7,870,810	$2,618,900	$10,489,710
NPS Spending	$4,159,970	$1,519,230	$5,679,200
Visitor Spending	$33,568,090	$11,169,300	$44,737,390
Total Impacts			
Jobs	2,850	951	3,801
Earnings	$36,188,770	$12,041,300	$48,230,070
NPS Spending	$11,368,370	$4,151,830	$15,520,200
Visitor Spending	$101,478,090	$33,765,300	$135,243,390

2005 baseline and Impact factors per recreational visit are adapted from Versel 2006

long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have Impacts on the regional and local economy are identified in Section 4.2.4 (see Table 4.4). These actions would generally be the same as those described for Alternative 1 (see Section 4.3.13 Regional and Local Economy (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on the regional and local economy. Alternative 4 would contribute a minor beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in regional short-term minor to moderate beneficial and regional long-term minor to moderate beneficial impacts on the regional and local economy. Alternative 4 would contribute a minor beneficial impact to the total cumulative long-term moderate beneficial impact on the regional and local economy.

4.6.14 Communities (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions implemented within the park would have the potential to affect natural resource conditions in communities within or near the park. As in Alternative 1, these primarily include management actions that would seek to protect water quality, floodplains, forest, and aquatic and terrestrial habitats and dependent species (see Section 4.4.14 Communities (Alternative 2) above. In addition, in Alternative 4 several management actions (common to Alternatives 2 to 5) would seek to:

- protect, preserve and restore the natural resources and functions of floodplains
- maintain and restore natural stream ecosystems supporting a full range of natural aquatic organisms
- maintain the park's native plants and natural landscapes

Collectively the impact of these management actions on natural resources in communities within and near the park would be local long-term major and beneficial.

Cultural Resource Management Actions. In Alternative 4, cultural resource management actions (in addition to those included in Alternative 1) with the potential to affect resources of potential significance to residents of communities within or near the park include:

- Several houses at Thurmond would be restored, accurately presenting the form, features, and character of the houses as they appeared in the early 20th century.
- Some individual structures already determined eligible for the National Register (those owned by the NPS) would be rehabilitated, including three early settlement farms, Prince Brothers General Store, Thurmond Commercial Row, and other houses at Thurmond that would not be restored.
- Approximately 20 to 25 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along rim to river trails and along trails in the vicinity of river gateways.

- The cultural landscape would be restored at the Prince Brothers Estate in the Prince/Quinnimont river gateway.

Cultural resource treatment at historic structures, cultural landscapes, and discovery sites would rehabilitate or stabilize resources that are likely to be found through further research to include significant ethnographic resources.

The impact of these actions on the residents of communities within or near the park would be local long-term moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. In Alternative 4, visitor facility improvements would address many of the visitor experience issues of concern to residents of communities within or near the park who use the park. These relate to crowding at river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few opportunities for biking and equestrian use). Impacts on visitor use and visitor experience for local residents as a result of these improvements (see Table 4.24) would be as follows:

- day-use facility improvements would result in a local long-term minor beneficial impact
- camping improvements would result in a local long-term major beneficial impact
- river access improvements would result in a local long-term moderate beneficial impact; some crowding would continue to occur at the Cunard River access during peak visitation periods resulting in a local long-term moderate adverse impact
- trail improvements would result in a local long-term major beneficial impact for hikers, bikers, and horseback riders; additional demand for biking and equestrian trails would not be satisfied resulting in a local long-term minor adverse impact
- trailhead improvements would result in a local long-term moderate beneficial impact for climbers and hunters (made possible by boundary adjustments)

Hunting would continue as it occurs today on most NPS-owned land in the park in accordance with the hunting and fishing regulations of the state of West Virginia. Impacts on residents of communities within or near the park who hunt would be local long-term moderate and beneficial. Addition of a voluntary hunter registration and reporting system would have a negligible impact on local hunters. Assuming that cooperative game management planning between the NPS and WV DNR would enhance game populations in the park there would be a local long-term minor and

beneficial impact on the hunting experience for local residents. Continued safety hazards would result in a local long-term minor and adverse impact on residents of communities within and near the park.

Park Operations Actions. Total recurring costs by NPS would be about $15.6 million annually, while total one-time costs would be about $29.3 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

At Thurmond, rehabilitation and subsequent leasing of Commercial Row and houses that remain in good condition would generate a sustainable income stream for long-term maintenance of the buildings. The impact on the community of Thurmond would be local long-term moderate and beneficial.

At Prince, rehabilitation and subsequent leasing of Prince Brothers General Store would generate a sustainable income stream for long-term maintenance of the building. New commercial services would be available to residents of Prince and Quinnimont. The impact on the communities of Prince and Quinnimont would be local long-term minor and beneficial.

Land Protection Actions. Impacts of future land protection actions on communities would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.14 Communities (Alternative 2) above).

Partnership and Community Collaboration Actions. As in Alternative 2, the NPS would implement a number of actions aimed at sustaining communities within the park, focused on Hinton, Thurmond, Meadow Creek, Backus, Highland, Prince/Quinnimont, Terry, and Thayer . Partnership actions would also be focused on building relationships with gateway communities, other government agencies, economic development entities, user groups, and the park's "friends". The types of actions collaborative would be similar to those in Alternative 2 (see Section 4.4.14 Communities (Alternative 2) above), although the focus of the actions would differ with the Alternative 4 River Gateways and Rim to River Experiences theme, described in Section 2.7.5 through 2.7.7 above. Also, in Alternative 4 additional effort would be focused on building gateway community partnerships and significantly expanding the relationships between gateway communities and the park. Collectively the impact of these actions on communities within and near the park would be local long-term major and beneficial.

- **Cumulative Impact**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on communities are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). These generally include growth and development on

private property, public infrastructure projects, and transportation system improvements. Collectively these actions have improved the quality of life in communities within and near the park. They have generally enhanced opportunities for education, attracted new employers to the area thereby providing new jobs, provided locations for needed commercial services, generally enhanced regional and local access, and protected public health and environmental quality by making available clean water, wastewater treatment, and other public services. Impacts of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on communities within or near the park. Alternative 4 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on communities within or near the park. Alternative 4 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative long-term major beneficial impact on communities within or near the park.

New River Gorge National River
Desired Visitor Experiences

Desired Visitor Experiences

- **Important Park Experiences that Visitor should have:**
  - Appreciate life in the gorge – the human history story
  - Appreciate/experience the wildness of the landscape
  - Experience the power of the river
  - Experience scenic beauty
- **Classic Park Experiences**
  - Paddling the New River
  - Sandstone Falls
  - Grandview
  - Thurmond
  - Endless Wall
  - Canyon Rim
  - Fayette Station Road

4.6.15 Visitor Use and Visitor Experience (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Blocks of intact and unfragmented forest that are removed from river gateways and primary rim to river travel routes would be managed as backcountry forest, preserving their wild character and enhancing the perception of the park's wildness as visitors experience the park. Overall, backcountry forest blocks would compose approximately 60.8 percent of the park. Impacts on visitor use and visitor experience would be local long-term minor to major and beneficial, depending upon individual visitor reasons for visiting the park and preferences for backcountry versus frontcountry experiences.

Cultural Resource Management Actions. Treatment of cultural resources at sites in the park would provide numerous new opportunities for visitors to appreciate the human history story of life in the gorge (see Table 4.22):

- visitors to the park's river gateways and to the New River Parkway corridor (existing New River Parkway corridor) in the south end of the park would have opportunities to learn about life in the gorge by visiting rehabilitated cultural resources that are leased through the NPS historic leasing program
- life in a railroading town during the park's industrial era would continue to be exemplified at the Thurmond River Gateway; it would also be represented at Prince/McCreery River Gateway where various sites would be rehabilitated and interpreted

- visitors would also learn about the history of life in the gorge when they come upon and find cultural resource discovery sites along trails at or near river gateways and along rim to river trails (approximately 20 to 25 sites)
- stabilized mining structures and town ruins at Nuttallburg Mining Complex and the Nuttallburg town site would tell stories about life in the gorge's historic coal mining towns (as in Alternative 1)

The impact of cultural resource management actions and related interpretive programs on visitor use and visitor experience would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. The central theme underlying Alternative 4 would help visitors better understand how the park is organized, the opportunities that are available, and how to travel in the complicated network of local roads and trails in the rugged terrain. Facilities and interpretive programs in Alternative 4 would connect visitors to the park through experiences that take them on roads and trails from gateway communities and other places on the plateau, over the rim, into the gorge, and down to the New River (see Figure 2.7 and Table 4.24). As they near the river, visitors would arrive at river gateways – located either within the park or at its edge – where they would learn about nearby park resources and recreation opportunities. Visitor use facilities would be clustered within or near river gateways offering a variety of interpretive and recreation experiences. From river gateways visitors would move out into the park on the water by boat, on trails by foot or bicycle, or on scenic roads. The park's stories would be told at rehabilitated cultural resources in river gateways – such as Hinton, Prince, and Thurmond – and at cultural resource "discovery sites" along rim to river trails and roads.

New visitor use facilities included in Alternative 4 – consistent with its overall management concept – would enable visitors to better and more easily enjoy the experiences that they "should have" at the park. Visitors would also continue to enjoy the classic park experiences at Sandstone Falls, Grandview, Thurmond, Endless Wall, Canyon Rim, and Fayette Station Road; new management actions consistent with the overall concept for Alternative 4 would enhance the visitor experience at Thurmond and at Fayette Station Road. The impact of these actions and related interpretive programs on visitor use and visitor experience would generally be local long-term major and beneficial.

Specific visitor facility improvements would address many of the visitor experience issues related to crowding at river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few opportunities for biking and equestrian use). Impacts on visitor use and visitor experience as a result of these improvements (see Table 4.24) would be as follows:

Table 4.24

New River Gorge National River
Alternative 4 – New Visitor Use Facilities

Actions *(in addition to Alternative 1)*

- **Cultural Resource Attractions**
  - restored properties
    - ✓ Thurmond Houses (some)
  - rehabilitated properties (with non-residential adaptive reuse through leasing or other agreements)
    - ✓ Thurmond Commercial Row
    - ✓ Thurmond (some houses leased for visitor lodging)
  - discovery sites (20 to 25 sites)
- **Day-Use Facilities**
  - improvements to existing facilities
    - ✓ Grandview (circulation system)
    - ✓ Dun Glen
    - ✓ Brooklyn
  - new day-use facilities
    - ✓ J&G Site
    - ✓ Stone Cliff (relocated)
- **Camping Facilities**
  - improvements to existing primitive campgrounds
    - ✓ Glade Creek
    - ✓ Grandview Sandbar
    - ✓ Mill Creek
    - ✓ Army Camp
    - ✓ Stone Cliff (relocated)
  - new developed campgrounds
    - ✓ J&G Site
    - ✓ Terry Beach
    - ✓ Highland-Backus Plateau
    - ✓ Burnwood
- **River Access Sites**
  - parking expansions at existing river access sites
    - ✓ Dun Glen
    - ✓ Brooklyn
    - ✓ Cunard (two areas)
    - ✓ Fayette Station
  - alternative transportation system (shuttle during peak periods of visitor use with satellite parking)
    - ✓ Fayette Station
  - new river access sites
    - ✓ J&G Site
    - ✓ Terry Beach
- **Parking for Climbers and Hunters**
  - in climbing areas
    - ✓ Junkyard
    - ✓ Ambassador Buttress
    - ✓ Fern Buttress
  - in hunting areas
    - ✓ Dowdy Bluff
    - ✓ Polls
  - Bridge Staging Area Trail
  - Stone Cliff Coke Ovens to Stone Cliff Mine Trail
  - Beauty Mountain Overlook Trail
  - Keeney Creek Beach Trail
  - Highland-Backus area mountain biking trail
  - Bucklick Branch Equestrian Loop Trail
- **New Trails (with Trailheads)**

(table continuation on next page)

Table 4.24 (continued)

New River Gorge National River
Alternative 4 – New Visitor Use Facilities

Actions *(in addition to Alternative 1)*

- **New Trails (with trailheads)**
  - climbing access trails
    - ✓ Endless Wall
    - ✓ Sunshine Buttress
    - ✓ Bubba City
    - ✓ Junkyard
  - Sandstone VC to Hump Mt.
  - Grandview to Mill Creek Trail
  - Army Camp to Pinnacle Rock Trail
  - Trump-Lilly Farm to Richmond-Hamilton Farm Trail
  - Cloverdale to the Upper Glade Creek Trail
  - Garden Ground to New River Trail
  - Mt. Hope to Southside Junction Rail Trail
  - GW Carver to Sewell to Caperton to Keeney Creek Trail
  - Fire Creek Trail
  - Army Camp to Stone Cliff Trail
  - Thurmond to Sewell Rail Trail
  - Highland-Backus area trails
  - Dowdy Creek to Highland Mountain Trail
  - New River Bridge Staging Area Trail
  - Stone Cliff Coke Ovens to Stone Cliff Mine Trail
  - Beauty Mountain Overlook Trail
  - Keeney Creek Beach Trail
  - Highland-Backus area mountain biking trail
  - Bucklick Branch Equestrian Loop Trail

- day-use facility improvements would result in a local long-term minor beneficial impact
- camping improvements would result in a local long-term major beneficial impact
- river access improvements would result in a local long-term moderate beneficial impact; some crowding would continue to occur at the Cunard River access during peak visitation periods resulting in a local long-term moderate adverse impact
- trail improvements would result in a local long-term major beneficial impact for hikers, bikers, and horseback riders; additional demand for biking and equestrian trails would not be satisfied resulting in a local long-term minor adverse impact
- trailhead improvements would result in a local long-term moderate beneficial impact for climbers and hunters (made possible by boundary adjustments)

Continuation of hunting as it occurs today on most NPS-owned land in the park in accordance with the hunting and fishing regulations of the state of West Virginia would continue to have local long-term moderate beneficial and local long-term minor adverse impacts on terrestrial habitat and dependent species (as in Alternative 1) (see Section 4.315 Visitor Use and Visitor Experience (Alternative 1) above). Addition of a voluntary hunter registration and reporting system would have a negligible impact on visitor use and visitor experience. Assuming that cooperative game management planning between the NPS and WV DNR would enhance game populations in the park there would be a local long-term minor beneficial impact on visitor use and visitor experience.

Park Operations Actions. Private use of Prince Brothers General Store, three early settlement farmhouses, Thurmond Commercial Row, and numerous houses at Thurmond would occur through lease, cooperative agreement, or concession agreement. Potential commercial use of Prince Brothers General Store could provide visitor services in the middle of the park where they are currently not available. Residential use of houses at Thurmond for park staff or private rental housing would not provide opportunities for visitors. Impacts on visitor use and visitor experience would be negligible to local long-term major and beneficial.

Land Protection Actions. The impact of land protection actions on visitor use and visitor experience would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.15 Visitor Use and Visitor Experience (Alternative 2) above).

Partnership and Community Collaboration Actions. Collaboration with WVDOH would seek to accomplish improvements to New River Parkway (existing River

Road), WV 41 (from Stanaford to McCreery), WV 25 (from Glen Jean to Southside Junction), Thurmond Bridge, WV 25/2 in Thurmond, and Fayette Station Road (WV 82). Improvements would address visitor safety concerns, reduce congestion by enhancing roadway capacity, and/or provide pull-outs where visitors could better experience park resources. NPS would also collaborate with WVDOH to design and install signage to enhance visitor orientation to the park and to facilitate wayfinding to park facilities. Impacts on visitor use and visitor experience would be local long-term major and beneficial.

Partnerships between the NPS and the park's gateway communities would seek to enhance the visitor experience by providing better visitor orientation, by promoting services needed by visitors in gateway communities, by fostering improved wayfinding signage, and by promoting complementary interpretive and recreational experiences at other attractions in southern West Virginia. Impacts on visitor use and visitor experience would be local long-term major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on visitor use and visitor experience are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.15 Visitor Use and Visitor Experience (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on visitor use and visitor experience. Alternative 4 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial and local long-term minor to moderate adverse impacts on visitor use and visitor experience. Alternative 4 would contribute an imperceptible beneficial and a major beneficial impact to the total cumulative long-term moderate adverse impact on visitor use and visitor experience. There would be no impairment of park resources or values related to visitor use and visitor experience.

4.6.16 Park Access (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Park management zoning would provide the framework for decision-making as to where motorized and non-motorized access would be appropriate for visitors and administrative use (common to Alternatives 2 to 5) (see Table 4.14). The nature of permitted access would be common to Alternatives 2 to 5 in park development, historic resource, and river corridor zones because these zones are the same for each action alternative. Differences would occur in the remainder of the park where areas are allocated to either backcountry or frontcountry zones. When considering access to the park, areas of frontcountry would have greater potential access because roads and parking facilities would be permitted in interior areas of zones. In contrast, in backcountry areas roads and parking would be limited to the perimeter of the forest blocks defined by the park's subareas (see Figure 2.8).

In Alternative 4 the impact of management zone allocations and related management prescriptions on park access would be local long-term minor and beneficial. Management actions would generally maintain existing patterns of motorized access within the park, while permitting expansion of motorized access for visitors and/or administrative use in park development zones, historic resource zones, river corridor zones, and frontcountry zones. Almost two-thirds (60.8%) of the park would be zoned backcountry where roads and parking would be limited to zone perimeters (see Figure 2.8) and where only non-motorized access could occur in the zone interior.

Public Use, Enjoyment, and Experience Management Actions. In Alternative 4, by the year 2025 approximately 1.56 million people are projected to visit the park annually, representing a 32.5 percent increase in visitation when compared to 2007. Most visitation would occur from June through September, with peak use happening during weekends in July and August. Most park visitors are expected to travel to many sites of the classic park experiences and to seek out the various important park experiences that visitor should have, as emphasized consistent with the overall management concept in Alternative 4 (see Table 2.24 above).

Park visitation associated with management actions in Alternative 4 would slightly increase traffic in and around the park during both peak and off-peak visitation periods (see Table 4.25). Most state roads and park roads used by visitors would experience local long-term negligible or minor adverse impacts. Eight would experience local long-term moderate adverse impacts during peak periods. Twp would experience local long-term moderate beneficial impacts during peak periods.

As in Alternative 1, improvements to Turkey Spur Road at Grandview would enhance access to visitor use facilities at the Turkey Spur Overlook. In Alternatives

TABLE 4.25 Alternative 4 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
South End of the Park			
Sandstone Falls and Visitor Attractions on River Left Future New River Parkway (under development by WVDOH)	▪ paved two-lane road with shoulders ▪ lane width adequate for safe two-way travel ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (included in Alternative 1)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Various Visitor Facilities on River Right below Hinton WV 20 (I-64 to Hinton)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (most non-truck traffic on WV 20 will be diverted to New River Parkway) (included in Alternative 1)	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
Sandstone Falls Visitor Center WV 7 (from I-64)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Developed Campground (Meadow Creek West) WV 7 (from I-64)	▪ paved one-lane road ▪ restricted two-way traffic ▪ safe maximum curves ▪ poor stopping distances	▪ poor capacity to accommodate visitor traffic generated by new campground development	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Middle of the Park			
Grandview WV 9 (primarily from I-64)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
McCreery, Lower Glade Creek Area, Terry Beach, Army Camp WV 41 (primarily from the west)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies (pedestrian safety deficiencies exist in vicinity of McCreery river access)	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Lower Glade Creek Area Glade Creek Road (Park Road) (state scenic backway)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Highland-Backus Area (developed campground and new trail network) WV41 (primarily from the west)	▪ same as for McCreery and Glade Creek (see above)	▪ same as for McCreery and Glade Creek (see above)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact

TABLE 4.25 Alternative 4 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
Thayer WV 25 (access primarily from the north, beginning at Stone Cliff New River Bridge)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term negligible impact ▪ Off-Peak Period – local long-term negligible impact
North End of the Park			
Thurmond, Dun Glen, and Stone Cliff WV 25 (from Glen Jean)	▪ paved two-lane road ▪ roadway lane width not adequate for safe two-way travel due to nine one-lane bridges (minimal to no shoulders) ▪ tight curves ▪ short stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies for small vehicles ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Thurmond Town Site various state roads	▪ one-lane Thurmond Bridge needs replacement (due to structural, capacity and safety issues) ▪ numerous one-lane paved roads ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight turns ▪ short stopping distances	▪ very poor capacity ▪ numerous roadway capacity and safety deficiencies ▪ future Thurmond Bridge replacement would address bridge deficiencies and likely include visitor parking (as mitigation) near the Thurmond Depot Visitor Center	▪ Peak Period – local long-term moderate adverse impact (assuming roadway improvements by the state) ▪ Off-Peak Period – local long-term minor adverse impact (assuming roadway improvements by the state)
Cunard Cunard Access Road (park road)	▪ one-lane gravel road ▪ constrained two-way travel (some pull-offs; minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate beneficial impact (assuming implementation of peak period shuttle service from a new parking area at Cunard top) ▪ Off-Peak Period – local long-minor adverse impact
Nuttallburg Visitor Use Area Keeney Creek Road (WV 85/2)	▪ one-lane paved road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of new trailheads at the Nuttallburg Visitor Use Area (included in Alternative 1)	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Canyon Rim Visitor Center and Burnwood Complex US 19	▪ four-lane divided highway (with shoulders) ▪ safe maximum gradients ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies in vicinity	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Fayette Station Fayette Station Road (WV 82)	▪ paved one-way road ▪ some pull-offs ▪ minimal to no shoulders ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor existing capacity, especially on peak visitation days ▪ access constrained due to road geometry for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate beneficial impact (assuming implementation of peak period shuttle service from a new parking area at Fayette Station top) ▪ Off-Peak Period – local long-term moderate adverse impact

2 to 5, a number of additional improvements at Grandview would address site-specific vehicular and pedestrian circulation issues. The impact of these actions on park access at Grandview would be local long-term major and beneficial.

As in Alternative 1, a few new hiking and equestrian trails, and trails providing access to climbing areas, would be developed in the park (see Table 4.26). In addition, in Alternative 4 numerous new rim to river trails would be added throughout the park along with numerous trails to park attractions in and around river gateways. Trailhead parking would be provided for all new trails. The impact of these trail additions (along with trailhead parking) on park access would be local long-term major and beneficial.

In Alternative 1, a new river access – designed primarily for use by private paddlers and fishermen – would be developed at Meadow Creek West in conjunction with construction of a new developed campground. In addition, enhancements to parking at the Stone Cliff river access would occur in conjunction with relocation of existing day-use and campground facilities at Stone Cliff to a site above the New River floodplain. In Alternative 4, one additional new river access (Terry Beach) would be provided and parking would be expanded at five other river access sites (see Table 4.26). A shuttle system would be used during peak visitation periods to alleviate crowding at the Fayette Station river access and on Fayette Station Road (WV 82). The impact of these actions on park access would be local long-term major and beneficial.

At Thurmond roadway, parking, and alternative transportation system improvements would enhance access. Working collaboratively with WVDOH, improvements would be made to WV Route 25 from Glen Jean to Southside Junction and to WV Route 25/2 within the town itself. Visitors would continue to be encouraged to park in the lot at Southside Junction and walk to Thurmond via the Thurmond Bridge. New parking would be provided in Thurmond at a small lot adjacent to Commercial Row and at a small lot adjacent to WV 25/2 in the upper section of the town. All houses rehabilitated for park housing or for visitor lodging would have one to two parking spaces included as part of the rehabilitation project (generally utilizing previously existing spaces at existing houses). In the future additional parking would likely be developed in conjunction with the planned WVDOH project to replace the Thurmond Bridge (see Partnership and Community Collaboration Actions below).

As in Alternative 1, improvements at Nuttallburg Mining Complex and Nuttallburg would provide parking (where none is currently available) for visitors at four trailheads from which they would access trails leading to cultural resource sites at the former Nuttallburg Mining Complex and Nuttallburg town site. In Alternatives 2 to 5, parking would be added in locations where visitors now park along roads near

Table 4.26

New River Gorge National River
Alternative 4 – Access Changes Needed to Achieve Desired Conditions in Visitor Use Areas

Actions

- **Internal Park Road System**
  - Turkey Spur Road improvements (as in Alternative 1)
  - Grandview circulation and parking improvements (common)
- **State Road System** (NPS and WVDOH collaboration to design and implement)
  - New River Parkway (as in Alt. 1)
  - Thurmond Bridge Replacement (as in Alt. 1)
  - WV 41 pullouts (Stanaford to McCreery)
  - WV 25 improvements (Glen Jean to Southside Junction) (common)
  - WV 25/2 road improvements (in Thurmond)
  - Fayette Station Road (WV 82) improvements (as in Alt. 1)
  - wayfinding signage along state roads (as in Alt. 1)
- **Parking**
  - at Thurmond
    - ✓ parking to be added by WVDOH in conjunction with Thurmond Bridge Replacement) (more spaces than in Alternative 1)
    - ✓ new parking at Commercial Row
    - ✓ new parking in upper level of the town along WV 25/2
    - ✓ parking maintained or added at rehabilitated houses to be used for park housing or visitor lodging (1 to 2 spaces/unit)
  - at cultural resource sites (new)
    - ✓ Richmond-Hamilton Farm
  - in climbing areas (new)
    - ✓ Junkyard
    - ✓ Ambassador Buttress
    - ✓ Fern Buttress
  - in hunting areas (new)
    - ✓ Dowdy Bluff
    - ✓ Polls
- **River Access Sites**
  - parking expansions at existing river access sites
    - ✓ Stone Cliff
    - ✓ Dun Glen
    - ✓ Brooklyn
    - ✓ Cunard
    - ✓ Fayette Station
  - alternative transportation system (shuttle during peak periods of visitor use)
    - ✓ Fayette Station
  - new river access sites
    - ✓ J&G Site
    - ✓ Terry Beach
- **New Trails (with trailheads)**

(see table continuation on next page)

Table 4.26 (continued)

New River Gorge National River
Alternative 4 – Access Changes Needed to Achieve Desired Conditions in Visitor Use Areas

Actions

- **New Trails (with trailheads)**
  - new trails (as in Alternative 1)
    - ✓ Nuttallburg Visitor Use Area trails
    - ✓ Bucklick Branch Equestrian Loop Trail
    - ✓ Laing Loop Nature Trail (no new trailhead)
    - ✓ climbing access trails (Endless Wall, Sunshine Buttress, Bubba City, and Junkyard areas)
  - new trails
    - ✓ Sandstone VC to Hump Mt.
    - ✓ Grandview to Mill Creek Trail
    - ✓ Army Camp to Pinnacle Rock Trail
    - ✓ Trump-Lilly Farm to Richmond-Hamilton Farm Trail
    - ✓ Cloverdale to the Upper Glade Creek Trail
    - ✓ Garden Ground to New River Trail
    - ✓ Mt. Hope to Southside Junction Rail Trail
    - ✓ GW Carver to Sewell to Caperton to Keeney Creek Trail
    - ✓ Fire Creek Trail
    - ✓ Army Camp to Stone Cliff Trail
    - ✓ Thurmond to Sewell Rail Trail
    - ✓ Highland-Backus area trails
    - ✓ Dowdy Creek to Highland Mountain Trail
    - ✓ New River Bridge Staging Area Trail
    - ✓ Stone Cliff Coke Ovens to Stone Cliff Mine Trail
    - ✓ Beauty Mountain Overlook Trail
    - ✓ Keeney Creek Beach Trail
    - ✓ Highland-Backus area mountain biking trail

popular climbing and hunting areas (see Table 4.26). The impact of these actions on park access would be local long-term major and beneficial.

Partnership and Community Collaboration Actions. The NPS would continue to work with WVDOH on several projects (see Table 4.26).

As in Alternative 1, the NPS would continue to work collaboratively with the city of Hinton to secure safe and legal access to the New River waterfront within the city.

As in Alternative 1, the NPS would continue to work with the CSX Corporation and other property owners to acquire wherever possible legal access to popular visitor use sites.

The NPS would also work collaboratively with its gateway community partners, state agencies, railroad companies, and private landowners to develop trail connections from the park to nearby communities and other visitor attractions, such as Hawks Nest State Park, Babcock State Park, the Gauley River National Recreation Area, Ansted, Oak Hill, Mount Hope, Beckley, and Meadow Bridge (common to Alternatives 2 to 5).

Assuming these collaborative efforts would be effective, the impact on park access would be local long-term major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on park access are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 4 would generally be the same as those described for Alternative 1 (see Section 4.3.16 Park Access (Alternative 1) above). Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term minor to moderate beneficial impact and a cumulative long-term minor to moderate adverse impact on park access. Alternative 4 would contribute negligibly to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on park access. Alternative 4 would contribute negligibly to the total cumulative long-term minor to moderate beneficial impacts and to the cumulative long-term minor to moderate adverse impacts on park access.

4.6.17 Park Operations (Alternative 4)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals

of natural and scenic resource protection and would guide development of targeted strategies to protect and improve nationally significant resources (see Section 4.4.17 Park Operations (Alternative 2) above). Staffing would be redirected to areas most likely to create beneficial impacts on natural and scenic resources resulting in a local long-term major beneficial impact on park operations.

In Alternative 4 areas dispersed through the park would be managed as backcountry. Law enforcement patrols and maintenance staff would rely less upon vehicles for patrol and maintenance, as existing logging and mining roads gradually recover. Law enforcement patrols and maintenance staff would rely less upon vehicles for patrol and maintenance, as existing logging and mining roads gradually recover. This would cause a minor need for additional staff, resulting in a local short-term minor adverse effect on the park budget. Overall the impact on park operations would be local long-term major and beneficial.

Cultural Resource Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of cultural resource protection and would guide development of targeted strategies to protect and improve nationally significant resources (see Section 4.4.17 Park Operations (Alternative 2) above). Collectively the common management actions would result in a local long-term major beneficial impact on park operations.

In Alternative 4 structures in or near river gateways would receive treatment and would be rehabilitated or adaptively reused. At Thurmond some buildings would be restored to use as exhibits; others would be leased through the historic leasing program. Restoration of structures and maintaining them as exhibits in good condition would likely require additional park maintenance staff. Leasing some of the buildings would result in less need for park maintenance staff to maintain those buildings, freeing them to keep restored historic structures in good condition. Additional NPS project management staff might also be needed as structures are restored. Collectively these actions would result in a local short-term minor adverse effect on the park budget and a local long-term moderate beneficial impact on park operations.

Public Use, Enjoyment, and Experience Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of natural and scenic resource protection and would guide development of targeted strategies to protect and improve nationally significant resources (see Section 4.4.17 Park Operations (Alternative 2) above). Staffing would be redirected to areas most likely to create beneficial impacts on natural and scenic resources resulting in a local long-term major beneficial impact on park operations.

Alternative 4 proposes that river gateways be developed and that partnerships with rim gateway communities be enhanced. New trails would be developed to provide

connections from gateways to the river, requiring minor additions to park maintenance staff. Volunteers from user groups would be encouraged to help maintain trails, creating a need for staff trained to manage volunteer services. This would be accomplished by retraining and reorganizing existing trails staff. New programs for children and adults at Camp Brookside would create the need for new staff and partnership actions. Interpretation would be focused at gateway sites where visitors would congregate. This would be accomplished through a realignment of existing staff. Collectively these actions would result in a local short-term minor adverse effect on the park budget and a local long-term moderate beneficial impact on park operations.

Park Operations Actions. In Alternatives 2 to 5 new sources of funding would become available as NPS works with users and visitors to create partnerships, friends groups, and other mechanisms to support park purposes (see Section 4.4.17 Park Operations (Alternative 2) above). These actions would result in a local long-term major beneficial impact on park operations.

Alternative 4 calls for leasing some historic structures. Depending on the physical condition of historic structures, terms of the lease, and other factors, it is possible that leasing could provide a minor income stream for the park. This would result in a local long-term minor beneficial impact on park operations.

Land Protection Actions. In Alternatives 2 to 5 the addition of six areas and 212.5 acres to the park to provide for parking and access would improve the ability of rangers to manage these uses within the park. The park would work with neighbors to promote better stewardship of privately-owned lands within the boundary and to reduce impacts on them from park use. This would result in a local long-term moderate beneficial impact on park operations.

Alternative 4 provides for new management zoning for the park. This will make it easier for park employees to monitor and enforce use, and manage newly acquired sites. These actions will result in a local long-term minor beneficial impact to park operations.

Partnership and Community Collaboration Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would lead NPS to implement actions making the park more relevant to local users and park neighbors (see Section 4.4.17 Park Operations (Alternative 2) above). Alternative 4 calls for enhanced collaborative efforts with park gateway communities – the places that are often visitor's initial contact with the park. Working with these communities to provide visitor information, limit conflicts with private owners, and provide new visitor services would lessen the impacts on law enforcement and interpretive staff. However, additional staff would be required to manage these collaborative efforts. While these actions would result in a local short-term minor adverse impact to the

park budget, they would also result in a local long-term moderate beneficial impact on park operations.

- **Cumulative Impacts**

Other past, present and reasonably foreseeable actions that have had or would have impacts on park operations and facilities include the completion of the New River Parkway, continued minimum maintenance of state roads to and within the park, other transportation improvements, and continued private ownership of lands within the park, particularly in communities. The building of the New River Parkway would mean that law enforcement patrol and maintenance of the River Road area would be greatly improved; other transportation improvements might make remote areas of the park more accessible. The minimum maintenance of state roads such as McCreery Road would continue to complicate park management efforts. Private ownership of land within the park boundaries, particularly in communities, also creates law enforcement issues and conflicts between private owners and visitors, although efforts to work more closely with communities would mitigate this somewhat. Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term minor adverse impact to park operations. Alternative 4 would contribute an imperceptible beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 4 would result in local short-term minor adverse impacts on the park budget and local long-term minor to major beneficial impacts on park operations. Alternative 4 would contribute an imperceptible beneficial impact to the cumulative long-term minor adverse impact on park operations.

4.6.18 Unavoidable Adverse Impacts (Alternative 4)

Unavoidable adverse impacts are major adverse impacts that cannot be fully mitigated or avoided. Alternative 4 would not result in any major adverse impacts.

4.6.19 Irreversible and Irretrievable Commitments of Resources (Alternative 4)

An irreversible commitment of resources is one that cannot be reclaimed, restored, or otherwise returned to its condition prior to disturbance. An irretrievable commitment of resources is a loss of something that once gone, cannot be replaced.

Proposed management actions would generally contribute to resource protection and preservation and would be expected to minimize the occurrence of irreversible or irretrievable impacts. Nevertheless some irretrievable impacts would occur:

- construction projects, landscape restoration and rehabilitation, and park operations would use limited amounts of nonrenewable resources,

including materials and energy; once these resources are committed they would be irretrievable

- minor amounts of soil would be permanently lost as a result of soil erosion and sedimentation from areas (approximately 180 acres) disturbed by cultural resource management actions, development of new visitor use facilities, and restoration actions
- potential exists at cultural resource sites undergoing restoration or rehabilitation for an irretrievable commitment of resources as a result of any loss of undiscovered below ground resources
- irretrievable commitments of resources could also occur at cultural resource sites undergoing restoration to a specific time period if material from subsequent periods is lost

Surveys, avoidance through design, documentation, and other mitigation would occur before any restoration or rehabilitation begins, thereby minimizing irretrievable impacts to cultural resources.

4.6.20 Relationship between Short-Term Uses of the Environment and Long-Term Productivity (Alternative 4)

In Alternative 4 most of the park would be protected in a natural state with an emphasis on reducing existing forest fragmentation and avoiding future forest fragmentation. Approximately 60.8 percent of the park would be managed as backcountry largely unaltered by future human-induced impacts. Approximately 30.0 percent of the park would be managed as frontcountry forest with minimal future human-induced impacts. The NPS would continue to manage the park to maintain ecological processes and native and biological communities, and to provide for appropriate recreational activities consistent with the preservation of natural and cultural resources. Previously disturbed areas would be restored to return them to productivity, as funding permits. Any actions the NPS takes in the park would be taken with consideration to ensure that uses do not adversely affect the productivity of biotic communities.

Disturbance of the park's soils, water quality, vegetation, and wildlife, due to visitor use and the construction of new facilities would reduce the long-term productivity of the park in localized areas; however, overall there would likely be only a small effect on the park's long-term productivity.

4.7 Environmental Consequences of Alternative 5

4.7.1 Physiography, Geology, and Soils (Alternative 5) (Preferred Alternative)

Natural and Scenic Resource Management Actions. Management actions would continue to seek to protect the park's physiography, geology, and soil resources (as in Alternative 1) by:

- generally allowing physiography, geology, and soil resources that are disturbed by natural phenomena – such as landslides – to recover naturally
- restoring/reclaiming physiography, geology, and soil resources altered by human activity – such as mining (in cooperation with WV DEP)
- protecting park resources from potential impacts associated with natural gas/oil production or mining activities that are permitted by valid oil, gas, and mineral rights (and that may be conducted within the park in compliance with appropriate state permits and Section 9b Regulations pursuant to the Surface Mining Control and Reclamation Act) (in cooperation with WVDEP)
- reducing soil erosion and sedimentation by restoring disturbed areas (such as areas disturbed by ATVs), as funding permits

In addition, in Alternative 5 management actions affecting physiography, geology, and soils would focus on the following:

- managing approximately two-thirds (66.4%) of the park as backcountry and one-tenth (7.7%) of the park as river corridor, with implementation of related management prescriptions that would maintain natural geologic processes and features to persist largely unaltered by further human-induced impacts
- managing the remainder of the park (25.9%) as frontcountry, historic resource, and park development zones, with implementation of related management prescriptions that would allow natural geologic processes and features to persist with minimal human-induced impacts

Impacts of natural resource management actions on physiography, geology, and soil resources would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact soil resources. Physical disturbance associated with cultural resource management actions would impact soil resources. Conceptual planning suggests that treatment actions at cultural resource sites would likely disturb approximately 105 acres of

previously disturbed soils.[1] Most disturbances would be associated with rehabilitation of the historic extent of fields at early settlement sites, as well as with stabilization and vegetation removal at discovery sites (30 to 35 sites) (see Table 4.27). During the treatment period erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Following the treatment period sites would be planted with native species or appropriately revegetated where cultural landscapes are restored. Impacts on soil resources would be local short-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact physiography, geology, and soil resources. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 190 to 210 acres.[2] Approximately 75 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. During the construction period erosion and sedimentation control measures would minimize soil exposure, control soil losses, trap sediment, and prevent sediment transport into adjoining waterways. Impacts on soil resources would be local short-term minor to moderate and adverse.

Following construction approximately 90 to 95 acres would be replanted with native species and 80 to 95 acres would be stabilized through placement of crushed stone or other surface treatment for roads, parking facilities, and some trails. Minimal areas of existing undisturbed soils would be permanently developed, primarily including the sites of small visitor facilities such as vault toilets and changing stations. Impacts on soil resources would be local long-term minor and adverse.

Visitor use at existing plus new or improved facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails (including approximately 20 acres within the tread of reestablished or new trails), leading to increased potential for soil erosion. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on soils would be local long-term minor and adverse.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

Physiography, Geology and Soils (Alternative 1) above). In Alternative 5, an additional 190 acres of restored, rehabilitated, or new fields at six early settlement farms would be leased for agriculture. Impacts on soils would be negligible to local long-term minor and adverse.

Land Protection Actions. Impacts of future land protection actions on physiography, geology, and soil resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.1 Physiography, geology, and soil resources (Alternative 2) above).

Partnership and Community Collaboration Actions. NPS would continue to work collaboratively with WV DEP to facilitate reclamation of areas disturbed by mining and to protect park resources from the potential impacts of mineral resource extraction on lands adjoining or near the park (as in Alternative 1). Impacts on physiography, geology, and soil resources would be local long-term minor and beneficial.

NPS would provide ongoing technical assistance to communities within the park and others engaged in resource management activities beyond the park boundary that have the potential to positively impact the park's geologic and soil resources (common to Alternatives 2 to 5). Impacts on physiography, geology, and soil resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on physiography, geology, and soils are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.1 Physiography, Geology, and Soils (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on physiography, geology, and soil resources. Alternative 5 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term moderate to major beneficial impacts, local short-term minor to moderate adverse impacts, and local long-term minor to moderate and adverse impacts on physiography, geology, and soil resources. Alternative 5 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on physiography, geology, and soil resources. There would be no impairment of park resources or values related to physiography, geology, and soil resources.

4.7.2 Floodplains[1] (Alternative 5) (Preferred Alternative)

Natural and Scenic Resource Management Actions. Management actions would protect, preserve and restore the natural resources and functions of floodplains (common to Alternatives 2 to 5) by:

- maintaining natural flows and hydropatterns
- restoring natural drainage patterns on all disturbed lands (in cooperation with WV DEP when part of mined land reclamation projects)
- maintaining rainfall-runoff dynamics and sediment delivery and transport processes at natural levels in backcountry, frontcountry, and river corridor zones and at somewhat altered levels in cultural landscape and park development zones
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries
- maintaining natural floodplain vegetation and – based on further feasibility study in coordination with the U.S. Army Corps of Engineers – promoting maintenance of natural floodplain vegetation through controlled releases from Bluestone Dam that provide periodic maximum floods
- removing debris from floodplains following flooding events
- preventing placement of additional obstructions in the New River and, wherever possible, removing structures in the New River that are no longer in use – such as abandoned bridge piers

Impacts on floodplains would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. In the future visitor use facilities within the floodplain would be limited to facilities that are dependent upon locations in proximity to water and for which non-floodplain sites would not be a practicable alternative. Existing facilities to remain within the floodplain would generally include river accesses, picnic facilities, trails, and river rest stops. Improvements to existing facilities and new facilities in the floodplain would include: improvements to the existing day-use areas and river launches at Mermaid Beach, Thayer, and Brooks Falls; addition of a river launch at Meadow Creek West, at Bass Lake, and at Terry Beach; and addition of disabled boater access at some river accesses. In addition if after making upland improvements at Cunard and Brooklyn, capacity issues remain on peak visitation day then a new river access would possibly be developed at Surprise.

Construction of improvements in the floodplain at existing and new visitor use facilities would occur in areas that have experienced recent prior disturbance and would involve minimal placement of impervious surfaces within the floodplain.

[1] *Floodplains with a recurrence interval of 100 years*

Mitigation measures would minimize potential for flooding or for other adverse impacts on floodplain values associated with these improvements. At the new Meadow Creek West river access, mitigation measures would include the following:

- during final design, the NPS would complete topographic surveys and flood elevation studies, and a floodplain statement of findings, as appropriate
- all facilities within the floodplain would be designed to meet standards and criteria of the National Flood Insurance Program (44 CFR Part 60)
- all park roads, trails, and parking areas in the floodplain would be designed with unpaved surfaces
- all facilities not functionally dependent on proximity to water – such as toilets and overnight camping facilities – would be located above the floodplain; parking would also be located above the floodplain to the maximum extent possible
- all existing previously disturbed areas within the floodplain on the site (not needed for new facilities) would be restored

If a new river access is developed at Surprise (as in Alternative 3), some facilities would be located in the floodplain and would impact a mature oak-tulip poplar silverbell floodplain forest on Red Ash Island. Impacts on the floodplain forest would be mitigated by limiting visitor use facilities in the floodplain to the minimum possible, including an access road, an access trail, small drop-off area, disabled river access, and launch site; the primary drop-off area, parking, staging areas, visitor changing/comfort stations, and picnic facilities would be located above Red Ash Island and outside of the floodplain at the base of the gorge wall. Collectively these new visitor use facilities would minimally to moderately affect natural floodplain values and minimally increase the use of the floodplain, resulting in either a local long-term minor adverse impact on the floodplain (without a new access at Surprise) or in a local long-term moderate adverse impact on the floodplain (with a new river access at Surprise).

Existing campgrounds in the floodplain at Hellems Beach, Stone Cliff, and Dun Glen would be eliminated and natural floodplain vegetation would be restored (common to Alternatives 2 to 5). Impacts on floodplains would be local long-term minor and beneficial.

Park Operations Actions. Impacts of floodplain management informed through findings of detailed floodplain studies would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.3.2 Floodplains (Alternative 1) above).

Impacts of maintaining the existing park headquarters and operations facilities at Glen Jean within the 100-year floodplain would continue to be local long-term minor

and adverse (common to Alternatives 1 to 5) (see Section 4.3.2 Floodplains (Alternative 1) above).

Land Protection Actions. Impacts of future land protection actions on floodplains would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.2 Floodplains (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of partnership and community collaboration actions on floodplains would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.2 Floodplains (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on floodplains are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.2 Floodplains (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on floodplains. Without a new river access at Surprise, Alternative 5 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on floodplains; alternatively, if a new river access is needed at Surprise, then Alternative 5 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative long-term moderate adverse impact on floodplains.

- **Conclusion**

Management actions in Alternative 5 – without a new river access at Surprise – would result in local long-term minor to major beneficial impacts and local long-term minor adverse impacts on floodplains. If a new river access is needed at Cunard, then the management actions in Alternative 5 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on floodplains. Without a new river access at Surprise, Alternative 5 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on floodplains; alternatively, if a new river access is needed at Surprise, then Alternative 5 would contribute a minor beneficial impact and a minor adverse impact to the total cumulative long-term moderate adverse impact on floodplains. Regardless of whether a new river access is developed at Surprise, in Alternative 5 there would be no impairment of park resources or values related to floodplains.

4.7.3 Water Quality (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain water quality in the New River and its tributaries in its natural condition free of pollutants generated by human activity (as in Alternative 1) by:

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions

In addition, in Alternative 5 management actions affecting water quality would focus on:

- maintaining a nearly continuous strip of natural riparian vegetation along the river where only low impact recreation would occur in locations and at levels that do not negatively impact the river (common to Alternatives 2 to 5)
- managing approximately two-thirds (66.4%) of the park as backcountry, with implementation of related management prescriptions that would generally eliminate further forest fragmentation and the potential for human-induced impacts to water quality
- managing approximately one-quarter (24.4%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce further forest fragmentation and the potential for human-induced impacts to water quality

Collectively these actions would protect natural vegetation and reduce soil disturbance and subsequent erosion and sedimentation potentially associated with forest disturbances and visitor use. Impacts on water quality would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact water quality. Conceptual planning suggests that treatment actions at cultural resource sites would likely disturb approximately 105 acres of previously disturbed soils (see Table 4.27).[1] During the treatment period use of best management practices (BMPs) would mitigate potential water quality impacts associated with sediment-laden stormwater discharges from disturbed areas, in accordance with requirements of

[1] *In addition to the approximate three acres disturbed for cultural resource treatments in Alternative 1*

the WV NPDES Stormwater Program. Following the treatment period sites would be planted with native species or appropriately revegetated where cultural landscapes are restored. When reestablishing the historic extent of fields or restoring cultural landscapes at early settlement sites adjoining the New River, a 50- to 100-foot buffer of native riparian habitat would be maintained. Impacts on water quality would be local short-term minor to moderate and adverse.

Permanent removal of impervious surfaces associated with modern structures at two early settlement farms would enhance on-site infiltration of stormwater and reduce site runoff (as in Alternative 1). Impacts on water quality would be negligible.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact water quality. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 190 to 210 acres.[1] Approximately 75 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. During the construction period use of best management practices (BMPs) would mitigate potential water quality impacts associated with sediment-laden stormwater discharges from disturbed areas, in accordance with requirements of the WV NPDES Stormwater Program. Impacts on water quality would be local short-term minor to moderate and adverse.

Following construction approximately 90 to 95 acres would be replanted with native species and 80 to 95 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Over the long-term unpaved roads and parking areas would be subject to compaction and would have the potential to generate increased runoff and to convey pollutants from parking areas and roads to streams and the river. Permanent stormwater management measures would be used in accordance with requirements of the WV NPDES Stormwater Program to reduce pollutants in stormwater discharged from developed sites. Impacts on water quality would be local long-term minor and adverse.

Visitor use at existing plus new or improved facilities over the long-term would have the potential to trample vegetation and expose soils in heavily used areas and along trails (including approximately 20 acres within the tread of reestablished trails), leading to increased potential for erosion and subsequent sedimentation in streams and the river. Where this occurs, management actions would stabilize soils and reestablish vegetation where possible. Trail maintenance could include placement of crushed stone or other surface material to stabilize the ground surface at impacted sites along trails. In some locations placement of pavement could be required to avert further resource damage. Impacts on water quality would be local long-term minor and adverse.

[1] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 Physiography, Geology and Soils (Alternative 1) above). In Alternative 5, an additional 190 acres of restored, rehabilitated, or new fields at six early settlement farms would be leased for agriculture. Impacts on water quality would be negligible to local long-term minor and adverse.

Impacts of other future park operations on water quality would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.3 Water Quality (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on water quality would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.3 Water Quality (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future partnerships and collaboration on water quality would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.3 Water Quality (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on water quality are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.3 Water Quality (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on water quality. Alternative 5 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts, local short-term minor to moderate adverse impacts, and local long-term minor adverse impacts on water quality. Alternative 5 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on water quality. There would be no impairment of park resources or values related to water quality.

4.7.4 Vegetation (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native plants and natural landscapes

(as in Alternative 1) (exclusive of wildland fire management). Actions would generally focus on the following:

- generally allowing natural landscapes that are disturbed by natural phenomena – such as landslides, floods, and fire – to recover naturally
- restoring natural landscapes altered by human activity, such as logging, mining, agriculture, transportation, utilities, and exclusion of natural fire
- preserving and restoring native plant populations and the communities in which they occur (particularly rare or significant plant communities)
- aggressively treating invasive exotic plant and insect pest species

In addition, in Alternative 5 management actions affecting vegetation would include the following:

- managing approximately two-thirds (66.4%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated impacts to diversity and vertical understory structure
- managing approximately one-quarter (24.4%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- removing non-water-dependent uses from the floodplain and restoring native floodplain vegetation (common to Alternatives 2 to 5)
- managing wildland fire to diminish the risk and consequences of severe wildland fires and, to the extent possible, to restore and protect the natural biological diversity and natural disturbance regime of the park (common to Alternatives 2 to 5)
- using prescribed fire to promote ecosystem health and native vegetation diversity in fire-dependent forest communities, such as rimrock pine communities and xeric oak-hickory forests (common to Alternatives 2 to 5)

Impacts of natural resource management actions on vegetation would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact vegetation. Conceptual planning suggests that cultural resource management

actions would likely disturb approximately 105 acres of previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.27).

Rehabilitation of buildings, restoration of cultural landscapes, and reestablishment of the historic extent of fields at early settlement farm sites would require disturbance to approximately 75 acres of previously disturbed land. Affected vegetation would generally include a mix of ornamental trees and shrubs, non-native plants, old field successional species, and forested land characterized by mixed-age stands of tulip poplar, maple, oak, and ash. Following the treatment period sites would be appropriately revegetated where cultural landscapes are restored. Where restored cultural landscapes adjoin the New River, a 50- to 100-foot buffer of native riparian habitat would be maintained. Impacts on vegetation would be local long-term minor to moderate and adverse.

Disturbance would also occur in conjunction with stabilization and protection at approximately 30 to 35 discovery sites, along with development of visitor use improvements and installation of interpretative media. The typical discovery site would encompass an area of ruins in the park's mixed mesophytic forest – approximately one acre in size or less – overgrown by a mix of variable-age trees, shrubs, and grasses, with many sites dominated by kudzu and other non-native plants. Treatment would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining resources. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that fragmentation would be minimized or would not occur. Cleared areas would be revegetated with native grasses. Impacts on vegetation would be local long-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Physical disturbance associated with development of visitor use facilities would have the potential to impact vegetation. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 190 to 210 acres.[2] Approximately 75 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. Affected vegetation would primarily include grasses, weeds, successional old field species, and non-native plants. However, development of a new river access at Surprise (if needed to address visitor crowding) would require limited clearing on Red Ash Island where a significant mature floodplain forest currently is present (dominant forest on the island is oak-tulip poplar/silverbell, with subdominant sycamore-ash floodplain forest and sycamore-river birch riverscour woodland). Future site planning and construction of new facilities would seek to minimize disturbance to forested land, particularly on Red Ash Island and where existing unmaintained trails are improved to provide official park trails. Following construction approximately 90 to 95 acres would be replanted

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*
[2] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

with native species and 80 to 95 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Approximately 20 acres would be within the tread of reestablished or new trails. Impacts on vegetation would be local long-term minor to moderate and adverse.

Visitor use throughout the park would have the potential to impact native plants and plant communities – particularly sensitive, rare, or significant vegetation communities. Management actions would protect sensitive, rare, or significant vegetation communities from visitor use impacts, as needed, generally including (common to Alternatives 2 to 5):

- in riparian areas (especially cobble and flatrock communities) – eliminate fires and overnight camping in all riparian areas; designate day-use river reststops downstream of Cunard
- on river bars – eliminate fires on most bars and close to visitor use bars with sensitive resources that are impacted by camping and day-use
- in clifftop communities – provide designated routes to climbing areas and limit access seasonally to critical cliff natural areas
- in flatrock communities – control visitor access; extend or add boardwalks to protect areas where visitor use occurs, such as at Sandstone Falls

Impacts on vegetation would be local long-term moderate and beneficial.

Land Protection Actions. Impacts of future land protection actions on vegetation resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.4 Vegetation Resources (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of implementing a community-based approach to managing wildland fire on vegetation would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.4 Vegetation Resources (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on vegetation are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.4 Vegetation (Alternative 1) above). Alternative 5 in conjunction with the impacts of other past, present, and reasonably foreseeable actions would result in a cumulative long-term moderate adverse impact on vegetation. Alternative 5 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term moderate to major beneficial impacts and local long-term minor to moderate adverse impacts on vegetation. Alternative 5 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on vegetation. There would be no impairment of park resources or values related to vegetation.

4.7.5 Aquatic Wildlife (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain and restore natural stream ecosystems with hydrologic features supporting a full range of natural aquatic organisms by (as in Alternative 1):

- reducing or eliminating existing non-point sources of water contamination within the park boundary associated with historic land uses and prior disturbance, as funding permits
- reducing water quality impacts due to potential soil exposure, increased runoff, and erosion and sedimentation associated with natural and scenic resource management actions
- removing debris from floodplains following flooding events

In addition, in Alternative 2 management actions affecting aquatic habitats and dependent wildlife would focus on the following (common to Alternatives 2 to 5):

- maintaining natural flows and hydropatterns
- restoring natural drainage patterns on all disturbed lands (in cooperation with WV DEP when part of mined land reclamation projects)
- maintaining rainfall-runoff dynamics and sediment delivery and transport processes at natural levels in backcountry, frontcountry, and river corridor zones and at somewhat altered levels in cultural landscape and park development zones
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- maintaining natural floodplain vegetation and – based on further feasibility study in coordination with the U.S. Army Corps of Engineers – promoting maintenance of natural floodplain vegetation through controlled releases from Bluestone Dam that provide periodic maximum floods
- protecting upland wetlands and their processes

- eliminating introduction of non-native species to aquatic ecosystems
- eliminating actions to supplement or maintain selective non-native species in aquatic ecosystems (as appropriate, based on further study of non-native species impacts)
- allowing select introduced species that may alter some process and interactions (e.g. continue WV State black fly treatments)

Impacts on aquatic habitat and dependent wildlife would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would seek to avoid or minimize direct and indirect impacts on aquatic habitat and dependent wildlife associated with visitor use facilities and visitor use.

Physical modifications to aquatic habitat and dependent wildlife caused by development of visitor use facilities would generally not occur except where they could not be avoided because a facility is water-dependent. Where water-dependent uses require location of new facilities along the river bank and in the near-shore area, some degree of physical modification to aquatic habitat and dependent wildlife would be unavoidable. This would occur at the new Meadow Creek West, Terry Beach, and Surprise (if determined necessary in the future) river accesses where a river launch would be developed, requiring limited site grading and some degree of bottom hardening to provide a safe surface for walking and to protect the bank and river bottom from erosion due to visitor use. Launch areas would be confined to the smallest possible area needed to accommodate average daily visitor demand. Impacts of new or improved visitor uses on aquatic habitat and dependent wildlife would be local short-term minor and adverse during construction and local long term minor and adverse following construction.

Potential visitor use impacts on aquatic habitat and dependent wildlife would continue to occur throughout the park where visitors have uncontrolled access to the New River, tributary streams, and special aquatic habitat and dependent wildlife. Indirect impacts would include those resulting from trampling of riparian vegetation, subsequent soil exposure, soil erosion, and sedimentation. Direct impacts would occur where visitors cross streams while hiking, walk in streams or the river while fishing, or disturb the river bottom while swimming, launching boats, or stopping at river rest stops. These impacts would be mitigated by designing new trails (approximately 25 miles) with the minimum number of tributary stream crossings and – where crossings could not be avoided – placement of footbridges to avoid hiker impacts, as funding permits. In the future sensitive aquatic habitat and dependent wildlife at and in the vicinity of popular backcountry river rest stops would be closed to day-use. At river launches visitor access to the river would be restricted to the minimum area possible and riparian areas adjoining launch sites

would be closed. Educational efforts would help deter visitor impacts through signage, informational materials, and interpretive programs that explain ecological values and sensitivity to disturbance of riparian areas and special aquatic habitat and dependent wildlife. Impacts on aquatic habitat and dependent wildlife would be local long-term minor and adverse.

Park Operations Actions. Impacts of future park operations actions on aquatic habitat and dependent wildlife would be local long-term major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.5 Aquatic Wildlife (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on aquatic habitat and dependent wildlife would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.5 Aquatic Wildlife (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future partnership and community collaboration actions on aquatic habitat and dependent wildlife would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.5 Aquatic Wildlife (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on aquatic habitat and dependent wildlife are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.5 Aquatic Wildlife (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on aquatic habitat and dependent wildlife. Alternative 5 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts and local long-term minor adverse impacts on aquatic habitat and dependent wildlife. Alternative 5 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on aquatic habitat and dependent wildlife. There would be no impairment of park resources or values related to aquatic habitats and dependent wildlife.

4.7.6 Terrestrial Wildlife (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to maintain the park's native animals (as in Alternative 1) by:

- perpetuating native animal life as part of the park's natural ecosystem by maintaining or restoring natural processes to the extent practically feasible
- relying on natural processes to control populations and habitats of native species to the greatest extent possible

In addition, in Alternative 5 management actions affecting terrestrial habitat and dependent species would focus on the following:

- managing approximately two-thirds (66.4%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated impacts to diversity and vertical understory structure
- managing approximately one-quarter (24.4%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- preserving the high diversity of native migratory species populations – particularly neotropical birds – and their habitats inside the park and cooperating with others to ensure preservation of their populations and habitats outside the park (common to Alternatives 2 to 5)

Impacts on terrestrial habitat and dependent species would be local long-term major and beneficial.

Cultural Resource Management Actions. Physical disturbance associated with cultural resource management actions would have the potential to impact terrestrial habitat and dependent species. Conceptual planning suggests that cultural resource management actions would likely disturb approximately 105 acres of previously disturbed land in the vicinity of cultural resource sites[1] (see Table 4.27). Field survey prior to treatment actions would determine terrestrial wildlife species present in the vicinity of each site and appropriate protection measures needed. Treatment would generally be scheduled so that it would occur during winter when wildlife are hibernating or during the non-breeding season.

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*

Restoration or rehabilitation of historic structures and associated cultural landscapes in the immediate vicinity of buildings would occur at five sites and affect approximately 15 acres. Pre-treatment and post-treatment habitat conditions would be quite similar, characterized by a mix of native grasses and ornamental plantings, although non-native plants would be removed where they are currently present at some sites. Affected wildlife would generally include habitat generalists that live in close association with human habitation. During the treatment period wildlife would be expected to migrate into adjacent habitat areas; following the treatment period they would likely migrate back to restored sites. Impacts on terrestrial habitat and dependent species would likely be local short-term minor and adverse.

At six sites where the larger cultural landscape of early settlement farms would be restored or the historic extent of fields reestablished, a total of 60 acres of successional old field vegetation and some areas of mixed-age forest would be cleared or otherwise altered. During the treatment period wildlife would be expected to migrate into adjacent habitat areas. Impacts would be negligible for species that live in close association with human habitation and agriculture. Impacts would be local long-term minor and adverse for species previously inhabiting successional old field or forest habitat that could not tolerate living in close association with human habitation and agriculture. Impacts for open grassland, pasture, meadows, and brush lands species – particularly some birds – would be local long-term moderate and beneficial.

At approximately 30 to 35 discovery sites potential habitat impacts would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining resources. Most sites would encompass approximately one acre or less. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that forest fragmentation would be minimized or would not occur. Wildlife in the vicinity of each site would be expected to migrate to adjacent habitat areas. Impacts on terrestrial habitat and dependent species would likely be local long-term minor and adverse.

Public Use, Enjoyment, and Experience Management Actions. Development of new facilities – and visitor use of those facilities – would have the potential to disturb or displace wildlife or cause areas to be avoided by wildlife. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 190 to 210 acres, dispersed among 30 to 31 sites and 104 miles of trails (primarily existing unmaintained trails that would be improved).[1] Approximately 75 percent of the area likely to be disturbed has experienced some degree of prior site disturbance. Affected vegetation would primarily include grasses, weeds, successional old field species, and non-native plants. However,

[1] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

development of a new river access at Surprise (if needed to address visitor crowding) would require limited clearing on Red Ash Island where a significant mature floodplain forest currently is present. Field survey prior to treatment actions would determine terrestrial wildlife species present in the vicinity of each visitor use site and the appropriate protection measures needed. Future site planning and construction of new facilities would seek to minimize disturbance to forested land, particularly on Red Ash Island and where existing unmaintained trails are improved to provide official park trails. To the maximum extent practicable, native vegetation that could be retained would not be disturbed so that forest fragmentation would be minimized or would not occur. Construction would generally be scheduled so that it would occur during winter when wildlife are hibernating or during the non-breeding season. Following construction approximately 90 to 95 acres would be replanted with native species and 80 to 95 acres would be stabilized through placement of crushed stone or other surface treatment for roads and parking facilities. Approximately 20 acres would be within the tread of reestablished or new trails. Wildlife would be expected to avoid sites during construction or would only travel through sites construction activity has abated, resulting in a local short-term minor adverse impact on wildlife and dependent species. Following construction, the permanent loss of habitat combined with disturbance, injury, or death associated with long-term visitor use and management of visitor use sites would result in a local long-term minor to moderate adverse impact on terrestrial habitat and dependent species.

Continuation of hunting in the park largely as it is today in accordance with all applicable regulations and policies adopted by the responsible management agencies would continue to have negligible impacts on terrestrial habitat and dependent species (as in Alternative 1) (see Section 4.3.6 Terrestrial Wildlife (Alternative 1) above). In addition implementation of voluntary hunter registration and end-of-season questionnaires would increase information on harvest and hunter use levels facilitating development of game management plans, potentially resulting in a local long-term minor beneficial impact on terrestrial habitat and dependent species. Opening of Grandview to limited hunting would help to control the white-tailed deer population and reduce adverse impacts of over browsing on understory vegetation in that area of the park.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture, subject to leasing terms that would mitigate potential farming impacts to natural resources (see Section 4.3.1 Physiography, Geology and Soils (Alternative 1) above). In Alternative 5, an additional 190 acres of restored, rehabilitated, or new fields at six early settlement farms would be leased for agriculture. Maintenance of open fields and forest edge along their perimeter would enhance wildlife habitat diversity locally in the park. Impacts on terrestrial habitat and dependent species would be local long-term minor and beneficial.

Land Protection Actions. Impacts of future land protection actions on terrestrial habitat and dependent species would likely be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.6 Terrestrial Wildlife (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of cooperation regarding hunting and game management between the NPS and the WV DNR on terrestrial habitat and dependent species would be local long-term moderate and beneficial (as in Alternative 4) (see Section 4.6.6 Terrestrial Wildlife (Alternative 4) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on terrestrial habitat and dependent species are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.6 Terrestrial Wildlife (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on terrestrial habitat and dependent species. Alternative 5 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts, local short-term minor adverse, and local long-term minor to moderate adverse impacts on terrestrial wildlife. Alternative 5 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on terrestrial wildlife. There would be no impairment of park resources or values related to terrestrial wildlife.

4.7.7 Rare, Threatened, and Endangered Species (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Management actions would continue to seek to generally increase the populations of rare, threatened, or endangered species in the park and to secure sufficient, suitable habitat to "recover" species designated as threatened or endangered (as in Alternative 1). Actions would generally focus on the following:

- managing habitat of threatened and endangered species to maintain their value for species recovery
- managing habitat of state-listed species to maintain their value for species maintenance to the greatest extent possible

- managing other native species of special management concern to the park to maintain their natural abundance and distribution
- controlling detrimental non-native species impacts on rare, threatened, or endangered species

In addition, in Alternative 5 management actions affecting terrestrial habitat and dependent species would focus on the following:

- managing approximately two-thirds (66.4%) of the park as backcountry, with implementation of related management prescriptions that would largely eliminate further human-induced forest fragmentation and associated impacts to diversity and vertical understory structure, including rare species and communities
- managing approximately one-quarter (24.4%) of the park as frontcountry, with implementation of related management prescriptions that would significantly reduce the potential for further human-induced fragmentation and associated impacts to diversity and vertical understory structure, including rare species and communities
- maintaining a nearly continuous strip of natural riparian vegetation along the New River and its tributaries (to be implemented through river corridor management zoning and related management prescriptions)
- preserving the high diversity of native migratory species populations – particularly neotropical birds – and their habitats inside the park and cooperating with others to ensure preservation of their populations and habitats outside the park (common to Alternatives 2 to 5)

Impacts on rare, threatened, and endangered species would be local long-term major and beneficial.

Cultural Resource Management Actions. Conceptual planning suggests that cultural resource management actions would likely disturb approximately 105 acres of previously disturbed land in the vicinity of cultural resource sites[1] (see 4.27). Restoration or rehabilitation of historic structures and associated cultural landscapes in the immediate vicinity of buildings would occur at five sites and affect approximately 15 acres. At six sites where the larger cultural landscape of early settlement farms would be restored or the historic extent of fields reestablished, a total of 60 acres of successional old field vegetation and some areas of mixed-age forest would be cleared or otherwise altered. At approximately 30 to 35 discovery sites potential habitat impacts would include removal of non-native plants and native trees and shrubs that threaten the stability of remaining structures on sites typically one acre in size or less.

[1] *In addition to the approximate four acres disturbed for cultural resource treatments in Alternative 1*

Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

Public Use, Enjoyment, and Experience Management Actions. Conceptual planning suggests that development of new or improved visitor use facilities would disturb approximately 190 to 210, dispersed among 30 to 31 sites and 104 miles of trails (primarily existing unmaintained trails that would be improved).[1] Field survey prior to treatment actions would determine if rare, threatened, or endangered species are present at or in the vicinity of other sites where treatment would occur. NPS would complete Section 7 Consultation with the U.S. Fish and Wildlife Service to determine necessary actions to avoid or mitigate adverse impacts to designated species where they are present. Assuming successful completion of Section 7 Consultation the determination would be that cultural resource management actions would not likely result in an adverse effect to designated species. For species that are state-listed the NPS would coordinate with WV DNR regarding potential impacts and mitigation measures needed to avoid or mitigate impacts. Impacts on rare, threatened, or endangered species would be negligible to local long-term minor to moderate and adverse.

Visitor use facilities at the Sandstone Falls Island day-use area would be improved, likely leading to increased visitation to Sandstone Falls. To address existing visitor use impacts to rare plants of the Appalachian flatrock community found in the Sandstone Falls vicinity – and to prevent expansion of the impacted area – the existing boardwalk trail would be expanded. The area impacted during construction would be limited to the minimum possible size. Following construction impacts on rare species would be local long-term minor and adverse.

Impacts of the ongoing program to stabilize and gate mine portals where rare, threatened, and endangered species are present would continue. Gates in abandoned mine openings throughout the park would continue to be local long-term moderate and beneficial (common to Alternatives 1 to 5) (see Section 4.3.7 Rare, Threatened, and Endangered Species (Alternative 1) above).

[1] *In addition to the approximate three acres disturbed for new or improved visitor use facilities in Alternative 1*

To protect designated species visitor use in certain areas of the park would be limited to day-use only, including Rush Run, Sewell, Beauty Mountain, Endless Wall, Sunshine Buttress, and Ames (common to Alternatives 2 to 5).[1] Impacts on rare, threatened, or endangered species would be local long-term moderate and beneficial.

Additional protections in climbing areas – including Endless Wall, Sunshine Buttress, Alabama, and Ames – would include provision of designated trails to climbing routes that would reduce the current proliferation of social trails that potentially disturb habitat of designated species (common to Alternatives 2 to 5). Impacts on rare, threatened, or endangered species would be local long-term moderate and beneficial.

Park Operations Actions. Impacts of future park operations actions on rare, threatened or endangered species would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.7 Rare, Threatened, and Endangered Species (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on rare, threatened or endangered species would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.7 Rare, Threatened, and Endangered Species (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future collaborative management actions on rare, threatened, and endangered species and their habitats that are outside but near the boundary of the park would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.7 Rare, Threatened, and Endangered Species (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on rare, threatened, and endangered species are identified in Section 4.2.4 (see Table 4.4). Impacts of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.7 Rare, Threatened, and Endangered Species (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on rare, threatened, and endangered species. Alternative 5 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on rare,

[1] *Visitor use in the Nuttallburg Visitor Use Area would also be limited to day-use only pursuant to the Nuttallburg Visitor Use Area DCP/EA (NPS 2008c)*

threatened, and endangered species. Alternative 5 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on rare, threatened, and endangered species. There would be no impairment of park resources or values related to rare, threatened, and endangered species.

4.7.8 Scenic Resources (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Resource management actions would seek to protect a range of views in all areas of the park, allowing visitors to experience the extent of the gorge, the river, the forest, and the rim by (as in Alternative 1):

- removing non-native plants at sites where they cause a major scenic or aesthetic intrusion
- reclaiming abandoned mine lands at sites throughout the park (in cooperation with the WV DEP)

In addition, in Alternative 5 management actions affecting scenic resources would focus on the following:

- managing approximately two-thirds (66.4%) of the park as backcountry with implementation of related management prescriptions that would protect unfragmented forest blocks and natural scenic qualities from human-induced impacts
- managing approximately almost one-quarter (24.4%) of the park as frontcountry with implementation of related management prescriptions that would protect natural scenic qualities by reducing human-induced disturbance
- maintaining a nearly continuous strip of natural riparian habitat along the New River, thereby also preserving its natural scenic qualities (common to Alternatives 2 to 5)

Impacts on scenic resources would be local long-term minor to major and beneficial.

Cultural Resource Management Actions. Restoration of cultural landscapes at one early settlement site and at the Prince Brothers General Store, removal of modern structures at three early settlement sites where potentially significant cultural landscapes exist (as in Alternative 1), rehabilitation of farm fields at seven early settlement sites, and treatments at approximately 30 to 35 cultural resource sites (to be managed as discovery sites) would enhance scenic resources fundamental to the park (see Section 4.7.10 Cultural Landscapes (Alternative 5)

above). Impacts on scenic resources would be local long-term minor to major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New visitor use facilities and expansion of existing facilities would alter the park setting in the vicinity of improvements:

- approximately 104 miles of new park trails would be developed, mostly by improving existing unmaintained trails to single-track trails approximately 24 inches in width, requiring minor alteration to the park setting
- approximately 34 small parking areas would be developed to provide trailheads for hikers, climbers, and horseback riders, mostly along existing roads on forest block perimeters, and on previously disturbed sites
- four existing day-use facilities would be improved through minor additions or expansions, most of which would enhance the existing setting, although there could be some minimal impacts to vegetation at some sites
- approximately 6 parking areas at existing river accesses would be expanded, with minimal changes to the park setting
- two new parking areas would be developed in support of a visitor shuttle system – one near U.S. Route 19 for satellite parking to serve the Fayette Station Road area and one at the top of the Cunard Road for satellite parking to serve the Cunard river access area
- three new river accesses and related day-use areas would be developed requiring clearing and alteration of the riparian zone at the river edge where the river launch would be located; two would be developed in conjunction with new developed campgrounds in areas that have been previously disturbed generally converting old successional field areas to developed uses; at Surprise development of related parking facilities on the bench above the New River would alter the wooded natural setting
- one new day-use facility at Fayette Station, utilizing a previously disturbed site in the riparian area
- four new developed campgrounds would be developed on open sites, requiring conversion of early successional old field vegetation on previously disturbed sites to developed visitor uses
- four existing primitive campgrounds would be expanded, requiring small areas of clearing for development of new campsites and road access that would slightly alter the park setting

- an existing primitive campground and day-use area in the floodplain would be relocated to a new site in an area of mixed vegetation where some minor clearing of trees would be required
- approximately five new groups of backcountry campsites would require small clearings for campsites in clusters along park trails in the backcountry and frontcountry
- a new park road on the Highland-Backus Plateau would be developed through expansion of an existing unmaintained road and minor improvements to the existing administrative road to Surprise

Overall the impacts of visitor use facilities on scenic resources would be local long-term minor and adverse.

Existing campgrounds in the floodplain at Hellems Beach, Stone Cliff, and Dun Glen would be eliminated and natural floodplain vegetation would be restored. The McCreery river access would also be closed and restored. Impacts on scenic resources would be local long-term minor and beneficial.

Park Operations Actions. The park would continue to lease approximately 38 acres of existing farm fields for agriculture. In Alternative 5, an additional 190 acres of restored, rehabilitated, or new fields at historic sites (see Table 4.27) would be leased for agriculture, subject to leasing terms that would mitigate potential farming impacts to cultural landscapes and other resources (see Section 4.3.10 Cultural Landscapes (Alternative 2) below). Farming would maintain the extent of restored or rehabilitated fields that are significant features of the park's cultural landscapes, protecting them from succession to mixed mesophytic forest. These landscapes are scenic resources considered fundamental to the park. Impacts on scenic resources would be local long-term moderate and beneficial.

Land Protection Actions. Impacts of future land protection actions on scenic resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.8 Scenic Resources (Alternative 2) above).

Partnership and Community Collaboration Actions. Impacts of future collaborative management actions on scenic resources that are outside but near the park boundary would be local long-term minor to major and beneficial (common to Alternatives 2 to 5) (see Section 4.4.8 Scenic Resources (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on scenic resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.8 Scenic Resources (Alternative 1)

Table 4.27

New River Gorge National River
Alternative 5 – Site Specific Cultural Resource Management Actions

Actions *(in addition to Alternative 1 see Table 4.6 above)*

- **Historic Structure Restoration**
  - Richmond-Hamilton Farm (farmhouse and outbuildings)
  - Thurmond Houses (those not rehabilitated – see below – would be restored on exterior only)
- **Historic Structure Rehabilitation** (with reuse through the park leasing program)
  - Trump Lilly Farm (farmhouse)
  - Vallandingham Farm (farmhouse)
  - Camp Brookside
  - Prince Brothers General Store
  - Thurmond Commercial Row
  - Thurmond Houses (those that are in good condition would be rehabilitated for park housing or visitor lodging)
- **Cultural Landscape Restoration**
  - Richmond-Hamilton Farm (with agricultural leasing)
  - Prince Brothers Estate
- **Discovery Site Stabilization and/or Maintenance**
  - treatment actions – at approximately 30 to 35 discovery sites – as needed to stabilize resources and/or to protect resources from potential visitor use impacts
- **Rehabilitation of the Historic Extent of Fields at Cultural Resource Sites** (with agricultural leasing)
  - Vallandingham Farm
  - Cochran Farm
  - Trump-Lilly Farm
  - Westfall Farm (if and when acquired by NPS from a willing seller)
  - Richmond Bottom (if and when acquired by NPS from a willing seller)
  - Harrah Homestead (no leasing)

above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on scenic resources. Alternative 5 would contribute a moderate beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts and local long-term minor impacts on scenic resources. Alternative 5 would contribute a moderate beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on scenic resources. There would be no impairment of park resources or values related to scenic resources.

4.7.9 Archeological Resources (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect and preserve archeological resources against natural destruction wherever practicable by eliminating and avoiding natural resource impacts, stabilizing sites and structures, and monitoring conditions. Management actions including removal of vegetative overgrowth at areas of known or potential archeological resources would be preceded by research sufficient to identify and evaluate such resources. The impact on archeological resources receiving stewardship actions would be local long-term minor and beneficial.

Backcountry zoning would apply to two-thirds (66.4%) of the park. In backcountry zones potential disturbance to archeological resources resulting from park development could occur only along zone perimeters and new trails and at a few designated backcountry camping sites (Figure 2.4). The impact on archeological resources would be local long-term moderate and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to identify and evaluate park archeological resources and to assess their condition and threats to them. Eligible archeological resources would continue to be nominated for listing in the National Register, as appropriate. Archeological resources would generally continue to be left undisturbed except where intervention could be justified based on compelling needs for research, interpretation, site protection, or park development.

Specific management actions at cultural resource sites that could potentially disturb archeological resources would include (see Table 4.27):

- historic building restoration, rehabilitation, or maintenance/ stabilization at numerous cultural resource sites

- cultural landscape restoration at two sites
- rehabilitation of farm fields at seven early settlement farm sites
- stabilization and protection actions at approximately 30 to 35 discovery sites

Strategies to protect archeological resources would be implemented as for Alternative 1 (see Section 4.3.9 Archeological Resources above). The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Public Use, Enjoyment, and Experience Management Actions. Ground disturbance associated with development of new facilities and enhancement of existing facilities could affect archeological resources at sites throughout the park. Strategies to protect archeological resources would be implemented as for Alternative 1 (see Section 4.3.9 Archeological Resources above). The impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity.

Expanded visitor use in historic resource zones, along trails, in the vicinity of recreation sites, and at discovery sites (approximately 30 to 35 sites) would increase vulnerability of archeological resources to surface disturbance, inadvertent damage, and vandalism. Loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence could result. NPS staff or volunteer presence and emphasizing visitor education would discourage vandalism and inadvertent destruction of cultural remains. Because expanded visitor use would be dispersed throughout the park in themed areas, at river gateways, at many discovery sites, along numerous new rim to river trails and numerous new trails to attractions in the vicinity of gateways, the potential for The impact on archeological sites would be dispersed. This would make resource protection more difficult for NPS staff and volunteers. The impact on archeological resources would be local long-term minor and adverse.

Increased use of archeological sites and resources for public education and interpretation in themed areas, in river gateways, and at discovery sites would increase awareness and appreciation of resources, thereby increasing support for their preservation, and resulting in a local long-term minor to moderate beneficial impact on archeological resources.

Park Operations Actions. Impacts of construction of water supply/distribution and wastewater collection/treatment facilities at Thurmond on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse (as in Alternative 4) (see Section 4.6.9 Archeological Resources (Alternative 4) above).

Farming would occur through an agricultural leasing program on fields at six early settlement cultural resource sites affecting approximately 190 acres (see Table 4.27). Leases would be structured to ensure that agricultural practices would result in a negligible to local long-term minor adverse impact on archeological resources, depending on the site (see Section 4.4.9 Archeological Resources (Alternative 2) above).

Private use of rehabilitated historic structures (see Table 4.27) would occur through lease or cooperative agreement. Leases would be structured to ensure that the impact on archeological resources would be site-specific and would range from negligible to local long-term minor and adverse, depending on the site and the type of activity (see Section 4.4.9 Archeological Resources (Alternative 2) above).

Land Protection Actions. Impacts of future land protection actions on archeological resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.9 Archeological Resources (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on archeological resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.9 Archeological Resources (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on archeological resources. Alternative 5 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effects to archeological resources.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to moderate beneficial impacts and local long-term minor adverse impacts on archeological resources. Alternative 5 would contribute an imperceptible beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on archeological resources. There would be no impairment of park resources or values related to archeological resources.

4.7.10 Cultural Landscapes (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions in the park would be expanded to include managing vegetation at restored cultural landscapes, rehabilitated farm fields, and discovery sites. Management would seek to control invasive plants at each site on an ongoing basis. Pruning or removal of natural forest vegetation would occur regularly where it threatens to overtake cultural landscapes or jeopardizes the integrity of landscape features. Areas to remain open would be periodically mowed or leased for agriculture. Stormwater management would seek to protect landscapes from impacts of flooding, erosion, sedimentation, and landslides. Impacts on cultural landscapes would be local long-term moderate and beneficial.

Cultural landscape sites where natural resource management actions would not be implemented would continue to be at risk due to vegetation overgrowth, poor drainage, and/or landslide susceptibility (common to Alternatives 2 to 5). Impacts on cultural landscapes would be local long-term minor to moderate and adverse.

Cultural Resource Management Actions. Efforts would continue to include all cultural landscapes in the park's *Cultural Landscapes Inventory* (NPS 2005a), to identify and nominate eligible landscapes to the National Register, and to prepare cultural landscape reports for all cultural landscapes (as in Alternative 1).

Specific management actions affecting cultural landscapes would include (see Table 4.27):

- Cultural resource management actions would include restoration of the cultural landscape at the Prince Brothers General Store in the Prince/Quinnimont river gateway and at the Richmond-Hamilton Farm in the Upper River Corridor Focal Area. The restored Prince Brothers Estate cultural landscape would depict the features and character of the landscape as it appeared at the turn of the 20th century. The restored Richmond-Hamilton Farm cultural landscape would depict the features and character of the landscape as it appeared in the pre-industrial period in the later part of the 19th century; Cultural landscape restoration would occur in conjunction with restoration of structures at Richmond-Hamilton Farm and with rehabilitation of the Prince Brothers General Store. Research and preparation of a cultural landscape report would precede work on each site and would serve as the principal document used to guide restoration decisions.

- Approximately 30 to 35 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along the Through Park Connector, along rim to river trails, and along trails within focal areas.

Many of these sites would be early settlement farms and ruins of historic structures at former sites of industrial activities or related settlements in the gorge. Where these sites involve cultural landscape components, maintenance activities would mitigate deterioration of cultural landscape components by protecting their condition; stabilization would reestablish the stability of unsafe damaged or deteriorated cultural landscape components while maintaining their existing character.

- At six early settlement sites – where known or potentially significant cultural landscapes exist – management actions would include reestablishment of the historic extent of fields.

All management actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on cultural landscapes would be local long-term minor to major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Impacts of new visitor facilities on cultural landscapes would include:

- New visitor use facilities would be added at the six early settlement farms in the south end of the park where the cultural landscape would be restored to access the site for interpretive experiences. Facilities would include parking, paths, other structures to facilitate access, and interpretive media. A farm loop trail would also link the restored landscape to other early settlement farms in the south end of the park. Design and location of contemporary facilities and structures would be considered within the context of the significance of the landscape and would minimize adverse impacts on the character and features of the cultural landscape to the maximum extent practicable. During construction ground disturbance would result in local short-term minor to moderate adverse impacts on the cultural landscape. The long-term impacts on the cultural landscape would be local long-term minor and adverse.

- Where historic structures would be rehabilitated for educational use, commercial use, housing, and visitor services (including lodging) at Camp Brookside, Prince Brothers General Store, two early settlement farmhouses, Thurmond Commercial Row, and numerous houses at Thurmond, use modifications such as development of parking facilities and walkways, could result in local long-term minor to moderate and adverse impacts on the cultural landscape. Circulation system improvements at Grandview would the affect cultural landscape (common to Alternatives 2 to 5) (see Section 4.4.16 Visitor Access above). During construction ground disturbance would result in a local short-term minor to moderate adverse

impact to the cultural landscape. Following construction the impact on the cultural landscape would be local long-term minor and adverse.

- Parking improvements at Thurmond in the vicinity of Commercial Row, in the upper residential area, and at restored houses to be used for housing or visitor lodging would affect the cultural landscape (see Section 4.5.16 Visitor Access below). Mitigating actions and impacts would be similar to those implemented for circulation improvements at Grandview (see preceding section).

- At discovery sites (approximately 30 to 35 sites), management actions would include installation of contemporary facilities and structures to control visitor access to cultural landscape components (if present) that would be vulnerable to damage from visitor use. Design considerations would reflect considerations similar to those described above for visitor facilities in a restored landscape. During construction ground disturbance would result in local short-term minor adverse impacts on cultural landscapes. The long-term impacts on the cultural landscapes would be local long-term minor and adverse.

Impacts on cultural landscapes associated with increased visitor use would include:

- Restored cultural landscapes and associated structures opened to the public for interpretive experiences and programs would be susceptible to wear and tear from increased use. NPS staff or volunteer presence would reduce the potential for visitors to inadvertently damage or to vandalize resources. Impacts on cultural landscapes would be negligible to local long-term minor and adverse.

- Cultural landscapes associated with rehabilitated and leased historic structures opened to the public for educational use, commercial use, housing, and visitor services (including lodging) would be susceptible to wear and tear from increased use. Lease holder or concessioner presence would reduce the potential for visitors to inadvertently damage or to vandalize resources. Impacts on cultural landscapes would be negligible to local long-term minor and adverse.

- Visitor use elsewhere in the park would continue to impact cultural landscapes, particularly in remote areas where ranger patrols and NPS staff are not routinely present. Visitor use impacts would generally include inadvertent disturbance and vandalism. Improved access to restored cultural landscapes in the south end of the park and to discovery sites (approximately 30 to 35 sites) along the Through Park Connector, along rim to river trails, and along trails within focal areas would increase the potential for visitor use impacts in those locations, although increased

presence of NPS staff at these sites would help educate visitors about appropriate resource stewardship. Impacts on cultural landscapes would be local long-term minor and adverse.

- Approximately 104 miles of new park trails would enhance visitor access to recreation sites and cultural resources sites in the park. Most new trails would use previously existing unmaintained trails, some of which might be determined historically significant upon further investigation and coordination with the WV SHPO. Future development of a park trail management plan would include Section 106 compliance with the WV SHPO during which historic significance would be assessed and mitigation measures incorporated into trail system design, as appropriate. The long-term impacts on cultural landscapes would be local long-term minor and adverse.

Park Operations Actions. Impacts of future provision of water supply and wastewater treatment services at Thurmond on cultural landscapes would be negligible to local long-term minor and adverse (see Section 4.4.10 Cultural Landscapes (Alternative 2) above).

Farming would occur through an agricultural leasing program at six early settlement cultural resource sites (190 acres) where known or potentially significant cultural landscapes exist (see Table 4.27). Leases or agreements would be structured to protect the historic scene and significant features of the cultural landscape at each site (see Section 4.4.10 Cultural Landscapes (Alternative 2) above). Impacts on cultural landscapes would be negligible.

Land Protection Actions. Impacts of future land protection actions on cultural landscapes would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.10 Cultural Landscapes (Alternative 2) above).

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on cultural landscapes are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.10 Cultural Landscapes (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on cultural landscapes. Alternative 5 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to cultural landscapes.

- **Conclusion**

Management actions in Alternative 5 would result in local short-term minor to moderate and adverse impacts, local long-term major and beneficial impacts, and local long-term minor to moderate and adverse impacts on cultural landscapes. Alternative 5 would contribute a moderate beneficial and a minor adverse impact to the total cumulative long-term moderate adverse impact on cultural landscapes. There would be no impairment of park resources or values related to cultural landscapes.

4.7.11 Historic Structures (Alternative 5) (Preferred Alternative)

Natural and Scenic Resource Management Actions. Natural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b) (as in Alternative 1). Stewardship would generally include removal of non-native plants and improvements to drainage in the vicinity of historic structures. The impacts to historic structures receiving stewardship actions would be local long-term minor and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to protect structures included on the park's *List of Classified Structures* (NPS 2006b) and to obtain determinations of their eligibility for the National Register (as in Alternative 1). Stewardship would generally include building stabilization to provide protection from weather and vandalism. Maintenance of previously stabilized structures would continue. The impacts to historic structures receiving stabilization and ongoing maintenance would be local long-term minor and beneficial.

Further stewardship of historic structures beyond the actions included in Alternative 1 (see Table 4.6) would include the following (see Table 4.27):

- The farmhouses and outbuildings at one historic farm would be restored in the south end of the park, accurately presenting the form, features, and character of the farm as it appeared in the late 19th to early 20th century. Building restoration would occur in conjunction with restoration of the cultural landscape.
- Several houses at Thurmond would be restored, accurately presenting the form, features, and character of the houses as they appeared in the early 20th century.
- Some individual structures already determined eligible for the National Register (those owned by the NPS) would be rehabilitated, including Camp Brookside (all camp structures), two early settlement farms, Prince Brothers General Store, Thurmond Commercial Row (including remediation of lead and asbestos contamination), and other houses at Thurmond that would not be restored. Houses at Thurmond would be rehabilitated for park housing and visitor lodging.

- Approximately 30 to 35 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along rim to river trails, along trails in the vicinity of river gateways, and in focal areas. Some of these sites would be early settlement farms and historic structures at former sites of industrial activities or related settlements in the gorge. Where these sites involve an historic building, maintenance activities would mitigate building deterioration by protecting its condition; stabilization would reestablish the stability of unsafe damaged or deteriorated structural components while maintaining existing building character.

All management actions would be completed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995e) and other NPS policies, guidelines, and standards. Impacts on historic structures would generally be local long-term minor to major and beneficial. Where structures are rehabilitated for leasing or visitor services, concession use modifications, such as those needed to accommodate accessibility and additional means of egress, could result in local long-term minor to moderate and adverse impacts.

Public Use, Enjoyment, and Experience Management Actions. Restored structures opened to the public for interpretive experiences and programs would be susceptible to wear and tear from increased use. NPS staff or volunteer presence would reduce the potential for visitors to inadvertently damage or to vandalize resources. Impacts on historic structures would be negligible to local long-term minor and adverse.

Historic structures leased for housing, educational use, visitor services, or commercial use (including visitor lodging) at two early settlement farmhouses, Camp Brookside, Prince Brothers General Store, Thurmond Commercial Row, and numerous houses at Thurmond would be susceptible to wear and tear from increased use, inadvertent damage, or vandalism. Leases and agreements would seek to reduce the potential for adverse impacts on historic structures associated with their adaptive reuse including maintenance requirements to avoid or mitigate adverse impacts of visitor use. Impacts on historic structures would be local long-term minor to moderate and adverse.

Park Operations Actions. Impacts of future provision of water supply and wastewater treatment services at Thurmond on historic structures would be negligible to local long-term minor and adverse (as in Alternative 4) (see Section 4.4.11 Historic Structures (Alternative 2) above).

Private use of rehabilitated historic structures (see Table 4.27) would occur through lease, cooperative agreement, or concession agreement. Leases or agreements would be structured to protect resources and defray the costs associated with building maintenance (see Section 4.4.11 Historic Structures (Alternative 2) above).

The impact on historic buildings would range from local long term minor to moderate and beneficial to local long term minor to moderate and adverse.

Land Protection Actions. Impacts of future land protection actions on historic structures would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.11 Historic Structures (Alternative 2) above).

Partnership and Community Collaboration Actions. NPS would continue to provide technical assistance to the city of Hinton to assess treatment options for rehabilitation and adaptive reuse of the city-owned Hinton Depot and to assist with implementation of treatment by helping to identify funding options and to develop grant applications (as in Alternative 1). Impacts on historic structures would be local long-term moderate and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on historic structures are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.11 Historic Structures (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on historic structures. Alternative 5 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to historic structures.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on historic structures. Alternative 5 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on historic structures. There would be no impairment of park resources or values related to historic structures.

4.7.12 Ethnographic Resources (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Backcountry zoning would preserve unfragmented blocks of mixed mesophytic forest in 66.4 percent of the park, while frontcountry zoning where human-induced fragmentation would be decreased would apply to 24.4 percent of the park. This would protect the forest and its associated watershed which is the ethnographic resource identified as vital

to the park's traditionally associated people and groups (Hufford et al 2006). Impacts on ethnographic resources would be local long-term major and beneficial.

Natural resource management actions would also protect specific natural and cultural resources found within the park's mixed mesophytic forest that are important to the park's traditionally associated people, such as plants, animals, and sites of former towns, settlement areas, and industrial sites (as in Alternative 1). Impacts to ethnographic resources would be local long-term minor to moderate and beneficial.

Cultural Resource Management Actions. Cultural resource management actions would continue to include appropriate studies and consultations to further document ethnographic resources and uses, traditionally associated people, and other affected groups, and cultural affiliations to park resources. Eligible ethnographic resources would continue to be nominated for listing in the National Register, as appropriate.

Cultural resource treatment at historic structures, cultural landscapes, and discovery sites would restore, rehabilitate, or stabilize resources that are likely to be found through further research to include significant ethnographic resources (see Table 4.27 and Sections 4.7.10 and 4.7.11 above). Impacts on ethnographic resources would be local long-term minor to major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. New visitor use facilities at historic structures, cultural landscapes, and discovery sites (approximately 30 to 35 sites) would impact resources that are likely to be found through further research to include significant ethnographic resources (see Table 4.29 and Sections 4.7.10 Cultural Landscapes and 4.7.11 Historic Buildings above). Impacts on ethnographic resources if determined to be present would be local long-term minor to moderate and adverse.

Impacts associated with increased visitor use on ethnographic resources, if determined to be present, would include the following (see Sections 4.7.10 Cultural Landscapes and 4.7.11 Historic Buildings above):

- negligible to local long-term minor adverse impacts at sites where structures and associated cultural landscapes are restored
- local long-term minor to moderate and adverse impacts at sites where structures (with associated cultural landscapes) are rehabilitated and leased for housing, educational use, visitor services, or commercial use (including visitor lodging)
- local long-term minor to moderate and adverse impacts elsewhere in the park, particularly in remote areas and in the vicinity of discovery sites (approximately 30 to 35 sites) where ranger patrols and NPS staff are not routinely present

Land Protection Actions. Impacts of future land protection actions on ethnographic resources would be local long-term moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.12 Ethnographic Resources (Alternative 2) above).

Partnership and Community Collaboration Actions. The NPS would continue to consult with traditionally associated groups and Indian tribes (as in Alternative 1) (see Section 4.3.12 Ethnographic Resources (Alternative 1) above). Impacts on ethnographic resources would be local long-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on ethnographic resources are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.12 Ethnographic Resources (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on ethnographic resources. Alternative 5 would contribute a minor beneficial impact and an imperceptible adverse impact to the total cumulative impact.

- **Section 106 Summary**

The Section 106 determination of effect would be no adverse effect to ethnographic resources.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on ethnographic resources. Alternative 5 would contribute a minor beneficial and an imperceptible adverse impact to the total cumulative long-term moderate adverse impact on ethnographic resources. There would be no impairment of park resources or values related to ethnographic resources.

4.7.13 Regional and Local Economy (Alternative 5) (Preferred Alternative)

In Alternative 5 – Exploration Experiences – the NPS would substantially expand the park's contributions to the Southern West Virginia's tourism industry and economic environment by implementing a comprehensive approach to enhancing the visitor experience, by expanding recreational and interpretive attractions. Alternative 5 represents the most aggressive alternative in terms of improving the park's visibility and accessibility. Alternative 5 also recommends a stronger system of regional wayfinding and cooperative marketing than do the other alternatives. The changes proposed would produce major visitation impacts in the park's focal areas while limiting the park's backcountry areas to primitive recreational experiences.

The Upper River Corridor focal area would gain visitation from the New River Parkway, as well as from improvements at Sandstone Falls, river access/camping at Meadow Creek West, the restoration of the Richmond Hamilton farm, and better wayfinding.

The Grandview/Prince focal area would benefit from the McKendree Road byway, accessibility improvements, and better marketing.

The Thurmond focal area would realize strong visitor growth from the restoration of Commercial Row and residential buildings, as well as from the McKendree Road byway, and better accessibility, wayfinding and marketing.

The Lower Gorge focal area would add visitation in several locations, particularly Cunard, Nuttallburg, and Fayette Station Road, as a result of accessibility improvements, the development of new recreational/interpretive facilities, and better wayfinding/marketing.

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Impacts of these expenditures on the regional and local economy would be regional short-term minor and beneficial and regional long-term minor and beneficial (common to Alternatives 2 to 5) (see Section 4.4.13 Regional and Local Economy (Alternative 2) above).

Cultural Resource Management Actions. Restoration and ongoing maintenance of one early settlement farmhouse and several Thurmond houses, as well as rehabilitation of Camp Brookside structures, two early settlement farmhouses, Prince Brothers General Store, Thurmond Commercial Row, and several additional Thurmond houses, would result in expenditures by the NPS for labor and materials. These initiatives would enhance the attractiveness of these sites to visitors. Impacts on the regional and local economy would be regional short-term minor and beneficial and regional long-term minor and beneficial.

Adaptive reuse through the park's leasing program of Camp Brookside, two early settlement farmhouses, Prince Brothers General Store, Thurmond Commercial Row, and several Thurmond houses for visitor services, commercial use, or visitor lodging would bring more visitors to the Hinton area and would enhance the attractiveness of the Prince and Thurmond areas to visitors. Impacts on the regional and local economy would be regional long-term moderate and beneficial.

Public Use, Enjoyment, and Experience Management Actions. Management would continue to encourage economic activity in areas with active visitor use facilities and support services.

The total annual number of recreational visits to the New River Gorge National River is projected to increase by 498,500 from the current (2007) level of 1,178,000 in

this alternative, a 42.3 percent growth rate. Table 4.28 displays projected direct and indirect economic impacts resulting from this increased level of visitor activity. Substantial visitation increases would occur in the four themed areas (excluding Babcock State Park), as each of these areas would undergo dramatic improvements related to visibility, accessibility, recreation, and interpretation. Other areas throughout the entire park would benefit from the expanded trail network and region-wide wayfinding and marketing programs.

Several industries that benefit from NPS stewardship of the New River Gorge, including outfitting, lodging, dining, and convenience goods, would continue to support significant levels of employment, wages, and housing demand. Businesses in these industries are mostly concentrated along the US 19 corridor, particularly in Fayetteville and Beckley.

Industries that have jobs supported by NPS-related activities at New River Gorge would also continue to realize significant impacts on earnings and the housing market.

TABLE 4.28 Alternative 5 – Exploration Experiences – Annual Direct and Indirect Economic Impacts ($2007)

Impact Type	2005	Added as a Result of Alternative 5	2025
Visitation			
Visitors	1,178,000	498,500	1,676,500 (+42.3%)
Direct Impacts			
Jobs	2,000	870	2,870
Earnings	$28,317,960	$12,257,500	$40,575,460
NPS Spending	$7,208,400	$2,790,600	$9,999,000
Visitor Spending	$67,910,000	$29,395,000	$97,305,000
Indirect Impacts			
Jobs	850	367	1,217
Earnings	$7,870,810	$3,406,900	$11,277,710
NPS Spending	$4,159,970	$1,610,430	$5,770,400
Visitor Spending	$33,568,090	$14,530,000	$48,098,090
Total Impacts			
Jobs	2,850	1,237	4,087
Earnings	$36,188,770	$15,664,400	$51,853,170
NPS Spending	$11,368,370	$4,401,030	$15,769,400
Visitor Spending	$101,478,090	$43,925,000	$145,403,090

2005 baseline and Impact factors per recreational visit are adapted from Versel 2006

Impacts on the regional and local economy would be regional long-term moderate and beneficial.

Park Operations Actions. Total recurring costs by NPS would be about $15.8 million annually, while total one-time costs would be about $29.7 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have Impacts on the regional and local economy are identified in Section 4.2.4 (see Table 4.4). These actions would generally be the same as those described for Alternative 1 (see Section 4.3.13 Regional and Local Economy (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on the regional and local economy. Alternative 5 would contribute a minor beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in regional short-term minor to moderate beneficial and regional long-term minor to moderate beneficial impacts on the regional and local economy. Alternative 5 would contribute a minor beneficial impact to the total cumulative long-term moderate beneficial impact on the regional and local economy.

4.7.14 Communities (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Natural resource management actions implemented within the park would have the potential to affect natural resource conditions in communities within or near the park. As in Alternative 1, these primarily include management actions that would seek to protect water quality, floodplains, forest, and aquatic and terrestrial habitats and dependent species (see Section 4.4.14 Communities (Alternative 2) above. In addition, in Alternative 5 several management actions (common to Alternatives 2 to 5) would seek to:

- protect, preserve and restore the natural resources and functions of floodplains
- maintain and restore natural stream ecosystems supporting a full range of natural aquatic organisms

- maintain the park's native plants and natural landscapes

Collectively the impact of these management actions on natural resources in communities within and near the park would be local long-term major and beneficial.

Cultural Resource Management Actions. In Alternative 2, cultural resource management actions (in addition to those included in Alternative 1) with the potential to affect resources of potential significance to residents of communities within or near the park include:

- The farmhouses and outbuildings at one historic farm would be restored in the south end of the park, accurately presenting the form, features, and character of the farm as it appeared in the late 19th to early 20th century.
- Several houses at Thurmond would be restored, accurately presenting the form, features, and character of the houses as they appeared in the early 20th century.
- Some individual structures already determined eligible for the National Register be rehabilitated, including Camp Brookside (all camp structures), two early settlement farms, Prince Brothers General Store, Thurmond Commercial Row and other houses at Thurmond that would not be restored.
- The cultural landscape would be restored at the Prince Brothers Estate in the Prince/Quinnimont river gateway and at the Richmond-Hamilton Farm in the Upper River Corridor Focal Area.
- Approximately 30 to 35 cultural resource sites would be stabilized and/or maintained as discovery sites, located primarily along rim to river trails, along trails in the vicinity of river gateways, and in focal areas.

Cultural resource treatment at historic structures, cultural landscapes, and discovery sites would restore, rehabilitate, or stabilize resources that are likely to be found through further research to include significant ethnographic resources.

The impact of these actions on the residents of communities within or near the park would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. In Alternative 4, visitor facility improvements would address many of the visitor experience issues of concern to residents of communities within or near the park who use the park. These relate to crowding at river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few opportunities for biking and equestrian use). Impacts on visitor use and visitor experience as a result of these improvements (see Table 4.27 would be as follows:

- day-use facility improvements would result in a local long-term minor beneficial impact
- camping improvements would result in a local long-term major beneficial impact
- river access improvements would result in a local long-term major beneficial impact
- trail improvements would result in a local long-term major beneficial impact for hikers, bikers, and horseback riders
- trailhead improvements would result in a local long-term moderate beneficial impact for climbers and hunters (made possible by boundary adjustments)

Hunting would continue as it occurs today on most NPS-owned land in the park in accordance with the hunting and fishing regulations of the state of West Virginia. Impacts on residents of communities within or near the park who hunt would be local long-term moderate and beneficial. Opening Grandview to hunting on a limited basis and restoration of open land bird habitat in restored cultural landscapes would have a local long-term minor beneficial impact on hunting. Addition of a voluntary hunter registration and reporting system would have a negligible impact on local hunters. Assuming that cooperative game management planning between the NPS and WV DNR would enhance game populations in the park there would be a local long-term minor and beneficial impact on the hunting experience for local residents. Continued safety hazards would result in a local long-term minor and adverse impact on residents of communities within and near the park.

Park Operations Actions. Total recurring costs by NPS would be about $15.8 million annually, while total one-time costs would be about $29.7 million. This spending would continue to have a direct effect on only a few people, groups, and businesses. Impacts of spending as a result of recurring costs would be regional long-term minor and beneficial. Impacts of spending for one-time costs would be regional short-term minor and beneficial.

At Thurmond – as in Alternative 4 – rehabilitation and subsequent leasing of Commercial Row and houses that remain in good condition would generate a sustainable income stream for long-term maintenance of the buildings. The impact on the community of Thurmond would be local long-term moderate and beneficial.

At Prince – as in Alternative 4 – rehabilitation and subsequent leasing of Prince Brothers General Store would generate a sustainable income stream for long-term maintenance of the building. The impact on the communities of Prince would be local long-term minor and beneficial.

Land Protection Actions. Impacts of future land protection actions on communities would be local long-term minor to moderate and beneficial (common to Alternatives 2 to 5) (see Section 4.4.14 Communities (Alternative 2) above).

Partnership and Community Collaboration Actions. As in Alternative 2, the NPS would implement a number of actions aimed at sustaining communities within the park, focused on Hinton, Thurmond, Meadow Creek, Backus, Highland, Prince/Quinnimont, Terry, and Thayer. Partnership actions would also be focused on building relationships with gateway communities, other government agencies, economic development entities, user groups, and the park's "friends". The types of collaborative actions would be similar to those in Alternative 2 (see Section 4.4.14 Communities (Alternative 2) above) although the focus of the actions would differ with the Alternative 5 Exploration Experiences theme, described in Section 2.8.5 through 2.8.7 above. Also – as in Alternative 4 – in Alternative 5 additional effort would be focused on building gateway community partnerships and significantly expanding the relationships between gateway communities and the park. Collectively the impact of these actions on communities within and near the park would be local long-term major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on communities are identified in Section 4.2.4 Cumulative Impact Analysis (see Table 4.4). These generally include growth and development on private property, public infrastructure projects, and transportation system improvements. Collectively these actions have improved the quality of life in communities within and near the park. They have generally enhanced opportunities for education, attracted new employers to the area thereby providing new jobs, provided locations for needed commercial services, generally enhanced regional and local access, and protected public health and environmental quality by making available clean water, wastewater treatment, and other public services. Impacts of Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on communities within or near the park. Alternative 5 would contribute a moderate beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts and a local long-term minor adverse impact on communities within or near the park. Alternative 5 would contribute a moderate beneficial impact to the total cumulative long-term major beneficial impact on communities within or near the park.

New River Gorge National River
Desired Visitor Experiences

Desired Visitor Experiences

- **Important Park Experiences that Visitor should have:**
  - Appreciate life in the gorge – the human history story
  - Appreciate/experience the wildness of the landscape
  - Experience the power of the river
  - Experience scenic beauty
- **Classic Park Experiences**
  - Paddling the New River
  - Sandstone Falls
  - Grandview
  - Thurmond
  - Endless Wall
  - Canyon Rim
  - Fayette Station Road

4.7.15 Visitor Use and Visitor Experience (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Blocks of intact and unfragmented forest along most of the length of the park on one or both sides of the river would be managed as backcountry forest, preserving their wild character and enhancing the perception of the park's wildness as visitors experience the park. Overall, backcountry forest blocks would compose approximately 66.4 percent of the park. Impacts on visitor use and visitor experience would be local long-term minor to major and beneficial, depending upon individual visitor reasons for visiting the park and preferences for backcountry versus frontcountry experiences.

Cultural Resource Management Actions. Treatment of cultural resources at sites in the park would provide numerous new opportunities for visitors to appreciate the human history story of life in the gorge (see Table 4.27):

- visitors to the park's river gateways and focal areas would have opportunities to learn about life in the gorge by visiting rehabilitated cultural resources that are leased through the NPS historic leasing program
- in the Upper River Corridor Focal Area visitors would learn about early Appalachian settlement by visiting historic farms where interpretive programs and exhibits would be available; the farmhouses would be restored to period condition and set within restored cultural landscapes
- in the Grandview/Prince Focal Area visitors would learn about life in a railroading and lumbering town at the rehabilitated Prince Brothers General Store and other nearby sites
- in the Lower Gorge Focal Area visitors would:
  - learn about life in a railroading town during the park's industrial era at the Thurmond River Gateway
  - learn about life in a mining town during the park's industrial era at the Nuttallburg River Gateway where mining structures and town ruins would be stabilized (as in Alternative 1)
- visitors would also learn about the history of life in the gorge when they come upon and find cultural resources discovery sites along the through park connector, along trails at or near river gateways, and along rim to river trails (approximately 30 to 35 sites)

The impact of cultural resource management actions and related interpretive programs on visitor use and visitor experience would be local long-term major and beneficial.

Public Use, Enjoyment, and Experience Management Actions. The central theme underlying Alternative 5 would help visitors better understand how the park is organized, the opportunities that are available, and how to travel in the complicated network of local roads and trails in the rugged terrain. Facilities and interpretive programs in Alternative 5 would emphasize a combination of primitive outdoor experiences in the park's forest complemented by diverse opportunities for visitors in and around specific focal areas (see Figure 2.9 and Table 4.29). Backcountry forest in much of the park would offer the most primitive outdoor experiences where visitors would be immersed in nature with few modern conveniences, while frontcountry forest would offer a broad variety of less primitive recreational experiences, such as family activities, mountain biking and equestrian use. In contrast, five focal areas would make available to visitors concentrated opportunities for cultural, natural, scenic, interpretive, and recreation experiences in specific areas of the park. The historic context for each focal area would define the stories that would be told, focusing as appropriate on the park's early settlement or industrial themes. A river gateway within each focal area would be the location where visitors would learn about the resources and recreation opportunities. From river gateways visitors would move out into the broader focal area and the park on the water by boat, on trails by foot or bicycle, or on scenic roads. The new Through Park Connector would enable visitors to explore the park from end-to-end. It would also connect focal areas and provide expanded access to cultural resources, scenic vistas, and natural features within the forest. As visitors explore the park on the Through Park Connector and other new trails they would learn about the park's history when they come upon cultural resource "discovery sites" where interpretive media would tell the park's stories.

New visitor use facilities included in Alternative 5 – consistent with its overall management concept – would enable visitors to better and more easily enjoy the experiences that they "should have" at the park. Visitors would also continue to enjoy the classic park experiences at Sandstone Falls, Grandview, Thurmond, Endless Wall, Canyon Rim, and Fayette Station Road; new management actions consistent with the overall concept for Alternative 5 would enhance the visitor experience at Sandstone Falls, Thurmond, and Fayette Station Road. The impact of these actions and related interpretive programs on visitor use and visitor experience would generally be local long-term major and beneficial.

Specific visitor facility improvements would address many of the visitor experience issues related to crowding at river accesses, availability and choice of camping facilities, availability of picnicking facilities, and the generally limited park trail system (with poor access to climbing areas, poor access to hunting areas, and few opportunities for biking and equestrian use). Impacts on visitor use and visitor experience as a result of these improvements (see Table 4.30) would be as follows:

Table 4.29

New River Gorge National River
Alternative 5 – New Visitor Use Facilities

Actions *(in addition to Alternative 1)*

- **Cultural Resource Attractions**
  - restored properties
    - ✓ Richmond-Hamilton Farm and Richmond Bottom Landscape
    - ✓ Thurmond Houses (some)
  - rehabilitated properties (with non-residential adaptive reuse through leasing or other agreements)
    - ✓ Camp Brookside
    - ✓ Thurmond Commercial Row
    - ✓ Thurmond (some houses leased for visitor lodging)
  - discovery sites (30 to 35 sites)
- **Day-Use Facilities**
  - improvements to existing facilities
    - ✓ Grandview (circulation system)
    - ✓ Dun Glen
    - ✓ Brooklyn
    - ✓ Fayette Station
  - new day-use facilities
    - ✓ J&G Site
    - ✓ Stone Cliff (relocated)
    - ✓ Fayette Station
- **Camping Facilities**
  - improvements to existing primitive campgrounds
    - ✓ Glade Creek
    - ✓ Grandview Sandbar
    - ✓ Mill Creek
    - ✓ Army Camp
    - ✓ Stone Cliff (relocated)
  - new developed campgrounds
    - ✓ J&G Site
    - ✓ Bass Lake or Richmond Campground
    - ✓ Terry Beach
    - ✓ Burnwood
  - new designated backcountry campsite groups
    - ✓ along Through Park Connector
    - ✓ along the Dowdy Creek Highland Mountain Trail
- **Excursion Train**
  - utilizing RJ Corman ROW from Mt. Hope to Southside Junction
- **River Access Sites**
  - parking expansions at existing river access sites
    - ✓ Thayer
    - ✓ Dun Glen
    - ✓ Brooklyn
    - ✓ Cunard (two areas)
    - ✓ Fayette Station
  - alternative transportation system (shuttle during peak periods of visitor use with satellite parking)
    - ✓ Cunard
    - ✓ Fayette Station
  - new river access sites
    - ✓ J&G Site
    - ✓ Terry Beach
    - ✓ Surprise (if needed to address capacity issue after making other improvements)
- **Parking for Climbers and Hunters**

(continued on next page)

Table 4.29 (continued)

New River Gorge National River
Alternative 5 – New Visitor Use Facilities

Actions *(in addition to Alternative 1)*

- **Parking for Climbers and Hunters**
  - at climbing areas (new)
    - ✓ Junkyard
    - ✓ Ambassador Buttress
    - ✓ Fern Buttress
  - in hunting areas (new)
    - ✓ Dowdy Bluff
    - ✓ Polls
- **New Trails (with trailheads)**
  - climbing access trails
    - ✓ Endless Wall
    - ✓ Sunshine Buttress
    - ✓ Bubba City
    - ✓ Junkyard
  - Through Park Connector
  - Farm Loop Trail
  - Sandstone VC to Hump Mt. Trail
  - Grandview to Mill Creek Trail
  - Army Camp to Pinnacle Rock Trail
  - Cloverdale to the Upper Glade Creek Trail
  - Mt. Hope to Southside Junction Rail Trail
  - Meadow Bridge to Meadow Creek Rail Trail
  - Stanaford to Prince/Quinnimont Rail/Trail
  - GW Carver to Sewell to Caperton to Keeney Creek Trail
  - Fayette Mine Trail
  - Thurmond to Sewell Rail Trail
  - David Branch Trail
  - Dowdy Creek to Highland Mountain Trail
  - Stone Cliff Coke Ovens to Stone Cliff Mine Trail
  - Beauty Mountain Overlook Trail
  - Bucklick Branch Equestrian Loop Trail
  - Craig Branch Equestrian Loop Trail
  - Chestnut Mountain Equestrian Loop Trail
  - Sandstone Falls Boardwalk expansion
  - Bucklick Branch Stacked Loop Biking Trails
  - Garden Ground Stacked Loop Biking Trails
  - Craig Branch Stacked Loop Biking Trails

- day-use facility improvements would result in a local long-term minor beneficial impact
- camping improvements would result in a local long-term major beneficial impact
- river access improvements would result in a local long-term major beneficial impact
- trail improvements would result in a local long-term major beneficial impact for hikers, bikers, and horseback riders
- trailhead improvements would result in a local long-term moderate beneficial impact for climbers and hunters (made possible by boundary adjustments)

Continuation of hunting as it occurs today on most NPS-owned land in the park in accordance with the hunting and fishing regulations of the state of West Virginia would continue to have local long-term moderate beneficial and local long-term minor adverse impacts on terrestrial habitat and dependent species (as in Alternative 1) (see Section 4.315 Visitor Use and Visitor Experience (Alternative 1) above). Opening Grandview to hunting on a limited basis and restoration of open land bird habitat in restored cultural landscapes would have a local long-term minor beneficial impact on hunting. Addition of a voluntary hunter registration and reporting system would have a negligible impact on visitor use and visitor experience. Assuming that cooperative game management planning between the NPS and WV DNR would enhance game populations in the park there would be a local long-term minor beneficial impact on visitor use and visitor experience.

Park Operations Actions. Private use of rehabilitated historic buildings at rehabilitated historic buildings would occur at Camp Brookside, Prince Brothers General Store, two early settlement farmhouses, Thurmond Commercial Row, and numerous houses at Thurmond through lease, cooperative agreement, or concession agreement. Educational use of Camp Brookside would provide opportunities for a large number of visitors to participate in a variety of educational programs. Residential use of farmhouses and houses at Thurmond for park staff or private rental housing would not provide opportunities for visitors although use of some houses for visitor lodging would provide a new opportunity for visitors to stay in the park. Potential commercial use of Prince Brothers General Store and at Thurmond Commercial Row could provide visitor services in parts of the park where they are currently not available. Impacts on visitor use and visitor experience would be negligible to local long-term major and beneficial.

Land Protection Actions. The impact of land protection actions on visitor use and visitor experience would be local long-term moderate and beneficial (common to

Alternatives 2 to 5) (see Section 4.4.15 Visitor Use and Visitor Experience (Alternative 2) above).

Partnership and Community Collaboration Actions. Collaboration with WVDOH would seek to accomplish improvements to New River Parkway (existing River Road), WV 41 (from Stanaford to McCreery), WV 25 (from Glen Jean to Southside Junction), Thurmond Bridge, WV 25/2 in Thurmond, McKendree Road (WV 25) (from Stone Cliff Bridge to Prince), and Fayette Station Road (WV 82). Improvements would address visitor safety concerns, reduce congestion by enhancing roadway capacity, and/or provide pull-outs where visitors could better experience park resources. NPS would also collaborate with WVDOH to design and install signage to enhance visitor orientation to the park and to facilitate wayfinding to park facilities. Impacts on visitor use and visitor experience would be local long-term major and beneficial.

Partnerships between the NPS and the park's gateway communities would seek to enhance the visitor experience by providing better visitor orientation, by promoting services needed by visitors in gateway communities, by fostering improved wayfinding signage, and by promoting complementary interpretive and recreational experiences at other attractions in southern West Virginia. Small visitor contact facilities and/or information kiosks would provide information on recreation activities, visitor facilities, and interpretive programs at the park as well as other attractions in the region. Impacts on visitor use and visitor experience would be local long-term major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on visitor use and visitor experience are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.15 Visitor Use and Visitor Experience (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on visitor use and visitor experience. Alternative 5 would contribute a moderate beneficial impact and a minor adverse impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts on visitor use and visitor experience. Alternative 5 would contribute a moderate beneficial impact to the total cumulative long-term moderate adverse impact on visitor use and visitor experience. There would be no impairment of park resources or values related to visitor use and visitor experience.

4.7.16 Park Access (Alternative 5) (Preferred Alternative)

- **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. Park management zoning would provide the framework for decision-making as to where motorized and non-motorized access would be appropriate for visitors and administrative use (common to Alternatives 2 to 5) (see Table 4.14). The nature of permitted access would be common to Alternatives 2 to 5 in park development, historic resource, and river corridor zones because these zones are the same for each action alternative. Differences would occur in the remainder of the park where areas are allocated to either backcountry or frontcountry zones. When considering access to the park, areas of frontcountry would have greater potential access because roads and parking facilities would be permitted in interior areas of zones. In contrast, in backcountry areas roads and parking would be limited to the perimeter of the forest blocks defined by the park's subareas (see Figure 2.10).

In Alternative 5 the impact of management zone allocations and related management prescriptions on park access would be local long-term minor and beneficial. Management actions would generally maintain existing patterns of motorized access within the park, while permitting expansion of motorized access for visitors and/or administrative use in park development zones, historic resource zones, river corridor zones, and frontcountry zones. Approximately two-thirds (66.4%) of the park would be zoned backcountry where roads and parking would be limited to zone perimeters (see Figure 2.10) and where only non-motorized access could occur in the zone interior.

Public Use, Enjoyment, and Experience Management Actions. In Alternative 5, by the year 2025 approximately 1.68 million people are projected to visit the park annually, representing a 42.3 percent increase in visitation when compared to 2007. Most visitation would occur from June through September, with peak use happening during weekends in July and August. Most park visitors are expected to travel to many sites of the classic park experiences and to seek out the various important park experiences that visitor should have, as emphasized consistent with the overall management concept in Alternative 5 (see Table 2.29 above).

Park visitation associated with management actions in Alternative 5 would slightly increase traffic in and around the park during both peak and off-peak visitation periods (see Table 4.30). Most state roads and park roads used by visitors would experience local long-term negligible or minor adverse impacts. Eight would experience local long-term moderate adverse impacts during peak periods. Two would experience local long-term moderate beneficial impacts during peak periods.

As in Alternative 1, improvements to Turkey Spur Road at Grandview would enhance access to visitor use facilities at the Turkey Spur Overlook. In Alternatives 2 to 5, a number of additional improvements at Grandview would address site-

specific vehicular and pedestrian circulation issues. The impact of these actions on park access would be local long-term major and beneficial.

As in Alternative 1, a few new hiking and equestrian trails, and trails providing access to climbing areas, would be developed in the park (see Table 4.29). In addition, in Alternative 5 a new through park connector would be developed providing continuous hiker/biker access from end to end of the park on a combination of trails and state or park roads. Other trail improvements in Alternative 5 would include a few new rim to river trails and numerous trails to cultural resource sites and other attractions in the park's five themed areas. Trailhead parking would be provided for all new trails. The impact of these trail additions (along with trailhead parking) on park access would be local long-term major and beneficial.

As in Alternative 1, a new river access – designed primarily for use by private paddlers and fishermen – would be developed at Meadow Creek West in conjunction with construction of a new developed campground. In addition, enhancements to parking at the Stone Cliff river access would occur in conjunction with relocation of existing day-use and campground facilities at Stone Cliff to a site above the New River floodplain. In Alternative 5, one additional new river access (Terry Beach) would be provided and parking would be expanded at five other river access sites (see Table 4.31). A shuttle system would be used during peak visitation periods to alleviate crowding and to satisfy parking demand at Cunard (in conjunction with private paddler parking expansions at the river level and at the Fisherman's Trail); in the event that these improvements do not adequately address management issues at Cunard, then a new river access would be developed at Surprise. A similar shuttle system would be used during peak visitation periods to alleviate crowding at the Fayette Station river access and on Fayette Station Road (WV 82). The impact of these actions on river access would be local long-term major and beneficial.

At Thurmond roadway, parking, and alternative transportation system improvements would enhance access. Working collaboratively with WVDOH, improvements would be made to WV Route 25 from Glen Jean to Southside Junction and to WV Route 25/2 within the town itself. Visitors would continue to be encouraged to park in the lot at Southside Junction and walk to Thurmond via the Thurmond Bridge. New parking would be provided in Thurmond at a small lot adjacent to Commercial Row and at a small lot adjacent to WV 25/2 in the upper section of the town. All houses rehabilitated for park housing or for visitor lodging would have one to two parking spaces included as part of the rehabilitation project (generally utilizing previously existing spaces at existing houses). In the future additional parking would likely be developed in conjunction with the planned WVDOH project to replace the Thurmond Bridge (see Partnership and Community Collaboration Actions below). In the future, the NPS would seek to establish an

TABLE 4.30 Alternative 5 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
South End of the Park			
Sandstone Falls and Visitor Attractions on River Left Future New River Parkway (under development by WVDOH)	▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (included in Alternative 1)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Various Visitor Facilities on River Right below Hinton (including a possible campground at Bass Lake – if not in New River Parkway corridor) WV 20 (I-64 to Hinton)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of the New River Parkway (most non-truck traffic on WV 20 will be diverted to New River Parkway) (included in Alternative 1)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Sandstone Falls Visitor Center WV 7 (from I-64)	▪ paved two-lane road with shoulders ▪ lane width adequate for safe two-way travel ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
Developed Campground (Meadow Creek West) WV 7 (from I-64)	▪ paved one-lane road ▪ restricted two-way traffic ▪ safe maximum curves ▪ poor stopping distances	▪ poor capacity to accommodate visitor traffic generated by new campground development	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Middle of the Park			
Grandview WV 9 (primarily from I-64)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with shoulders) ▪ 8% maximum gradient ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
McCreery, Lower Glade Creek Area, Terry Beach, Army Camp WV 41 (primarily from the west)	▪ paved two-lane road ▪ roadway lane width adequate for safe two-way travel (with minimal shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies (pedestrian safety deficiencies exist in vicinity of McCreery river access)	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Lower Glade Creek Area Glade Creek Road (Park Road) (state scenic backway)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Highland-Backus Area (developed campground and new trail network) WV41 (primarily from the west)	▪ same as for McCreery and Glade Creek (see above)	▪ same as for McCreery and Glade Creek (see above)	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact

TABLE 4.30 Alternative 5 – Summary of Visitor-Generated Traffic Impacts on Local Road Capacity

Park Area/Primary Access	Existing Road Conditions	Capacity to Accommodate Projected Visitor Trips	Visitor Impact on Road Capacity
Thayer WV 25 (access primarily from the north, beginning at Stone Cliff New River Bridge)	▪ one-lane gravel road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ very poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term minor adverse impact ▪ Off-Peak Period – local long-term negligible impact
North End of the Park			
Thurmond, Dun Glen, and Stone Cliff WV 25 (from Glen Jean)	▪ paved two-lane road ▪ roadway lane width not adequate for safe two-way travel due to nine one-lane bridges (minimal to no shoulders) ▪ tight curves ▪ short stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies for small vehicles ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Thurmond Town Site various state roads	▪ one-lane Thurmond Bridge needs replacement (due to structural, capacity and safety issues) ▪ numerous one-lane paved roads ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight turns ▪ short stopping distances	▪ very poor capacity ▪ numerous roadway capacity and safety deficiencies ▪ future Thurmond Bridge replacement would address bridge deficiencies and likely include visitor parking (as mitigation) near the Thurmond Depot Visitor Center ▪ Excursion train from Mt. Hope would provide alternative access for visitors	▪ Peak Period – local long-term moderate adverse impact (assuming roadway improvements by the state and excursion train from Mt. Hope) ▪ Off-Peak Period – local long-term minor adverse impact (assuming roadway improvements by the state)
Cunard (and potentially Surprise) Cunard Road (park road)	▪ one-lane gravel road ▪ constrained two-way travel (some pull-offs; minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor capacity ▪ road geometry constrains access for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate beneficial impact (assuming implementation of peak period shuttle service from a new parking area at Cunard top) ▪ Off-Peak Period – local long-minor adverse impact
Nuttallburg Visitor Use Area Keeney Creek Road (WV 85/2)	▪ one-lane paved road ▪ constrained two-way travel (minimal to no shoulders) ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ existing capacity and safety issues will be mitigated by construction of new trailheads at the Nuttallburg Visitor Use Area (included in Alternative 1)	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Canyon Rim Visitor Center and Burnwood Complex US 19	▪ four-lane divided highway (with shoulders) ▪ safe maximum gradients ▪ safe maximum curves ▪ safe stopping distances	▪ no current or anticipated roadway capacity or safety deficiencies in vicinity	▪ Peak Period – local long-term moderate adverse impact ▪ Off-Peak Period – local long-term minor adverse impact
Fayette Station Fayette Station Road (WV 82)	▪ paved one-way road ▪ some pull-offs ▪ minimal to no shoulders ▪ steep gradients ▪ tight curves ▪ short stopping distances	▪ poor existing capacity, especially on peak visitation days ▪ access constrained due to road geometry for large RVs, trucks, and buses	▪ Peak Period – local long-term moderate beneficial impact (assuming implementation of peak period shuttle service from a new parking area at Fayette Station top) ▪ Off-Peak Period – local long-term moderate adverse impact

Table 4.31

New River Gorge National River
Alternative 5 – Access Changes Needed to Achieve Desired Conditions in Visitor Use Areas

Actions

- **Internal Park Road System**
  - Turkey Spur Road improvements (as in Alternative 1)
  - Grandview circulation and parking improvements (common)
  - extension/improvement of Cunard Access Road to Surprise (if new access at Surprise is determined necessary after making other improvements first)
- **State Road System** (NPS and WVDOH collaboration to design and implement)
  - New River Parkway (as in Alt. 1)
  - Thurmond Bridge Replacement (as in Alt. 1)
  - WV 41 pullouts (Stanaford to McCreery)
  - McKendree Road improvements (WV 25) from Stone Cliff Bridge to Prince
  - WV 25 improvements (Glen Jean to Southside Junction) (common)
  - WV 25/2 road improvements (in Thurmond)
  - Fayette Station Road (WV 82) improvements (as in Alt. 1)
  - wayfinding signage along state roads (as in Alt. 1)
- **Excursion Train**
  - utilizing RJ Corman ROW from Mt. Hope to Southside Junction
- **Parking**
  - at Thurmond
    - ✓ parking to be added by WVDOH in conjunction with Thurmond Bridge Replacement) (more spaces than in Alternative 1)
    - ✓ new parking at Commercial Row
    - ✓ new parking in upper level of the town along WV 25/2
    - ✓ parking maintained or added at rehabilitated houses to be used for park housing or visitor lodging (1 to 2 spaces/unit)
  - at cultural resource sites (new)
    - ✓ Richmond-Hamilton Farm
    - ✓ Vallandingham Farm
    - ✓ Cochran Farm
  - in climbing areas (new)
    - ✓ Junkyard
    - ✓ Ambassador Buttress
    - ✓ Fern Buttress
  - in hunting areas (new)
    - ✓ Dowdy Bluff
    - ✓ Polls
  - at Sandstone Falls Visitor Use Area
  - at existing trailheads
    - ✓ Glade Creek Trail
    - ✓ Gwuinn Ridge Trail
- **River Access Sites**
  - parking expansions at existing river access sites
    - ✓ Thayer
    - ✓ Stone Cliff
    - ✓ Dun Glen
    - ✓ Brooklyn
    - ✓ Cunard
    - ✓ Fayette Station

(see table continuation on next page)

excursion train from Mt. Hope to Southside Junction from which visitors would walk to Thurmond.

As in Alternative 1, improvements at Nuttallburg Mining Complex and Nuttallburg would provide parking (where none is currently available) for visitors at four trailheads from which they would access trails leading to cultural resource sites at the former Nuttallburg Mining Complex and Nuttallburg town site. In Alternatives 2 to 5, parking would be added in locations where visitors now park along roads near popular climbing and hunting areas (see Table 4.31). In Alternative 5, parking at the Sandstone Falls Visitor Use Area and trailheads for the Glade Creek and Gwinn Ridge Trails – which chronically suffer from overuse – would also be expanded to meet existing and projected demand. The impact of these actions on park access would be local long-term major and beneficial.

Partnership and Community Collaboration Actions. The NPS would continue to work with WVDOH on several projects (see Table 4.31).

As in Alternative 1, the NPS would continue to work collaboratively with the city of Hinton to secure safe and legal access to the New River waterfront within the city.

As in Alternative 1, the NPS would continue to work with the CSX Corporation and other property owners to acquire wherever possible legal access to popular visitor use sites.

The NPS would also work collaboratively with its gateway community partners, state agencies, railroad companies, and private landowners to develop trail connections from the park to nearby communities and other visitor attractions, such as Hawks Nest State Park, Babcock State Park, the Gauley River National Recreation Area, Ansted, Oak Hill, Mount Hope, Beckley, and Meadow Bridge (common to Alternatives 2 to 5).

Assuming these collaborative efforts would be effective, the impact on park access would be local long-term major and beneficial.

- **Cumulative Impacts**

Other past, present, and reasonably foreseeable actions that have had or would have impacts on park access are identified in Section 4.2.4 (see Table 4.4). The impact of these actions in Alternative 5 would generally be the same as those described for Alternative 1 (see Section 4.3.16 Park Access (Alternative 1) above). Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term minor to moderate beneficial impact and a cumulative long-term minor to moderate adverse impact on park access. Alternative 5 would contribute negligibly to the total cumulative impact.

■ **Conclusion**

Management actions in Alternative 5 would result in local long-term minor to major beneficial impacts and local long-term minor to moderate adverse impacts on park access. Alternative 5 would contribute negligibly to the total cumulative long-term minor to moderate beneficial impacts and to the cumulative long-term minor to moderate adverse impacts on park access.

4.7.17 Park Operations (Alternative 5)

■ **Direct and Indirect Impacts**

Natural and Scenic Resource Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of natural and scenic resource protection and would guide development of targeted strategies to protect and improve nationally significant resources (see Section 4.4.17 Park Operations (Alternative 2) above). Staffing would be redirected to areas most likely to create beneficial impacts on natural and scenic resources resulting in a local long-term major beneficial impact on park operations.

In Alternative 5 more area than in any other alternative would be managed as backcountry. Law enforcement patrols and maintenance staff would rely less upon vehicles for patrol and maintenance, as existing logging and mining roads gradually recover. Law enforcement patrols and maintenance staff would rely less upon vehicles for patrol and maintenance, as existing logging and mining roads gradually recover. This would cause a minor need for additional staff, resulting in a local short-term minor adverse effect on the park budget. Overall the impact on park operations would be local long-term major and beneficial.

Cultural Resource Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of cultural resource protection and would guide development of targeted strategies to protect and improve nationally significant resources (see Section 4.4.17 Park Operations (Alternative 2) above). Collectively the common management actions would result in a local long-term major beneficial impact on park operations.

In Alternative 5 structures in or near some river gateways would receive treatment and would be rehabilitated or adaptively reused. In addition, some sites are maintained as discovery sites along trails. At Thurmond some buildings would be restored to use as exhibits; others would be leased through the historic leasing program or used as park housing. Restoration of structures and maintaining them as exhibits in good condition would likely require additional park maintenance staff. Leasing some of the buildings would result in less need for park maintenance staff to maintain those buildings, freeing them to keep restored historic structures in good condition. Since in this alternative, maximum use of leasing is proposed, slightly fewer historic structures maintenance staff would be needed than in the

Table 4.31 (continued)

New River Gorge National River
Alternative 5 – Access Changes Needed to Achieve Desired Conditions in Visitor Use Areas

Actions

- **River Access Sites (continued from previous page)**
  - alternative transportation system (shuttle during peak periods of visitor use)
    - ✓ Cunard
    - ✓ Fayette Station
  - new river access sites
    - ✓ J&G Site
    - ✓ Terry Beach
    - ✓ Surprise (if needed to address capacity issue after making other improvements)
- **New Trails (with trailheads)**
  - new trails (as in Alternative 1)
    - ✓ Nuttallburg Visitor Use Area trails
    - ✓ Bucklick Branch Equestrian Loop Trail
    - ✓ Laing Loop Nature Trail (no new trailhead)
    - ✓ climbing access trails (Endless Wall, Sunshine Buttress, Bubba City, and Junkyard areas)
  - new trails
    - ✓ Through Park Connector
    - ✓ Farm Loop Trail
    - ✓ Sandstone VC to Hump Mt. Trail
    - ✓ Grandview to Mill Creek Trail
    - ✓ Army Camp to Pinnacle Rock Trail
    - ✓ Cloverdale to the Upper Glade Creek Trail
    - ✓ Mt. Hope to Southside Junction Rail Trail
    - ✓ Meadow Bridge to Meadow Creek Rail Trail
    - ✓ Stanaford to Prince/Quinnimont Rail/Trail
    - ✓ GW Carver to Sewell to Caperton to Keeney Creek Trail
    - ✓ Fayette Mine Trail
    - ✓ Thurmond to Sewell Rail Trail
    - ✓ David Branch Trail
    - ✓ Dowdy Creek to Highland Mountain Trail
    - ✓ Stone Cliff Coke Ovens to Stone Cliff Mine Trail
    - ✓ Beauty Mountain Overlook Trail
    - ✓ Craig Branch Equestrian Loop Trail
    - ✓ Chestnut Mountain Equestrian Loop Trail
    - ✓ Sandstone Falls Boardwalk expansion
    - ✓ Bucklick Branch Stacked Loop Biking Trails
    - ✓ Garden Ground Stacked Loop Biking Trails
    - ✓ Craig Branch Stacked Loop Biking Trails

other alternatives. Additional NPS project management staff might also be needed as structures are rehabilitated. Collectively these actions would result in a local short-term minor adverse effect on the park budget and a local long-term moderate beneficial impact on park operations.

Public Use, Enjoyment, and Experience Management Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would better define for park staff the goals of natural and scenic resource protection and would guide development of targeted strategies to protect and improve nationally significant resources (see Section 4.4.17 Park Operations (Alternative 2) above). Staffing would be redirected to areas most likely to create beneficial impacts on natural and scenic resources resulting in a local long-term major beneficial impact on park operations.

Alternative 5 would implements a variety of actions to make the park accessible to the public in a largely primitive setting, including some river gateways, partnerships with rim gateway communities, a new through park connector, and four interpretive focal areas. New trails would include trails connecting the river and rim gateways, several new through park connecting trails, and other trails, requiring additions to park maintenance staff. Volunteers from user groups would be encouraged to help maintain trails, creating a need for staff trained to manage volunteer services. This would be accomplished by retraining and reorganizing existing trails staff. New programs for children and adults at Camp Brookside would create the need for new staff and partnership actions. Interpretation would be focused at the four focal sites where visitors would congregate, and in new river campgrounds. This would be accomplished through a realignment of existing staff. Collectively these actions would result in a local short-term minor adverse effect on the park budget and a local long-term moderate beneficial impact on park operations.

Park Operations Actions. In Alternatives 2 to 5 new sources of funding would become available as NPS works with users and visitors to create partnerships, friends groups, and other mechanisms to support park purposes (see Section 4.4.17 Park Operations (Alternative 2) above). These actions would result in a local long-term major beneficial impact on park operations.

Alternative 5 calls for leasing many historic structures. Depending on the physical condition of historic structures, terms of the lease, and other factors, it is possible that leasing could provide a minor income stream for the park. This would result in a local long-term minor beneficial impact on park operations.

Land Protection Actions. In Alternatives 2 to 5 the addition of six areas and 212.5 acres to the park to provide for parking and access would improve the ability of rangers to manage these uses within the park. The park would work with neighbors to promote better stewardship of privately-owned lands within the

boundary and to reduce impacts on them from park use. This would result in a local long-term moderate beneficial impact on park operations.

Alternative 5 provides for new management zoning for the park. This will make it easier for park employees to monitor and enforce use, and manage newly acquired sites. These actions will result in a local long-term minor beneficial impact to park operations.

Partnership and Community Collaboration Actions. In Alternatives 2 to 5 the desired future conditions (see Table 2.8) would lead NPS to implement actions making the park more relevant to local users and park neighbors (see Section 4.4.17 Park Operations (Alternative 2) above). Alternative 5 calls for enhanced collaborative efforts with park gateway communities – the places that are often visitor's initial contact with the park. Working with these communities to provide visitor information, limit conflicts with private owners, and provide new visitor services would lessen the impacts on law enforcement and interpretive staff. However, additional staff would be required to manage these collaborative efforts. While these actions would result in a local short-term minor adverse impact to the park budget, they would also result in a local long-term moderate beneficial impact on park operations.

- **Cumulative Impacts**

Other past, present and reasonably foreseeable actions that have had or would have impacts on park operations and facilities include the completion of the New River Parkway, continued minimum maintenance of state roads to and within the park, other transportation improvements, and continued private ownership of lands within the park, particularly in communities. The building of the New River Parkway would mean that law enforcement patrol and maintenance of the River Road area would be greatly improved; other transportation improvements might make remote areas of the park more accessible. The minimum maintenance of state roads such as McCreery Road would continue to complicate park management efforts. Private ownership of land within the park boundaries, particularly in communities, also creates law enforcement issues and conflicts between private owners and visitors, although efforts to work more closely with communities would mitigate this somewhat. Alternative 5 in conjunction with the impacts of these actions would result in a cumulative long-term minor adverse impact to park operations. Alternative 5 would contribute an imperceptible beneficial impact to the total cumulative impact.

- **Conclusion**

Management actions in Alternative 5 would result in local short-term minor adverse impacts on the park budget and local long-term minor to major beneficial impacts on park operations. Alternative 5 would contribute an imperceptible beneficial impact to the cumulative long-term minor adverse impact on park operations.

4.7.18 Unavoidable Adverse Impacts (Alternative 5)

Unavoidable adverse impacts are major adverse impacts that cannot be fully mitigated or avoided. Alternative 5 would not result in any major adverse impacts.

4.7.19 Irreversible and Irretrievable Commitments of Resources

An irreversible commitment of resources is one that cannot be reclaimed, restored, or otherwise returned to its condition prior to disturbance. An irretrievable commitment of resources is a loss of something that once gone, cannot be replaced.

Proposed management actions would generally contribute to resource protection and preservation and would be expected to minimize the occurrence of irreversible or irretrievable impacts. Nevertheless some irretrievable impacts would occur:

- construction projects, landscape restoration and reestablishment, and park operations would use limited amounts of nonrenewable resources, including materials and energy; once these resources are committed they would be irretrievable
- minor amounts of soil would be permanently lost as a result of soil erosion and sedimentation from areas (approximately 285 to 305 acres) disturbed by cultural resource management actions, development of new visitor use facilities, and restoration actions
- potential exists at cultural resource sites undergoing restoration or rehabilitation for an irretrievable commitment of resources as a result of any loss of undiscovered below ground resources
- irretrievable commitments of resources could also occur at cultural resource sites undergoing restoration to a specific time period if material from subsequent periods is lost

Surveys, avoidance through design, documentation, and other mitigation would occur before any restoration or rehabilitation begins, thereby minimizing irretrievable impacts to cultural resources.

4.7.20 Relationship between Short-Term Uses of the Environment and Long-Term Productivity (Alternative 5)

In Alternative 5 most of the park would be protected in a natural state with an emphasis on reducing existing forest fragmentation and avoiding future forest fragmentation. Approximately 66.4 percent of the park would be managed as backcountry largely unaltered by future human-induced impacts. Approximately 24.4 percent of the park would be managed as frontcountry forest with minimal future human-induced impacts. The NPS would continue to manage the park to maintain ecological processes and native and biological communities, and to provide for appropriate recreational activities consistent with the preservation of natural and

cultural resources. Previously disturbed areas would be restored to return them to productivity, as funding permits. Any actions the NPS takes in the park would be taken with consideration to ensure that uses do not adversely affect the productivity of biotic communities.

Disturbance of the park's soils, water quality, vegetation, and wildlife, due to visitor use and the construction of new facilities would reduce the long-term productivity of the park in localized areas; however, overall there would likely be only a small effect on the park's long-term productivity.

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5 Consultation and Coordination

Rams Head – one of many landforms shaped by the New River as it cut through the Appalachian Plateau.

Broad views of unbroken forest, steep gorge walls, and a river both tranquil and turbulent are punctuated by pastoral landscapes and industrial ruins to produce dramatic and extraordinary views from the river, along trails and rural roads, and from rocky overlooks.

Opposite side: Panoramic views of the New River and its gorge.

5.0 Consultation and Coordination

5.1 Public Involvement and Agency Coordination

Since beginning the GMP planning process in the spring of 2005, the NPS has reached out to various members of the public on numerous occasions for input regarding management issues, the range of alternatives, and the types of impacts to be addressed in the park's new plan. This process – referred to as scoping – has involved the general public, interested people and groups, local governments, civic organizations, park user groups, and various federal, state, and local agencies. As the planning process has progressed the NPS has provided information and updates via newsletters, news releases, the park website, and briefings.

Table 5.1 below provides a running list of the consultations and public involvement activities. The key issues considered in the GMP planning process – developed through the analysis of issues and concerns related to park management – are discussed above in Section 1.8. Also Appendix D contains relevant correspondence with agencies and American Indian tribes.

Table 5.1 Running List of Consultation and Public Involvement

Date	Consultation or Public Involvement Activity
February 2004	NPS staff developed project agreement and list of potential GMP issues.
June 27, 2005	NPS staff met with GMP Contractor at NPS HQ for project orientation and internal scoping.
June 28 – July 1, 2005	WRT and NPS staff initiated public scoping process. Conducted stakeholder meetings involving approximately 20 interviews with over 40 people. Stakeholders included recreational groups (whitewater outfitters, climbers, bikers, private boaters, hikers, birders, and commercial photographers), economic development groups (chambers of commerce, CVB, WV Planning and Development Councils, and Tamarack), federal and state agencies, local political contacts (mayors of Hinton and Fayetteville), and state and local water quality and watershed interest groups.
July 6, 2005	Park outdoor recreation planner attended WVPRO Guide/Trip Leader meeting at local outfitter and addressed group of approximately 21 people representing 6 outfitters.
July 26 – 28, 2005	NPS conducted GMP Planning Team Workshop 1 addressing park purpose, park significance, and fundamental resources and values. Workshop included approximately 30 people representing local and regional NPS employees, contractors, and university researchers.
October 17 – 18, 2005	NPS conducted GMP Planning Team Workshop 2 addressing GMP public involvement strategies, park purpose and significance, and interpretive themes.
October 19, 2005	NPS and consultants conducted Nuttallburg IP/EA Planning Workshop 1 discussing visitor experience, interpretation, recreation, and resource protection needs at Nuttallburg.
December 12 – 14, 2005	NPS conducted GMP Planning Team Workshop 3 discussing park purpose, significance, and fundamental resources, visitor experiences, and GMP public involvement strategies.
January 9, 2006	Park superintendent attended the regular monthly meeting of the New River Parkway Authority and reported the status and progress on the GMP, including dates and times of the first planned public meetings and encouraged their participation.
January 11, 2006	Park superintendent attended the quarterly meeting of the WV Whitewater Commission and provided a description of the GMP planning process and the dates of upcoming public meetings.

Table 5.1 Running List of Consultation and Public Involvement

Date	Consultation or Public Involvement Activity
January 11, 12, 13, 2006	Park superintendent and deputy superintendents met with 43 park employees in three small groups to discuss the GMP and the significant resources identified, and to solicit employee feedback.
January 11, 2006	NPS mailed Newsletter #1 to approximately 515 people and groups, landowners, federal and state agencies, county, state, and local officials, and businesses on the park mailing list. NPS distributed a press release concerning public meetings (held January 24-27, 2006) to newspapers: in Summersville – *The Nicholas Chronicle*; in Bluefield – *The Bluefield Daily Telegraph*; in Charleston – *The Charleston Gazette*; in Huntington and Beckley – *The Register-Herald*; in Hinton – *The Hinton News*; and in Fayetteville and Oak Hill – *The Fayette Tribune*. Press releases were also distributed to radio stations (National Public Radio, MetroNews Radio, WJLS, WTNJ, and WCIR) and TV stations (WOAY (CH 4), WVNS (Ch 59), and WVVA (CH 6)). Ads announcing the GMP Public Meetings were placed in the *Fayette Tribune*, *Register-Herald*, and *Hinton News*.
January 12, 2006	NPS made the New River Gorge National River GMP project available to the public for comment on the NPS Planning, Environment and Public Comment (PEPC) webpage. Links to the park webpage were provided as well as a planning schedule, meeting dates, and a means to comment electronically.
January 13, 2006	Park chief of visitor protection briefed members of the local climbing community, including representatives of the Access Fund, New River Alliance of Climbers (NRAC), and three local climbing guide services. Information concerning the GMP was discussed and feedback solicited.
January 24, 2006	Park superintendent telephoned the congressional delegates Senator Byrd and Congressman Nick Rahall at their Washington, DC offices, as well as Ann Barth (Senator Byrd's Charleston office) and Paul Gonzalez (Congressman Rahall's Beckley office) to discuss the public meetings for the GMP. He also telephoned Tom Acker of Forward Southern WV in Beckley and Erin Haddix of National Parks and Conservation Association.
January 24-27, 2006	NPS conducted GMP Planning Team Workshop 4 discussing the public involvement strategy, interpretive themes, ethnographic resources, how GMP alternatives are developed, and a vision for the New River Gorge, including its resources, experiences, and stories. Also analyzed the Nuttallburg resources and discussed the Nuttallburg site's opportunities and constraints.
January 24, 25, and 26, 2006	NPS conducted Public Meeting #1 to provide information on the GMP planning process and to gather comments, as follows: ▪ January 24 – Hinton (approximately 28 people attended) ▪ January 25 – Beckley (approximately 69 people attended) ▪ January 26 – Fayetteville (approximately 88 people attended)
January 30, 2006	Notice of Intent (NOI) to prepare a General Management Plan and Environmental Impact Statement for New River Gorge National River was printed in the *Federal Register*. The NOI also indicated that as part of the GMP planning process the NPS would assess the potential for wilderness designation in the park.
February 6, 2006	NPS requested consultation and information regarding federally listed threatened or endangered species, species of special concern, or critical habitat that may be affected by park management actions from WV Division of Natural Resources Non-game Wildlife and Natural Heritage Program and from the US Fish and Wildlife Service.
February 6, 2006	NPS initiated consultation with the WV State Historic Preservation Officer.
February 10, 2006	Park chief of interpretation attended a meeting of the West Virginia Sustainable Communities at their request and introduced the GMP planning goals to the group of about 50 people from the six southern West Virginia counties.
February 15, 2006	Park superintendent met with state Senators Russell Weeks, Shirley Love, and Randy White to share information on the GMP and the upcoming public meetings scheduled in March.
February 23, 2006	Representatives from the NPS and the GMP Contractor met in Philadelphia for an initial GMP alternative concepts work session.
February 28, 2006	NPS received a response from the WV Division of Natural Resources Non-game Wildlife and Natural Heritage Program concerning federally listed threatened or endangered species, species of special concern, or critical habitat. WV DNR provided a listing of rare, threatened, and endangered species and critical habitats within New River Gorge National River.

Table 5.1 Running List of Consultation and Public Involvement

Date	Consultation or Public Involvement Activity
March 1, 2006	NPS mailed invitations to GMP Meeting #2 to approximately 642 people and groups, landowners, federal and state agencies, county, state, and local officials, and businesses.
March 2, 2006	Park public affairs specialist and fisheries biologist attended the monthly meeting of the Piney Creek Watershed Association and made a presentation at their request to a group of about 15 members and discussed the park's fundamental resources.
March 2, 2006	Park chief of interpretation at their request introduced GMP planning goals to a group of about 40 people from education, resource management, and nature center fields gathered to discuss Wolf Creek Park near Fayetteville.
March 3, 2006	NPS distributed a press release concerning public meetings (held March 14-16, 2006) to newspapers: in Summersville – *The Nicholas Chronicle*; in Bluefield – *The Bluefield Daily Telegraph*; in Charleston – *The Charleston Gazette*; in Huntington and Beckley – *The Register-Herald*; in Hinton – *The Hinton News*; and in Fayetteville and Oak Hill – *The Fayette Tribune*. Press releases were also distributed to radio stations (National Public Radio, MetroNews Radio, WJLS, WTNJ, and WCIR) and TV stations (WOAY (CH 4), WVNS (Ch 59), and WVVA (CH 6)). Ads announcing the GMP Public Meetings were placed in the *Fayette Tribune*, *Register-Herald*, and *Hinton News*.
March 6, 2006	Park superintendent met with state Senators Jesse Guills and Donald Caruth, and Delegate David Perry to share information about the park and an update on the GMP planning process.
March 7-9, 2006	Park superintendent and deputy superintendents met with approximately 25 NERI employees in three small groups to solicit employee feedback and to discuss the major issues to be addressed in the GMP and their vision of the future for the park.
March 13, 2006	NPS provided community leaders with a presentation summarizing the economic impact assessment of New River Gorge National River. Invitations were mailed February 23, 2006 to 105 community leaders. 18 attended presentation by economist David E. Versel.
March 14-16, 2006	NPS conducted GMP Planning Team Workshop 5 discussing public involvement, interpretive themes, economic impact of the park, gateway community issues, analysis of resources, and initial GMP alternative concepts.
March 14-16, 2006	WRT and NPS conducted Public Meeting #2 to discuss with the public what they consider to be the issues to be addressed in the GMP and their ideas for the future of the park. ▪ March 14 – Hinton (approximately 15 people attended) ▪ March 15 – Beckley (approximately 19 people attended) ▪ March 16 – Fayetteville (approximately 41 people attended)
March 17, 2006	Park superintendent, deputy superintendent, and GMP contractor met with representatives of West Virginia Professional River Outfitters at their request to discuss their concerns and ideas for the GMP.
March 20, 2006	Park superintendent met with the three Summers County commissioners for the purpose of updating them on the GMP planning process and providing copies of the newsletter, the economic impact study, the 2004 visitor survey, and public comment sheets.
March 27, 2006	Park superintendent and park staff met with NPS National Wilderness Program representative to discuss the wilderness review process at New River Gorge as a requirement for preparing the GMP.
March 29, 2006	Park outdoor recreation planner met with the Roanoke Chapter of the Float Fishermen of Virginia at their request at their monthly meeting in Roanoke, Virginia. The 21 members that attended the meeting were shown the GMP Public Meeting #2 presentation and asked to provide comments identifying issues to be addressed in the plan and their ideas for the future of the park.
April 19, 2006	Since January 12, 2006, the NPS received 61 written comments from the public via several sources, including: 22 Comment Forms mailed back to the NPS (distributed at two public meetings and various presentations to groups), 1 E-mail to the Superintendent, 15 Letters to the Superintendent (10 from people, 4 from Whitewater Canoe Clubs representing 1900+ members, 1 from WV Professional River Outfitters representing 12 outfitters), and 23 comments via PEPC (22 from people, mostly private boaters, 1 from the Keelhauler Canoe Club representing 250+ members).
April 20, 2006	NPS mailed Newsletter #2 (in advance of Public Meeting #3) to approximately 708 people and groups.

Table 5.1 Running List of Consultation and Public Involvement

Date	Consultation or Public Involvement Activity
April 29, 2006	Park public affairs specialist met with approximately 23 members of the Highlands Conservancy at their request at their annual spring review held in Lansing, WV. She provided a general briefing on the GMP planning process and provided newsletters and comment forms.
April 22, 2006	Park public affairs specialist attended the quarterly membership meeting of the Coastal Canoeists in Shipman, Virginia, at their request. Met with approximately 20 members to discuss what members valued about New River Gorge National River and what their vision of the park might be in the next 15 to 20 years.
May 3, 2006	NPS distributed a press release concerning public meetings (held May 9-11, 2006) to newspapers: in Summersville – *The Nicholas Chronicle*; in Bluefield – *The Bluefield Daily Telegraph*; in Charleston – *The Charleston Gazette*; in Huntington and Beckley – *The Register-Herald*; in Hinton – *The Hinton News*; and in Fayetteville and Oak Hill – *The Fayette Tribune*. Press releases were also distributed to radio stations (National Public Radio, MetroNews Radio, WJLS, WTNJ, and WCIR) and TV stations (WOAY (CH 4), WVNS (Ch 59), and WVVA (CH 6)). Ads announcing the GMP Public Meetings were placed in the *Fayette Tribune*, *Register-Herald*, and *Hinton News*.
May 9-11, 2006	NPS conducted GMP Planning Team Workshop 6 reviewing the resource analysis and GMP interests, concerns, and decision points. Also examined potential management zones and zone allocations.
May 9-11, 2006	WRT and NPS conducted Public Meeting #3 to discuss with the public where they like to go for recreation in the park, what natural areas they like to visit, and what historic resource areas they most like to visit. ▪ May 9 – Sandstone Visitor Center (4 people attended) ▪ May 10 – Beckley (8 people attended ▪ May 11 – Canyon Rim Visitor Center (29 people attended)
May 22, 2006	Park superintendent met with Mayor Stanley Adkins to share information about the park and an update on the GMP planning process.
May 30, 2006	Park superintendent met with Mayor Jim Akers of Fayetteville to share information about the park and an update on the GMP planning process.
June 6, 2006	Park superintendent met with the Raleigh County commissioners for the purpose of updating them on the GMP planning process and providing copies of the newsletter, the economic impact study, the 2004 visitor survey, and public comment sheets.
June 13, 2006	NPS mailed a letter to the Shawnee Tribe establishing consultation and requesting comments with respect to the General Management Plan/Environmental Impact Statement.
June 27-29, 2006	NPS conducted GMP Planning Team Workshop 7 discussing GMP alternatives, issues, and decision points, interpretive themes, management zones, boundary modifications, and Nuttalburg alternatives.
July 3, 2006	Park superintendent met with Mayor Pete Hobbs of Ansted to review the GMP planning process and provide information about the park, including recent GMP newsletters and comment forms.
July 6, 2006	Since April 20, 2006, the NPS received 23 additional written comments from the public via several sources, including: 2 Comment Forms mailed back to the NPS (distributed at one public meeting and various presentations to groups), 4 E-mails to the Superintendent, 3 Letters to the Superintendent (1 from an individual, 2 from groups), and 14 comments via PEPC (all from individual people, mostly mountain bikers).
July 10, 2006	Park superintendent and deputy superintendents met with NPS Regional Director to provide a Power Point briefing on the work accomplished to date on the GMP and to discuss potential alternative concepts, controversial issues, and potential boundary modifications.
July 12, 2006	NPS mailed invitations to GMP Public Meeting #4 to approximately 752 people and groups.
July 20, 2006	NPS distributed a press release concerning public meetings (held July 25-27, 2006) to newspapers: in Summersville – *The Nicholas Chronicle*; in Bluefield – *The Bluefield Daily Telegraph*; in Charleston – *The Charleston Gazette*; in Huntington and Beckley – *The Register-Herald*; in Hinton – *The Hinton News*; and in Fayetteville and Oak Hill – *The Fayette Tribune*. Press releases were also distributed to radio stations (National Public Radio, MetroNews Radio, WJLS, WTNJ, and WCIR) and TV stations (WOAY (CH 4), WVNS (Ch 59), and WVVA (CH 6)). Ads announcing the GMP Public Meetings were placed in the *Fayette Tribune*, *Register-Herald*, and *Hinton News*.

Table 5.1 Running List of Consultation and Public Involvement

Date	Consultation or Public Involvement Activity
July 25-27, 2006	NPS conducted GMP Planning Team Workshop 8 discussing area-specific desired conditions for the various management zones and indicators and standards.
July 25-27, 2006	WRT and NPS conducted Public Meeting #4 to discuss with the public a range of preliminary alternative management concepts for the park. Six management zones were proposed and three zoning concepts presented. ▪ July 25 – Hinton (approximately 17 people attended) ▪ July 26 – Beckley (approximately 24 people attended) ▪ July 27 – Fayetteville (approximately 37 people attended)
August 1, 2006	NPS mailed letters to the Cayuga Nation of Indians, Seneca-Cayuga Tribe of Oklahoma, and the Appalachian American Indians of West Virginia initiating consultation and requesting comments with respect to the GMP/EIS.
August 2, 2006	NPS mailed letters to the Onondaga Nation, Mohawk Nation, Tonawanda Seneca Nation, Monacan Indian Nation, Inc, Eastern Shawnee Tribe of Oklahoma, Absentee-Shawnee Tribe of Indians of Oklahoma, Tuscarora Nation, Tuscarora Tribe, Virginia Council on Indians, and the Shawnee Tribe initiating consultation and requesting comments with respect to the GMP/EIS.
August 15, 2006	Park deputy superintendent met with representatives of six river outfitters at their request to brief them on the preliminary alternative management concepts presented at the last public meetings and to answer questions and concerns with the GMP revision.
August 25, 2006	Park superintendent met with the Fayette County Commissioners for the purpose of updating them on the GMP and providing copies of Newsletter 2 and public comment forms.
September 7, 2006	Park superintendent responded by letter to questions from the Tribal Historic Preservation Officer of the Absentee-Shawnee Tribe of Indians of Oklahoma regarding management of archeological resources in New River Gorge received via email on August 30, 2006.
September 7, 2006	Park superintendent and deputy superintendents met with five representatives of West Virginia Professional River Outfitters at their request to answer questions and discuss their concerns with the GMP revision.
September 11, 2006	NPS receives letter from A Faithkeeper for the Onondaga Nation indicating an interest in consulting on the GMP and requesting a recent report giving an overview of the archeology of the area. The park superintendent responded by letter on September 26, 2006 and providing a copy of the *New River Gorge National River Archeological Overview and Assessment Report*.
September 11, 2006	Park deputy superintendent made a presentation on the GMP to the New River Parkway Authority Board and provided copies of the newsletter and public comment forms.
September 11, 2006	Park deputy superintendent met with members of the New River Parkway Authority at their request and provided a 30-minute presentation on the GMP and copies of the newsletter and comment forms.
September 14, 2006	Park deputy superintendent addressed approximately 80 NPS and WV-CCC employees at an all-employees meeting at park headquarters and gave a presentation describing the GMP planning process and alternative concepts.
September 19, 2006	Park chief of interpretation met with approximately 12 members of the Oak Hill Rotary Club at their request and provided an overview of the park and a discussion of the GMP alternative concepts and means by which to comment.
September 20-22, 2006	Park superintendent and deputy superintendents met with approximately 25 NERI employees in three small groups to discuss the alternative concepts that were developed through the GMP planning process and to ask them to identify a preferred alternative.
September 27, 2006	NPS GMP Planning Team met to discuss the four GMP alternative concepts and the need for development of a fifth alternative concept.
October 31, 2006	Since July 7, 2006, the NPS received 18 additional written comments from the public via several sources, including: 10 Comment Forms mailed back to the NPS, 4 Letters to the Superintendent (2 from individual people, 2 from groups), and 4 comments via PEPC.
November 15, 2006	Park superintendent and deputy superintendents met with planning team members to discuss the newly developed Concept 5: Themed and Connected Exploration Experiences.

Table 5.1 Running List of Consultation and Public Involvement

Date	Consultation or Public Involvement Activity
December 6, 2006	NPS GMP Planning Team conducted Choosing By Advantages (CBA) Workshop.
January 1, 2007	Deputy Superintendent met with John Karish, NPS Northeast Region Chief Scientist, and provided a briefing on the GMP.
January 25, 2007	Superintendent and Deputy Superintendent met with the New River Working Group at their request to discuss the GMP planning issues, including potential boundary adjustments and lands important to the protection of park resources and values. The New River Working Group is comprised of representatives of the Plateau Action Network, WV Wildlife Federation, Trust for Public Land, WV Rivers Coalition, National Parks and Conservation Association, New River CVB, WV Wilderness Coalition, New River Alliance of Climbers, Southern WV CVB, WV Division of Culture and History, WV Professional River Outfitters, National Committee for the New River, WV Highlands Conservancy, National Wildlife Federation, and the WV BASS Federation.
April 18, 2007	Superintendent and NPS staff met with representatives of the WV Wilderness Coalition at their request to discuss the NPS process of wilderness studies as a component of the GMP.
May 18, 2007	Superintendent and NPS staff met with representatives of the New River Alliance of Climbers at their request to discuss climber access and potential campground developments.
May 23, 2007	Superintendent and NPS staff met with representatives of the river outfitters at their request to discuss issues at the park and the GMP.
May 29, 2007	Superintendent and NPS staff met with representatives of the International Mountain Biking Association (IMBA), the owner of a local bicycle shop, and several local enthusiasts at their request to discuss trail opportunities in the park.
May 30, 2007	Superintendent and NPS staff met with representatives of National Parks and Conservation Association and The Nature Conservancy at their request.
June 5, 2007	Deputy Superintendent and NPS staff met with the New River Working Group at their request and provided them with an update on the status and issues in the GMP.
June 13, 2007	Superintendent met with the Mayor of Beckley.
June 14, 2007	Superintendent and NPS staff met with representatives of the WV Wilderness Coalition at their request to discuss the areas identified for field inventory. The NPS staff and WV Wilderness Coalition representatives then completed a field reconnaissance of two of the three potential areas of interest.
June 14, 2007	Superintendent and NPS staff met with members of the WV Professional River Outfitters at their request to discuss outfitter and river related issues.
June 18, 2007	Superintendent and NPS staff met with Carl Frischkorn at his request to discuss a proposed residential development adjacent to the park in an area tentatively identified for a boundary expansion to provide for better hiker and climber access and camping.
June 19, 2007	Superintendent and NPS staff met with local land owner Robert Sayer at his request to discuss access and boundary issues.
June 20, 2007	NPS received the WV Wilderness Coalition's citizen's proposal for wilderness at New River Gorge. The proposal identified three areas for consideration including Glade Creek, Dowdy Creek, and Backus Mountain.
June 21, 2007	Superintendent and NPS staff met with members of the WV Whitewater Commission and briefs group on progress with the GMP.
June 27, 2007	NPS Planning Team met to discuss the alternative concepts and issues including wilderness, hunting, and boundary modifications.
July 24, 2007	Superintendent met with Tom Aker of Forward WV at his request to discuss economic development ideas which might be incorporated into the GMP.
August 11, 2007	Deputy Superintendent briefed John Latschar, Acting Regional Director of the NPS Northeast Regional Office, and provided a presentation and update on the GMP.

Table 5.1 Running List of Consultation and Public Involvement

Date	Consultation or Public Involvement Activity
August 31, 2007	Deputy Superintendent and staff met with representatives of West Virginia Professional River Outfitters at their request for a new commercial river access located upstream of Surprise rapid.
September 6, 2007	At their request the Deputy Superintendent provided a GMP status update to the New River Working Group, which included core groups as well as representatives of the local SCA/Sustainable Communities Program, National Wild Turkey Federation, and Friends of New River. The group discussed the need for future public meetings, the re-designation of the New River Gorge National River as a National Park, and the potential for wilderness designation.
September 25, 2007	NPS receives a letter from the Executive Director of West Virginia Professional River Outfitters urging the inclusion in the GMP of an investigation of a new commercial access above Surprise rapid. The letter cites a 2007 strategy study which recommends that the whitewater industry adapt and evolve from an adrenalin sport to more of a family experience. The complete West Virginia Whitewater Industry Strategy project report is released in October 2007.
October 22, 2007	NPS mailed Newsletter #3 (for Public Meeting #5) to approximately 797 people and groups on the park mailing list. NPS distributed a press release concerning public meetings (held July 25-27, 2006) to newspapers: in Summersville – *The Nicholas Chronicle*; in Bluefield – *The Bluefield Daily Telegraph*; in Charleston – *The Charleston Gazette*; in Huntington and Beckley – *The Register-Herald*; in Hinton – *The Hinton News*; and in Fayetteville and Oak Hill – *The Fayette Tribune*. Press releases were also distributed to radio stations (National Public Radio, MetroNews Radio, WJLS, WTNJ, and WCIR) and TV stations (WOAY (CH 4), WVNS (Ch 59), and WVVA (CH 6)). Ads announcing the GMP Public Meetings were placed in the *Fayette Tribune*, *Register-Herald*, and *Hinton News*.
November 6, 7, and 8, 2007	WRT and NPS conducted Public Meeting #5 to discuss with the public five revised management alternatives and corresponding management zones for each alternative. Several specific management issues were also discussed including wilderness designation, water Quality management, biking in the park, hunting, and potential boundary adjustments. ▪ November 6 – Hinton- approximately 46 people attended. ▪ November 7 – Beckley- approximately 67 people attended. ▪ November 8 – Fayetteville- approximately 179 people attended.
December 6, 2007	At their request the Superintendent and NPS staff met with the New River Working Group, which included core groups as well as representatives of the New River Mountain Guides/ Access Fund and Marathon Bicycle Company. NPS staff discussed the potential boundary expansions being considered in the GMP to address the definition of lands "in and around" the New River Gorge and ways to improve communication between the NPS and the community.
December 14, 2007	Superintendent met with representatives of West Virginia Professional River Outfitters at their request to discuss the development of additional river access.
December 17, 2007	NPS receives Resolution of the WV Natural Resources Commission opposing any efforts to prohibit hunting or fishing or to designate any areas as wilderness within the New River Gorge National River.
December 18, 2007	Superintendent met with Jim Summers of the WV Wildlife Federation Camo Coalition to discuss the hunting program options being considered in the GMP.
December 20, 2007	Superintendent and NPS staff met with a representative of the International Mountain Biking Association (IMBA), the owner of a local bicycle shop Marathon Bicycle Company, and a representative of the Raleigh County Cycling Club to discuss mountain bike access to various existing trails and to future new trails in the backcountry areas.
December 21, 2007	NPS receives letter from the West Virginia Division of Natural Resources providing comments regarding the GMP and strongly opposing any attempt to abolish hunting or to designate wilderness.
January 15, 2008	Superintendent met with regional director of Ducks Unlimited to discuss the hunting alternatives in the GMP.
February 8, 2008	Since October 15, 2007, the NPS received 702 written comments from the public via several sources, including: 345 GMP Comment Cards (10 received at the three public meetings in November, 135 with handwritten responses and 200 signed form letters mailed back to the NPS), 9 E-mail to the Superintendent, 52 Letters to the Superintendent, and 178 comments via PEPC. The NPS received 118 signed form letters seeking the continuation of the existing hunting program, as well as two similar petitions, one with 115 signatures and one with 2677 signatures. Most of the comments supported the continuation or enhancement of hunting, many comments supported the

Table 5.1 Running List of Consultation and Public Involvement

Date	Consultation or Public Involvement Activity
	development of mountain bike trails in frontcountry and backcountry zones, many of the continuation of hunting letters and comments were duplicates and opposed wilderness designation, however, some letters supported wilderness designation of two or three areas.
February 8, 2008	Since October 15, 2007, the NPS has received inquiries and comments on behalf of their constituents from US Senator Byrd, US Congressman Rahall, US Congresswoman Capito, and WV Senator Love.
March 7, 2008	Superintendent receives letter from the National Parks Conservation Association on behalf of its more than 340,000 members and in response to the issues raised at the November public meetings. The NPCA commented on Alternative 5, supports inclusion of three wilderness areas, expanding the water quality management efforts, expanded biking opportunities and the timely promulgation of a special rule for off-road biking, continued hunting in the park, and identifying lands critical to protect in an additional boundary adjustment.
March 11, 2008	Superintendent met with representatives of WV Bowhunters Association to discuss the hunting alternatives in the GMP.
April 10, 2008	NPS requested updated information regarding federally listed threatened or endangered species, species of special concern, or critical habitat that may be affected from WV Division of Natural Resources Non-game Wildlife & Natural Heritage Program and from the US Fish and Wildlife Service.
April 18, 2008	Fayette County Commission sends letter to US Senator Byrd requesting his support for a critical analysis of the lands that NPS has identified as “in and around” and critical to protecting park resources.
April 21, 2008	Superintendent receives letter from US Senator Byrd on behalf of several constituents concerned about the possible cessation of hunting in New River Gorge National River.
May 6, 2008	Superintendent and Deputy Superintendent met with representatives of West Virginia Professional River Outfitters at their request to brief them on the potential park boundary adjustments and how the park might address legislative requirements to “conserve resources in and around the New River Gorge”.
May 27, 2008	NPS receives response from WV Division of Natural Resources Non-game Wildlife & Natural Heritage Program concerning requested consultation and information regarding federally listed threatened or endangered species, species of special concern, or critical habitat. WV DNR provided an updated listing of rare, threatened and endangered species and critical habitats within New River Gorge National River.
June 13, 2008	The Deputy Superintendent and NPS staff met with the New River Working Group at their request to discuss the potential boundary expansions being considered in the GMP.
July 9, 2008	The Deputy Superintendent and NPS staff again met with the New River Working Group at their request to discuss the potential boundary expansions being considered in the GMP.
July 10, 2008	Superintendent and NPS staff met with representatives of the WV Wilderness Coalition at their request to discuss potential boundary changes and wilderness eligibility.
August 28, 2008	The Superintendent, Deputy Superintendent, and NPS staff met with the New River Working Group at their request to brief them on the development of the GMP.
September 5, 2008	Superintendent and NPS staff met with a representative of the National Parks and Conservation Association and the owner of a local bicycle shop (also the local representative of the International Mountain Biking Association) at their request to discuss how mountain biking opportunities in the park might be retained and improved.
October 10, 2008	Superintendent and NPS staff met with representatives of the WV Wilderness Coalition at their request to discuss potential boundary changes and wilderness eligibility.

5.2 Tribal Coordination

Indian tribes with possible cultural associations with sites within New River Gorge National River were contacted via letter to initiate consultation regarding management planning for the park. The initial consultation letter provided tribes with copies of the park's purpose, significance, and fundamental resource statements. Letters inviting comments were sent to the following tribes and tribal organizations (see Appendix C for a representative example of the letter sent):

- Absentee-Shawnee Tribe of Indians of Oklahoma
- Appalachian American Indians of West Virginia
- Cayuga Nation
- Eastern Shawnee Tribe of Oklahoma
- Haudenosaunee Cultural Resource Center
- Haudenosaunee Standing Committee on Burial Rules and Regulations
- Monacan Indian Nation
- Onondaga Nation
- Seneca-Cayuga Tribe of Oklahoma
- Shawnee Tribe
- Tonawanda Seneca Nation
- Tuscarora Nation
- Tuscarora Tribe
- Virginia Council on Indians

Subsequent to sending these letters additional information was provided, as requested, to the Onondaga Nation and to the Absentee-Shawnee Tribe of Indians of Oklahoma (see Appendix C).

Consultation with tribes will continue during implementation of the GMP, as needed. This effort will also be continued throughout the Section 106 compliance process.

5.3 Section 106 Consultation

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, requires that federal agencies consider the effect of undertakings on properties listed on the National Register of Historic Places and allow the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) the opportunity to comment. On February 6, 2006 and April 11, 2007, New River Gorge National River sent letters to the West Virginia Deputy SHPO to initiate consultation for the GMP/EIS. The SHPO has indicated that comments will be provided after receiving and reviewing the Draft GMP/EIS.

The general nature of the management objectives and potential actions in the GMP has necessitated that the analysis of impacts to cultural resources and related Section 106 consultation also be general and programmatic. In the future Section 106 compliance will occur during design and construction of specific projects referenced in the GMP, if and when project funding becomes available.

5.4 Section 7 Consultation

Section 7 of the Endangered Species Act of 1973, as amended (16 USC 1531 et seq.) requires all federal agencies to consult with the U.S. Fish and Wildlife Service to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitat. NPS management policies also require cooperation with appropriate state conservation agencies to protect state-listed and candidate species of special concern within park boundaries.

On April 10, 2008, New River Gorge National River sent a letter to the Wildlife Resources Section of the West Virginia Division of Natural Resources (WV DNR) and to the West Virginia Field Office of the U.S. Fish and Wildlife Service for consultation purposes and to request information about special status species within New River Gorge National River.

The U.S. Fish and Wildlife Service has indicated that comments will be provided after receiving and reviewing the Draft GMP/EIS.

WVDNR responded by letter on December 8, 2008. The responses included lists of the rare, threatened, and endangered species and critical habitats that could be present within the park. WVDNR requested that the NPS take these species into consideration when planning future projects for the park. As requested, the actions proposed in the GMP have been designed to avoid and/or minimize adverse impacts to these species and their habitats. As individual management actions are implemented in the future, the park will survey the specific area of potential impact and if species are encountered will coordinate with the WVDNR and other state agencies, as appropriate.

5.5 Draft GMP/EIS Document Review

The Draft GMP/EIS for New River Gorge National River will be on public and agency review for 60 days. During the review period, the park will solicit public and agency comments and will hold public meetings that will be advertised in local media outlets. Once comments are received and analyzed, a Final GMP/EIS (or Abbreviated Final GMP/EIS if comments are not substantive) will be prepared that will respond to and incorporate the public comments on the draft document. Thirty days of no action will follow release of the Final GMP/EIS. After that a Record of Decision (ROD) will be prepared to document the selected alternative and set forth any stipulations for implementation of the GMP. Preparation of the ROD will complete satisfaction of NEPA compliance requirements for the GMP.

As noted previously, the Draft GMP/EIS presents an overview of potential actions and impacts related to the management concepts for the park. More detailed plans would be developed for individual development and management projects in the

park, if and when funding becomes available. These plans would require and be subject to additional environmental compliance reviews, such as those required pursuant to the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as amended.

5.6 List of Draft GMP/EIS Recipients

Copies of the Draft GMP/EIS were distributed to the following government officials, government agencies, and non-governmental organizations and institutions. Copies were also distributed to over 550 people, groups, property owners, and businesses who requested the document or who are on the park's public involvement mailing list.

- **Congressional Delegation**

West Virginia Senator Robert C. Byrd
West Virginia Senator Jay Rockefeller
West Virginia Representative Nick J. Rahall II

- **Federal Agencies**

U.S. Army Corps of Engineers
U.S. Environmental Protection Agency
U.S. Department of Agriculture, Natural Resources Conservation Service
U.S. Department of the Interior, Fish and Wildlife Service
U.S. Department of the Interior, U.S. Geological Survey
U.S. Department of the Interior, Office of Surface Mining
Advisory Council on Historic Preservation, Office of Federal Agency Programs

- **West Virginia Legislative Delegation**

Governor Joe Manchin III
Senator Mike Green, District 9
Senator Jesse O. Guills, District 10
Senator James W McNeely, District 10
Senator Randy C. White, District 11
Senator William R. Laird, District 11
Representative Virginia Mahan, District 27
Representative Rick Moye, District 27
Representative Linda Sumner, District 27
Representative Sally Susman, District 27
Representative Bill Wooton, District 27
Representative Tom Louisos, District 29
Representative David G. Perry, District 29
Representative Margaret Anne Staggers, District 29
Representative Sam J. Argento, District 35

- **West Virginia State Agencies**

West Virginia Department of Agriculture
  - West Virginia Conservation Agency

West Virginia Department of Commerce
  - Division of Forestry
  - Division of Natural Resources
  - Division of Tourism
  - Development Office

West Virginia Department of Education and the Arts
  - Division of Culture and History

West Virginia Department of Environmental Protection
  - Division of Air Quality
  - Division of Land Restoration
  - Division of Mining and Reclamation
  - Division of Water and Waste Management

West Virginia Department of Transportation
  - Division of Highways
  - Parkways, Economic Development and Tourism Authority

- **County and Local Governments**

Fayette County Commission
Nicholas County Commission
Raleigh County Commission
Summers County Commission
City of Beckley
City of Hinton
City of Mt. Hope
City of Oak Hill
City of Summersville
Town of Ansted
Town of Fayetteville
Town of Thurmond
Fayette County Planning Commission
Fayette County Transition Team
Raleigh County Planning & Zoning Commission

- **Organizations and Institutions**

Absentee-Shawnee Tribe of Indians of Oklahoma
American Canoe Association
American Mountain Guides Association
American Outdoors
American Whitewater
Appalachian American Indians of WV

Appalachian Folklife Center
Beckley Area Foundation
Beckley/Raleigh County Chamber of Commerce
Carolina Canoe Club, Inc.
Canaan Valley Institute
Cayuga Nation of Indians
Coastal Canoeists, Inc.
Collis P. Huntington Society
Ducks Unlimited
Dunloup Creek Watershed Association
Eastern National – Southeast Region
Eastern Shawnee Tribe of Oklahoma
Fayette County Chamber of Commerce
Fayette County Water Quality Coalition
Fayetteville Convention and Visitors Bureau
Forward Southern West Virginia
Friends of Coal
Friends of the Rivers of Virginia
Glade-Pinch Trout Association
Greenbrier River Watershed Association
Haudenosaunee Cultural Resource Center
Hinton Chamber of Commerce
Humane Society of Raleigh County
Institute for History of Technology
International Mountain Bike Association
Izaak Walton League
Keelhauler Canoe Club
Lilly Reunion Association
Monacan Indian Nation, Inc.
Mountaineer Audubon Society
Muster Project
National Committee for the New River
National Railway Historical Society
National Park Foundation
National Parks and Conservation Association
National Wild Turkey Federation
New River Alliance of Climbers
New River Community Partners
New River Convention and Visitors Bureau
New River Land Trust
Nicholas County Chamber of Commerce
Onondaga Nation
Piney Creek Watershed Association

Plateau Action Network
Potomac Appalachian Trail Club
Public Employees for Environmental Responsibility (PEER)
Quality Deer Management Association
Rails-to-Trails Conservancy
Raleigh County Horsemen Association
Richwood Area Chamber of Commerce
River Management Society
Seneca-Cayuga Tribe of Oklahoma
Shawnee Tribe
Sierra Club – WV Chapter
Southern WV Convention and Visitors Bureau
Student Conservation Association, Inc
Summersville Convention and Visitors Bureau
The Access Fund
The Conservation Fund
The Nature Conservancy
Three Rivers Avian Center
Trout Unlimited
Trout Unlimited- Almost Heaven Chapter
Trust for Public Lands
Tuscarora Tribe
Virginia Council on Indians
Webster County Watershed Association
West Virginia Highlands Conservancy
West Virginia Rivers Coalition
West Virginia Wildwater Association
WV Bear Hunters Association
WV Bowhunters Association
WV Chapter- National Wild Turkey Federation
WV Council Trout Unlimited
WV Eco-Tourism Association
WV Mountain Bike Association
WV Professional River Outfitters
WV Rails-to-Trails Council
WV Scenic Trails Association
WV Sporting Dog Association
WV State Chapter of Quail Unlimited
WV Trappers Association
WV Trails Coalition
WV Wilderness Coalition
4C Economic Development Authority

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Hiking alone in winter – experiencing solitude.

Outfitted paddlers bound for adventure on the New River in the lower gorge.

New River Gorge National River affords exceptional opportunities for exploration, adventure, discovery, solitude, and community.

Opposite side: Tranquil setting on the New River at dusk.

Appendix A Park Enabling Legislation and Mandates

Appendix A

Park Enabling Legislation and Mandates

- **Public Law 95-625, Title XI (Stat.3544-3548, November 10, 1978)**..... A-1
- **Public Law 100-534, Section 1 (West Virginia National Interest River Conservation Act of 1987) (102 Stat. 2699-2708, October 26, 1988)** A-5
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Public Law 95-625
95th Congress

An Act

To authorize additional appropriations for the acquisition of lands and interests in lands within the Sawtooth National Recreation Area in Idaho.

Nov. 10, 1978
[S. 791]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

National Parks and Recreation Act of 1978.

SHORT TITLE AND TABLE OF CONTENTS

SECTION 1. This Act may be cited as the "National Parks and Recreation Act of 1978". 16 USC 1 note.

TITLE XI—NEW RIVER GORGE NATIONAL RIVER

Establishment and administration. 16 USC 460m-15.

SEC. 1101. For the purpose of conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge and preserving as a free-flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations, the Secretary of the Interior (hereinafter referred to as the "Secretary") shall establish and administer the New River Gorge National River. The Secretary shall administer, protect, and develop the national river in accordance with the provisions of the Act of August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), as amended and supplemented; except that any other statutory authority available to the Secretary for the preservation and management of natural resources may be utilized to the extent he finds such authority will further the purposes of this title. The boundaries of the national river shall be as generally depicted on the drawing entitled "Proposed New River Gorge National River" numbered NERI-20,002, dated July 1978, which shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior.

Boundary description, availability for public inspection.

Acquisition of lands, waters, or interests. 16 USC 460m-16.

SEC. 1102. (a) Within the boundaries of the New River Gorge National River, the Secretary may acquire lands and waters or interests therein by donation, purchase with donated or appropriated funds, transfer, or exchange. Lands owned by the State of West Virginia or a political subdivision thereof may be acquired by donation only. The authority of the Secretary to condemn in fee, improved properties as defined in subsection (c) of this section shall not be invoked as long as the owner of such improved property holds and uses it in a manner compatible with the purposes of this title. The Secretary may acquire any such improved property without the consent of the owner whenever he finds that such property has undergone, since January 1, 1978, or is imminently about to undergo, changes in land use which are incompatible with the purposes of the national river. The Secretary may acquire less than fee interest in any improved or unimproved property within the boundaries of the national river.

Non-federally owned lands.

(b) On non-federally owned lands within the national river boundaries, the Secretary is authorized to enter into cooperative agreements with organizations or individuals to mark or interpret properties of significance to the history of the Gorge area.

"Improved property."

(c) For the purposes of this Act, the term "improved property" means (i) a detached single family dwelling, the construction of which was begun before January 1, 1977 (hereafter referred to as "dwelling"), together with so much of the land on which the dwelling is situated, the said land being in the same ownership as the dwelling, as the Secretary shall designate to be reasonably necessary for the enjoyment of the dwelling for the sole purpose of noncommercial residential use, together with any structures necessary to the dwelling

as the Secretary shall designate to be reasonably necessary for the enjoyment of the dwelling for the sole purpose of noncommercial residential use, together with any structures necessary to the dwelling which are situated on the land so designated, or (ii) property developed for agricultural uses, together with any structures accessory thereto which were so used on or before January 1, 1977, or (iii) commercial and small business properties which were so used on or before January 1, 1977, the purpose of which is determined by the Secretary to contribute to visitor use and enjoyment of the national river. In determining when and to what extent a property is to be considered an "improved property", the Secretary shall take into consideration the manner of use of such buildings and lands prior to January 1, 1977, and shall designate such lands as are reasonably necessary for the continued enjoyment of the property in the same manner and to the same extent as existed prior to such date.

Right of use and occupancy, term.

(d) The owner of an improved property, as defined in this title, on the date of its acquisition, as a condition of such acquisition, may retain for himself, his heirs and assigns, a right of use and occupancy of the improved property for noncommercial residential, or agricultural purposes, or the continuation of existing commercial operations, as the case may be, for a definite term of not more than twenty-five years, or, in lieu thereof, for a term ending at the death of the owner or the death of his spouse, whichever is later. The owner shall elect the term to be reserved. Unless the property is wholly or partially donated, the Secretary shall pay to the owner the fair market value of the property on the date of its acquisition, less the fair market value of the property on that date of the right retained by the owner. A right retained by the owner pursuant to this section shall be subject to termination by the Secretary upon his determination that it is being exercised in a manner inconsistent with the purposes of this title, and it shall terminate by operation of law upon notification by the Secretary to the holder of the right of such determination and tendering to him the amount equal to the fair market value of that portion which remains unexpired.

Fair market value.

Termination, notification.

Plan, submittal to congressional committees. 16 USC 460m-17.

SEC. 1103. (a) Within two years from the date of enactment of this title, the Secretary shall submit, in writing, to the House Committee on Interior and Insular Affairs, the Senate Committee on Energy and Natural Resources and the Committees on Appropriations of the United States Congress, a detailed plan which shall indicate—

(i) the lands and areas which he deems essential to the protection and public enjoyment of the natural, scenic, and historic values and objects of this national river;

(ii) the lands which he has previously acquired by purchase, donation, exchange, or transfer for the purpose of this national river;

(iii) the annual acquisition program (including the level of funding) which he recommends for the ensuing four fiscal years; and

(iv) the feasibility and suitability of including within the boundaries of the national river, the section of the New River from Fayetteville to Gauley Bridge, and reasons therefor.

Zoning laws and ordinances, establishment assistance. 16 USC 460m-18.

SEC. 1104. The Secretary shall on his own initiative, or at the request of any local government having jurisdiction over land located in or adjacent to the Gorge area, assist and consult with the appropriate officials and employees of such local government in establishing zoning laws or ordinances which will assist in achieving the purposes of this title. In providing assistance pursuant to this section, the Secretary shall endeavor to obtain provisions in such zoning laws or ordinances which—

(1) have the effect of restricting incompatible commercial and industrial use of all real property in or adjacent to the Gorge area;

(2) aid in preserving the character of the Gorge area by appropriate restrictions on the use of real property in the vicinity, including, but not limited to, restrictions upon building and construction of all types; signs and billboards; the burning of cover; cutting of timber; removal of topsoil, sand, or gravel; dumping, storage, or piling of refuse; or any other use which would detract from the esthetic character of the Gorge area; and

(3) have the effect of providing that the Secretary shall receive advance notice of any hearing for the purpose of granting a variance and any variance granted under, and of any exception made to, the application of such law or ordinance.

Mining, prohibition and limitation. 16 USC 460m-19.

SEC. 1105. (a) Notwithstanding any other provision of law, no surface mining of any kind shall be permitted on federally owned lands within the boundary of the national river where the subsurface estate is not federally owned. Underground mining on such lands may be permitted by the Secretary only if—

(1) the mining operation will have no significant adverse impact on the public use and enjoyment of the national river;

(2) the mining operation will disturb the minimum amount of surface necessary to extract the mineral; and

(3) the surface is not significantly disturbed, unless there is no technologically feasible alternative.

Timber harvesting.

(b) The harvesting of timber on federally owned lands within the national river boundary is prohibited, except insofar as it is necessary for the Secretary to remove trees for river access, historic sites, primitive campgrounds, scenic vistas, or as may be necessary from time to time for reasons of public health and safety.

Recovery.

(c) The owner of a mineral estate subject to this section who believes he has suffered a loss by operation of this section, may bring an action only in a United States district court to recover just compensation, which shall be awarded if the court finds that such loss constitutes a taking of property compensable under the Constitution.

Hunting and fishing zones, designation. 16 USC 460m-20.

SEC. 1106. The Secretary may permit hunting and fishing on lands and waters under his jurisdiction within the boundaries of the New River Gorge National River in accordance with applicable Federal and State laws, and he may designate zones where, and establish periods when, no hunting or fishing shall be permitted for reasons of public safety, administration, fish or wildlife management, or public use and enjoyment. Except in emergencies, any rules and regulations of the Secretary pursuant to this section shall be put into effect only after consultation with the appropriate State agency responsible for hunting and fishing activities.

Rules and regulations, consultation.

New River Gorge National River, project work prohibition. 16 USC 460m-21.

SEC. 1107. The Federal Energy Regulatory Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act (41 Stat. 1063) as amended (16 U.S.C. 791a et seq.), on or directly affecting the New River Gorge National River, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary. Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above the New River Gorge National River or on any stream tributary thereto which will not invade the area or diminish the scenic, recreation, and fish and wildlife values present in the area on the date of this section. No department or agency of the United States shall recommend authorization of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined

Advisement to Secretary and report to Congress.

by the Secretary, or request appropriations to begin construction on any such project whether heretofore or hereafter authorized, without advising the Secretary in writing of its intention to do so at least sixty days in advance, and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this section and would effect the national river and the values to be protected by it under this section.

Public Law 100-534
100th Congress

An Act

To protect and enhance the natural, scenic, cultural, and recreational values of certain segments of the New, Gauley, Meadow, and Bluestone Rivers in West Virginia for the benefit of present and future generations, and for other purposes.

Oct. 26, 1988
[H.R. 900]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE AND TABLE OF CONTENTS.

This Act may be cited as the "West Virginia National Interest River Conservation Act of 1987".

West Virginia National Interest River Conservation Act of 1987.
National Park System.
16 USC 460m-15 note.

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SEC. 2. FINDINGS AND PURPOSE.

16 USC 460m-15 note.

(a) FINDINGS.—The Congress finds that—

(1) The outstanding natural, scenic, cultural and recreational values of the segment of the New River in West Virginia within the boundaries of the New River Gorge National River have been preserved and enhanced by its inclusion in the National Park System.

(2) The establishment of the New River Gorge National River has provided the basis for increased recreation and tourism

activities in southern West Virginia due to its nationally recognized status and has greatly contributed to the regional economy.

(3) Certain boundary modifications to the New River Gorge National River are necessary to further protect the scenic resources within the river's visual corridor and to provide for better management of the national park unit.

(4) Several tributaries of the New River in West Virginia also possess remarkable and outstanding features of national significance. The segment of the Gauley River below Summersville Dam has gained national recognition as a premier whitewater recreation resource. The lower section of the Bluestone River and the lower section of the Meadow River possess remarkable and outstanding natural, scenic, and recreational values due to their predominantly undeveloped condition.

(5) Portions of several of the New River tributaries, including segments of the Gauley River, the Meadow River, and the Bluestone River are suitable for inclusion in the National Park System or the National Wild and Scenic Rivers System.

(6) It is in the national interest to preserve the natural condition of certain segments of the New, Gauley, Meadow, and Bluestone Rivers in West Virginia and to enhance recreational opportunities available on the free-flowing segments.

(b) PURPOSE.—The purpose of this Act is to provide for the protection and enhancement of the natural, scenic, cultural, and recreational values on certain free-flowing segments of the New, Gauley, Meadow, and Bluestone Rivers in the State of West Virginia for the benefit and enjoyment of present and future generations.

TITLE I—NEW RIVER GORGE NATIONAL RIVER

SEC. 101. BOUNDARY MODIFICATION.

Section 1101 of the National Parks and Recreation Act of 1978 (16 U.S.C. 460m-15) is amended by striking out "NERI-20,002, dated July 1978" and substituting "NERI-80,023, dated January 1987".

SEC. 102. COOPERATIVE AGREEMENTS WITH STATE.

Title XI of the National Parks and Recreation Act of 1978 is amended by adding the following new section at the end thereof:

16 USC 460m-26.

"SEC. 1113. COOPERATIVE AGREEMENTS WITH STATE.

Law enforcement and crime.

"In administering the national river, the Secretary is authorized to enter into cooperative agreements with the State of West Virginia, or any political subdivision thereof, for the rendering, on a reimbursable or non-reimbursable basis, of rescue, fire fighting, and law enforcement services and cooperative assistance by nearby law enforcement and fire preventive agencies.".

SEC. 103. IMPROVEMENT OF ACCESS AT CUNARD.

Title XI of the National Parks and Recreation Act of 1978 is amended by adding the following new section at the end thereof:

16 USC 460m-27.

"SEC. 1114. IMPROVEMENT OF ACCESS AT CUNARD.

Real property. Safety.

"(a) DEVELOPMENT AND IMPROVEMENT.—The Secretary shall expeditiously acquire such lands, and undertake such developments and improvements, as may be necessary to provide for commercial and noncommercial access to the river near Cunard. No restriction

shall be imposed on such access based on the time of day, except to the extent required to protect public health and safety.

"(b) INTERIM MEASURES.—Pending completion of the developments and improvements referred to in subsection (a), the Secretary shall permit the motorized towing of whitewater rafts in the section of the national river between Thurmond and Cunard when the volume of flow in the river is less than three thousand cubic feet per second.".

SEC. 104. FLOW MANAGEMENT.

Title XI of the National Parks and Recreation Act of 1978 is amended by adding the following new section at the end:

"SEC. 1115. FLOW MANAGEMENT. 16 USC 460m-28.

"(a) FINDINGS.—The Congress finds that adjustments of flows from Bluestone Lake project during periods of low flow are necessary to respond to the congressional mandate contained in section 1110 of this Act and that such adjustments could enhance the quality of the recreational experience in the segments of the river below the lake during those periods as well as protect the biological resources of the river.

"(b) REPORT TO CONGRESS REQUIRED.—The Secretary of the Army, in conjunction with the Secretary of the Interior, shall conduct a study and prepare a report under this section. The report shall be submitted to the Committee on Energy and Natural Resources of the United States Senate and the Committee on Interior and Insular Affairs of the United States House of Representatives not later than December 31, 1989. Before submission of the report to these Committees, a draft of the report shall be made available for public comment. The final report shall include the comments submitted by the Secretary of the Interior and the public, together with the response of the Secretary of the Army to those comments. Public information.

"(c) CONTENTS OF STUDY.—The study under this section shall examine the feasibility of adjusting the timing of daily releases from Bluestone Lake project during periods when flows from the lake are less than three thousand cubic feet per second. The purpose of such adjustment shall be to improve recreation (including, but not limited to, fishing and whitewater recreation) in the New River Gorge National River. Any such adjustments in the timing of flows which are proposed in such report shall be consistent with other project purposes and shall not have significant adverse effects on fishing or on any other form of recreation in Bluestone Lake or in any segment of the river below Bluestone Lake. The study shall assess the effects of such flow adjustments on the quality of recreation on the river in the segments of the river between Hinton and Thurmond and between Thurmond and the downstream boundary of the New River Gorge National River, taking into account the levels of recreational visitation in each of such segments. Fish and fishing.

"(d) TEST PROCEDURES.—As part of the study under this section, the Secretary of the Army shall conduct test releases from Bluestone Lake project during twenty-four-hour periods during the summer of 1989 when flows are less than three thousand cubic feet per second from the project. All such adjustments shall conform to the criteria specified in subsection (c). The tests shall provide adjustments in the timing of daily flows from Bluestone Lake project which permit flows higher than the twenty-four-hour average to reach downstream recreational segments of the river during morning and afternoon hours. The tests shall develop specific data on the

effects of flow adjustments on the speed of the current and on water surface levels in those segments. No test shall be conducted when flows from the lake are less than one thousand seven hundred cubic feet per second and no test shall reduce flows below that level.".

SEC. 105. VISITOR FACILITY.

Title XI of the National Parks and Recreation Act of 1978 (16 U.S.C. 460m–15 and following) is amended by adding the following new section at the end thereof:

16 USC 460m–29.

"SEC. 1116. GLADE CREEK VISITOR FACILITY.

Public information.

"In order to provide for public use and enjoyment of the scenic and natural resources of the New River Gorge National River and in order to provide public information to visitors with respect to the national river and associated State parklands, the Secretary is authorized and directed to construct a scenic overlook and visitor information facility at a suitable location accessible from Interstate 64 in the vicinity of Glade Creek within the boundary of the national river. There is authorized to be appropriated such sums as may be necessary to carry out construction (including all related planning and design) of the scenic overlook and visitor information facility.".

Appropriation authorization.

TITLE IV—GENERAL PROVISIONS

SEC. 401. COORDINATION AMONG RECREATIONAL RESOURCES.

16 USC 460m–15 note.

Subject to existing authority, the Secretary of the Interior shall cooperate with, and assist, any regional authority comprised of representatives of West Virginia State authorities and local government authorities in or any combination of the foregoing Nicholas, Fayette, Raleigh, Summers, Greenbrier, and Mercer Counties, West Virginia, for the purposes of providing for coordinated development and promotion of recreation resources of regional or national significance which are located in southern West Virginia and management by State or Federal agencies, including State, local and National Park System units, State and National Forest System units, and historic sites.

SEC. 402. SPECIAL PROVISIONS.

16 USC 460m–15 note.
Contracts.

Subject to his responsibilities to protect the natural resources of the National Park System, the Secretary of the Interior shall enter into a cooperative agreement with the State of West Virginia providing for the State's regulation, in accordance with State law, of persons providing commercial recreational watercraft services on units of the National Park System and components of the National Wild and Scenic Rivers System subject to this Act.

SEC. 403. PUBLIC AWARENESS PROGRAM.

16 USC 1274 note.

The Secretary of the Interior shall establish a public awareness program to be carried out in Mercer, Nicholas, and Greenbrier Counties, West Virginia, in cooperation with State and local agencies, landowners, and other concerned organizations. The program shall be designed to further public understanding of the effects of designation as components of the National Wild and Scenic Rivers System of segments of the Bluestone and Meadow Rivers which were found eligible in the studies completed by the National Park Service in August 1983 but which were not designated by this Act as units of such system. By December 31, 1992, the Secretary shall submit a report to the Committee on Interior and Insular Affairs of the United States House of Representatives and to the Committee

Reports.

on Energy and Natural Resources of the United States Senate describing the program undertaken pursuant to this section. Section 7(b) of the Wild and Scenic Rivers Act shall continue to apply to the segments subject to this section until December 31, 1992. Termination date.

SEC. 404. CONSOLIDATED MANAGEMENT.

In order to achieve the maximum economy and efficiency of operations in the administration of the National Park System units established or expanded pursuant to this Act, the Secretary shall consolidate offices and personnel administering all such units to the extent practicable and shall utilize the existing facilities of the New River Gorge National River to the extent practicable. 16 USC 460m-15 note.

SEC. 405. NEW SPENDING AUTHORITY SUBJECT TO APPROPRIATIONS.

Any new spending authority which is provided under this Act shall be effective for any fiscal year only to the extent or in such amounts as provided in appropriation Acts. 16 USC 460m-15 note.

Table A.1 New River Gorge National River – Summary of Park Legislation and Related Legislative Mandates

Year	Public Law	Statute	Summary
1978	PL95-625	92 Stat. 3544-3548	Includes enabling legislation for New River Gorge National River.
1986	PL99-590	100 Stat. 3339-3340	Authorized acquisition of up to 10 acres outside the park boundary for an administrative site; used to acquire site for headquarters at Glen Jean.
1987	PL100-71	101 Stat. 415	Authorizes WV DNR to conduct black fly spraying program (HR 1827-86)
1988	PL100-446	102 Stat. 1782	Authorizes NPS to undertake friendly land condemnation
1988	PL100-534	102 Stat. 2699-2708	Includes enabling legislation for Gauley River National Recreation Area and Bluestone National Scenic River. Provides findings and purpose for New River Gorge National River (NERI), Gauley River National Recreation Area (GARI), and the Bluestone National Scenic River (BLUE). For NERI provides boundary modification, cooperative agreements with the state, improvement of access at Cunard, flow management, and visitor facility (Glade Creek). Also includes promotion of recreation in southern West Virginia, state regulation of commercial watercraft services on the New River, Gauley River, and Bluestone River, public awareness of wild/scenic designation on other rivers, and consolidation of management offices for the three parks.
1991	PL102-154	105 Stat. 996	Authorized NPS to make road improvements for the purpose of public safety on WV Route 25 between Glen Jean and Thurmond.
1992	PL102-381	106 Stat. 1382-1383	Authorized NPS to spend $4.2 million on Fayette Station Bridge.
1992	PL102-580	106 Stat. 4810-4811	Directed the U.S. Army Corps of Engineers to study debris removal at Bluestone Dam.
1996	PL104-333	110 Stat. 4149-4153 110 Stat. 4243-4244	Authorizes NERI and BLUE boundary modifications and management of fish and wildlife resources. Establishes National Coal Heritage Area.
1998	PL105-178	112 Stat. 205	Authorized NPS to spend $12.2 million for a visitor center in the vicinity of I-64 and Sandstone.
2002	PL107-356	116 Stat. 3013	Authorized expansion of the NERI boundary to the upstream limit of Hawks Nest State Park.
2003	PL108-108	117 Stat. 1281-1282	Directed NPS to adopt a special regulation concerning continued hunting at NERI.
2009	PL 111-11		Amends the park's enabling legislation to provide that hunting and fishing shall be permitted in accordance with federal and state laws.

Table A.2 New River Gorge National River – Other Special Mandates

Party with Whom Agreement Exists	Type of Agreement and General Provisions
■ **Arnott Property**	Memorandum of Agreement (MOA) provides for public use of private property (Tract 112-15) in order to access the New River in the vicinity of Meadow Creek. Specific provisions address minimal facilities and services to be provided by the NPS as well as Mr. Arnott's right to charge commercial entities for their use of his property. The most recent five-year MOA was signed on June 13, 2005.
■ **CSX Transportation Police**	Memorandum of Agreement (MOA) provides for the NPS to enforce certain federal regulations on CSX property within New River Gorge National River in a manner consistent with the NPS mission. The most recent five-year MOA was signed on December 16, 2004.
■ **Concord University**	General Agreement sets forth objectives of a feasibility study on the joint future use of the NPS-owned Camp Brookside as a research and educational facility. The most recent five-year CA was signed in August 2005.
■ **New River Blueway Partners**	Memorandum of Understanding (MOU) provides for the NPS to cooperate with the US Army Corps of Engineers and various state agencies in Virginia and North Carolina to promote a canoe trail on the New River by the use of a common logo on signs and informational media. This initiative intends to facilitate the public's recreational use of the New River by sharing information about river access sites and support facilities. The most recent five-year MOU was signed in April 2006.
■ **New River Parkway Authority** ■ **Federal Highway Administration** ■ **WV DOT Division of Highways**	Memorandum of Understanding (MOU), signed in 1999 and referenced in the 2003 Final Environmental Impact Statement (FEIS) for the New River Parkway, provides 14 conditions for selection of West Bank Alternative 2A/2D as the preferred alternative. Included in these conditions is a stipulation that the parkway "shall be located, designed and administered in such a manner as to cause no significant harm, short or long term, to the New River Gorge National River…", and that the NPS "will have a lead role in establishing mitigation and parkway planning standards and will concur in any and all decisions regarding location, design and construction of the parkway. This shall include a Service construction monitor/supervisor on site during construction to ensure the protection of sensitive resources crucial to the park's mission; …" Further, NPS land required for construction "will be replaced with land of at least fair market value and of reasonably equivalent usefulness and location." The MOU is intended to remain in effect during planning and construction activities for the parkway.
■ **New River Parkway Authority** ■ **Federal Highway Administration** ■ **WV DOT Division of Highways** ■ **WV State Historic Preservation Officer**	Memorandum of Agreement (MOA), revised in September 2003, defines the process for protecting and/or documenting cultural resources during the remainder of the New River Parkway construction project. Several stipulations provide that the signatories will work together to ensure protection of the Richmond Farm, the Richmond-Hamilton Farm, the Stone Wall, and archeological resources in the project corridor. The New River Parkway Authority is also responsible for developing a land management system to guide future development and minimize future secondary impacts to the area.

Table A.2 New River Gorge National River – Other Special Mandates (continued)

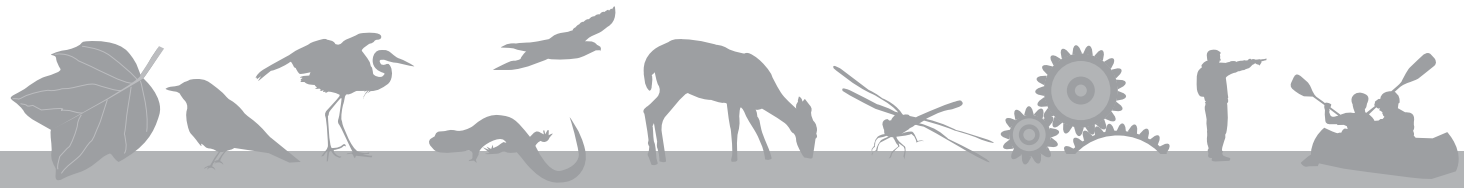
Party with Whom Agreement Exists	Type of Agreement and General Provisions
■ **Theatre West Virginia**	General Agreement provides conditions allowing Theatre West Virginia to utilize the Cliffside Amphitheater at Grandview for the "sole purpose of operating and maintaining a production company for the performing arts and related activities for the benefit of the general public…"
■ **Town of Fayetteville**	GA establishes standards, terms, and conditions under which the NPS and the town of Fayetteville will provide access and maintain trails and foot paths on NPS and town properties near the Fayetteville Town Park. The current GA, signed in 2004, has a five-year term.
■ **WV Division of Natural Resources**	MOA to jointly manage a public fishing access area at Camp Brookside. The site was in existence when the NPS purchased the Camp Brookside property in 1933 from Elkem Metals Company in 1993 who had built the camp as a condition of its hydropower license for the Hawks Nest/ Glen Ferris Hydropower Projects. The agreement with WV DNR specifies that NPS will be responsible for maintaining road access, including the vehicle bridge, the grounds, and bulletin board, and will consult with WVDNR on enforcement issues and sign wording. The agreement, signed February 11, 1994, is in effect for 40 years.
■ **Local Fire and Law Enforcement Entities**	Agreements to provide for coordinated communications and response to emergency situations for better public service.
■ **Specific Properties**	Numerous deeded rights are reserved by previous owners of property now owned by NPS such as cemetery access, utility corridors, and various other rights-of-way.

Table A.3 New River Gorge National River – Special Park Designations

Designation	Finding
■ **Outstandingly Remarkable Values** (National Park Service, 1982)	The New River from Bluestone Dam to Gauley Bridge is listed on the Nationwide Rivers Inventory of free-flowing rivers with Outstandingly Remarkable Values (ORVs) pursuant to Section 5(d) of the National Wild and Scenic Rivers Act (16 U.S.C 1271-1287). The New River possesses four ORVs, including: - wildlife (segment includes 23 federally-designated threatened or endangered species, including the New River crayfish, big mouth chub, Kanawha darter, New River snail, and ephemeral cave scud) - culture (segment includes the New River Bridge – the larges expansion bridge in the world) - recreation (a nationally recognized whitewater recreation area) - geology (reported to be the oldest river – geologically – in North America) All federal agencies must seek to avoid or mitigate actions that would adversely affect NRI segments.
■ **Nationally Significant and Unique Wildlife Ecosystem** (U.S. Fish and Wildlife Service, 1977)	New River Gorge is designated by the U.S. Fish and Wildlife Service and the West Virginia Division of Natural Resources as a nationally significant and unique wildlife ecosystem. These areas have wildlife or wildlife habitat values that go beyond local values in the sense that they provide substantial benefits to the public over a wide geographical area or are significantly different from other habitats in an area.
■ **Resource Category 1 Habitat** (U.S. Fish and Wildlife Service, 1986)	Habitat of the New River is designated a Resource Category 1 habitat for purposes of determining actions required to mitigate the impacts of federal actions to fish and wildlife populations, their habitat, and the human uses thereof. Federal actions include: actions requiring a federally-issued permit or license that would impact waters of the U.S.; major federal actions significantly affecting the quality of the human environment; and other federal actions for which the U.S. Fish and Wildlife Service has legislative authority or executive direction for involvement. Resource Category 1 habitat includes habitat of high value for evaluation species and is unique and irreplaceable on a national basis or in the ecoregion section. The mitigation goal is no loss of existing habitat value. The U.S. FWS management guideline states that: - all losses of existing habitat be prevented as these one-of-a-kind areas cannot be replaced - insignificant changes that do not result in adverse impacts on habitat value may be acceptable provided they will have no significant cumulative impact
■ **High Quality Stream** (State of West Virginia, 1986)	The New River is classified by the state of West Virginia as a high quality stream. These include streams with native or stocked populations of trout and native warmwater streams five or more miles in length with desirable fish populations that are utilized by the public. Policy directs public agencies to avoid actions that impact fish populations (especially trout) in high quality streams.
■ **American Heritage River** (Executive Order 13061, 1998)	The New River in Virginia, North Carolina, and West Virginia is designated an American Heritage River. The American Heritage River Initiative offers streamlined access to federal resources for projects that are created, planned, and implemented by local communities who voluntarily participate. The federal role in management of American Heritage Rivers is to solely support community-based efforts to preserve, protect, and restore designated rivers and their communities.

Table A.3 New River Gorge National River – Special Park Designations (continued)

Designation	Finding
■ **Protected Stream** (State of West Virginia, 1969)	The New River from its confluence with the Gauley River to its confluence with the Greenbrier River is designated a protected stream within the state's natural streams preservation system. Protected streams are to be managed for the use and enjoyment of the citizens of West Virginia in such manner as will leave them unimpaired for future use and enjoyment as free-flowing streams, and so as to provide for their protection and preservation in their natural character. Regulations state that permits will not be granted for work that will materially alter or affect the free-flowing characteristics of a substantial part of a protected stream.
■ **Aquatic Resource of National Importance** (U.S. Environmental Protection Agency, 2007)	The New River is designated an Aquatic Resource of National Importance (ARNI). As such, individual permits for discharges of dredge or fill material are eligible for a higher level of review within the Department of the Army. Factors used in identifying ANRIs include: economic importance of the aquatic resource, rarity or uniqueness, and/or importance of the aquatic resource to the protection, maintenance, or enhancement of the quality of the nation's waters.



Appendix B

Applicable Federal and State of West Virginia Laws and Regulations and National Park Service Policies

Appendix B

Applicable Federal and State of West Virginia Laws and Regulations and National Park Service Policies

Federal Mandates	Reference	Purpose	Compliance Required by
National Park Service Organic Act of 1916	16 U.S.C. 1-4 et seq.	Promotes and regulates the use of national parks, monuments, and reservations, b such means and measures as to conserve the scenery and the natural and historic objects and the wildlife therein and provides for the enjoyment of the land in such manner as will leave them unimpaired for the enjoyment of future generations	National Park Service
National Parks and Recreation Act of 1978	16. U.S.C. 1(a)-7(b)	Requires the National Park Service to conduct comprehensive general management planning on park units	National Park Service
Government Performance and Results Act of 1933	P.L. 103-62; 31 U.S.C. 1101	Requires Federal Agencies to develop a strategic planning and performance management system establishing goals and reporting results	Federal Agencies
National Parks Omnibus Management Act of 1998	P.L. 105-391; 112 Stat 3497; 36 CFR 51	Public accommodations, facilities, and services in NPS units shall be limited to those accommodations, facilities, and services necessary for public use and enjoyment, and consistent with the preservation and conservation of the resources and values of the unit	National Park Service
General Authorities Act of 1970, as amended in 1978	16 U.S.C. 1a-1	Affirmed that all national park areas, including historic sites, while acknowledged to be “distinct in character,” were “united through their interrelated purposes and resources into one national park system, as cumulative expressions of a single national heritage”	National Park Service
National Environmental Policy Act of 1969 (NEPA)	P.L. 91-190, as amended by P.L. 94-52; 42 U.S.C. 4321-4347	Establishes national policy for protection of the human environment and ensures that decision-makers take into account; requires all Federal Agencies to analyze alternatives and document impacts resulting from proposed actions that could potentially affect the natural and human environment	Federal Agencies
Council on Environmental Quality (CEQ) Regulations, as amended	40 CFR 1500-1508	Implements NEPA and provides guidance to Federal Agencies in the preparation of environmental documents identified under NEPA	Federal Agencies
Procedural Provisions of the National Environmental Policy Act by CEQ, as amended	40 CFR Parts 1500-1508	Provides guidance to Federal Agencies in the preparation of environmental documents	Federal Agencies
Administrative Procedures Act of 1979, as amended	5 U.S.C. 551, et seq	Outlines the forms of administrative proceedings (hearings, adjudication, etc.) and prescribes procedural and substantive limitations thereon; provides for judicial review of federal decision-making actions	Federal Agencies
National Trust Act of 1949	16. U.S.C. 468-c-e	Facilitates public participation in the preservation of sites, buildings, and objects of national significance or interest	Federal Agencies
Historic Sites Act of 1935	16 U.S.C. 461-467; 36 CFR 65	Establishes a national policy to preserve historic sties and objects of national significance for public use	Federal Agencies

Appendix B. Applicable Federal and State of West Virginia Laws and Regulations and National Park Service Policies (continued)

Federal Mandates (continued)	Reference	Purpose	Compliance Required by
National Historic Preservation Act of 1966, as amended; Sec. 106 and Sec. 110	16 U.S.C. 470; 36 CFR 60,63, 65,78-79, 800	Protects and preserves districts, sites, and structures and architectural, archeological, and cultural resources; Section 106 requires consultation with the State Historic Preservation Office; Section 110 requires that NPS identify and nominate all eligible resources under its jurisdiction to the National Register of Historic Places	Federal Agencies
Antiquities Act of 1906, as amended	16. U.S.C. 431-433	Provides for the protection of historic and prehistoric remains, "or any antiquity," on federal lands; authorizes the President to declare national monuments by proclamation; authorizes the scientific investigation of antiquities on federal lands; provides for protection of historic monuments on public lands	Federal Agencies
Archeological and Historic Preservation Act of 1974, as amended	16 U.S.C. 469-469c	Requires survey, recovery and preservation of significant scientific, prehistorical, historical, archeological, or paleontological data when such data may be destroyed due to a federal project; directs Federal Agencies to notify the Secretary of the Interior whenever they find that such a project may cause loss or damage	Federal Agencies
Archeological Resources Protection Act of 1979, as amended	16 U.S.C. 470aa-mm	Prohibits the unauthorized excavation or removal of archeological resources on federal and Indian land. Archeological resources include sites, features, artifacts, etc.	Federal Agencies
Native American Graves Protection and Repatriation Act	25 U.S.C. 3001 et seq; 43 CFR 10	Requires Federal Agencies and museums receiving federal funding to return Native American cultural items – including human remains – to their respective peoples (allowing a short time for analysis by archeological teams)	Federal Agencies and museums receiving federal funding
American Indian Religious Freedom Act	42 U.S.C. 21	Protects and preserves the traditional religious rights of American Indians, Eskimos, Aleuts, and Native Hawaiians on federal lands	Federal Agencies
Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation	48 CFR 44716	Organizes information about federal preservation activities; describes results to be achieved by Federal Agencies, states, and other when planning for the identification, evaluation, registration and treatment of historic properties; integrates diverse efforts of many entities performing historic preservation into a systematic effort to preserve the nation's cultural heritage	Federal, State, and Local Agencies
Secretary of the Interior's Standards for the Treatment of Historic Properties	36 CFR 68	Provides guidance regarding the treatment of historic properties, focusing treatments: preservation, rehabilitation, restoration, and reconstruction	National Park Service
The Architectural Barriers Act of 1968; the Rehabilitation Act of 1973; and Americans with Disabilities Act of 1990	42 U.S.C. 4157 et seq.; 29 U.S.C. 701, et seq.; 42 U.S.C. 12101, P.L. 101-336. 1-4 Stat. 327	Requires public buildings constructed, altered, leased, or financed with federal funds to be accessible to persons with disabilities; ensures that all facilities and programs are accessible to visitors with disabilities	Federal, State, and Local Agencies
Federal Cave Resources Protection Act	16. U.S.C. 4301-4310	Protects and preserves significant caves on federal lands for the perpetual use, enjoyment, and benefit of all people; fosters increased cooperation and exchange of information between governments and those who use caves on federal land	Federal Agencies

Appendix B. Applicable Federal and State of West Virginia Laws and Regulations and National Park Service Policies (continued)

Federal Mandates (continued)	Reference	Purpose	Compliance Required by
Clean Water Act (CWA) of 1977, as amended, Sec. 401, Sec. 402 and Sec. 404(b)(1)	33 U.S.C. 121, et seq.	Sec. 401 regulates water quality requirements specified under the CWA; Section 402 requires a National Pollutant Discharge Elimination System (NPDES) permit for discharges into waters of the U.S.; Sec. 404 requires a permit before dredging or filling wetlands can occur	Federal, State, and Local Agencies
Rivers and Harbors Act of 1899	33 U.S.C. 403	Prohibits construction of any bridge, dam, dike or causeway over or in navigable waterways of the U.S. without Congressional approval	Federal, State, and Local Agencies
Federal Water Pollution Control Act of 1972, as amended	33 U.S.C. 1251-1376, et seq.	Establishes criteria and performance standards for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters through prevention, reduction, and elimination of pollution	Federal, State, and Local Agencies
Fish and Wildlife Coordination Act of 1934, as amended	16 U.S.C. 661-666c; 48 Stat. 401	Requires Federal Agencies to coordinate with the FWS when any project involves impoundment, diversion, channel deepening or other modification of a stream or water body	Federal, State, and Local Agencies
Clean Air Act (CAA) Amendments of 1990, as amended; Sec. 118	42 U.S.C. 7401, et seq. 42 U.S.C. 7609	Establishes standards to protect and improve air quality; requires project conformity with State Implementation Plan concerning air quality; Sec. 118 requires federal land managers to protect air quality on federal land	Federal, State, and Local Agencies
Endangered Species Act of 1973, as amended	16 U.S.C. 1531-1543	Establishes a policy to protect and restore federally listed threatened and endangered species of flora and fauna	Federal, State, and Local Agencies
Surface Mining Control and Reclamation Act of 1977, as amended	P.L. 95-87	Provides funding for: (1) reclamation and restoration of land and water resources adversely affected by past coal mining, including but not limited to reclamation and restoration of abandoned surface mine areas, abandoned coal processing areas, and abandoned coal refuse disposal area (2) sealing and filling abandoned deep mine entries and voids (3) planting of land adversely affected by past coal mining to prevent erosion and sedimentation; prevention, abatement, treatment, and control of water pollution created by coal mine drainage including restoration of stream beds, and construction and operation of water treatment plants (4) prevention, abatement, and control of burning Section 522(e) prohibits or restricts surface coal mining operations on certain lands, including, among other areas, units of the National Park System, federal lands in national forests, and buffer zones for public parks, public roads, occupied dwellings, and cemeteries	
Land and Water Conservation Fund Act of 1965, as amended; Section 6(f)	16 U.S.C. 4601-4 to 4601-11	Preserves, develops, and assures the quality and quantity of outdoor recreational resources; applies to all projects that impact recreational lands involving funds obtained from the Land and Water Conservation Fund	Federal, State, and Local Agencies
Federal Farmland Protection Act of 1981	7 U.S.C. 4201-4209	Minimizes impacts of federal programs on the unnecessary and irreversible conversion of farmland to nonagricultural uses; assures to the extent possible that federal programs are administered to be compatible with the farmland protection programs and policies of state and local units of government and private organizations	Federal, State, and Local Agencies

Appendix B. Applicable Federal and State of West Virginia Laws and Regulations and National Park Service Policies (continued)

Federal Mandates (continued)	Reference	Purpose	Compliance Required by
Resource Conservation and Recovery Act, as amended	42 U.S.C. s/s 6901 et seq. (1976)	Authorizes USEPA to control hazardous waste, including the generation, transportation, treatment, storage, and disposal of hazardous waste; RCRA also sets forth a framework for the management of non-hazardous wastes; addresses environmental problems resulting from underground storage tanks; focuses on active and future facilities, not abandoned or historical sites	federal, state and Local Governments; private industry
Federal Communications Commission Procedures Implementing the National Environmental Policy Act of 969	47 CFR 1.301-1.1319	Addresses impacts that proposed antenna structures may have on historical sites and other protected resources	Federal Communications Commission and cell service carriers
Uniform Relocation Assistance and Real Property Acquisition Policies Act	42 U.S.C. 4601 et seq.	Establishes uniform policies to compensate people displaced from their homes or businesses by activities that are wholly or partially federally-funded	Federal Agencies
Payments In Lieu of Taxes Act (PILOT or PILT), as amended by P.L 98-63	P.L. 94-565 (31 U.S.C. 6901-6907), recodified at 31 U.S.C. 6907	Provides certain payments from the Federal Government to Local Governments to compensate for the removal of land from the local real estate tax base and the amount (acres) of certain public lands within the boundaries of local governmental units	National Park Service
Department of Transportation Act of 1966, Section 4(f)	49 U.S.C. 303	Requires the Secretary of Transportation to demonstrate that there is no feasible or prudent alternative to impacting publicly-owned land in a park, recreation area, wildlife and waterfowl refuge, or an historic site of national, state or local significance, or any land from an historic site of national, state or local significance, and that all possible planning to minimize harm to such land is incorporated into proposed transportation project	U.S Department of Transportation; WV DOT; FAA
Wilderness Act of 1964	P.L. 88-577 (16 U.S.C. 1131-1136)	Establishes the National Wilderness Preservation System to include federal lands designated as "wilderness" by Congress; directs the Secretary of the Interior to review all roadless areas of 5,000 contiguous acres or more in national parks for designation as wilderness	U.S. Department of the Interior
NPS Mandates	**Reference**	**Purpose**	**Compliance Required by**
Final Draft Park Planning Program Standards	NPS 2007	Describes the National Park Service framework for park planning and decision-making, which includes six discrete kinds of planning, each with its own particular purpose and standards	National Park Service
National Park Service Management Policies 2006	NPS 2006	Sets the policy framework and provides direction for all management decisions for units of the national park system	National Park Service
NPS Special Directive 92-11 and P.L. 105-391	P.L. 105-391	Identifies NPS criteria and qualifications for resource evaluation and determination of a site's suitability and feasibility for inclusion in the national park system; provides guidance for NPS special resource studies	National Park Service
Conservation Planning, Environmental Impact Analyses and Decision-Making	Director's Order 12 and Handbook for Environmental Analysis	Provides bureau guidance on NEPA compliance consistent with CEQ regulations and on approaches to environmental documentation	National Park Service

Appendix B. Applicable Federal and State of West Virginia Laws and Regulations and National Park Service Policies (continued)

NPS Mandates (continued)	Reference	Purpose	Compliance Required by
National Park Service Tourism	Director's Order 17	Promotes and supports sustainable, responsible, informed, and managed visitor use through cooperation and coordination with the tourism industry	National Park Service
Land Protection	Director's Order 25	Articulates the framework for land protection and the process for land acquisition and interests in land within the authorized boundaries of NPS units; the policy includes direction for parks to develop a "land protection plan," which establishes land acquisition priorities	National Park Service
Cultural Resource Management	Director's Order 28	Addresses the preservation and treatment of archeological, cultural, and historic properties and ethnographic resources	National Park Service
Cultural Resource Management Guideline Release No. 5	NPS-28	Addresses standards and requirements for research, planning, and stewardship of cultural resources, as well as management of archeological resources, cultural landscapes, historic, and prehistoric structures, museum objects, and ethnographic resources	National Park Service
Cultural Resource Management	Director's Order 28A	Articulates framework for planning, reviewing, and undertaking archeological activities and other activities that may affect archeological resources within the National Park System; also addresses the manner in which the Service will meet its archeological assistance responsibilities outside the national parks	National Park Service
Coordination with State Historic Preservation Officers	Programmatic MOA among NPS, Advisory Council on Historic Preservation and National Council of SHPOs (1995; revised 2002)	Describes how the NPS will carry out its Section 106 responsibilities with respect to managing the national park system; states that the NPS will coordinate with SHPO activities for research related to resource management needs and identification, evaluation, and registration of park historic properties	National Park Service
Accessibility for Park Visitors	Director's Order 42	Ensures that all people have the highest level of accessibility that is reasonable to NPS programs, facilities, and services in conformance with applicable regulations and standards	National Park Service
Special Park Uses	Director's Order 53	Provides supplemental guidance to Section 8.6 of NPS Management Policies on permitting special park uses	National Park Service
Natural Resource Management Guidelines	NPS-77	Guides the actions of park managers so that natural resource management activities planned and initiated at field areas comply with federal laws and regulations, and with Department of the Interior and NPS policy	National Park Service
Wetlands Protection	Director's Order 77-1	Establishes NPS policies, requirements and standards for implementing Executive Order 11990, "Protection of Wetlands;" recommends park units obtain a parkwide wetland inventory, based on "Classification of Wetlands and Deepwater Habitats of the U.S.," FWS/OBS-79-31	National Park Service
Wilderness Preservation and Management	Director's Order 41 and Reference Manual 41	Provides accountability, consistency, and continuity to the NPS's wilderness management program and to generally guide NPS policies to comply with the Wilderness Act of 1964	National Park Service

Appendix B. Applicable Federal and State of West Virginia Laws and Regulations and National Park Service Policies (continued)

NPS Mandates (continued)	Reference	Purpose	Compliance Required by
Integrated Pest Management Manual and Integrated Pest Management Plan	Reference Manual 77-7	Describes the biology and management of 21 species or categories of pests; minimizes the use of toxic pesticides and establishes a strategy for the control of invasive species	National Park Service
Structural Fire Management	Directors Order 58 and Reference Manual-58	Supplements the structural fire policy articulated in NPS Management Policies by setting forth the policies and procedures necessary to establish and implement structural fire management programs throughout the national park system	National Park Service
Federal Executive Orders	**Reference**	**Purpose**	**Compliance Required by**
Intergovernmental Review of Federal Programs	E.O. 12372	Establishes clearinghouse coordination required with state and local agencies concerning impacts of federal projects	Federal Agencies
Protection and Enhancement of Environmental Quality	E.O. 11514, as amended by E.O. 11990	Provides federal leadership in protecting and enhancing the quality of the nation's environment to sustain and enrich human life	Federal Agencies
Protection of Floodplains	E.O. 11988	Establishes federal policy to avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to preserve the natural and beneficial values served by floodplains	Federal Agencies
Protection of Wetlands	E.O. 11990	Requires Federal Agencies to consider all practicable alternatives to impacting wetlands	Federal Agencies
Off-Road Vehicles on Public Lands	E.O. 11644, as amended by E.O. 11989	Requires public land managers to establish policies and procedures to ensure that the use of off-road vehicles on public lands will be controlled to protect the resources, to promote the safety of all users of those lands and to minimize conflicts among the various uses of those lands	Federal Agencies
Invasive Species	E.O. 13112	Prevents the introduction of invasive species and provides for their control and to minimize the economic and human health impacts that invasive species cause	Federal Agencies
American Indian Sacred Sites	E.O. 13007	Requires that management of federal land shall, to the extent practicable, permitted by law, accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of sacred sites	Federal Agencies
Greening the Government through Efficient Energy Management	E.O. 13123	Directs the Federal Government to significantly improve its energy management in order to save taxpayer dollars and reduce emissions that contribute to air pollution and global climate change; sets specific goals for federal agencies to reduce energy consumption	Federal agencies
Governmental Actions and Interference with Constitutionally Protected Property Rights	E.O. 12630	Establishes federal policy to assist Federal Agencies in proposing, planning and implementing actions with due regard to the constitutional protections provided by the Fifth Amendment and to reduce undue or inadvertent burdens on the public resulting from lawful government action	Federal Agencies
Federal Actions to Address Env Justice in Minority Populations and Low-Income Populations	E.O. 12898	Established federal policy to avoid federal actions that cause disproportionately high and adverse impacts on minority and low-income populations with respect to human health and the environment	Federal Agencies

Appendix B. Applicable Federal and State of West Virginia Laws and Regulations and National Park Service Policies (continued)

Federal Executive Orders (continued)	Reference	Purpose	Compliance Required by
Protection and Enhancement of the Cultural Environment	E.O. 11593	Establishes federal policy to protect and enhance the cultural environment	Federal Agencies
Strengthening Federal Environmental, Energy, and Transportation Management	E.O. 13423	Requires federal agencies to conduct their environmental, transportation, and energy-related activities in support of their respective missions in an environmentally, economically, and fiscally sound, integrated, continuously improving, efficient, and sustainable manner.	Federal Agencies
Government-to-Government Relations with Tribal Governments	Presidential Memorandum of April 29, 1994	Establishes principles to be followed by federal departments and agencies in their interactions with Native American tribal governments and requiring consideration of the impacts of federal actions on tribal trust resources	Federal Agencies
State of West Virginia Mandates	**Reference**	**Purpose**	**Compliance Required by**
Air Pollution Control Act	W.Va. Code, §22-5-1 *et seq* and W.Va. Code St. Regs. §45	Provides for a coordinated statewide program of air pollution prevention, abatement and control; to facilitate cooperation across jurisdictional lines in dealing with air pollution not confined within single jurisdictions; and to provide a framework within which values may be balanced in the public interest	WV Department of Environmental Protection (DEP)
Water Pollution Control Act	W.Va. Code, §22-12-1 *et seq*	Establishes as public policy of the state to maintain reasonable standards of purity and quality of water and to make available the quantity of water for the reasonable use by all of the citizens of the state	WV Office of Water Resources (OWR)
Groundwater Protection Act	W.Va. Code, §22-12-1 *et seq*	Establishes as public policy of the state to maintain and protect the state's groundwater so as to support the present and beneficial uses and further to maintain and protect groundwater at existing quality where the existing quality is better than the required to maintain and protect the present and future beneficial uses.	WV Department of Environmental Protection (DEP), Environmental Quality Board (EQB)
Natural Streams Preservation Act	W.Va. Code, §22-13-1 to *et seq*	Establishes as public policy of the state to secure for the citizens of West Virginia the benefits of an enduring resource of free-flowing streams possessing outstanding scenic, recreational, geological, fish and wildlife, botanical, historical, archeological or other scientific or cultural values; establishes a natural stream preservation system, including among others the New River from its confluence with the Gauley River to its confluence with the Greenbrier River	WV Department of Natural Resources (DNR)
Solid Waste Management Act	W.Va. Code, §22-15-1 *et seq*	To establish an efficient, environmentally safe procedure for the disposal of sewage sludge and/or domestic sewage from a publicly-owned treatment works facility; requires all solid waste to be disposed, processed, stored, transferred, or recycled only at permitted solid waste facilities.	WV Department of Environmental Protection (DEP)
Hazardous Waste Management Act	W.Va. Code, §22-18-1 *seq*	To protect public health and safety and the environment from the effects of the improper, inadequate or unsound management of hazardous wastes; to establish a program of regulation over the storage, transportation, treatment, and disposal of hazardous wastes; to assure the safe and adequate management of hazardous wastes	WV Department of Environmental Protection (DEP)

Appendix B. Applicable Federal and State of West Virginia Laws and Regulations and National Park Service Policies (continued)

State of West Virginia Mandates (continued)	Reference	Purpose	Compliance Required by
Underground Storage Tank Act	W.Va. Code §22-17-1 *et seq*	Creates a program to control the installation, operation and abandonment of underground storage tanks and to provide for corrective action to remedy releases of regulated substances from underground storage tanks	WV Department of Environmental Protection (DEP)
Abandoned Well Act	W.Va. Code, §22-10-1 *et seq*	Declares it a public policy in the state to foster, encourage, and promote the proper plugging of all abandoned oil and gas wells at the time of their abandonment to protect the environment and mineral resources	WV Department of Environmental Protection (DEP)
Game and Wildlife Codes	W.Va. Code, §20-2-1 *et seq*	Declares it a public policy in the state that the wildlife resources shall be protected for the use and enjoyment of all citizens and that all species of wildlife shall be maintained for values which may be either intrinsic or ecological or of benefit to man, including 1) hunting, fishing, and other diversified recreational uses, 2) economic contributions in the best interests of the people of the state, and 3) scientific and educational uses	WV DNR, Division of Wildlife
Cultural Resources	W.Va. Code, §29-1-1 *et seq*	Creates the State Historic Preservation Office within the Division of Culture and History and grants to it a number of duties, including the ability to locate, survey, investigate, register, identify, preserve, and protect historic, architectural, archeological and cultural sites, and structures and objects worthy of preservation; also gives the section the ability to review all undertakings permitted, funded, licensed or otherwise assisted by the state in order to protect historic resources	WV State Historic Preservation Office
Whitewater Outfitters and Guides Act	W.Va. Code, §20-2-23 *et seq*	Creates the WV Whitewater Commission and establishes special provisions for the New River and the Gauley River; calls for implementation of an allocation methodology for commercial outfitter licenses; and calls for a limits of acceptable change study to be completed	WV Department of Natural Resources
Whitewater Responsibility Act	W.Va. Code, §20-3B-1 *et seq*	Defines the areas of responsibility and actions for which commercial whitewater outfitters and commercial whitewater guides are liable for loss, damage, or injury	WV Department of Natural Resources
Commercial Whitewater Regulations	W.Va. Code St. Regs. §58	Provides for regulation of commercial whitewater rafting, outfitting, and related activities to assure safe operations and protect the environment	WV Department of Natural Resources
Regulation of All Terrain Vehicles	W.Va. Code §17-F	Defines all terrain vehicles (ATVs), defines safe ATV operations, empowers local communities to regulate the use of ATVs, and requires safety awareness courses for young ATV drivers	Variable
Land Use Planning; Subdivision; Zoning; Farmland Protection	W.Va. Code §8a	Requires communities to adopt comprehensive plans that include a statement on present and future land use, as well as goals and objectives specifically regarding land use, housing, transportation, infrastructure, public services, recreation, economic development, community design, rural areas, preferred development areas, renewal/ redevelopment, financing, and historic preservation; provides enabling legislation for regulating the use of land through subdivision and zoning ordinances; provides enabling legislation for voluntary farmland protection programs	Local Governments

Appendix C Compliance Coordination

Appendix C

Compliance Coordination

- Response Letter Received from W.V. Department of Natural Resources ..... C-1 (December 8, 2008)
- Letter Sent by the NPS to U.S. Fish and Wildlife Service ..... C-6 (April 10, 2007)
- Letter Sent by the NPS to WV State Historic Preservation Officer ..... C-7 (February 6, 2006)
- Representative Letter Sent by the NPS to Tribal Nations[1] ..... C-8 (August 2, 2006)
- Email Received from Absentee-Shawnee Tribe Historic Preservation Officer..... C-10 (August 30, 2006)
- NPS Response to Absentee-Shawnee Tribe of Indians of Oklahoma ..... C-11 (September 7, 2006)
- Letter Received by the NPS from the Onondaga Nation ..... C-13 (September 11, 2006)
- NPS Response to the Onondaga Nation (September 26, 2006) C-14

[1] *Similar Letters Sent to the Following Tribes:*
- *Appalachian American Indians of West Virginia*
- *Cayuga Nation*
- *Eastern Shawnee Tribe of Oklahoma*
- *Haudenosaunee Cultural Resource Center*
- *Haudenosaunee Standing Committee on Burial Rules and Regulations*
- *Monacan Indian Nation*
- *Onondaga Nation*
- *Seneca-Cayuga Tribe of Oklahoma*
- *Shawnee Tribe*
- *Tonawanda Seneca Nation*
- *Tuscarora Nation*
- *Tuscarora Tribe*
- *Virginia Council on Indians*

DIVISION OF NATURAL RESOURCES
Wildlife Resources Section
Operations Center
P.O. Box 67
Elkins, West Virginia 26241-3235
Telephone (304) 637-0245
Fax (304) 637-0250

Joe Manchin III
Governor

Frank Jezioro
Director

December 8, 2008

Ms. Deborah Darden
National Park Service
New River Gorge National River
P.O. Box 246
Glen Jean, WV 25843

Dear Ms. Darden:

Enclosed are the listing of plant communities, rare plants and rare or endangered animals currently documented within the boundaries of the New River Gorge National River in Fayette, Raleigh and Summers counties, WV. These lists will be emailed to you as well.

Please keep in mind that the lists were created with information currently in the Wildlife Diversity Program's Biotics database. This database is continually being updated, and therefore all rare species records may not be represented within the lists we provided.

If you have any questions or require additional information do not hesitate to contact me.

Sincerely,

Barbara Sargent
Environmental Resources Specialist
Wildlife Diversity Program

RECEIVED
NATIONAL PARK SERVICE
DEC 10 2008
NEW RIVER GORGE NATIONAL RIVER

enclosures

Rare animals documented from the New River Gorge National River - 2008						
Name	**Common Name**	**SRANK**	**GRANK**	**FEDERAL**		
Ambystoma jeffersonianum	Jefferson salamander	S3	G4			
Aneides aeneus	Green salamander	S3	G3G4			
Cicindela ancocisconensis	A tiger beetle	S3	G3G4			
Corynorhinus rafinsqueii	Rafinesque's big-eared bat	S1	G3G4			
Corynorhinus townsendii virginianus	Virginia big-eared bat	S2	G4T2	LE		
Cyclonaias tuberculata	Purple wartyback	S1	G5			
Desmognathus quadramaculatus	Black-bellied salamander	S3	G5			
Eumeces anthracinus anthracinus	Northern coal skink	S2	G5T5			
Eumeces laticeps	Broad-headed skink	S2	G5			
Eurycea lucifuga	Cave salamander	S3	G5			
Lampsilis fasciola	Wavy-rayed lampmussel	S2	G5			
Lasmigona subviridis	Green floater	S2	G3G4			
Myotis leibii	Eastern small-footed bat	S1	G3G4			
Myotis sodalis	Indiana bat	S1	G2	LE		
Neotoma magister	Allegheny woodrat	S3	G3G4			
Nocomis platyrhynchus	Bigmouth chub	S3S4	G4Q			
Notropis scabriceps	New River shiner	S2	G4			
Ochrotomys nuttallii	Golden mouse	S2	G5			
Opheodrys aestivus	Rough greensnake	S3	G5			
Phoxinus oreas	Mountain redbelly dace	S3	G5			
Pseudotriton ruber	Northern red salamander	S3	G5			
Sorex dispar	Long-tailed shrew	S2S3	G4			
Sorex hoyi winnemana	Southern pygmy shrew	S2S3	G5T4			
Speyeria diana	Diana fritillary	S2S3	G3G4			
Tritogonia verrucosa	Pistolgrip	S2	G4G5			

Rare plants documented from the New River Gorge National River - 2008						
Name	Common Name	SRANK	GRANK	FEDERAL		
Arabis hirsuta var. pycnocarpa	Hairy rockcress	S2	G5T5			
Aristida purpurascens var. purpu	Purple needlegrass	S1	G5T5			
Baptisia australis var. australis	Wild blue indigo	S3	G5T3T4			
Calopogon tuberosus var. tuber	Grass pink	S1	G5T5			
Cardamine flagellifera	Bitter cress	S2	G3			
Carex aestivalis	Summer sedge	S2	G4			
Carex careyana	Carey's sedge	S1	G4G5			
Carex comosa	Bearded sedge	S2	G5			
Carex emoryi	Emory's sedge	S2	G5			
Carex mesochorea	Midland sedge	S2	G4G5			
Carex molesta	Troublesome sedge	S3	G4			
Carex nigromarginata	Black-edge sedge	S3	G5			
Carex styloflexa	Bent sedge	S1	G4G5			
Carex suberecta	Prairie straw sedge	S1	G4			
Carex typhina	Cat-tail sedge	S2	G5			
Carex woodii	Pretty sedge	S2	G4			
Commelina erecta var. angustifo	Slender day-flower	S2	G5T5			
Corallorhiza wisteriana	Spring coralroot	S2	G5			
Coreopsis pubescens var. robus	Star tickseed	S2	G5?T3T5			
Croton glandulosus var. septent	Northern croton	S3	G5T5			
Cuscuta indecora var. neuropeta	Pretty dodder	S1	G5T5			
Cyperus refractus	Reflexed flatsedge	S3	G5			
Desmodium lineatum	Sand tick-trefoil	S1	G5			
Eleocharis compressa	Flat-stemmed spike-rush	S2	G4			
Eleocharis intermedia	Matted spike-rush	S1	G5			
Eupatorium pilosum	Vervain thoroughwort	S2	G5			
Fimbristylis annua	Annual fimbry	S1	G5			
Galactia volubilis	Downy milkpea	S2	G5			
Helianthus occidentalis ssp. occ	McDowell sunflower	S2	G5T5			
Hibiscus laevis	Halberd-leaved mallow	S2	G5			
Hypericum virgatum	Coppery St. John's-wort	S1	G4?			
Juncus dichotomus	Forked rush	S1	G5			
Lythrum alatum var. alatum	Winged-loosestrife	S2	G5T5			
Melica mutica	Two-flowered melic grass	S2	G5			
Najas gracillima	Slender water nymph	S2	G5?			

Pellaea glabella ssp. glabella	Smooth cliffbrake	S2	G5T5			
Piptochaetium avenaceum	Blackseed needlegrass	S2	G5			
Platanthera psycodes	Small purple-fringe orchid	S1	G5			
Poa saltuensis	Drooping bluegrass	S1	G5			
Pogonia ophioglossoides	Rose pogonia	S2	G5			
Polygala curtissii	Curtiss' milk-wort	S2	G5			
Pycnanthemum loomisii	Loomis' mountain-mint	S2	G4?			
Pycnanthemum torrei	Torrey's mountain-mint	S1	G2			
Ranunculus pusillus var. pusillus	Low spearwort	S1	G5T4?			
Rhynchospora recognita	Globe beak-rush	S2	G5?			
Salix lucida ssp. Lucida	Shining willow	S1	G5T5			
Saxifraga careyana	Carey saxifrage	S3	G3			
Schoenoplectus purshianus	Weakstalk bulrush	S3	G4G5			
Scutellaria saxatilis	Rock skullcap	S2	G3			
Sida hermaphrodita	Virginia mallow	S3	G3			
Silene nivea	Snowy campion	S1	G4?			
Silphium perfoliatum var. connat	Virginia cup-plant	S1	G5T3?			
Spiranthes tuberosa	Little ladies'-tresses	S3	G5			
Sporobolus clandestinus	Rough dropseed	S1	G5			
Stachys nuttallii	Nuttall's hedge-nettle	S3	G5?			
Stachys tenuifolia	Smooth hedge-nettle	S3	G5			
Triphora trianthophora	Nodding pogonia	S2	G3G4			
Vitis rupestris	Sand grape	S2	G3			

Plant communities documented from the New River Gorge National River - 2008			
Name	**Common Name**	**SRANK**	**GRANK**
Acer rubrum-Nyssa sylvatica/Ilex verticillata-Vaccinium fuscatum/Osmunda cinnamomea forest		SNR	G3G4
Alnus serrulata-Hypericum densiflorum shrub wetland	Smooth alder - Glade St. John's-wort shrub swamp	S3?	G4
Andropogon gerardii-Baptisia australis riverscour prairie	Big bluestem - False indigo riverscour prairie	S2S3	G2G3
Betula allegheniensis/Rhododendron maximum forest	Yellow birch cold cove	S2S3	GNR
Carex torta riverscour prairie	Twisted sedge riverscour prairie	S3?	G3G4
Hypericum densiflorum/Juncus effusus/Sphagnum ssp. sl	Bushy St. John's-wort shrub swamp	S3?	GNR
Juniperus virginiana-Pinus virginiana-Quercus stellata/Asp	Riverside flatrock Virginia pine - Red cedar - Post oak woodland	S1	G2?
Juniperus virginiana-Pinus virginiana sparsely vegetated r	Open high riverscour flatrock	S1	GNR
Leersia oryzoides-Sagittaria latifolia marsh	Rice cutgrass marsh	S3?	GNR
Pinus rigida-Quercus coccinea/Gaylussacia baccata/Epig	Clifftop Pitch pine woodland	S2S3	GNR
Pinus virginiana-(Quercus spp.)/Nyssa sylvatica/Gaultheri	Clifftop Virginia pine forest	S2S3	G4?
Platanus occidentalis-Fraxinus pensylvanica/Carpinus car	Sycamore - Red ash floodplain forest	S3?	GNR
Platanus occidentalis-Ulmus americana/Andropogon gera	Open low riverscour flatrock	S1S2	GNR
Quercus (velutina, rubra, alba)-Liriodendron tulipifera/Hal	High floodplain oak forest	S2?	GNR
Quercus prinus/Kalmia latifolia forest	Oak / Mountain laurel forest	S4	GNR
Quercus ssp.-(Liriodendron tulipifera, Carya spp.) forest	Oak - Tulip poplar forest	S5	GNR
Saururus cernuus-Boehmeria cylindrica herbaceous wetla	Lizardtail - False nettle backwater slough	S3?	GNR
Sparganium (americanum, chlorocarpum) marsh	American bur-reed marsh	S2	G2G3
Tsuga canadensis-Betula lenta/Rhododendron maximum	Hemlock / Giant rhododendron forest	S5	G5
Tsuga canadensis-Quercus prinus/Rhododendron catawb	Hemlock - Chestnut oak / Catawba rhododendron forest	S2	G3?

United States Department of the Interior
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GAULEY RIVER NATIONAL RECREATION AREA
BLUESTONE NATIONAL SCENIC RIVER
104 Main Street
P.O. Box 246
Glen Jean, West Virginia 25846

IN REPLY REFER TO:

FILE COPY

April 10, 2008

L7617 (NERI)

Thomas R. Chapman
U.S. Fish and Wildlife Service
West Virginia Field Office
694 Beverly Pike
Elkins, WV 26241

Re: Section 7, Consultation for Rare, Threatened, or Endangered Species. New River Gorge National River, *General Management Plan and Environmental Impact Statement*

Dear Mr. Chapman:

In February of 2006 we notified your office that we were preparing a major revision to the New River Gorge National River General Management Plan (GMP). The GMP will identify the park's fundamental resources, actions needed to protect those resources, and the experiences visitors may have in the park. The draft GMP will be accompanied by an Environmental Impact Statement (EIS). Enclosed are a vicinity map and a site map of New River Gorge National River in Fayette, Raleigh, and Summers Counties, West Virginia.

As we prepare the draft plan we again request any information your office may provide regarding federally listed threatened or endangered species, species of concern, or critical habitat(s) that may be affected within the New River Gorge National River. The draft GMP/EIS that is prepared utilizing this information will be forwarded to your office for review and comment later this year.

If you or your staff has questions, please feel free to contact me at (304) 465-0508.

Sincerely,

Deborah A. Darden

Deborah A. Darden
Deputy Superintendent

Enclosure

TAKE PRIDE IN AMERICA

Department of the Interior
NATIONAL PARK SERVICE
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GAULEY RIVER NATIONAL RECREATION AREA
BLUESTONE NATIONAL SCENIC RIVER
104 Main Street
P.O. Box 246
Glen Jean, West Virginia 25846

IN REPLY REFER TO:

February 6, 2006

A42(NERI)
DR GMP

Ms. Susan M. Pierce
Deputy State Historic Preservation Officer
Department of Culture and History
Cultural Center
Capitol Complex
Charleston, WV 25305

Dear Ms. Pierce:

We are writing to inform you that the New River Gorge National River is beginning the process to update its 1982 General Management Plan (GMP).

Our preliminary discussions indicate that the preservation and protection of cultural resources will be an important goal of the GMP. Recent historical and archeological baseline studies and our nomination of Nuttallburg to the National Register of Historic Places demonstrate the significance of the park's cultural resources. We would like to invite you and your staff to actively participate in the public meetings and in reviewing the draft and final GMP. We will also be contacting local and state-level organizations that are interested in historic preservation. Our regional office will be responsible for consulting with Native American tribes such as the Shawnee, Iroquois, and Cherokee. We expect to complete the GMP in late 2007.

This information is submitted in accordance with Section 106 of the National Historic Preservation Act and 36 CFR 800, Protection of Historic and Cultural Properties. If you have any questions on this matter, please contact Deborah Darden at (304) 465-6509 or deborah_darden@nps.gov.

Sincerely,

Calvin F. Hite

Calvin F. Hite
Superintendent

TAKE PRIDE IN AMERICA

United States Department of the Interior
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GAULEY RIVER NATIONAL RECREATION AREA
BLUESTONE NATIONAL SCENIC RIVER
104 Main Street
P.O. Box 246
Glen Jean, West Virginia 25846

IN REPLY REFER TO:

D18(GMP)

August 2, 2006

Karen Kaniatobe
Tribal Historic Preservation Officer
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 S. Gordon Cooper Dr.
Shawnee, OK 74801

Dear Ms. Kaniatobe:

We are writing to request your comments on a new General Management Plan/Environmental Impact Statement (GMP/EIS) that the National Park Service is developing for the New River Gorge National River (NERI). As the enclosed map shows, the park is located in Summers, Raleigh, and Fayette Counties, West Virginia, and encompasses a 55-mile corridor along the New River that extends from the city of Hinton to Hawk's Nest State Park. The new GMP will identify alternatives and priorities for visitor use of the park and the long range management of its cultural and natural resources. Since Congress established the park in 1978, many changes have occurred in and around the park that require a reformulation of the strategies to protect and interpret its natural and cultural resources.

Archeological research in southern West Virginia indicates that Native Americans lived in the lower New River region from 11,500 years ago until the mid-1600s. Previous archeological and historical studies and a recently completed archeological overview have identified over 350 archeological sites. The sites include small upland camps, rock shelters, large bottomland camps, possible hamlets or villages, and a few burial mounds, and are known primarily from surface collections and shovel testing. Glass beads and other trade items recovered from 6 archeological sites in the park indicate the presence of Native Americans between 1580 and 1650.

The cultural associations with these sites are not clear. Due to the sketchiness of the historical records, it is also not clear which, if any, contemporary tribes lived or utilized resources in the park in the past. However, it is known that Shawnee warriors raided European frontier settlements in the New River area during the mid- to late 1700s. Archeological and historical research therefore suggests that the Shawnee people are one of several Native American groups that may be culturally associated with archeological sites in the park.

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Since the park is located near the Shawnee's possible ancestral homeland in the Upper Ohio Valley, and the Shawnee interacted with post-contact settlements in the New River area, we would like to initiate the Section 106 process of the National Historic Preservation Act (36 CFR 800.2 (c)(2)(ii)(B)) with the Shawnee Tribe. This letter is a formal request to the Shawnee Tribe to inform us whether there may be any features of NERI that are of cultural or religious significance to the tribe, and to invite the tribe to consult with us about these issues. If there are matters of tribal interest or concern, we would like to know the best way to enter into discussions with you so that we may discuss the management planning process with your tribe, and include its comments, perspectives, concerns and recommendations in the GMP.

At the beginning of the planning process we reaffirm the park's purpose and significance and identify its fundamental and other important resources and values. We do this to establish the framework within which we can evaluate proposed alternatives to ensure that they are consistent with the park's establishing legislation. The enclosed newsletter presents the most recent drafts of the Park Purpose, Significance, and Fundamental Resource Statements for the Shawnee Tribe's consideration. These statements are preliminary and continue to undergo revision as we receive comments from consulting parties and the general public. As a starting point, we would also like to know whether the Shawnee Tribe has any comments on the enclosed draft statements.

We look forward to entering into discussions with the Shawnee Tribe about the future planning and interpretation of NERI. If you have any suggestions about the consultation process, questions about the planning process, or would like additional information, please contact Deborah Darden, Deputy Superintendent, NERI, at (304)465-6509.

Sincerely,

Calvin F. Hite

Calvin F. Hite
Superintendent

Enclosures (3)

Calvin Hite
08/31/2006 07:42 AM EDT

To: David Fuerst/NERI/NPS@NPS
cc: Deborah Darden/NERI/NPS@NPS
Subject: Fw: From NPS.gov: Comments from the Absentee Shawnee Tribe on the GMP

Dave,

Please prepare draft reply to the message below for my review/signature by 9/8.

Thx,

Cal
----- Forwarded by Calvin Hite/NERI/NPS on 08/31/2006 07:41 AM -----

Donna Shepard
08/30/2006 07:32 PM EDT

To: Calvin Hite/NERI/NPS@NPS
cc:
Subject: Fw: From NPS.gov: Comments from the Absentee Shawnee Tribe on the GMP

----- Forwarded by Donna Shepard/NERI/NPS on 08/30/2006 07:32 PM -----

kkaniatobe@astribe.com
08/30/2006 05:09 PM AST

To: neri_interpretation@nps.gov
cc:
Subject: From NPS.gov: Comments from the Absentee Shawnee Tribe on the GMP

Email submitted from: /neri/contacts.htm

Dear Mr Calvin Hite: Thank you for contacting the Absentee Shawnee Tribal Historic Preservation Office for comment. After looking over your letter, I realized I would need some additional information before I can comment as right now I have more questions than comments. About the burial mounds: How are they protected now? Have they been excavated and/or studied? What procedures do you have in place for inadvertent discoveries? Where are the artifacts stored? What areas of your park have been archeologically surveyed? How are archeological sites monitored? For future communications it is more efficient for this office to receive notification and send responses via e-mail. I look forward to hearing back from you. Thanks. Karen Kaniatobe, Tribal Historic Preservation Officer 2025 S Gordon Cooper Shawnee Oklahoma 74801 Phone: 405.275.4030 x199 Fax: 405.878.4711 Website: www.absenteeshawneetribe-nsn.gov

United States Department of the Interior
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104 Main Street
P.O. Box 246
Glen Jean, West Virginia 25846

IN REPLY REFER TO:

September 7, 2006

D18(GMP)

Karen Kaniatobe
Tribal Historic Preservation Officer
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 S. Gordon Cooper Dr.
Shawnee, OK 74801

Dear Ms. Kaniatobe:

We are pleased to receive your questions about the management of archeological resources in the New River Gorge National River (NERI). We also look forward to receiving your tribe's comments on the park's draft General Management Plan, which we hope will be available this winter. Your tribe's questions and comments are particularly important because the park is located near the Shawnee's possible ancestral homeland in the Upper Ohio Valley. Historical records also indicate that the Shawnee interacted with post-contact settlements in the New River area.

The answers to the six questions you asked about the park's archeological resources are listed below:

Questions 1 and 2: About the burial mounds: How are they protected now? Have they been excavated and/or studied?

Mounds and other archeological sites in the park are protected through monitoring, compliance, and personnel training. Our law enforcement rangers and park cultural resource specialist regularly visit these sites to ensure they are in good condition. Our compliance program also reviews and monitors all projects, which have the potential to disturb the ground where these sites are located. In addition, the park provides training to law enforcement and maintenance staff on the sensitivity and significance of the park's archeological resources.

The mounds in the park have been identified and located, but have not been formally excavated. One mound was dug into by a local pothunter in the 1970s before the park was established in 1978. Interviews with people who knew him suggest that he recovered human remains and a chipped stone cache blade. However, the whereabouts of these funerary items is unknown.

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Question 3: What procedures do you have in place for inadvertent discoveries?

The park has an established protocol for the treatment of inadvertent discoveries. Any projects that encounter human remains and/or archeological materials are required to immediately halt work and contact the park's cultural resource specialist and/or law enforcement rangers. Personnel at the scene are also instructed in advance not to remove or disturb human remains and archeological resources. Avoidance of inadvertent discoveries is promoted through the park's compliance review process, which identifies known archeological sites and sensitive site areas prior to the start of projects.

Question 4: Where are the artifacts stored?

The artifacts that were recovered through archeological investigations are stored in the park's curation facility, which is located across the street from park headquarters in Glen Jean, WV. Access to its storage area is restricted to approved personnel. The artifacts in the park's museum collections are maintained at NPS standards and are managed in accordance with the park's 2003 Collection Management Plan. The museum collections, however, do not include any human remains, funerary objects, or objects of cultural patrimony.

Question 5: What areas of your park have been archeologically surveyed?

The first professional inventory of archeological resources was conducted in 1980-1981 (Fuerst 1981) and was a judgmental survey of probable site locations throughout the park. The survey successfully identified a number of sensitive site areas such as stream junctures and old alluvial terraces. Since that time, many other archeological surveys have been done in connection with specific construction projects. Surveys of sensitive site locations for research purposes have also nearly doubled the number of archeological sites in the park. It is estimated that baseline archeological surveys have been performed on approximately 15% of the park or roughly 9,000 acres.

Question 6: How are archeological sites monitored?

Archeological sites are primarily monitored through on-site visits by law enforcement rangers and the park's cultural resources specialist. Because of their visibility, the main archeological site type that the park monitors is rockshelters. Most of the archeological sites, however, are open sites, which are located in undisturbed forest areas. Each year the park's cultural resource specialist speaks to a gathering of law enforcement rangers to remind them about the potential impacts to archeological resources in the park.

Thank you for sending us your questions about the park's management of its archeological resources. We look forward to receiving comments of the Shawnee Tribe about the future planning and interpretation of NERI. If you have any questions about the planning process, or would like additional information, please contact Deborah Darden, Deputy Superintendent, NERI, at (304)465-6509.

Sincerely,

Calvin F. Hite

Calvin F. Hite
Superintendent

RECEIVED
NATIONAL PARK
SERVICE
SEP 19 2006
NEW RIVER GORGE
NATIONAL RIVER

Onondaga Nation
RR #1, Route 11A
Box 258C
via Nedrow, NY 13120

September 11, 2006

Calvin F. Hite
Superintendent, New River Gorge National River
National Park Service
104 Main Street
P.O. Box 246
Glen Jean, WV 25846

RE: General Management Plan/Environmental Impact Statement

Dear Mr. Hite:

Thank you for your letter dated August 2, 2006 concerning the General Management Plan/Environmental Impact Statement that the National Park Service is developing for the New River Gorge National River.

The Onondaga Nation is interested in consulting with you on this project under section 106 of the National Historic Preservation Act. I would be particularly interested in receiving additional information about the archeological resources at the site. Perhaps a copy of your recent report giving an overview of the archeology of the area would be the most logical place for me to begin to familiarize myself with the resources in the area.

Please contact me at (315)952-3109 if you have any questions about this matter. Thank you for your help.

Sincerely,

Tony Gonyea

Tony Gonyea
A Faithkeeper for the Onondaga Nation
Onondaga Nation Historic Preservation Office

cc: Onondaga Nation Council of Chiefs
Joseph Heath, Esq.

United States Department of the Interior
NATIONAL PARK SERVICE
NEW RIVER GORGE NATIONAL RIVER
GAULEY RIVER NATIONAL RECREATION AREA
BLUESTONE NATIONAL SCENIC RIVER
104 Main Street
P.O. Box 246
Glen Jean, West Virginia 25846

IN REPLY REFER TO

September 26, 2006

D18(GMP)

Tony Gonyea
A Faithkeeper for the Onondaga Nation
Onondaga Nation Historic Preservation Office
RR #1, Route 11A
Box 258C
Nedrow, NY 13120

Dear Mr. Gonyea:

We are pleased to receive your letter indicating the Onondaga Tribe's interest in consulting with the National Park Service (NPS) on its plans for managing archeological resources in the New River Gorge National River (NERI). Enclosed is a CD with a copy of the NERI Archeological Overview and Assessment report (Pollack and Crothers 2004). The report synthesizes information on archeological resources in the park and their relationship to the native peoples who lived in the Central Appalachians. We hope the report will help you with your review of the NERI General Management Plan.

The park actively protects its archeological resources. In addition to regularly visiting archeological sites, the park's archeologist reviews and monitors all projects that may disturb the ground at these sites. Each year the park also trains law enforcement and maintenance staff on the sensitivity and significance of its archeological resources. If human remains or artifacts are encountered, workers are required to halt the project immediately and contact the park's cultural resource specialist and/or law enforcement rangers. The park does not have any human remains, funerary objects, or objects of cultural patrimony in its museum collections.

Thank you for consulting with the NPS on the NERI General Management Plan, and its proposed management of archeological resources. We look forward to receiving the Onondaga Tribe comments about the future planning and interpretation of NERI. If you have any questions about the planning process, or would like additional information, please contact Deborah Darden, Deputy Superintendent, NERI, at (304) 465-6509.

Sincerely,

Calvin F. Hite
Superintendent

Enclosure

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Appendix D Wilderness Eligibility Assessment

United States Department of the Interior
NATIONAL PARK SERVICE
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GAULEY RIVER NATIONAL RECREATION AREA
BLUESTONE NATIONAL SCENIC RIVER
104 Main Street
P.O. Box 246
Glen Jean, West Virginia 25846

IN REPLY REFER TO

D18-NERI

May 27, 2009,

Memorandum

To: WASO-Chief, Wilderness Stewardship & Recreation Management

From: Superintendent, New River Gorge National River

Subject: Wilderness Eligibility Assessment for New River Gorge National River

This Wilderness Eligibility Assessment for New River Gorge National River was conducted in accordance with National Park Service (NPS) Management Policies 2006 Section 6.2.1 and to support the updating of the General Management Plan (GMP).

Overview of the Park and its Values

New River Gorge National River was established "For the purpose of conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge and preserving as a free-flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations..." (Public Law 95-625, November 10, 1978). The national river unit was initially approximately 50 miles in length and included about 62,000 acres.

New River Gorge National River is rich in natural and cultural history and scenic and recreational opportunities. It extends through three counties (Summers, Raleigh, and Fayette) in West Virginia, from the city of Hinton northward through pastoral landscapes, past eight riverside communities, through its cliff-lined gorge, to Hawks Nest State Park. The rail line that extends the length of the river, and which is still active today, was completed in 1873 and was used to extract timber, coal, and coke through the 1950s. The New River Gorge contains a large, outstanding, and representative group of historic colliery structures, coke ovens, historic structures, and ruins associated with the more than 50 company-owned towns located within the river corridor, as well as railroad depots, rail yards, and steel and timber trestle bridges, and subsistence farms. Recreation facilities, including visitor centers, campgrounds, river access/boat ramps, trails, and associated parking areas, have been developed at over three dozen locations and receive over 1.1 million visits annually. The whitewater rapids of the New River

attract approximately 150,000 commercially outfitted paddlers annually and over 2000 paddlers per day on weekends during the peak summer months.

The park's first GMP was completed in 1982 and called for limited land acquisition for access (less than 25% of the park designated boundary), resource protection, and public use and did not address wilderness eligibility. The largest unit of the park identified in the GMP "for acquisition in order to secure protection for the outstanding natural resources and scenic values" was the approximately 4300 acres of Glade Creek (GMP, pg 37).

In 1988, the West Virginia National Interest River Conservation Act of 1987 found that in order "To protect and enhance the natural, scenic, cultural, and recreational values of certain segments of the New, Gauley, Meadow, and Bluestone Rivers in West Virginia.....certain boundary modifications to the New River Gorge National River are necessary to further protect the scenic resources within the river's visual corridor and to provide for better management of the national park unit" (Public Law 100-534, October 26, 1988). The legislation required the NPS, among other things, to expeditiously acquire lands and undertake such developments and improvements necessary to provide a commercial and noncommercial access to the river near Cunard. The purchase of the Ward Tract in the late 1980s added 5,847 acres of previously mined and timbered but relatively undeveloped land in the Highland/Backus Mountain areas.

The boundary of the park was further modified in 1996 (Public Law 104-333, November 12, 1996) and again in 2002 (Public Law 107-356, December 17, 2002). The 1996 boundary expansion included 6753 acres in the Highland/Backus Mountain areas, which was purchased in 2002. The park increased to 55 miles in length with the last boundary modification and now includes approximately 72,000 acres, of which the NPS currently owns 56,000 acres, more or less. While most of the land within the park has been previously logged, mined, or developed, some blocks of unfragmented forests have been re-established and now provide essential habitat for endangered mammals, rare birds, and amphibians. With the acquisition of a substantial amount of federally owned lands and per NPS policy it is the purpose of this assessment to evaluate all those lands for their eligibility for inclusion in the national wilderness preservation system.

Summary of Public Involvement

Public notices announcing the park's intention to prepare a GMP and, as part of the process, assess the potential for wilderness were placed in the Federal Register on January 30, 2006. The park held public scoping meetings in January, March, May, and July of 2006 and no comments with respect to wilderness were received and wilderness was not identified as an issue by the public.

In March of 2006, park staff met with the NPS National Wilderness Program Lead to discuss the wilderness review process. The park began preparing the initial screening assessment, which the NPS Management Policies 2006 refers to as the wilderness eligibility assessment.

In January of 2007, the Superintendent and Deputy Superintendent met with the New River Working Group at their request to discuss GMP planning issues. This group was comprised of representatives of many groups with an interest in the future of the park, including representatives of the WV Wilderness Coalition. On April 18, 2007, the Superintendent and NPS staff met with representatives of the WV Wilderness Coalition at their request to discuss the NPS process of wilderness as a component of the GMP and provide some initial background information. On June 14, 2007, the representatives of the WV Wilderness Coalition again met with park staff and completed a field reconnaissance of two of the three areas of potential interest to the group. On June 20, 2007, the WV Wilderness Coalition submitted a Citizen's Proposal that identified three areas for consideration as wilderness.

The NPS GMP Planning Team met June 27, 2007 and considered the Citizen's Proposal, which was very similar to the three areas identified by the NPS as potentially eligible for wilderness designation. It was determined that an additional public scoping meeting would be scheduled to discuss a newly developed GMP Alternative 5, and specifically, the issues of hunting, potential boundary adjustments, biking, water quality management, and wilderness designation. The newsletter mailed in October of 2007 discussed the wilderness designation process and identified the three areas potentially eligible as wilderness within the park. The public scoping meeting was held in November of 2007 and several verbal comments were received concerning the existing resource conditions and visitor uses in the areas. As of February 2008, over 700 written comments had been received. The comments were generally highly polarized concerning wilderness designation but did provide some feedback as to the extent of alteration and degree of restoration of the impacts from previous human actions in the areas.

Summary of the Wilderness Eligibility Assessment Process

In conducting the wilderness eligibility assessment, park staff first reviewed natural and cultural resource studies, existing resource conditions, park visitation and activity trends, and current land ownership and conditions of developments. This information was used to address the Primary Eligibility Criteria, Section 6.2.1.1, of Management Policies 2006.

A remote sensing analysis was completed utilizing the parks Geographic Information System (GIS) to identify areas of development and blocks of relatively undeveloped federally owned lands within the park boundary. Most of the park was eliminated from consideration as wilderness because of the substantial level of development, including state roads, park roads, bridges, parking facilities, structures, railroad lines, utility lines, and mining impacts (map: Wilderness Eligibility Assessment - Overview). Communities, such as Thurmond, Meadow Creek, Prince and Thayer, and other places with significant amounts of private property, such as River Road between Hinton and Sandstone, were also eliminated from consideration. The river corridor was also eliminated from consideration because it is: 1) closely paralleled on one or both sides along its entire length by an active railroad line; 2) closely paralleled by roads along over fifty percent of its length; 3) accessible by vehicle at over two dozen public and private developed launch sites; 4) spanned by over a dozen bridges and transmission lines.

Eight blocks of relatively undeveloped land were identified for a closer examination of size and of remaining impacts to naturalness (map: Wilderness Eligibility Assessment - Undeveloped Areas). Aerial photography (color IR, 0.6 m pixel resolution, 2003) further revealed the impacts of mining operations, mostly conducted in the mid to late 1960's, and the impacts of logging operations. Field reconnaissance confirmed that many of theses impacts are substantial and still apparent today. Due the extent of the impacts and the small size of the areas, the following five areas were immediately determined to be ineligible for further wilderness study. All were found to be less than 5,000 acres in size and judged to be of insufficient size to make practicable their preservation as wilderness. In all five areas, the imprint of humans' work remains substantially noticeable.

Garden Ground- approximately 2,570 acres. The area was deep mined in 1965 and later strip mined along the contour creating a bench and a headwall of 50-75 feet left largely un-reclaimed. Several miles of strip bench road are still accessible and currently used by four-wheel drive vehicles.

Highland Mountain- approximately 1,340 acres. The area is bounded by an electrical transmission line to the north and state road WV 41 to the south. Interspersed is the small community of Highland Mountain, with more than a dozen residences, and the remnants of the partially reclaimed strip bench.

War Ridge- approximately 4,007 acres. The area is bounded by state road WV 41 to the north and to the east by the roads and private property of the mountain top community of Backus Mountain. An electrical distribution line and active CSX railroad bound the remainder of the area. War Ridge is bisected by an unmaintained secondary non-paved road running the length of the area. The remnants of the strip mining activities and road access remain readily noticeable and the restoration is incomplete.

Little Laurel- approximately 2,710 acres. The Little Laurel area was deep mined in 1928 and later contour strip mined and reclaimed in the 1960's. The area remains bisected by unmaintained mining bench roads and logging roads. Large areas of reclaimed strip bench are still in the process of revegetating and remain substantially noticeable.

Upper Glade Creek- approximately 1,660 acres. The area is bound on one side by Interstate I-64 and on the others by an electrical transmission line and private lands outside the park boundary. The area is bisected by an administrative road used for fish stocking and the remnants of a bridge construction access road, part of which is now the Kates Plateau trail.

The three relatively undeveloped lands that remained to be evaluated for their eligibility for inclusion in the national wilderness preservation system were Glade Creek, Dowdy Creek, and Backus Mountain. These three areas as described below are the largest and least impacted areas in the park.

Glade Creek- approximately 4,543 acres. The area is bounded to the north partially by an NPS park road, which accesses the Glade Creek campground, and partially by the proposed Thru-the-Park hiking/biking trail, which follows an existing road trace. The area is bounded to the south

by an electrical transmission line, and on all other sides by private property and the park boundary. It excludes and cherrystems a private inholding and access road (Camp Two Dog) and a segment of the Glade Creek Trail/Administrative Road and foot-bridge across Glade Creek. It excludes the mining strip bench of Redden Ridge, the historic town site of Hamlet (at the mouth of Glade Creek), and a portion of the Polls Branch Trail/Administrative Road used to maintain the towers of the electrical transmission line.

Dowdy Creek- approximately 4,241 acres. The area is bounded along the west and north by a maintained gravel state road (McKendree Road) and an electrical transmission line and the associated maintenance road. The area on the east is bounded by the park boundary and adjacent private property. The boundary to the south follows a maintained state road, excludes a private residence, cherrystems a private inholding and the unmaintained NPS gravel road which provides access, and finally follows an electrical transmission line.

Backus Mountain- approximately 2,509 acres. The area is bounded to the north by the park boundary and adjacent private property of the mountain top community of Backus Mountain. The boundary on the east drops to the bottom of the Gorge and is bounded by the remains and foundations of the historic Beurytown incline and mining town. The southern boundary then follows the maintained WV state road 7/1, excludes the private residential properties of the town of Meadow Creek, and follows the active CSX railroad. The western boundary is an electrical distribution line extending approximately ¾ mile from the mountain top community down a 50+% slope into the gorge and to the active railroad line below.

The New River Gorge National River Wilderness Eligibility Assessment

Comparison of resource conditions of the three remaining areas of undeveloped lands within New River Gorge National River with the Primary Eligibility Criteria, Section 6.2.1:

1. The earth and its community of life are untrammeled by humans, where humans are visitors and do not remain.

Since the cessation of on-going mining and logging operations, the three areas have been largely free from human control and manipulation. Visitation by humans is generally temporary and short-term (less than 1 or two days), with the longest stays occurring during the Fall deer hunting season. No fire suppression or vegetation management activities are occurring. The lower Glade Creek area is, however, regularly stocked with non-native brown trout fingerlings as permitted by the federal enabling legislation which created the New River Gorge.

2. The area is undeveloped and retains its primeval character and influence without permanent improvements or human habitation.

Due to prior intense and on-going land use, most of the land within New River Gorge National River is not primeval in character. The undeveloped areas at Glade Creek, Dowdy Creek, and Backus Mountain generally do not contain permanent structures for human habitation but historic remnants and cemeteries do remain.

The Glade Creek, Dowdy Creek, and Backus Mountain areas all contain segments of unmaintained and unreclaimed roads associated with past logging and mining activities (also see next section). All three areas are adjacent to residential areas. Glade Creek has remnants of an historic rail line and roads used for logging, as well as agricultural fields and fences still utilized in the 1980's prior to park acquisition. The road that has become the Polls Branch trail was recently used by park personnel utilizing full-size motor vehicles to gain access to and remove debris at several trash dumps. This route follows an abandoned rail grade with hill cuts which remain substantially noticeable. Dowdy Creek and Backus Mountain have the remnants of a series of strip mine access roads and logging roads. The remnants of the Hilton strip mine haul road on Highland Mountain in the Dowdy Creek area is regularly used by hunters and campers in the Fall driving full size vehicles and pulling travel trailers.

3. The area generally appears to have been affected primarily by the forces of nature, with the imprint of humans' work substantially unnoticeable.

The Glade Creek, Dowdy Creek, and Backus Mountain areas are beginning to recover from past logging and mining activities through natural restoration processes but many of the mining bench roads and logging roads are substantial and readily noticeable.

The Glade Creek area is partially fragmented by remnants of an unused and unmaintained state road near the mouth of Glade Creek and the remnants of the unmaintained Pair-Glade Road, which extends east over 2 miles from Hamlet up to the community of Pair located just beyond the rim overlooking the river. The Pair-Glade Road has visible evidence of blasting from the construction of the road cut in the 1950s and 1960s. The Polls Branch Trail and the Glade Creek Trail follow the remnants of a rail grade used for timber extraction.

The Dowdy Creek area has remnants of strip mines where mining cuts and road access are readily noticeable and where restoration is incomplete. The extensive alteration to the landscape in these areas remains substantially noticeable. The area is also criss-crossed with secondary non-paved and four-wheel drive roads.

The Backus Mountain area has a network of mining and logging routes and the remnants of a disconnected electrical powerline extending from the community of Backus Mountain on top down to the railroad tracks below.

4. The area is protected and managed so as to preserve its natural conditions.

Since acquisition, the park has taken steps to protect and manage the areas to control visitor use and restore natural conditions. Motor vehicle use has been substantially controlled or eliminated in the Glade Creek, Dowdy Creek, and Backus Mountain areas but designated vehicle routes receive heavy use throughout hunting season.

Restoration continues through natural revegetation processes. The strip benches and reclamation areas with adequate soil coverage have begun to revegetate while those with exposed rock remain barren. Several of the areas previously disturbed by mining or logging activities have

been overtaken by invasive weeds, similarly to other areas within the park. Overall, the three areas mostly appear to be in a natural condition.

5. The area offers outstanding opportunities for solitude or a primitive and unconfined type of recreation.

The opportunities for solitude along the river are compromised by the active rail line. The sights and sounds of the trains and the tracks, which extend the length of the New River Gorge, are still frequent and common within the river corridor and its steep hillsides. Upland areas in the Glade Creek, Dowdy Creek, and Backus Mountain areas, however, do allow one to escape from the sight and sound of the trains and, when away from major motor vehicle corridors (I-64 and WV 41), do offer outstanding opportunities for primitive and unconfined types of recreation.

The opportunities for primitive and unconfined recreation within the steep terrain of the river gorge and the Glade Creek drainage are very limited. The Backus Mountain area in particular is just 2,509 acres in size and over 2000 of those acres are on slopes ranging from 50-90%. Most of steep slopes are difficult to traverse on foot except on established trails or logging roads.

Local residents frequently used four-wheel drive and all-terrain vehicles in these areas prior to NPS acquisition. Visitor use in the three areas is particularly heavy during hunting season in the Fall but the areas also receive frequent year round use. Most of the previously used routes have been signed as closed to motor vehicles but occasional illegal ATV use has been documented. Due to the lack of formalized trails, trailheads, and campgrounds most visitors are locals or hunters directed to the areas.

Conclusion

The Wilderness Eligibility Assessment for New River Gorge National River conducted by park staff and determined that all park lands within the current park boundary fail to meet the primary eligibility criteria and are therefore ineligible for further wilderness study. Park-owned lands within the boundary of the New River Gorge will not be subject to the wilderness preservation provisions but will be managed in accordance with the NPS Organic Act of 1906 and all other laws, executive orders, regulations, and policies applicable to units of the national park system.

Should you have any questions regarding this eligibility assessment, please contact Don Striker, Superintendent, or Debbie Darden, Deputy Superintendent, at 304-465-0508.

Don Striker, Superintendent

6/25/09
Date

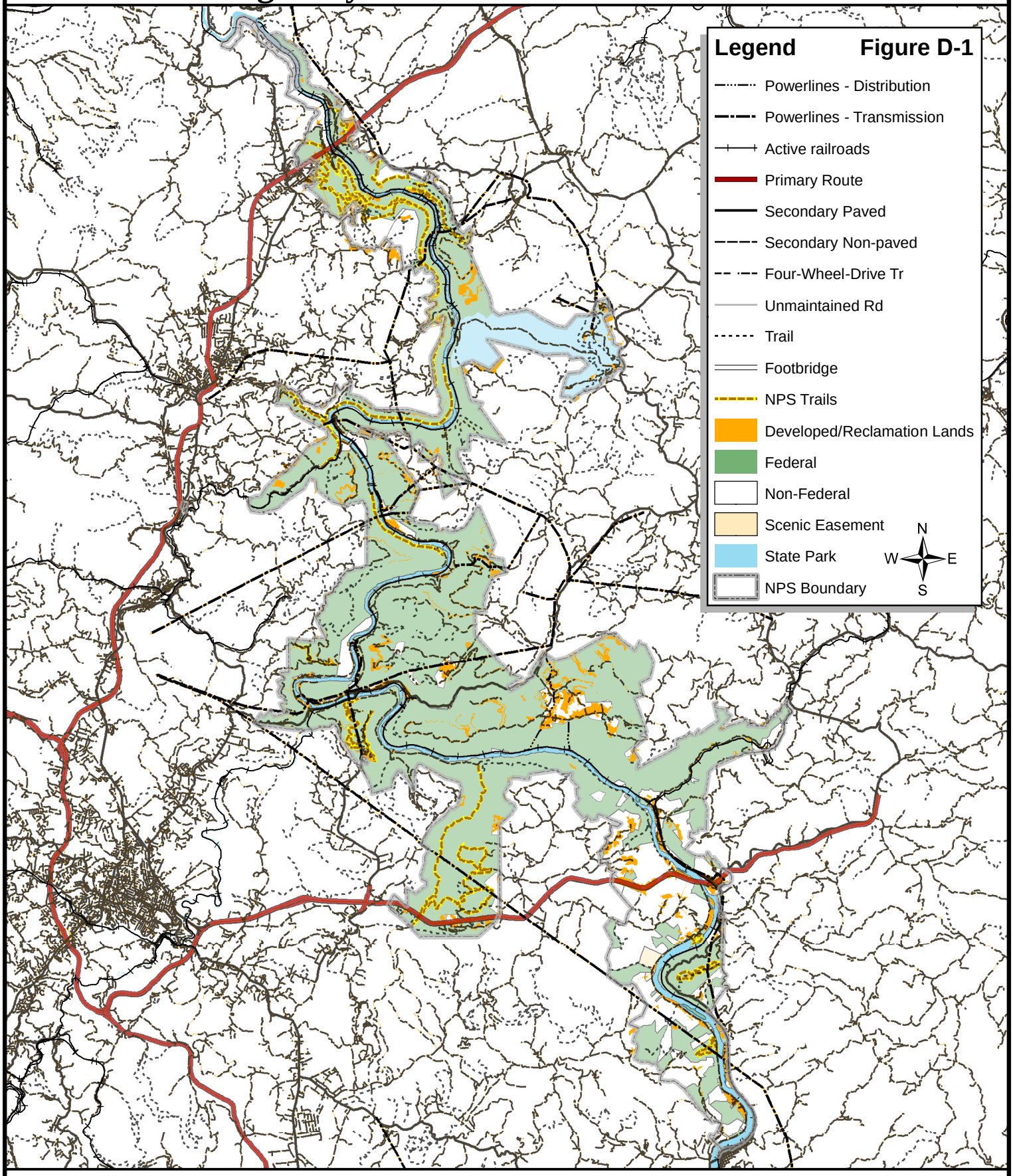
cc:

NER- Chief of Park Planning and Special Studies (Terry Moore)

New River Gorge National River
West Virginia

National Park Service
U.S. Department of the Interior

Wilderness Eligibility Assessment - Overview



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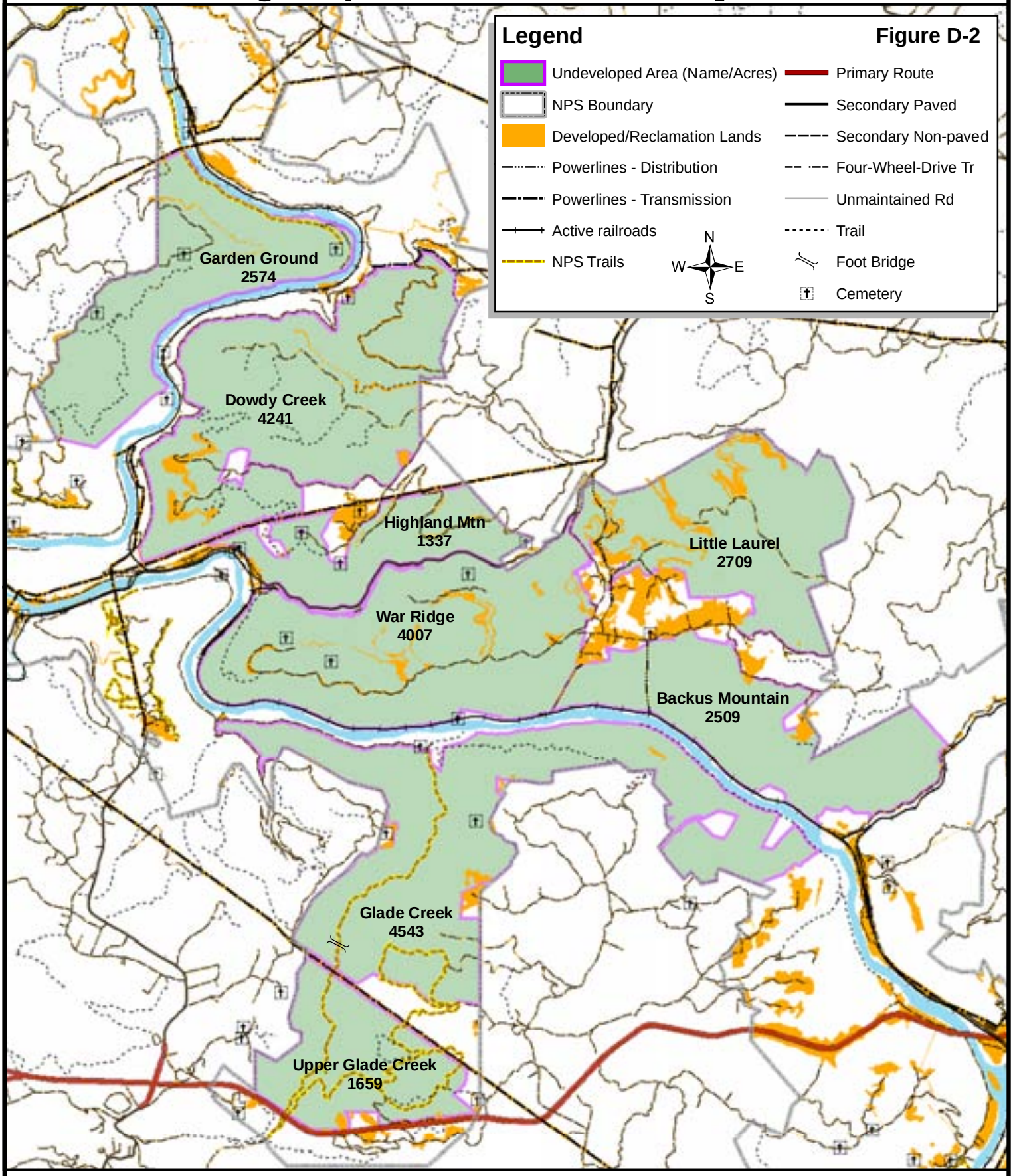
March 2008

New River Gorge National River
West Virginia

National Park Service
U.S. Department of the Interior

Wilderness Eligibility Assessment - Undeveloped Areas



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Appendix E Boundary Adjustment Study

APPENDIX E

New River Gorge National River
Boundary Adjustment Study

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New River Gorge National River
Boundary Adjustment Study

1.0 Introduction

1.1 NPS Mandate to Evaluate Park Boundaries

- **Federal law and policy:**

In Public Law 95-625, the National Parks and Recreation Act of 1978, Congress directed that the National Park Service (NPS) consider as part of a planning process what modifications of external boundaries might be necessary to carry out park purposes. Subsequent to this act, Congress also passed Public Law 101-628, the Arizona Desert Wilderness Act. Section 1216 of this act directed the Secretary of the Interior to develop criteria to evaluate any proposed changes to the existing boundaries of individual park units.

NPS Management Policies state that boundary adjustments may be recommended to:

- protect significant resources and values, or to enhance opportunities for public enjoyment related to park purposes

- address operational and management issues, such as the need for access or the need for boundaries to correspond to logical boundary delineations such as topographic or other natural features or roads

- otherwise protect park resources that are critical to fulfilling park purposes.

The NPS policies further state that all recommendations for boundary changes: 1) be feasible to administer considering size, configuration, and ownership; costs; views of and impacts on local communities and surrounding jurisdictions; and other factors such as the presence of hazardous substances or exotic species; and 2) have determined that other alternatives for management and resource protection are not adequate.

Legislation from Congress would be required to allow for the expansion of the boundary of New River Gorge National River, and the appropriation of funds to provide for the purchase of lands within the revised boundary from willing sellers, in accordance with National Park Service policy.

- **Park Legislation, Section 1101 – Park Purpose**

The 1978 legislation established New River Gorge National River (NRGNR) *"For the purpose of conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge* (emphasis added) *and preserving as a free-flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations…"*

- **Park Legislation, Section 1104 – Cooperation with Communities to Protect Resources In and Adjacent to the Park**

This legislation also provided that the Secretary of the Interior (through his subordinate agency, the NPS) should *"assist and consult with the appropriate officials and employees of such local government in establishing zoning laws or ordinances which will assist in achieving the purposes of this title."* Furthermore, *"the Secretary shall endeavor to obtain provisions in such zoning laws or ordinances which- (1) have the effect of restricting incompatible commercial and industrial use of all real property in or adjacent to the Gorge area* (emphasis added): *(2) aid in preserving the character of the Gorge area by appropriate restrictions on the use of real property in the vicinity,… and (3) have the effect of providing that the Secretary shall receive advance notice of any hearing for the purpose of granting a*

variance and any variance granted under, and of any exception made to, the application of such law or ordinance."

Thus, Congress clearly intended that local officials (county commissions and town councils) work with the NPS to protect the outstanding values "in and around the New River Gorge" by establishing appropriate land use restrictions.

1.2 New River Gorge National River Boundary Evaluation Process

Based on input from field staff and comments received from the public during the GMP process, NPS staff identified areas where recreational access is needed by rock climbers, hikers, hunters, bicyclists, fishermen, horseback riders, etc. Primarily these areas would provide better vehicle parking at trailheads and in some locations, the opportunity to develop new primitive campgrounds.

2.0 Boundary Adjustment Alternatives Considered

2.1 Alternative 1 – Continuation of Current Boundary (No Action) (Figure E-1)

This alternative is a continuation of existing conditions; the NRGNR boundary would remain unchanged. It is included as a baseline against which to measure the other alternatives.

2.2 Alternative 2 – Recreation Access (Preferred Alternative) (Figure E-2)

This alternative adds six areas to the existing boundary, all of which provide improved access to recreational sites. Primarily, these provide parking areas where none currently exist, and/ or where visitors are parking along roads or on private property. The six areas are:

- Junkyard
- Ambassador Buttress
- Keeney Creek
- Cunard
- Dowdy Bluff
- Polls Parking

2.3 Minor Deletions from the Boundary

In recent years, the NPS staff has identified three areas where it would be appropriate to delete certain privately owned lands from the park. Although rare, existing conditions on private lands within the boundary or survey/mapping errors occasionally create extremely difficult operational problems that are best resolved via deletion. Three such areas have been identified; a brief explanation for deleting each area is provided below:

- **City of Fayetteville** (one parcel of 37 acres)

The City of Fayetteville maintains a water treatment plant along House Creek, on the southern end of this parcel. On the northern section of this parcel, the City is constructing a 'free-ride' park for bicycling enthusiasts. Through the middle of this parcel, a well-established hike/ bike trail is used as part of a trail network maintained by the NPS. The NPS plans to construct a new section of trail in this area so that the entire NPS trail network is on NPS-owned land. This deletion will result in all of the City's land and municipal facilities being outside the NPS boundary.

- **Kaymoor Top** (one parcel of 0.4 acre)

In 2006, when the NPS was acquiring approximately 500 acres inside the current boundary, this small tract was severed from the acquisition because an adjoining landowner had created an encroachment by building two structures partly within the 500 acre tract. The NPS cannot acquire land with

encumbrances; so rather than delay or jeopardize the larger acquisition, the owner of the 500 acre tract severed 0.4 acre where the encroachment was located. This deletion will move the boundary line from its current location where it bisects the two privately owned structures to a location that coincides with NPS ownership.

- **Gatewood Road** (two adjoining parcels of 6 and 32 acres)

In 2006, when the NPS was acquiring approximately 500 acres inside the current boundary, these two tracts were severed from the acquisition. An adjoining landowner had created an encroachment on the 32 acre parcel by building a sewage treatment facility partly within the 500 acre tract. The NPS cannot acquire land with encumbrances; so rather than delay or jeopardize the larger acquisition, the owner of the 500 acre tract severed 32 acres where the encroachment was located. Removing the 6 acre parcel will correct a mapping error. These two deletions (totaling 38 contiguous acres) will move the boundary line to coincide with NPS ownership.

3.0 Applying NPS Boundary Adjustment Criteria

Each of the six areas proposed for addition to the NPS boundary has been determined to satisfy certain criteria, to insure that there is a legitimate need to add an area to the park. These additions all propose solutions to current problems with public access to popular recreational areas within the park. A brief explanation of each problem/solution scenario and its anticipated impact on local communities is provided below.

A cost estimate is also shown for each area and it is split into two components: 1) the estimated cost to acquire the land, and 2) the administrative costs associated with purchasing each tract. For each individual landowner, the average cost for preparing an appraisal, title search, and hazardous materials survey has been estimated to be $12,000. This cost has been multiplied by the number of individual landowners to determine a total administrative cost estimate per area.

Following is a detailed summary of the analysis for each of the six areas.

3.1 Junkyard (Figure E-3)

- **To protect significant resources, values or opportunities for public enjoyment related to the purposes of the park; and/ or to address operational and management issues**

This 61-acre tract would provide much-needed vehicle parking for rock climbers accessing a popular climbing area known as Junkyard. Currently, climbers often park on road shoulders and/or trespass on private land to reach the climbing areas.

The rock climbing community has also expressed a need for camping facilities near the rim of the gorge, and this area is suitable for the development of a primitive campground. It is located adjacent to the current park boundary and just south of Burma Road in Fayette County. It is also adjacent to a residential development in Ames Heights.

- **Added lands will be feasible to administer**

Size and configuration – 61 acres; existing access to this tract is from public roads.

Ownership – Six owners, no known residential structures.

Hazardous substances – No hazardous materials are known or anticipated.

Cost to acquire (estimate) – $200,000 (land); $72,000 (administrative costs for 6 landowners - $12,000 x 6), see explanation in Section 3.0.

Views of and impacts on local communities – Net impact on local community should be positive. Once the public has a parking facility available, parking along roads and trespassing on private property should be eliminated. If a primitive campground is developed, there is some potential for residents on adjacent properties to experience additional noise at night from vehicles entering/leaving the campground.

Exotic species – Any exotic plants would be removed during construction of the parking lot and/or campground.

- **Consideration of other management strategies**

Other alternatives, such as the continuation of private ownership, have been considered but do not adequately address the operational problems created when the public crosses private land to reach the Junkyard recreational area on public (NPS) land. The NPS is not aware of any non-profit organization, or other agency willing to purchase land and administer facilities for this area. Since the federal government cannot construct facilities on land it doesn't own, acquisition by the NPS is the only strategy which would resolve the parking and trespassing problem.

3.2 Canyon Rim (Figure E-3)

- **To protect significant resources, values or opportunities for public enjoyment related to the purposes of the park; and/ or to address operational and management issues**

This 8-acre tract would bring federally-owned property within the boundary as well as providing protection for the Canyon Rim Visitor Center.

This area is located adjacent to the current park boundary and to the West Virginia State Rt. 85/12 in Fayette County, across from the NPS Canyon Rim Visitor Center.

- **Added lands will be feasible to administer**

Size and configuration – 8 acres; existing access to this tract is from public roads

Ownership – Three owners, 1 parcel currently owned by NPS, 1 commercial structure, no known residential structures.

Hazardous substances – No hazardous materials are known or anticipated.

Cost to acquire (estimate) – $10,000 (land); $24,000 (administrative costs for 2 landowners - $12,000 x 2), see explanation in Section 3.0.

Views of and impacts on local communities – Net impact on local community and motorists should be positive.

Exotic species – Any exotic plants would be removed during construction or restoration.

Other factors – NPS currently owns 5 acres of this parcel. Bringing these parcels in will cleanup boundary lines and make the area more manageable.

- **Consideration of other management strategies**

Other alternatives, such as the continuation of private ownership, have been considered but do not adequately address the operational problems created when the public crosses private land to reach the Ambassador Buttress and Fern Buttress recreational areas on public (NPS) land. The NPS is not aware of any non-profit organization, or other agency willing to purchase land and administer facilities for this area. Since the federal government cannot construct facilities on land it doesn't own,

acquisition by the NPS is the only strategy which would resolve the parking, trespassing and obstruction of interpretive sign problems.

3.3 Ambassador Buttress (Figure E-3)

- **To protect significant resources, values or opportunities for public enjoyment related to the purposes of the park; and/ or to address operational and management issues**

This 13-acre tract would provide much-needed vehicle parking for rock climbers accessing two popular climbing areas known as Ambassador Buttress and Fern Buttress. Currently, the climbers park on road shoulders and/or trespass on private land to reach the climbing areas. In addition, their parked vehicles often block an interpretive sign about the area's coal heritage from the view of motorists on the Fayette Station Road.

This area is located adjacent to the current park boundary and to the Fayette Station Road (Rt. 82) in Fayette County, east of the NPS Canyon Rim Visitor Center.

- **Added lands will be feasible to administer**

Size and configuration – 13 acres; existing access to this tract is from public roads.

Ownership – Six owners, no known residential structures.

Hazardous substances – No hazardous materials are known or anticipated.

Cost to acquire (estimate) – $20,000 (land); $72,000 (administrative costs for 6 landowners - $12,000 x 6), see explanation in Section 3.0.

Views of and impacts on local communities – Net impact on local community and motorists should be positive. Once the public has a parking facility available, parking along roads and trespassing on private property should be eliminated.

Exotic species – Any exotic plants would be removed during construction of the parking facility.

Other factors - The Fayette Station Road is a steep, narrow, one-way road that is heavily traveled by commercial outfitter buses and private vehicles. The road has been designated a spur of the National Coal Heritage Highway, and a brochure available at the Canyon Rim Visitor Center guides motorists from sign to sign on the road, explaining the history of the area. Eliminating vehicles parking along the roadside will improve public safety and enjoyment of this historic route.

- **Consideration of other management strategies**

Other alternatives, such as the continuation of private ownership, have been considered but do not adequately address the operational problems created when the public crosses private land to reach the Ambassador Buttress and Fern Buttress recreational areas on public (NPS) land. The NPS is not aware of any non-profit organization, or other agency willing to purchase land and administer facilities for this area. Since the federal government cannot construct facilities on land it doesn't own, acquisition by the NPS is the only strategy which would resolve the parking, trespassing and obstruction of interpretive sign problems.

3.4 Keeney Creek (Figure E-4)

- **To protect significant resources, values or opportunities for public enjoyment related to the purposes of the park; and/ or to address operational and management issues**

This 34-acre tract would protect the top two trestles of the Keeney Creek rail grade, and provide a much-needed trailhead and parking area for hikers and bicyclists using trails into the Nuttallburg area. Currently, visitors park on private land at the beginning (top end) of the rail grade.

This area is located adjacent to the current park boundary near Winona in Fayette County.

- **Added lands will be feasible to administer**

Size and configuration – 34 acres; existing access to this tract is from public roads.

Ownership – Two owners, no known residential structures.

Hazardous substances – No hazardous materials are known or anticipated.

Cost to acquire (estimate) – $35,000 (land); $24,000 (administrative costs for 2 landowners - $12,000 x 2), see explanation in Section 3.0.

Views of and impacts on local communities – Net impact on local community and motorists should be positive. Once the public has a parking facility available, parking along roads and on private property should be eliminated.

Exotic species – Any exotic plants would be removed during construction of the parking facility.

- **Consideration of other management strategies**

Other alternatives, such as the continuation of private ownership, have been considered but do not adequately address the operational problems created when the public crosses private land to reach the Keeney Creek recreational area on public (NPS) land. The NPS is not aware of any non-profit organization, or other agency willing to purchase land and administer facilities for this area. Since the federal government cannot construct facilities on land it doesn't own, acquisition by the NPS is the only strategy which would resolve the parking and trespassing problem.

3.5 Cunard (Figure E-5)

- **To protect significant resources, values or opportunities for public enjoyment related to the purposes of the park; and/ or to address operational and management issues**

This 10-acre tract would provide satellite parking for private boaters to utilize a shuttle system and reduce vehicle congestion at the Cunard launch. Currently, major vehicle congestion occurs at the NPS river launch site when the number of non-commercial boater vehicles exceeds the available parking spaces. Commercial buses may also use this parking lot as a staging area to wait in until they are dispatched to pick up customers, which would further reduce vehicle congestion at the river launch.

This property is located adjacent to the current park boundary at the upper end of the NPS road to the Cunard river launch in Fayette County.

- **Added lands will be feasible to administer**

Size and configuration – 10 acres; existing access to this tract is from public roads.

Ownership – One owner, one known residential structure.

Hazardous substances – No hazardous materials are known or anticipated.

Cost to acquire (estimate) – $15,000 (land); $12,000 (administrative costs), see explanation in Section 3.0.

Views of and impacts on local communities – Net impact on local community will be the additional noise created by vehicles coming and going from the shuttle parking lot during the busiest days (Saturday and Sunday). However, on these same days there is already heavy bus traffic by the commercial river outfitters in and out of the Cunard community. The majority of the time this parking area would probably receive light use, because the shuttle system may only need to operate on weekends. In addition, this location is out of sight from the majority of the residences in the Cunard community.

Exotic species – Any exotic plants would be removed during construction of the parking facility.

- **Consideration of other management strategies**

Other alternatives, such as the continuation of private ownership, have been considered but do not adequately address the need to provide a public shuttle system to alleviate vehicle congestion at the Cunard river launch. The NPS is not aware of any non-profit organization, or other agency willing to purchase land and administer a shuttle system for this area. Since the federal government cannot construct facilities on land it doesn't own, acquisition by the NPS is the only strategy which would resolve the vehicle congestion problem at Cunard.

3.6 Dowdy Bluff (Figure E-6)

- **To protect significant resources, values or opportunities for public enjoyment related to the purposes of the park; and/ or to address operational and management issues**

This 92-acre tract would provide much-needed parking and trail access for hunters and backcountry users along the ridge between Dowdy and Slater Creeks. The only public access (Route 41/12) to an 1100-acre plateau inside the park with popular hunting and backcountry lands passes through this tract.

There is also a need for a designated camping area to serve hunters and backcountry users in this part of the park and this area is suitable for the location of a primitive campground. It is located adjacent to the current park boundary and Route 41/12 in the Highland Mountain area of Fayette County.

This area also would increase protection of Dowdy Creek, a high quality stream in the most pristine watershed in the park.

- **Added lands will be feasible to administer**

Size and configuration – 92 acres; existing access to this tract is from public roads.

Ownership – One owner, no known residential structures.

Hazardous substances – No hazardous materials are known or anticipated.

Cost to acquire (estimate) – $100,000 (land); $12,000 (administrative costs), see explanation in Section 3.0.

Views of and impacts on local communities – Net impact on local community should be positive. Once the public has a parking facility available, parking along roads and trespassing on private property should be eliminated.

Exotic species – Any exotic plants would be removed during construction of the parking facility.

- **Consideration of other management strategies**

Other alternatives, such as the continuation of private ownership, have been considered but do not adequately address the operational problems created when the public crosses private land to reach the Dowdy Bluff recreational area on public (NPS) land. The NPS is not aware of any non-profit organization, or other agency willing to purchase land and administer facilities for this area. Since the federal government cannot construct facilities on land it doesn't own, acquisition by the NPS is the only strategy which would resolve the parking and trespassing problem.

3.7 Polls Parking (Figure E-7)

- **To protect significant resources, values or opportunities for public enjoyment related to the purposes of the park; and/ or to address operational and management issues**

This 4.2-acre tract would provide much-needed parking for hunters and hikers using the Kates Branch – Polls Plateau trail network. Currently, visitors are parking on the road shoulder or on private property. They are also trespassing as they cross private property to reach NPS property in this area.

It is located on the north side of Polls Branch Road (Rt. 27/9) in Raleigh County.

- **Added lands will be feasible to administer**

Size and configuration – 4.2 acres; existing access to this tract is from public roads.

Ownership – Two owners, no known residential structures.

Hazardous substances – No hazardous materials are known or anticipated.

Cost to acquire (estimate) – $16,800 (land); $24,000 (administrative costs), see explanation in Section 3.0.

Views of and impacts on local communities – Net impact on local community should be positive. Once the public has a parking facility available, parking along roads and trespassing on private property should be eliminated.

Exotic species – Any exotic plants would be removed during construction of the parking facility.

- **Consideration of other management strategies**

Other alternatives, such as the continuation of private ownership, have been considered but do not adequately address the operational problems created when the public crosses private land to reach the Polls Plateau – Kates Branch trail network on public (NPS) land. The NPS is not aware of any non-profit organization, or other agency willing to purchase land and administer facilities for this area. Since the federal government cannot construct facilities on land it doesn't own, acquisition by the NPS is the only strategy which would resolve the parking and trespassing problem.

4.0 Meeting the Legislative Mandate to Protect Resources in and around the Park

4.1 Legislative Mandate

In 1978, Congress clearly intended that local officials (county commissions and town councils) work with the NPS to protect the outstanding values "*in and around the New River Gorge*" (see 1.1.1 and 1.1.2). By establishing appropriate land use restrictions on areas outside, but near the park boundary, more lands could remain in private ownership but still "aid in preserving the character of the Gorge area…" Thus, Congress mandated that the NPS role is to advise local officials which areas outside the boundary need protection, and it is the role of local officials is to protect those areas.

4.2 Recent Events and Public Comment

Almost thirty years later, public comments received during the GMP scoping process in 2006 affirmed the need to protect areas around the Gorge. Many voiced concerns that views from the park were increasingly threatened as local authorities re-zoned areas along and near the boundary of the park to allow housing developments. Some comments suggested expanding the current boundary as a way to achieve protection of the park's scenic qualities.

Others noted that better (expanded) watershed protection for many of the New River's tributaries would improve local water quality, rated the most important issue by persons participating the GMP scoping process.

New scientific information about the importance of preserving large blocks of unfragmented forest, the existence of rare plant communities, and the habitat needs of threatened and endangered species were additional reasons given for increasing the lands within the park.

However, rather than expand the boundary of New River Gorge National River (except for the 211 acres identified for improved recreational access, see 2.2 and 3.0), the NPS is proposing that local authorities and the NPS cooperate to fulfill the intent of the 1978 Congressional mandate. By updating or creating county and municipal planning processes to ensure the protections envisioned by Congress and requested in recent public comments, thousands of acres can remain in private ownership. There are a variety of methods which local officials (and private landowners) could use to achieve protection. Examples include land use restrictions, such as zoning for various building densities, and scenic or conservation easements held by land trust organizations.

Such a cooperative effort can also enhance property values, the quality of life for area residents, and the marketability of the New River Gorge region as a tourism destination. Re-zoning to allow new housing developments near the rim of the Gorge (mentioned above) has underscored the vulnerability of its reputation and potential to become a top-notch tourism destination. Protecting the qualities expected in a unit of the national park system will contribute to the sustainability of the area's tourism economy. (Local tourism bureaus can only tout superlative scenic views if such views actually exist.)

4.3 Defining Areas Needing Protection around the Park

To assist local officials with identifying which lands are important to protect the outstanding values "in and around the New River Gorge," NPS resource specialists analyzed viewshed data, watershed boundaries, the habitat needs of rare and threatened species, and the location of other important resources, such as rare plant communities. Based on those analyses, areas adjacent to the current boundary were identified and mapped to protect the following three categories: 1) views from the river, 2) other views, and 3) important resource areas.

- **Views from the River (Figure E-8 and Table E-1)**

Rationale: Protection of views from the river would ensure that a major component of a fundamental park value, its scenery, would be preserved. Because the New River itself serves as a 'platform' for

viewing by visitors fishing, paddling, picnicking, hunting and camping, preserving the river corridor's viewshed is integral to any long term protection strategy for the park.

Recreational opportunities in the New River Gorge are surrounded by superlative scenery, and this has contributed to the region's growing reputation as a high quality tourism destination. It is one of the reasons the area was designated a unit of the National Park System, and why many travelers seek areas within the System for recreational pursuits.

In 2004, an NPS survey of visitors to New River Gorge National River found that sightseeing was the most common activity (55%), followed closely by hiking/walking (53%). When those visitors rated the importance of selected park resources, they attributed the highest combined proportional scores (of "extremely important" and "very important") to natural setting (92%), scenic views (91%) and water quality (85%). To ensure that visitors continue to find the New River Gorge worthy of its designation as a unit of the National Park System, the river corridor viewshed must be protected.

Identification Methodology: Identification of Views from the River was accomplished by utilizing ArcMap GIS software with Spatial Analyst extension. Both river banks of the New River within the current boundary and a 10 meter digital elevation model were selected as the basis for view perspective in this analysis. The software was used to run a standard 360 degree view from each vertex along both river banks. Areas the software identified as both visible from the river and adjacent to the current boundary were selected and mapped as the private lands where various protection strategies are needed to protect Views from the River (see Figure E-8).

- **Other Views (Figure E-9 and Table E-1)**

Rationale: Protection of views from points other than at river level would ensure that a major component of a fundamental park value, its scenery, would be preserved. These are locations from which people at visitor centers, roadside pullouts, trail overlooks and rock outcroppings may enjoy a variety of expansive vistas while hiking, hunting, rock climbing, mountain biking, bird watching, or driving. Preserving these views is critical to any long term protection strategy for the park.

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Identification Methodology: Identification of Other Views was accomplished by utilizing ArcMap GIS software with Spatial Analyst extension. Developed overlooks, other popular vantage points, trails with overlooks, and gorge views within the current boundary and a ten meter digital elevation model were selected as the basis for view perspective in this analysis. The software was used to run a standard 360 degree view from each point and vertex along these lines. Areas the software identified as visible from at least two vantage points and adjacent to the current boundary were selected and mapped as the private lands where various protection strategies are needed to protect the park's Other Views (see Figure E-9).

- **Important Resources (Figure E-10 and Table E-2)**

Rationale: Certain protection strategies for private lands adjacent to the current park boundary would improve the status of fundamental park resources. The park lies at the core of a globally significant forest, and its largely unfragmented condition provides essential habitat for endangered mammals and rare birds and amphibians. Much of the private land adjacent to the park is an extension of that forest; protecting additional unfragmented blocks wherever possible would provide

long term benefits to many species by enlarging areas available for their hunting, foraging, breeding and nesting activities.

Many of the park's smaller watersheds are only partly within the boundary, thus they are lacking long term protection from impacts that might occur from current, planned, or future residential or commercial developments. By protecting the upper reaches of certain high quality streams, the water quality and ecological integrity of these watersheds could at least avoid additional compromise and may be able to improve. Pollutants and sediment run-off often accompany construction, inadequate sewage treatment and unregulated land use practices such as logging and mining.

Some adjacent lands abut areas within the existing boundary that have high biological value. Protection strategies for these adjacent lands would extend the expanse and integrity of these high value areas. (Example: not allowing high density development in areas adjoining a rare plant community will present fewer threats to the health and stability of that plant community.) High biological value was defined based on the density of rare plant and animal species and the presence of rare and/or sensitive plant communities.

Identification Methodology: Identification of Important Resource Areas was done using a large volume of spatial data depicting natural resource inventory and monitoring information. Data sets included drainage basins and watershed divides, a recently completed high-resolution vegetation community map, and derived maps noting spatial distribution of documented presence of rare (including Federally listed) species.

Areas outside but adjacent to the boundary were identified for the protection of Important Resources if they met at least one of the following criteria: 1) large tracts of unfragmented forest; 2) upper reaches of watersheds with high quality streams; and 3) areas of high biological value.

- **Combined Resources around the Park (Figure E-11 and Table E-2)**

Figure E-11 and Table E-2 combine the areas that are needed to preserve river views, other views, and important resources areas. Combined these areas illustrate the total area where protection for any purpose is needed to preserve the nationally significant character of the park and its fundamental resources

4.4 Working with Communities to Protect Resources around the Park

Local authorities (county commissions and town councils) and the NPS should seek to fulfill the intent of the 1978 Congressional mandate (Sections 1.1.1and 1.1.2) by pursuing a cooperative strategy. Updating or creating county and municipal planning processes to insure the protections envisioned by Congress and requested in recent public comments can result in thousands of acres remaining in private ownership. There are a variety of actions which the NPS could pursue with local officials and private landowners to achieve that goal. Examples include land use restrictions, such as zoning for various building densities, and scenic or conservation easements held by land trust organizations.

Such a cooperative effort can also enhance property values, the quality of life for area residents, and the marketability of the New River Gorge region as a tourism destination. Re-zoning to allow new housing developments near the rim of the Gorge has underscored the vulnerability of its reputation and potential to become a top-notch tourism destination. Protecting the qualities expected in a unit of the national park system will contribute to the sustainability of the area's tourism economy.

If local officials and the NPS determine that a community planner would be important in coordinating efforts, the NPS would seek funding to hire the position. A planner could also help local authorities pursue grants and establish contacts with organizations that acquire scenic or conservation easements on private lands.

TABLE E-1. Analysis of Views around the Park Needing Protection

Map No.	Approximate Acreage	Approximate # of Tax Parcels	Primary Existing Land Uses	Existing Zoning (if any)
Views from the River				
1	10	1	forest	LC 1
2	10	10	residential	LC 1
3	15	8	forest,, cemetery, 1 house	LC 1, RR
4	5	3	forest, 1 house +	RR
5	55	23	forest, residential	RR
6	57	1	forest	LC 1
7	31	2	forest, proposed housing development	RR w/ PUD
8	171	3	forest, proposed housing development	RR w/ PUD
9	337	1	forest, proposed housing development	RR w/ PUD
10	258	13	forest, proposed housing development	RR w/ PUD, LC 1, RR
11	2	1	managed timber	LC 1
12	324	5	forest	LC 1
13	63	1	forest	LC 1
14	146	2	forest	LC 1
15	124	2	forest	LC 1
16	23	1	forest	LC 1
17	174	1	forest	LC 1
18	114	1	forest	LC 1
19	6	1	forest	LC 1
20	261	1	forest	–
21	1,138	16	forest	–
22	251	10		–
23	67	3	½ forest, ½ agriculture	–
24	523	6	forest, AML surface strip	RR
25	95	1	forest	LC 1, RR
26	4	1	forest	RR
27	2,520	86	forest, residential	–
28	832	2	forest	–
29	4	1	commercial	LC 1
30	150	29	proposed housing development	city
31	106	1	managed timber	LC 1
32	35	23	residential, proposed housing development	LC 2
33	6,723	306	forest, residential	–
34	1,115	123	forest, residential	–
35	3,425	26	forest, agriculture	–

TABLE E-1 (continued). Analysis of Views around the Park Needing Protection

Map No.	Provides Public Access	Provides Views from River	Protects Other Views	Protects Important Resources	Comments
Views from the River (continued)			○ = overlaps with additional areas in the park needing protection		
1	○	■	○		
2		■	○	○ w/G	
3		■	○	○ w/G	
4		■	○	○ w/G	stretches from Beauty Mountain to Robertson tract
5		■	○		
6		■	○		
7		■	○		
8		■	○		
9		■	○		
10		■	○		
11		■	○		borders Babcock State Park
12		■	○	○ w/A	
13		■	○	○ w/A	
14		■		○ w/I	
15		■	○	○ w/A	
16		■	○	○ w/A	
17		■		○ w/L	
18		■	○	○ w/M	
19		■	○	○ w/M	
20		■	○	○ w/M	seen from Turkey Spur overlook
21		■	○	○ w/B	
22		■	○	○ w/D	
23		■	○		
24		■			
25		■		○ w/J	across from Thurmond
26		■			south side of Arbuckle watershed
27		■	○	○ w/S	
28		■	○	○ w/N&O	
29		■	○		
30		■	○		stretches for 2-3 miles along rim
31		■	○		
32	○	■	○	○ w/F	stretches for 1-2 miles along rim
33		■	○	○ w/Y	
34		■	○		
35		■	○	○ w/U	

TABLE E-1 (continued). Analysis of Views around the Park Needing Protection

Map No.	Approximate Acreage	Approximate # of Tax Parcels	Primary Existing Land Uses	Existing Zoning (if any)
Other Views				
40	112	1	forest	RR
41	575	1	forest	LC 1, RR
42	13	1	forest	LC 1
43	2,751	54	forest, residential	LC 1
44	196	2	managed timber, cemetery	LC 1
45	339	3	forest	LC 1
46	150	25	forest, residential	RR
47	7	5	residential	RR
48	24	5	forest, residential	RR
49	9	7	residential	RR
50	25	7	forest, residential	LC 1
51	23	29	proposed housing development	city of Fayetteville
52	37	6	proposed housing development	city of Fayetteville
53	27	1	forest, proposed housing development	RR w/ PUD
54	23	1	forest, proposed housing development	RR w/ PUD
58	5	1	forest	RR
59	15	1	forest	RR
60	429	20	forest, residential	LC 1
61	102	1	forest	–
62	14	1	forest	–
63	39	1	forest	–
64	479	24	rural residential/agriculture, some forest	–
65	35	1	½ forest, ½ agriculture	–
66	165	6	½ forest, ½ agriculture	–
67	111	1	forest, proposed housing development	LC 1
68	466	11	forest, residential	–
69	482	11	forest	–
70	192	36 lots sold	forest, proposed housing development	RR w/ PUD
71	44	8	some residential, some forest	LC 1
72	148	5	agriculture	RR
73	59	1	½ forest, ½ agriculture	RR
74	123	1	forest	RR
75	181	122	residential	LC 1
76	12	1	forest	–
77	363	45	forest, residential, agriculture	–
78	286	4	forest	–

TABLE E-1 (continued). Analysis of Views around the Park Needing Protection

Map No.	Provides Public Access	Provides Views from River	Protects Other Views	Protects Important Resources	Comments
Other Views (continued)			○ = overlaps with additional areas in the park needing protection		
40			■		
41	○		■	○ w/I	
42			■	○ w/IG	
43			■	○ w/A&I	most structures are seasonal use
44			■		includes Sewell cemetery
45			■	○ w/H	
46			■	○ w/G	
47			■	○ w/G	
48			■	○ w/G	
49			■	○ w/G	
50			■	○ w/G	
51			■		
52			■		
53		○	■		
54		○	■		
58			■		
59			■	○ w/J	
60			■	○ w/L&M	seen from Turkey Spur overlook
61			■	○ w/M	
62			■	○ w/M	
63			■	○ w/N	between highway and Piney Creek
64			■	○ w/D	
65			■		
66			■		
67	○		■	○ w/F	
68			■		seen from Gwinn Ridge
69			■	○ w/B	
70		○	■		36 lots are ½-acre lots
71	○		■		
72			■		
73			■		
74			■		
75	○	○	■	○ w/G	
76			■		
77			■		
78			■	○ w/T	

TABLE E-2. Analysis of Important Resource Areas around the Park Needing Protection

Map No.	Approximate Acreage	Approximate # of Tax Parcels	Primary Existing Land Uses	Existing Zoning (if any)
Important Resource Areas				
A	2,761	52	forest, residential	LC 1
B	1,446	26	Forest	
D	2.761	88	½ forest, ½ agricultura	
E	398	16	forest, agricultura	
F	406	33	forest, proponed housing development	LC2
G	5,374	636	forest, residential	RR
H	351	2	Forest	LC 1
I	4,719	38	Forest	RR, LC 1
J	769	15	forest	LC 1, RR
K	162	1	forest	RR
L	830	1	forest	
M	3,101	25	forest	¼ LC 1, 1/4 RR, ½ none (Raleigh Co)
N	263	1	forest	
O	128	1	forest	
P	666	12	forest	

TABLE E-2 (continued). Analysis of Important Resource Areas around the Park Needing Protection

Map No.	Provides Public Access	Provides Views from River	Protects Other Views	Protects Important Resources	Comments
Important Resource Areas (continued)				**O** = overlaps with additional areas in the park needing protection	
A		**O**	**O**	**A**	A =protects upper reaches of Fire, Molly, Todd, and unnamed creek (all four are undeveloped watersheds); provides foraging habitat for listed bat species
B		**O**	**O**	**B**	B = expands and protects high priority unfragmented forest blocks at Glade Creek; protects river bridge of Mill creek; protects; protects rare plant and animal species and rare plant communities
D		**O**	**O**	**D**	D = expands and protects high priority unfragmented forest block over a range of elevations at Glade Creek; protects headwaters to tributaries of Polls Branch and Glade Creek; protects rare plant and animal species and rare plant communities
E				**E***	E = expands and protects high priority unfragmented forest block; protects rare plant and animal species and rare plant communities; protects additional parts of Glade Creek watershed below Table Rock Road
F	**O**	**O**	**O**	**F**	F = expands and protects high priority unfragmented forest block; protects important habitat for rare cliff dwelling animal species and rare plant communities
G	**O**	**O**	**O**	**G**	G = protects all of Contrary and Short Creek watersheds and nearly all of Fern Creek watershed; protects high priority unfragmented forest block; protects rare plant and animal species and rare plant communities
H				**H**	H = expands and protects high priority unfragmented forest block; protects tributary of Keeney Creek
I	**O**	**O**	**O**	**I**	I = expands and protects high priority unfragmented forest block; protects Dowdy, Slater, and Buffalo Creek watersheds in their entirety
J		**O**	**O**	**J**	J = expands and protects high priority unfragmented forest block; protects rare plant communities
K				**K***	K = expands and protects high priority unfragmented forest block; enhances protection of Dunloup Creek watershed by extending protection to watershed divide
L		**O**	**O**	**L**	L = expands and protects high priority unfragmented forest block; protects rare plant and animal species; protects all of Big and Little Creek watersheds not already within NPS boundary
M		**O**	**O**	**M**	M = protects underground mineral reserves that would be removed by surface removal mining, thus degrading park watersheds and viewsheds
N		**O**	**O**	**N**	N = expands and protects high priority unfragmented forest block; enhances protection of Batoff Creek watershed by extending protection to watershed divide
O		**O**	**O**	**O**	O = expands and protects high priority unfragmented forest block; protects rare plant and animal species; protects all of McCreery Hollow watershed not already within NPS boundary
P				**P***	P = expands and protects high priority unfragmented forest block; protects rare plant and animal species and rare plant communities; enhances protection of Pinch Creek watershed by extending protection to watershed divide, including one entire tributary

TABLE E-2 (continued). Analysis of Important Resource Areas around the Park Needing Protection

Map No.	Approximate Acreage	Approximate # of Tax Parcels	Primary Existing Land Uses	Existing Zoning (if any)
Important Resource Areas (continued)				
S	990	29	forest, residential	
T	110	4	forest	
U	781	23	forest	
W	113	14	forest, agriculture	
X	47	1	forest, agriculture	
Y	3,455	183	forest	

TABLE E-2 (continued). Analysis of Important Resources Areas around the Park Needing Protection

Map No.	Provides Public Access	Provides Views from River	Protects Other Views	Protects Important Resources	Comments
Important Resource Areas (continued)					**O** = overlaps with additional areas in the park needing protection
S		**O**	**O**	**S**	S = expands and protects high priority unfragmented forest block; enhances protection of Meadow Creek watershed by extending protection to watershed divide
T				**T**	T = expands and protects high priority unfragmented forest block; enhances protection of Farley Creek tributary watershed by extending protection to watershed divide
U		**O**	**O**	**U**	U = expands and protects high priority unfragmented forest block, enhances protection of Fall Branch watershed by extending protection to watershed divide; protects mill and Kates Branch watersheds
W				**W***	W = expands and protects high priority unfragmented forest block; enhances protection for all of Big Branch watershed not already within NPS boundary
X				**X***	X = expands and protects high priority unfragmented forest block; enhances protection of unnamed tributary of New River by extending protection to watershed divide
Y		**O**	**O**	**Y***	Y = expands and protects high priority unfragmented forest block; protects lower reaches of Tug Creek, Brooks Branch, Collins Hollow, and Owens Branch

Coal City
Coal City
MacArthur
MacArthur
Beckley
Prosperity
Bradley
Mount Hope
Gauley Bridge
Beaver
Daniels
Shady Spring
Stanaford
Piney View
Oak Hill
Fayetteville
Ansted
Thurmond
64
19
Hinton
Meadow Bridge

FIGURE E-1
Boundary Adjustment Alternative 1 – Continuation of Existing Management
(No Action Alternative)

Current NPS Boundary
NPS land within National River Limits
State Park Land within National river Limits
Scenic Easment
Private Land within National River Limits

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

N

0 1.5 3 6 9 12 15 Miles

Coal City
Coal City
MacArthur
MacArthur
Beckley
Prosperity
Bradley
Mount Hope
Gauley Bridge
Beaver
Daniels
Stanaford
Piney View
Oak Hill
Shady Spring
Fayetteville
Ansted
Thurmond
64
Figure E-3
19
Figure E-5
Figure E-6
Figure E-4
Figure E-7
Hinton
Meadow Bridge

FIGURE E-2
Boundary Adjustment Alternative 2 – Recreation Access
(Preferred Alternative)

Recreation Access
Current NPS Boundary
NPS land within National River Limits
State Park Land within National river Limits
Scenic Easment
Private Land within National River Limits

New River Gorge National River

WEST VIRGINIA

National Park Service US Department of the Interior

N

0 1.5 3 6 9 12 15 Miles

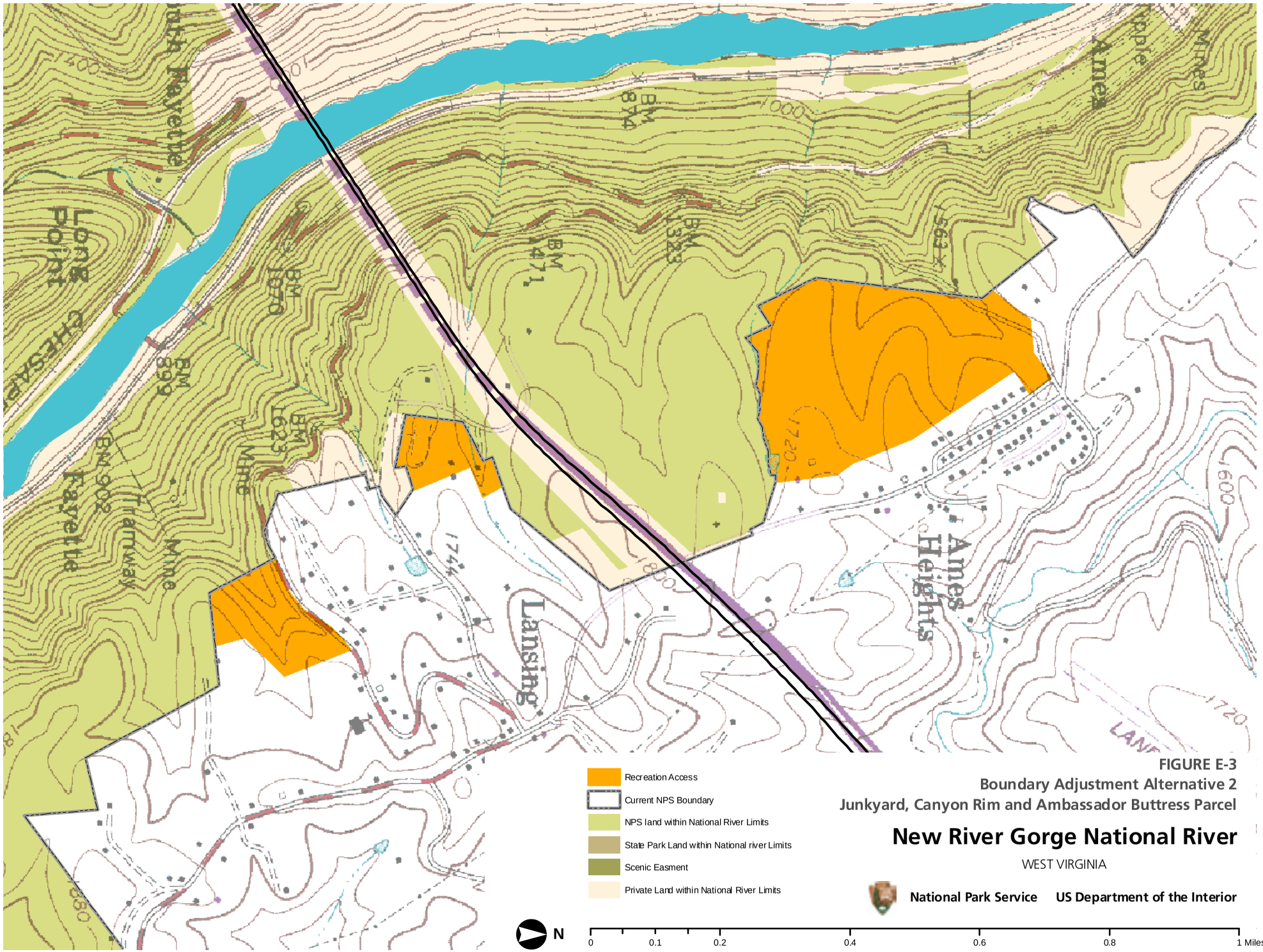

FIGURE E-3

Boundary Adjustment Alternative 2

Junkyard, Canyon Rim and Ambassador Buttress Parcel

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

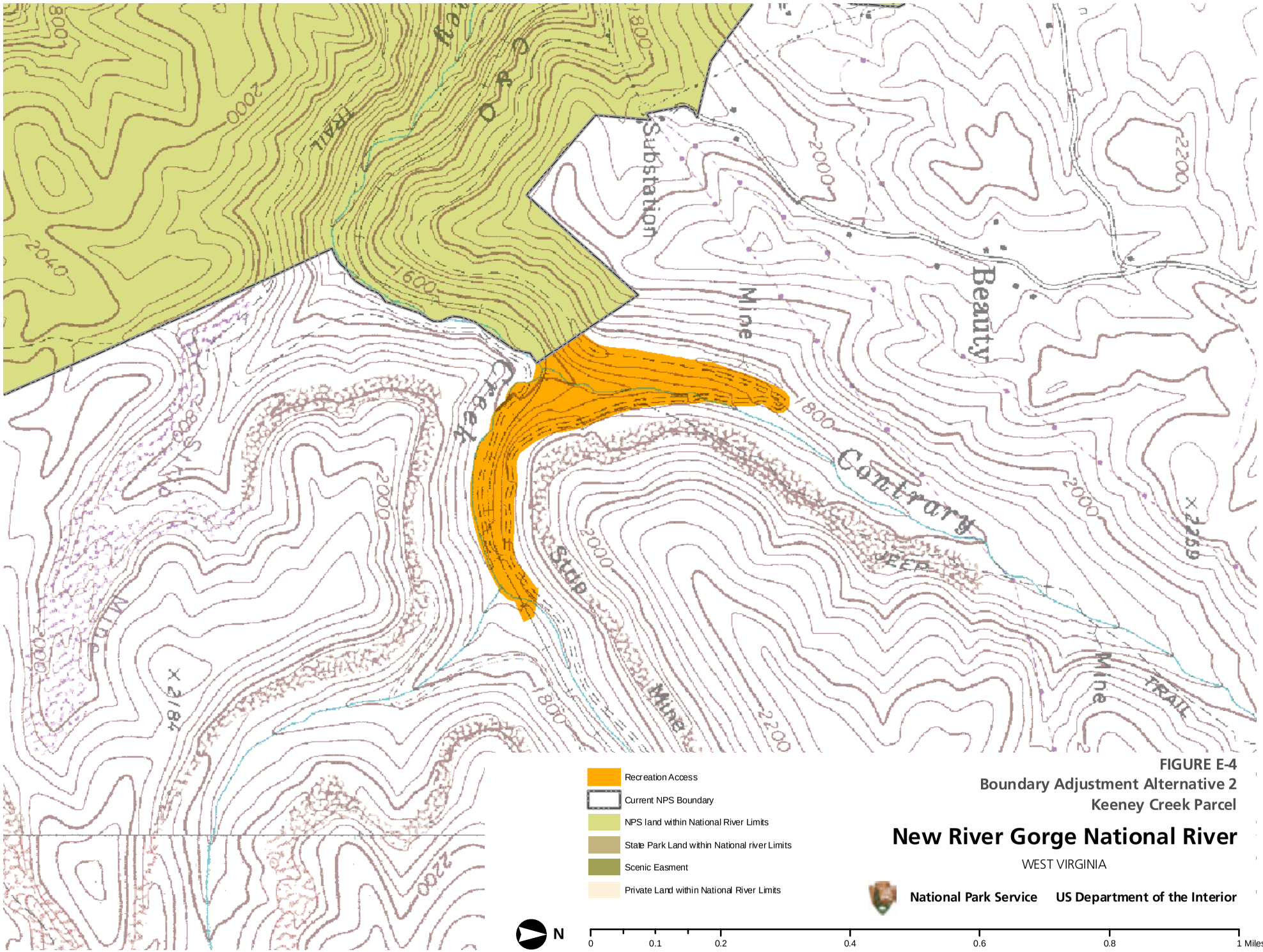

FIGURE E-4
Boundary Adjustment Alternative 2
Keeney Creek Parcel

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

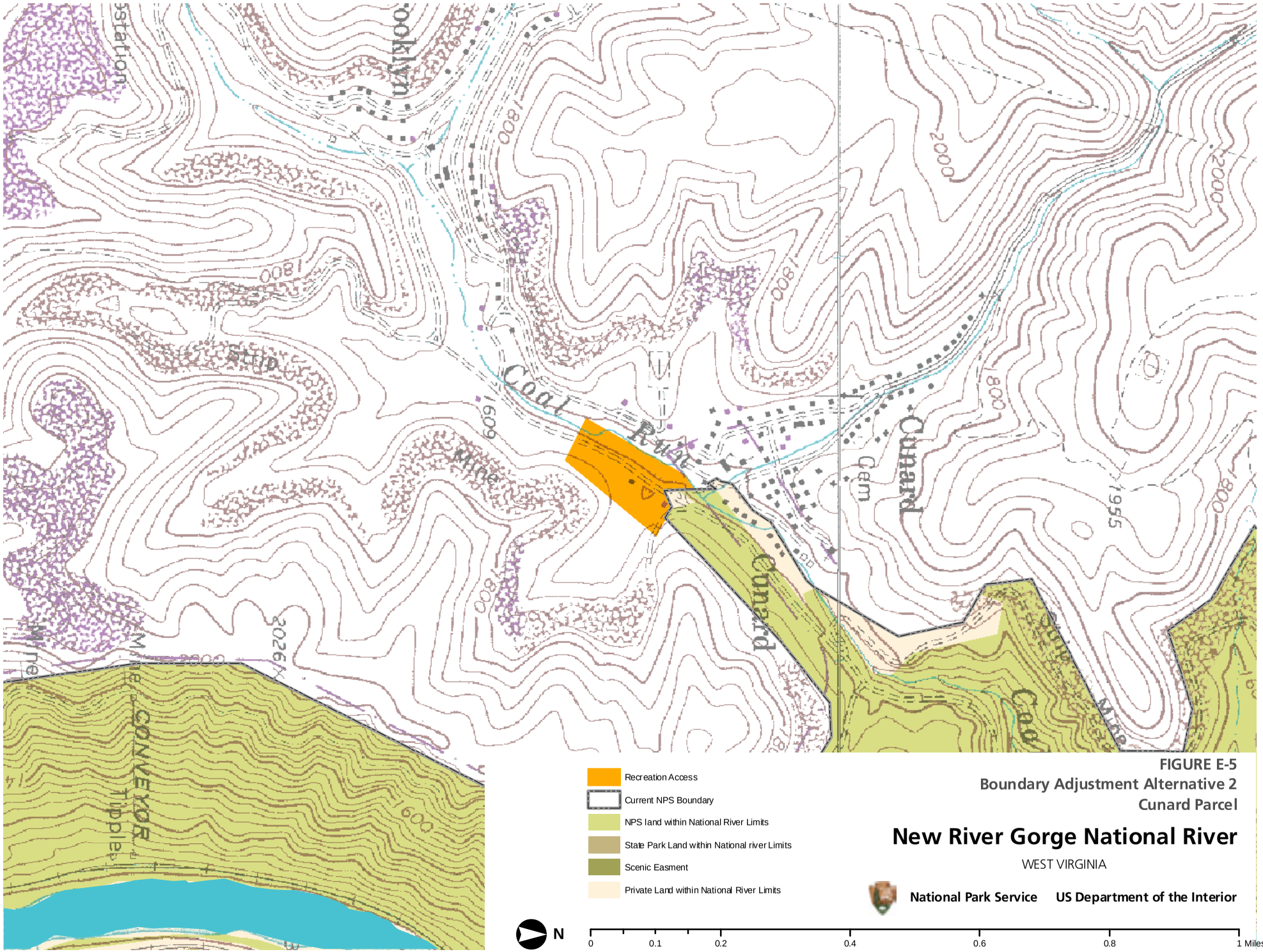

FIGURE E-5
Boundary Adjustment Alternative 2
Cunard Parcel

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

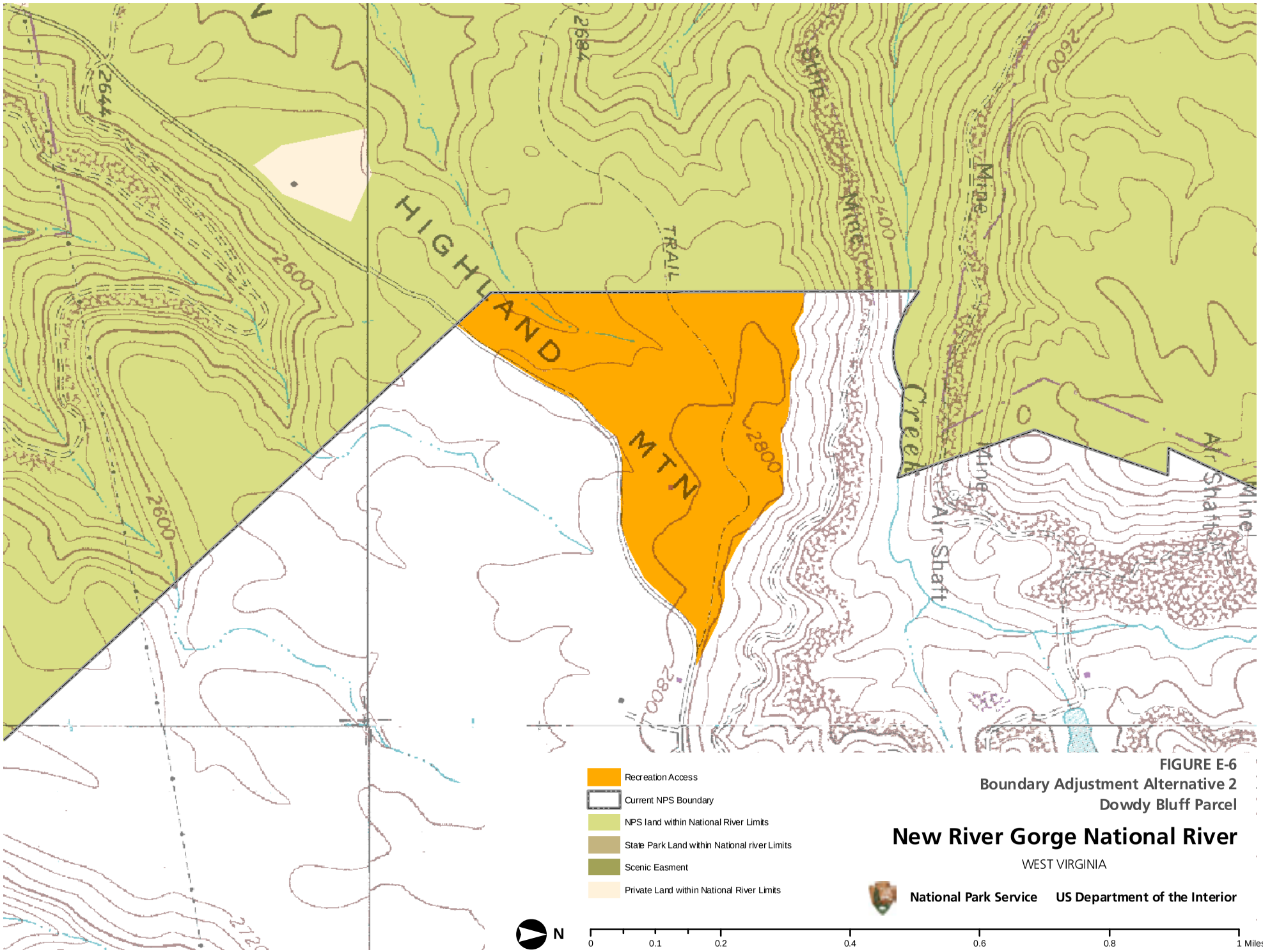

FIGURE E-6
Boundary Adjustment Alternative 2
Dowdy Bluff Parcel

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

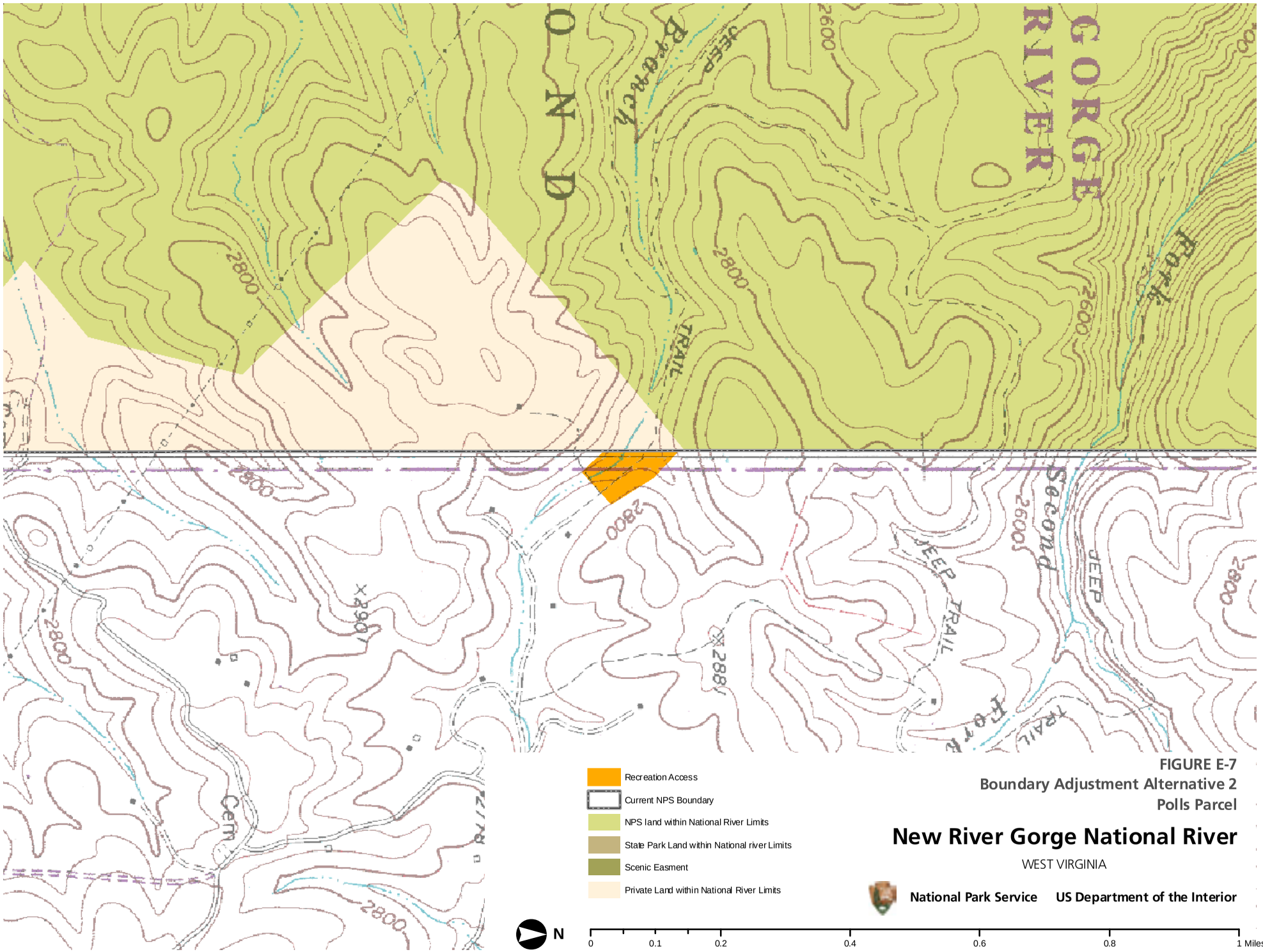

FIGURE E-7
Boundary Adjustment Alternative 2
Polls Parcel

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

Coal City
Coal City
MacArthur
MacArthur
Prosperity
Bradley
Beckley
Mount Hope
Gauley Bridge
Beaver
Stanaford
Piney View
Oak Hill
Daniels
Shady Spring
Fayetteville
Ansted
Thurmond
64
19
Hinton
Meadow Bridge

Views from the River
Current NPS Boundary
NPS land within National River Limits
State Park Land within National river Limits
Scenic Easment
Private Land within National River Limits

N

0 1.5 3 6 9 12 15 Miles

FIGURE E-8
Resources in and around the Park
Views from the River

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

Coal City
Coal City
MacArthur
MacArthur
Beckley
Prosperity
Bradley
Mount Hope
Gauley Bridge
Beaver
Stanaford
Piney View
Oak Hill
Daniels
Shady Spring
Fayetteville
Ansted
Thurmond
64
19
Hinton
Meadow Bridge

Other Views
Current NPS Boundary
NPS land within National River Limits
State Park Land within National river Limits
Scenic Easment
Private Land within National River Limits

FIGURE E-9
Resources in and around the Park
Other Views

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

N

0 1.5 3 6 9 12 15 Miles

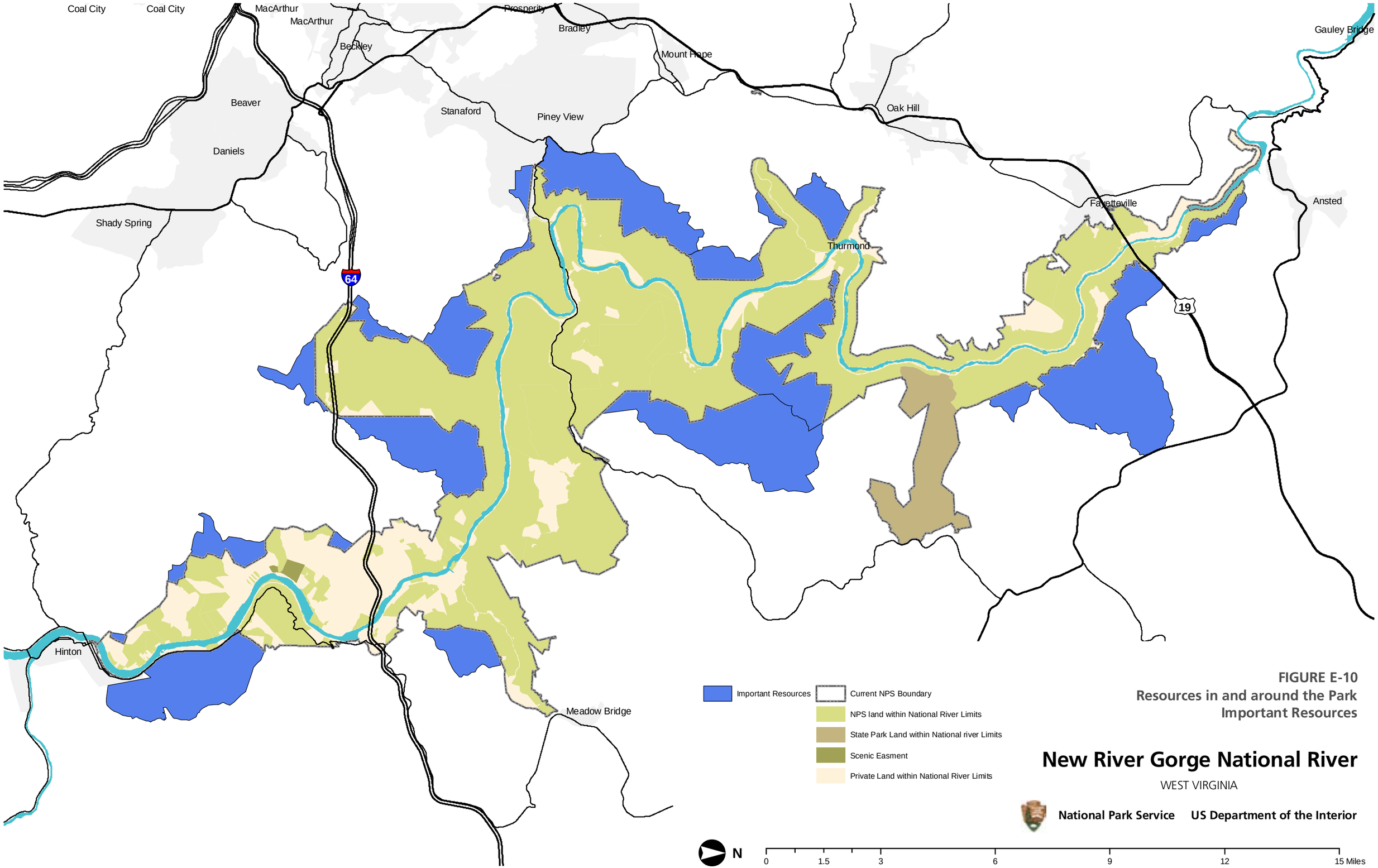

FIGURE E-10
Resources in and around the Park
Important Resources

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

Coal City
Coal City
MacArthur
MacArthur
Beckley
Prosperity
Bradley
Mount Hope
Gauley Bridge
Beaver
Stanaford
Piney View
Oak Hill
Daniels
Shady Spring
64
Thurmond
Fayetteville
Ansted
19
Hinton
Meadow Bridge

Views from the River
Other Views
Important Resources
Current NPS Boundary
NPS land within National River Limits
State Park Land within National river Limits
Scenic Easment
Private Land within National River Limits

FIGURE E-11
Resources in and around the Park
Composite of Views from the River, Other Views, and Important Resources

New River Gorge National River

WEST VIRGINIA

National Park Service **US Department of the Interior**

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Appendix F Affected Environment Data Tables

Appendix F

Affected Environment Data Tables

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TABLE F.1 Characteristics of Predominant Soil Types

Soil Type (listed from rim to river)	Topographic Location	Depth to Bedrock	Depth to Seasonal High Water	Erodibility (1st horizon K Factor)	Runoff Potential (hydrologic soil group)
Lily loam (LlB, LlC)	ridgetops and benches (gently to strongly sloping)	shallow (1½ - 3')	>6'	moderately low (0.28)	moderately low (B)
Gilpin silt loam (GaB, GaC)	ridgetops and benches (gently sloping)	shallow (2-3')	>6'	moderate (0.32)	moderately high (C)
Calvin, high base substratum-Berks shaley silt loam (CbD, CbF)	ridgetops (moderately to steeply sloping)	shallow (2-3')	>6'	moderately low (0.28)	moderately high (C)
Gilpin silt loam (GlB, GlC, GlD, GlE, GlF)	ridgetops and mountainsides	shallow (2-3')	>3'	moderate (0.32)	moderately high (C)
Dekalb fine sandy loam (DbB, DbC)	ridgetops and mountainsides	shallow (1½ - 3½')	>4'	low (0.24)	moderately high (C)
Calvin, high base substratum-Berks stony silt loam (CkF)	side slopes (very steep)	shallow (2-3')	>6'	moderately low (0.28)	moderately high (C)
Calvin-Gilpin very stony silt loam (CgF)	side slopes (very steep)	shallow (1½ - 2½')	>4'	moderately low (0.28)	moderately high (C)
Dekalb and Gilpin very stony soils (DsC, DsE, DsF)	side slopes (steep)	shallow (1½ - 3½')	>4'	moderately low (0.28)	moderately high (C)
Steep Rock Land (Sr)	cliffs in New River Gorge and on mountainsides	variable	variable	variable	variable
Ernest silt loam (ErB, ErC)	foot slopes and along drainageways (gently to strongly sloping)	deep (>4')	1½ -3'	high (0.43)	moderately high (C)
Shouns silt loam (ShC, ShD, StC)	foot slopes and around the heads of drainageways (strongly sloping)	deep (>5')	>6'	low (0.24)	moderately low (B)
Meckesville very stony silt loam (MdC, MdE, McB, McC)	foot slopes and around the heads of drainageways (moderately to strongly sloping)	deep (>5')	>3'	moderate (0.32)	moderately high (C)
Ernest and Shelocta very stony silt loam (EsC, EsE)	foot slopes (strongly sloping)	deep (>4')	1½ - 2'	high (0.43)	moderately low (B/C)
Kanawha fine sandy loam (Ka)	low terraces and high floodplains (nearly level)	deep (>5')	>6'	low (0.24)	moderately low (B)
Ashton fine sandy loam (As)	high New River floodplain	deep (>5')	>6'	moderately low (0.28)	moderately low (B)
Chagrin loam (Cm)	New River floodplain (nearly level)	deep (>5')	4 - 6'	moderate (0.32)	moderately low (B)
Alluvial Land (Ad)	New River floodplain (nearly level)	deep (>5')	>6'	variable	variable
Gravelly Alluvial Land (Gr)	New River floodplain (nearly level)	variable	variable	variable	variable
Strip Mine (St)	areas where coal has been strip mined	variable	variable	variable	variable
Urban Land (UeC)	areas covered with urban structures (in Hinton) on foot slopes and along drainageways	deep (>5')	1½ - 3'	high (0.43)	moderately high (C)

Source: USDA 1975 and 1984

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TABLE F.2 Summary of Fecal Coliform Standard Exceedences in the New River and its Tributaries in the Vicinity of New River Gorge National River
(number/percent of samples exceeding standard of 200 fecal coliform bacteria/100ml water)

Sampling Sites Coliform Standard Exceedences >25% of samples >10% of samples	Year Monitoring Began	2001 to 2003 Samples		Exceedences of WV Standard for Contact Recreation since Monitoring Began
		Samples Exceeding WV Standard for Contact Recreation	Highest bacteria density (coliforms/100ml)	
New River below Bluestone Dam	2003	0 of 6 (0%)	90	0 of 6 (0%)
New River at Hinton Visitor Center	1990	2 of 16 (12.5%)	740	9 of 114 (7.9%)
New River at Brooks Falls	2001	0 of 7 (0%)	108	0 of 7 (0%)
New River above Sandstone Falls	1990	1 of 10 (10%)	1100	11 of 107 (10.3%)
New River below Sandstone Falls	1993	1 of 16 (6%)	363	9 of 84 (10.7%)
New River below Laurel Creek	2003	0 of 5 (9%)	48	0 of 5 (0%)
New River below Prince	1990	0 of 7 (0%)	135	11 of 107 (10.3%)
New River below Piney Creek	2003	0 of 5 (0%)	34	0 of 5 (0%)
New River at Thurmond	1993	2 of 13 (15%)	1880	12 of 113 (10.6%)
New River above Coal Run	1993	2 of 15 (13%)	1300	10 of 96 (10.4%)
New River above Wolf Creek	1990	3 of 15 (20%)	1400	15 of 115 (13%)
Greenbrier River at Willowhead	2003	0 of 6 (0%)	103	0 of 6 (0%)
Madam Creek	1990	16 of 16 (100%)	37000	108 of 115 (93.9%)
Lick Creek	1990	2 of 16 (12.5%)	1140	20 of 115 (17.4%)
Meadow Creek	1990	4 of 16 (25%)	1000	25 of 115 (21.7%)
Glade Creek	1995	0 of 12 (0%)	112	4 of 44 (9.1%)
Mill Creek	1994	0 of 9 (0%)	33	0 of 11 (0%)
Laurel Creek (at Quinnimont)	1990	0 of 12 (0%)	75	8 of 112 (7.1%)

TABLE F.2 Summary of Fecal Coliform Standard Exceedences in the New River and its Tributaries in the Vicinity of New River Gorge National River (continued)

(number/percent of samples exceeding standard of 200 fecal coliform bacteria/100ml water)

Sampling Sites Coliform Standard Exceedences >25% of samples >10% of samples	Year Monitoring Began	2001 to 2003 Samples		Exceedences of WV Standard for Contact Recreation since Monitoring Began
		Samples Exceeding WV Standard for Contact Recreation	Highest bacteria density (coliforms/100ml)	
Piney Creek at McCreery	1990	4 of 12 (33%)	1200	37 of 113 (32.7%)
Dowdy Creek at McKendree Road	1997	0 of 6 (0%)	11	0 of 16 (0%)
Slater Creek at McKendree Road	1997	0 of 13 (0%)	121	0 of 24 (0%)
Slater Creek at Mouth	2002	0 of 7 (0%)	54	0 of 7 (0%)
Buffalo Creek at McKendree Road	1997	0 of 13 (0%)	55	0 of 23 (0%)
Claremont Mine Spring	1996	0 of 11 (0%)	2	0 of 21 (0%)
Dunloup Creek	1990	6 of 16 (37.5%)	1730	59 of 127 (46.5%)
Arbuckle Creek	1990	7 of 14 (50%)	4080	65 of 113 (57.5%)
Coal Run	1990	4 of 15 (27%)	1225	43 of 114 (37.7%)
Keeney Creek above Winona	2003	2 of 5 (40%)	4670	2 of 5 (40%)
Keeney Creek at Winona	1990	14 of 14 (100%)	10000	14 of 14 (100%)
Keeney Creek below Winona	2003	5 of 6 (83%)	1500	5 of 6 (83%)
Wolf Creek	1990	3 of 15 (20%)	2250	29 of 115 (25.2%)
Ajax Mine Spring	1995	0 of 13 (0%)	1	0 of 51 (0%)
Marr Branch	1990	7 of 14 (50%)	4600	80 of 113 (70.8%)

Source: Purvis et al. 2006

TABLE F.3 Species of Special Concern in West Virginia Known to Occur in New River Gorge National River

Scientific Name	Common Name	Global Rank	West Virginia Rank	Federal Rank
Vascular Plants				
minima	dwarf anemone	G5	S1	–
Aristada purpurascens	purple needlegrass	G5 T5	S1	–
Arabis hirsute var. *pycnocarpa*	hairy rock-cress	G5 T5	S2	–
Arabis patens	spreading rock-cress	G3	S2	–
Baptisia australis	wild false indigo	G5 T3 T4	S3	–
Calopogon tuberosus var. *tuberosus*	grass Pink	G5 T5	S1	–
Cardamine flagellifera	bitter cress	G3	S2	–
Carex aestivalis	summer sedge	G4	S2	–
Carex careyana	Carey's sedge	G4 G5	S1	–
Carex comosa	bearded sedge	G5	S2	–
Carex emoryi	Emory's sedge	G5	S1	–
Carex interior	inland sedge	G5	S1	–
Carex mesochorea	midland sedge	G4 G5	S2	–
Carex molesta	troublesome sedge	G4	S3	–
Carex nigromarginata	black-edge sedge	G5	S3	–
Carex seorsa	wesk stellate sedge	G4	S1	–
Carex styloflexa	bent sedge	G4 G5	S1	–
Carex suberecta	prairie straw sedge	G4	S1	–
Carex typhina	cat-tail sedge	G5	S2	–
Carex woodii	pretty sedge	G4	S1 S2	–
Commelina erecta	slender day-flower	G5 T5	S2	–
Corallorhiza wisteriana	spring coralroot	G5	S2	–
Coreopsis pubescens var. *robusta*	star tickweed	G5? T3 T5	S2	–
Croton glandulosus var. septentrionalis	northern croton	G5 T5	S3	–
Cuscuta indecora	pretty dodder	G5 T5	S1	–
Cymophyllus fraserianus	Fraser's Sedge	G4	S3	–
Cyperus refractus	reflexed flatsedge	G5	S3	–
Cyperus squarrosus	awned cyperus	G5	S3	–
Desmodium lineatum	sand tick-trefoil	G5	S1	–
Eleocharis compressa	flat-stemmed spikerusH	G4	S2	–
Eleocharis intermedia	matted spikerush	G5	S1	–
Eleocharis palustris	creeping spike-rush	G5	S3	–
Eriogonum allenii	yellow buckwheat	G4	S2	–
Eupatorim pilosum	vervain thoroughwort	G5	S2	–
Fimbristylis annua	annual fimbry	G5	S1	–
Galactia volubilis	downy milkpea	G5	S2	–
Gentiana austromontana	Appalachian gentian	G3	S1	–
Helianthemum canadense	Canada frostweed	G5	S2	–
Helianthus laevigatus	smooth sunflower	G4	S2	–

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Scientific Name	Common Name	Global Rank	West Virginia Rank	Federal Rank
Helianthus occidentalis spp. *occidentalis*	McDowell sunflower	G5 T5	S2	–
Hibiscus laevis	halberd-leaved mallow	G5	S2	–
Hypericum virgatum	coppery St. John's-wort	G4	S1	–
Juncus dichotomus	forked rush	G5	S1	–
Lythrum alatum	winged loosestrife	G5 T5	S2	–
Maianthemum stellatum	starflower false Solomon's seal	G5	S2	–
Melica mutica	two-flower melic grass	G5	S2	–
Najas gracillilma	slender water nymph	G5?	S2	–
Oenothera pilosella	evening-primrose	G5	S2	–
Pinus resinosa	red pine	G5	S1	–
Piptochaetium avenaceum	blackseed needlegrass	G5	S2	–
Platanthera psycodes	small purple-fringe orchid	G5	S1	–
Poa saltuensis	drooping bluegrass	G5	S1	–
Pogonia ophioglossoides	rose pogonia	G5	S2	–
Polygala curtissii	Curtis milkwort	G5	S2	–
emersum	water smarweed	G5 T5	S2	–
Pycnanthemum incanum var. *puberulum*	hoary mountain-mint	G4	S1	–
Pycnanthemum loomisii	Loomis' mountain-mint	G4?	S2	–
Pycnanthemum torrei	Torrey's mountain-mint	G2	S1	–
Ranunculus pusillus	low spearwort	G5 T4?	S1	–
Rhynchospora recognia	globe beaked-rush	G5?	S2	–
Salix lucida	shining willow	G5 T5	S1	–
Saxifraga careyana	Carey's saxifrage	G3	S3	–
Schoenoplectus purchianus	weakstalk bulrush	G4 G5	S3	–
Scutellaria saxatilis	rock skullcap	G3	S2	–
Sibana virginica	Virginia cress	G5	S2?	–
Sida hermaphrodita	Virginia mallow	G3	S3	–
Silene nivea	snowy campion	G4?	S1	–
Silphium perfoliatum var. *connatum*	Virginia cup-plant	G5 T3?	S1	–
Solidago simples ssp randii	Rand's goldenrod	G5 T4	S1	–
Spiranthes tuberosa	little ladies'-tresses	G5	S3	–
Spirea virginiana	Virginia spiraea	S1	G2	threatened
Sporobolus clandestinus	rough dropseed	G5	S1	–
Stachys nuttallii	Nuttall's hedge-nettle	G5?	S3	–
Stachys tenuifolia var. *tenuifoia*	smooth hedge-nettle	G5	S3	–
Thalictrum clavatum	Mountain meadow-rue	G4	S1	–
Thalictrum steeleanum	Steele's meadow rue	G3	S1	–
Trifolium stoloniferum	running buffalo clover	S3	G3	endangered
Triphora trianthophora	nodding pogonia	G3	S2	–
Vitis rupestris	sand grape	G3	S2	–

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Scientific Name	Common Name	Global Rank	West Virginia Rank	Federal Rank
Woodsia scopulina	Allegheny cliff fern	G5	S2	–
Birds				
Accipiter cooperii	Cooper's hawk	G5	S3B, S4N	–
Accipiter striatus	sharp-shinned hawk	G5	S3B, S4N	–
Actitis macularia	spotted sandpiper	G5	S3B	–
Ammodramus savannarum	grasshopper sparrow	G5	S3B	–
Anas crecca	green-winged teal	G5	SHB, S2N	–
Anas rubripes	American Black duck	G5	S2B, S4N	–
Ardea herodias	great blue heron	G5	S2B, S4N	–
Botaurus lentiginosus	American bittern	G4	S1B, S1N	–
Catharus ustulatus	Swainson's thrush	G5	S1B	–
Certhia americana	brown creeper	G5	S3B, S4N	–
Chordeiles minor	common nighthawk	G5	S3B	–
Circus cyaneus	northern harrier	G5	S1B, S3N	–
Coccyzus erythropthalmus	black-billed cuckoo	G5	S3B	–
Colinus virginianus	northern bobwhite	G5	S3B, S3N	–
Contopus virens	eastern wood peewee	G5	SB5	–
Coragyps atratus	black vulture	G5	S3	–
Dendroica coronata	yellow-rumped warbler	G5	S3B, S3N	–
Dendroica fusca	Backburnian warbler	G5	S3B	–
Dolichonyx oryzivorus	bobolink	G5	S2B	–
Eremophila alpestris	horned hawk	G5	S2B, S3N	–
Falco peregrinus	peregrine falcon	G4	S1B, S2N	–
Fulica americana	American coot	G5	S1B, S3N	–
Haliaeetus leucocephalus	bald eagle	G5	S2B, S3N	–
Limnothlypis swainsonii	Swainson's warbler	G4	S2B	–
Lophodytes cucullatus	hooded merganser	G5	S1B, S4N	–
Melanerpes erythrocephalus	red-headed woodpecker	G5	S2B, S3N	–
Pandion haliaetus	osprey	G5	S2B, S2N	–
Petrochelidon pyrrhonota	cliff swallow	G5	S3B	–
Podilymbus podiceps	pied-billed grebe	G5	S2B, S4N	–
Pooecetes gramineus	Vesper sparrow	G5	S3B, S3N	–
Protonotaria citrea	prothonotary warbler	G5	S2B	–
Riparia riparia	bank swallow	G5	S2B	–
Sphyrapicus varius	yellow-billed sapsucker	G5	S1B, S3N	–
Spiza americana	dickcissel	G5	S2B	–
Vermivora chrysoptera	golden-winged warbler	G4	S2B	–
Vermivora ruficapilla	Nashville warbler	G5	S1B	–

TABLE F.3 Species of Special Concern in West Virginia Known to Occur in New River Gorge National River

Scientific Name	Common Name	Global Rank	West Virginia Rank	Federal Rank
Mammals				
Cornynorhinus rafinesquii	Rafinesque's big-eared bat	G3 G4	S1	–
Cornynorhinus townsendii	Virginia big-eared bat	G4 T2	S2	endangered
Cryptotis parva	least shrew	G5	S2	–
Lasionycteris noctivagans	silver-haired bat	G5	S2	–
Lasiurus cinereus	hoary bat	G5	S3	–
Myotis leibii	small-footed myotis	G3 G4	S1	–
Myotis sodalis	Indiana bat	G2	S1	endangered
Neotoma magíster	Allegheny woodrat	G3 G4	S3	species of concern
Nycticeius humeralis	evening bat	G5	SH	–
Ochrotomys nuttalli	golden Mouse	G5	S2	–
Puma concolor couguar	eastern cougar	G5	SH	–
Scalopus aquaticus	eastern mole	G5	S3	–
Sorex dispar	long-tailed shrew	G4	S2 S3	–
Sorex hoyi winnemana	southern pygmy shrew	G5 T4	S2 S3	–
Synaptomys cooperi	southern bog lemming	G5	S2	–
Zapus hudsonius	meadow dumping mouse	G5	S3	–
Reptiles				
Carphophis amoenus	eastern worm snake	G5	S3	–
Crotalis horridus	timber rattlesnake	G4	S3	–
Eumeces anthracinus anthracinus	northern coal skink	G5 T5	S2	
Eumeces laticeps	broad-headed skink	G5	S2	–
Glyptemys insculpta	wood turtle	G4	S2	–
Graptemys geographica	common map turtle	G5	S2	–
Opheodrys aestivus	rouge green snake	G5	S3	–
Pseudemys concinna	river cooter	G5	S2	–
Invertebrate Animals				
Calephelis borealis	swamp metalmark	G3	S2	–
Cicindela ancocisconensis	tiger beetle	G3 G4	S3	–
Speyeria diana	Diana fritillary	G4 G5	S2	species of concern
Amphibian Species				
Ambystoma jeffersonianum	Jefferson salamander	G4	S3	–
Aneides aeneus	green salamander	G3 G4	S3	–
Desmognathus quadramaculatus	black-bellied salamander	G5	S3	–
Eurycea lucifuga	cave salamander	G5	S3	–
Plethodon Kentucky	Cumberland plateau salamander	G4	S2	–
Pseudotriton montanus diastictus	midland mud salamander	G5	S1	–
Pseudotriton ruber	northern red salamander	G5	S3	–

TABLE F.3 Species of Special Concern in West Virginia Known to Occur in New River Gorge National River

Scientific Name	Common Name	Global Rank	West Virginia Rank	Federal Rank
Fish				
Etheostoma osburni	candy darter	G3	S2	–
Nocomis platyrhynchus	bigmouth chub	G4	S3 S4	–
Notropis scabriceps	New River shiner	G4	S2	–
Phoxinus oreas	mountain redbelly dace	G5	S3	–
Mussels				
Alasmidonta marginata	elktoe mussel	G4	S2	–
Cyclonaias turberculata	purple wartyback	G5	S1	–
Elliptio dilatata	spike mussel	G5	S2	–
Lampsilis fasciola	wavy-rayed lampmussel	G5	S2	–
Lampsilis ovata	pocketbook mussel	G5	S1	–
Lasmigona subviridis	green floater	G3 G4	S2	–
Quadrula quadrula	maple leaf	G5	S2	–
Toxolasma parvus	lilliput	G5	S2	–
Tritogonia verrucosa	pistolgrip	G5	S2	–

G1 – five or fewer documented occurrences, or very few remaining individuals globally – extremely rare and critically imperiled

G2 – six to 20 documented occurrences, or few remaining individuals globally – very rare and imperiled

G3 – twenty-one to 100 documented occurrences – either very rare and local throughout its range or found locally in a restricted range, vulnerable to extinction

G4 – common and apparently secure globally, though it may be rare in parts of its range, especially at the periphery

G5 – very common and demonstrably secure, though it may be rare in parts of its range, especially at the periphery

S1 – five or fewer documented occurrences, or very few remaining individuals within the state – extremely rare and critically imperiled

S2 – six to 20 documented occurrences, or few remaining individuals within the state – very rare or imperiled

S3 – twenty-one to 100 documented occurrences – may be somewhat vulnerable to extirpation

S4 – common and apparently secure with more than 100 occurrences

S5 – very common and demonstrably secure

SA – rare in the state but an accidental occurrence

SH – known only from historical records

SA – rare in the state but an accidental occurrence

T – T ranks are defined the same way as G rankings (G1 to G5) but they refer only to the rarity of the subspecific taxon

B – bird breeding populations; rank reflects species status in WV during breeding season

N – non-breeding populations; rank reflects species status in WV outside the breeding season; mainly refers to species status in the winter; doesn't apply for regular non-breeding migrants

Source: NatureServe 2004; NPS 2008f; WVDNR 2008b

Table F.4 Roads Providing Access to Park Facilities

Road	Park Facilities Accessed	Road Surface/ Average Daily Trips	Related Issues/ Planned Improvements
WV State Route 20	▪ Sandstone Falls Overlook ▪ Camp Brookside ▪ Camp Brookside River Access ▪ Sandstone River Access	▪ paved maintained ▪ ADT 2100 at Sandstone ▪ ADT 2900 near Barksdale ▪ ADT 8300 west Hinton Br	▪ existing capacity and safety deficiencies (to be mitigated in part following construction of New River Parkway)
River Road WV County Route 26	▪ Tug Creek River Access ▪ Brooks Falls Day Use Area ▪ Hellems Beach River Access ▪ Sandstone Falls Take-Out ▪ Sandstone Falls ▪ Sandstone Falls River Access	▪ paved maintained	▪ existing capacity and safety deficiencies ▪ future planned redesign and reconstruction as New River Parkway
Brooks Mountain Road WV County Route 44/5	▪ Gwinn Ridge Trailhead	▪ gravel maintained	▪ existing capacity and safety deficiencies
WV County Route 26/3	▪ Trump-Lilly Farm	▪ gravel maintained/ unimproved	▪ existing capacity and safety deficiencies
WV County Route 7	▪ Sandstone Visitor Center ▪ Meadow Creek River Access ▪ Jewell Tract River Access	▪ paved maintained ▪ ADT 360 before Sandstone Visitor Center	▪ no current or anticipated roadway capacity or safety deficiencies from I-64 to Sandstone VC ▪ existing capacity and safety deficiencies from Sandstone VC to Meadow Creek
Claypool Road WV County Route 7/1	▪ Meadow Creek fishing area	▪ gravel maintained	▪ existing capacity and safety deficiencies
Backus Mountain Road WV County Route 22/7	▪ Backus Mountain hunting area	▪ paved maintained ▪ ADT 200 near Backus	▪ existing capacity and safety deficiencies
WV County Route 27/9	▪ Polls Branch hiking and fishing area	▪ gravel maintained	▪ existing capacity and safety deficiencies
WV County Route 119/36	▪ Glade Creek Trailhead ▪ Glade Creek hiking and fishing area	▪ unimproved/primitive	▪ existing capacity and safety deficiencies ▪ road geometry constrains access for large vehicles
WV County Route 9	▪ Grandview day-use facilities ▪ Theatre West Virginia	▪ paved maintained ▪ ADT – 2600 north I-64 ▪ ADT – 820 at SR 983	▪ no current or anticipated roadway capacity or safety deficiencies
Grandview Entrance Road and Turkey Spur Overlook Road (NPS Park Roads)	▪ Grandview day-use facilities ▪ Theatre West Virginia ▪ Turkey Spur Overlook	▪ paved maintained	▪ no current or anticipated roadway capacity or safety efficiencies from park entrance to shelters ▪ existing access issues between amphitheater and visitor contact station ▪ existing capacity and safety issues for Turkey Spur Road will be mitigated by construction of new parking lot, pedestrian access
WV State Route 41	▪ McCreery River Access	▪ paved maintained ▪ ADT - 950 at Quinnimont ▪ ADT - 1150 at McCreery	▪ pedestrian crossing hazard at McCreery river access ▪ Thomas Burford Pugh Memorial

Table F.4 Roads Providing Access to Park Facilities

Road	Park Facilities Accessed	Road Surface/ Average Daily Trips	Related Issues/ Planned Improvements
			Bridge Replacement after 2009 ▪ no other current or anticipated roadway capacity or safety deficiencies
Glade Creek Road (NPS Park Road) (State Scenic Backway)	▪ Glade Creek Campground ▪ Glade Creek River Access ▪ Glade Creek hiking, fishing, and hunting area ▪ Mill Creek River Access ▪ Grandview Sandbar Campground ▪ Grandview Sandbar River Access	▪ gravel maintained	▪ road closed due to slides in 2006 and 2007; repaired by FHWA and reopened 1/2008
Army Camp Road NPS Park Road	▪ Army Camp Campground ▪ Army Camp River Access	▪ gravel maintained	▪ no current or anticipated roadway capacity or safety deficiencies
McKendree Road (from Stone Cliff to Prince) WV County Route 25	▪ Thayer River Access ▪ Thayer Campground ▪ Stone Cliff and Buffalo Creek fishing area	▪ gravel maintained/ paved	▪ very poor capacity ▪ road geometry constrains access for large vehicles ▪ road from Thayer to Prince in poor condition and is subject to slides and slumping
Stone Cliff Road NPS Park Road	▪ Stone Cliff Campground ▪ Stone Cliff River Access ▪ Stone Cliff hiking area	▪ gravel maintained	▪ no current or anticipated roadway capacity or safety deficiencies
WV County Route 41/12	▪ Dowdy Creek hunting area	▪ gravel maintained/dirt	▪ existing capacity and safety deficiencies
WV County Route 25/2	▪ Claremont hunting area ▪ Above Thurmond hunting area ▪ Below Thurmond hunting area	▪ gravel maintained	▪ existing capacity and safety deficiencies ▪ road geometry constrains access for large vehicles
Terry Road WV County Route 41/8	▪ Terry Beach River Access	▪ gravel maintained	▪ existing capacity and safety deficiencies
WV County Route 41/2	▪ Terry Batoff and Garden Ground hiking areas	▪ gravel maintained	▪ existing capacity and safety deficiencies
WV County Route 25 (from Glen Jean to Stone Cliff)	▪ Park Headquarters ▪ Dunloup Creek fishing area ▪ Thurmond-Minden Trailhead ▪ Southside Junction Parking Area ▪ Dun Glen Group Camping ▪ Dun Glen Group Picnicking ▪ Dun Glen River Access ▪ Dun Glen Park Operations Facility	▪ paved maintained ▪ ADT – 950 at Glen Jean	▪ no current or anticipated roadway capacity or safety deficiencies for small vehicles ▪ road geometry constrains access for large vehicles ▪ Laurel Creek Bridge replacement after 2013
Thurmond Access Roads various state roads	▪ Thurmond Depot Visitor Center ▪ Thurmond Historic District	▪ paved maintained	▪ very poor capacity and numerous existing roadway capacity and safety deficiencies ▪ Thurmond Bridge (state-owned) replacement in 2012
Minden Road WV County Route 17	▪ Thurmond-Minden Trailhead	▪ paved maintained	▪ existing capacity and safety deficiencies
Keeney Creek Road	▪ Nuttallburg Visitor Use Area	▪ paved maintained	▪ existing capacity and safety issues will be mitigated by

Table F.4 Roads Providing Access to Park Facilities

Road	Park Facilities Accessed	Road Surface/ Average Daily Trips	Related Issues/ Planned Improvements
WV County Route 85/2			construction of new trailheads for the Nuttallburg Visitor Use Area ▪ road geometry constrains access for large vehicles
Lansing Road WV County Routes 5 and 82	▪ Canyon Rim Visitor Center ▪ Canyon Rim Boardwalk ▪ Ambassador Buttress climbing area Endless Wall climbing area ▪ Fern Creek Trailhead ▪ Nuttall Trailhead	▪ paved maintained ▪ ADT – 700 at Edmond ▪ ADT – 280 at Winona	▪ no current or anticipated roadway capacity or safety deficiencies
WV County Route 85/5	▪ Beauty Mountain Trailhead ▪ Beauty Mountain climbing area	▪ gravel maintained	▪ existing capacity and safety deficiencies
Cunard Access Road NPS Park Road	▪ Cunard Trailhead ▪ Cunard River Access	▪ gravel maintained	▪ road damaged by recurring slides; repaired and widened by FHWA in 2007/2008
Brooklyn Road NPS Park Road	▪ Brooklyn Southside Junction Trailhead	▪ gravel maintained	▪ no current or anticipated roadway capacity or safety deficiencies
Gatewood Road WV County Route 9	▪ Longpoint Trailhead ▪ Kaymoor Top Area ▪ Cunard River Access	▪ paved maintained ▪ ADT – 2150 at SR 16 ▪ ADT – 1200 at Garden ▪ ADT – 470 at Cunard	▪ no current or anticipated roadway capacity or safety deficiencies
Kaymoor Top Road NPS Park Road	▪ Kaymoor Top Trailhead ▪ Craig Branch Trail ▪ South Nuttall climbing area ▪ Butcher Branch climbing area	▪ gravel maintained	▪ existing capacity and safety deficiencies
Fayette Station Road WV County Route 82	▪ Fayette Station River Access ▪ Wolf Creek Trailhead ▪ Bridge Climbing Area ▪ Bridge Trailhead ▪ Bridge Buttress Climbing Area ▪ Sunshine Buttress Climbing Area	▪ paved, one-way with pull-offs ▪ ADT – 120 at Canyon Rim ▪ ADT – 380 at US 19	▪ poor existing capacity, especially on peak visitation days ▪ steep gradients, tight curves, short stopping distances ▪ access constrained due to road geometry for large vehicles
US Route 19	▪ Burnwood Group Picnic Area ▪ Burnwood Park Operations Facility	▪ paved maintained ▪ ADT – 12000 above bridge ▪ ADT – 16200 below bridge	▪ no current or anticipated roadway capacity or safety deficiencies

Source: WV DOT 2005, 2005-2006, and 2007 (for planned improvements); 2006 (for average daily trips – ADTs)

References

References

Albers, S.and D.Duriscoe
2003 Analysis of air quality and visibility in and around New River Gorge." (George Wright FORUM 2002). National Oceanic and Atmospheric Administration, Forecast Systems Laboratory. Boulder, CO.

Allan, J.
1983 Predator-prey relationships in streams. Pages 191-229. J.R. Barnes and G.W. Marshall (eds). Steam ecology: application and testing of general ecological theory. Plenum Press, NY.

Aldehoch, J.
2003 Analysis of air quality and visibility in and around New River Gorge National River. (Prepared by Air Resource Specialists.) Fort Collins, CO.

Alterman, M.L.
1989 Archeological testing for boardwalk and bridge improvements at Sandstone Falls, New River Gorge National River. (Louis Berger & Associates, Inc). National Park Service, Rockville, MD.

Alterman, M.L., and A. Friedlander
2000 Canyon Rim Visitor Center improvement project historical and archeological investigations. (Louis Berger & Associates, Inc.). National Park Service. Glen Jean, WV.

Baker, Jr., Michael
1977 Addendum cultural resources technical report for the proposed New River Parkway environmental impact statement (volume III). Report prepared for Community Design Assistance Center, Virginia Polytechnic Institute and State University and the West Virginia Department of Transportation, Division of Highways (State Project: X241-125-0.00; Federal Project DE-000602 802). Charleston, WV.

Balcom, B.J., and R.H. Yahner
1996 Microhabitat and landscape characteristics associated with the threatened Allegheny woodrat. Conservation Biology 10.

Beckley, City of
2001 City of Beckley comprehensive plan. Prepared by Poggemeyer Design Group, Bowling Green, OH.

Bourassa, N., and A. Cattaneo
1998 Control of periphyton biomass in Laurentian streams (Quebec). Journal of the North American Benthological Society 17:420-429.

Brown, S.A.
1990 Kay Moor historic resource study. National Park Service. Glen Jean, WV.

Bryan, H.D., J.R. MacGregor, and J.D. Kiser
1999 A survey for federally endangered bat species in abandoned mine portals in the New River Gorge National River, West Virginia. Final report. Eco-Tech, Inc. Frankfurt, KY.

Buhlmann, K.A.
1990 A naturalist's view of the New River Gorge National River. Eastern National Park and Monument Association.

Buhlmann, K.A., and M.R. Vaughan
1987 A biological survey of the New River Gorge National River. Volumes 1-3. National Park Service, Mid-Atlantic Region.

Camarena, N., and S.A. Brown
1990 Bank of Glen Jean historic structure report. National Park Service. Glen Jean, WV.

Campbell, Brian C.
2006 New River Gorge National River – park associated people and groups. National Park Service, Northeast Region Ethnography Program. Boston, MA

Canterbury, R.A., J. Meyer, S. Pugh, and D.M. Stover
2002 Monitoring avian productivity and survivorship in New River Gorge National River West Virginia. Progress report. New River Gorge National River. Glen Jean, WV.

Castleberry, S.B., W.M. Ford, M.A. Menzel, J.M. Menzel, and K.V. Miller
2002 Surveys of bat community composition, relative abundance, and distribution at the New, Gauley, and Bluestone River National Park areas. Research proposal. New River Gorge National River. Glen Jean WV.

Cater, S.
2006 New River Gorge, Meadow River, and Summersville Lake Rock Climbers' Guidebook (3nd Edition). King Coal Propaganda. Fayetteville, WV.

Cincotta, D.A., D.B. Chambers, and T. Messinger
1999 Recent changes in the distribution of fish species in the New River Basin in West Virginia and Virginia. *in* Proceedings. New River Symposium. April 15-16, 1999. Boone, NC. National Park Service. Glen Jean, AV.

Clare, M.
2006 Geology report 2006 New River Gorge National River, Gauley River National Recreation Area, Bluestone National Scenic River. National Park Service, Glen Jean, WV.

Cooper, A.H., and D.G. Orr
1997 Archeological evaluation of proposed improvements Grandview Sandbar and Army Camp. National Park Service. Philadelphia, PA.

Cowardin, L.M., V. Carter, F. Golet, and E. LaRoe
1979 Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, Washington, D.C.

Crossman, E.
1991 Introduced freshwater fishes: a review of North American perspective with emphasis on Canada. Canadian Journal of Fisheries and Aquatic Sciences 48 (supplement): 46-57.

Curtis, P.D., and K.L. Sullivan
2001 Wildlife damage management fact sheet series: White-tailed deer. Cornell Cooperative Extension. Ithaca, NY.

Dillon, R.T., and E.F. Benfield
1982 Distribution of pulmonate snails in the New River of Virginia and North Carolina, U.S.A.: Interaction between alkalinity and stream drainage area. Freshwater Biology 12.

Easton, R.S., D.J. Orth, and J.R. Voshell. 1995. Spatial and annual variation in diet and foraging success of age – 0 smallmouth bass, *Micropterus dolomieu* (Lacopede). Environmental Biology of Fishes 46.

Economics Research Associates
2007 West Virginia whitewater industry strategy. Prepared for 4-C Economic Development Authority, Beckley, West Virginia.

Entech, Inc
2002 Re-Inventory and assessment of AML sites at New River Gorge and Gauley River, Fayette, Nicholas, Raleigh and Summers Counties, West Virginia. National Park Service. Glen Jean, WV.

Eye, O.L
1981 Kate's Branch wetland. (Unpublished report to West Virginia Department of Natural Resources).

Fayette County
2005 Comprehensive wastewater management plan for Fayette County. Prepared by Lombardo Associates, Inc. in association with Stafford Consultants, Inc.) Glen Jean, WV.

2001 2001 comprehensive plan – Fayette County, West Virginia. (Prepared by Whitney, Bailey, Cox & Magnani, Inc.).

Federal Emergency Management Agency
1988 Flood insurance rate maps – Fayette County, West Virginia.

Feminella, J., and C. Hawkins
1995 Interactions between stream herbivores and periphyton: a quantitative analysis of past experiments. Journal of the North American Benthological Society 14:465-509.

Flug, M.
1987 New River flow analysis. National Park Service, Fort Collins, CO.

Fortney, R.H., S.L. Stephenson, and H.S. Adams
1995 Reconnaissance vegetation study of the Bluestone, New, and Gauley River Gorges. Final Report. New River Gorge National River. Glen Jean, WV.

Fridley, H.
1950 The geomorphic history of the New-Kanawha River system. West Virginia Geological and Economic Survey. Morgantown, WV.

Fuerst, David N.
1981 A cultural resource project: New River Gorge National River, West Virginia (volumes 1 and 3). Report submitted to the National Park Service (Contract No. CX4000-0-0034) by Paul D. Marshall & Associates, Charleston, WV

GAI Consultants, Inc.
2007 Archaeological data recovery at Nuttallburg Mine Conveyor, New River Gorge National River. National Park Service, Denver CO.

Garman, G., and L. Nielson
1982 Piscivory by stocked brown trout (*Salmo trutta*) and its impact on the nongame fish community of Bottom Creek, Virginia. Canadian Journal of Fisheries and Aquatic Sciences 39:862-869.

Good, G.A., L. Stasick, and J. Clarke
2005 Administrative history, New River Gorge National River, West Virginia. National Park Service. Glen Jean, WV.

Graham, R.J., and D.J. Orth
1986 Effects of temperature and streamflow on time and duration of spawning by smallmouth bass. Transactions of the American Fisheries Society 115(5):693-702.

Grafton, W.N.
1993 Vascular flora on the lower sections of Gauley, Meadow, and Bluestone Rivers. (Extension Service and Division of Forestry, West Virginia University) National Park Service. Glen Jean, WV.

Grafton, W.N. and E. Grafton
1980 Literature review of geology/soils, plants and animal information pertinent to the New River Gorge National River, WV. Unpublished report.

Heritage Partners/ICON architecture, inc., and McMullan & Associates
2004 Nuttallburg Mine historic structures report. National Park Service. Glen Jean, WV

Hinton, City of
2005 Hinton 2010: planning for the future. Prepared by West Virginia University Extension Service, Hinton WV.

Hooper, M.K., J.A. Parkhurst, and L.L. McMullin
2006 Assessment of hunting impacts of New River Gorge National River, West Virginia. Technical Report NPS/NER/NRTR – XXXX/XXX. National Park Service. Philadelphia, PA.

Horsely, S.B., S.L. Stout, and D.S. DeCalesta
2003 White-tailed deer impact on the vegetation dynamics of a northern hardwood forest. Ecological Applications 13.

Hufford, M., T. Carroll, and R. Moonsammy
2006 Ethnographic overview and assessment of the New River Gorge National River and the Gauley River National Recreation Area. (Center for Folklore and Ethnography, University of Pennsylvania). National Park Service, Glen Jean,WV.

Jarvis, G.
2002 Draft climbing management plan: environmental assessment (internal draft). National Park Service, Geological Resources Division, Denver, CO.

Jenkins, R.E., and N.M. Burkhead
1994 Freshwater fishes of Virginia. American Fisheries Society. Bethesda, MD.

Jensen, P., D. Regan and J.L. Marion.
1993 A trail development plan for the New River Gorge National River. (Openspace Management, Appalachian Mountain Club, and Virginia Tech) National Park Service. Glen Jean, WV.

Jirka, K.J., and R.J. Neves
1987 A biological survey of the New River Gorge National River, Volume 4: a survey of freshwater mussels: final report. New River Gorge National River. Glen Jean, WV.

Johnson, J.
2003 Survey of abandoned mine portals for bats at the New River Gorge National River and Gauley River National Recreation Area, West Virginia. Research report. National Park Service, New River Gorge National River. Glen Jean, WV.

Jones, T., and J.M. Purvis
2003 Determine status and trends of New River crayfish community. Research Proposal. National Park Service, Glen Jean, WV.

Land and Community Associates
1994 Grandview cultural landscape report. National Park Service. Denver, CO

LeeDecker, C., H Henry, M.R. Holt, and J.T. Eddins
1996 Archeological investigations at site 46 FA 214 Thurmond Historic District and Southside Junction, New River Gorge National River. (Louis Berger & Associates, Inc.) National Park Service. Denver, CO.

Lessing, P.
1986 Geology of the New River Gorge. *Mountain State Geology.*

Leung, Yu-Fai, and Jeffry L. Marion.
1998 A survey of whitewater recreation impacts along five West Virginia rivers. (Prepared for the WV Division of Natural Resources.) Virginia Tech, Department of Forestry, Blacksburg, VA.

Lincoln, R.J., G. A. Boxshall, and P.F. Clark.
1982 A dictionary of ecology, evolution and systematics. Cambridge University Press.

Lobb, M.D., and D.J. Orth
1988 Microhabitat use by the bigmouth chub *Nocomis platyrhynchus* in the New River, West Virginia. American Midland Naturalist 120(1):32-40.

1987 A biological survey of the New River Gorge National River, Volume 3, habitat use by fishes of the New River, West Virginia. Final Report. New River Gorge National River, Glen Jean, WV.

1986 Habitat use by the bigmouth chub *Nocomis platyrhynchus* in the New River, West Virginia. American Midland Naturalist 120.

Lytle, D. A., and N. R. Poff.
2004 Adaptation to natural flow regimes. Trends in Ecology and Evolution 19.

Mahan, C.G.
2004 A natural resource assessment for New River Gorge National River. Technical Report NPS/NER/NRTR-2004/002. National Park Service. Philadelphia, PA.

Manni, M.F., Y. Le, M.A. Littlejohn, and S.J. Hollenhorst
2005 New River Gorge National River visitor study summer 2004. (Park Studies Unit Report 153). (University of Idaho Park Studies Unit) National Park Service. Moscow, ID

Markham, S.L., C.H. Hocutt, and J.R. Stauffer, Jr
1980 The crayfish and the freshwater mussels of the lower New River, Virginia and West Virginia. Natural History Miscellanea 708.

Marshall, B.D.
2001. An evaluation of the sensitivity of a macroinvertebrate biomonitoring study in headwater streams of New River Gorge National River. Journal of Freshwater Ecology 16.

Marshall, P.D.
1981 A cultural resource project: New River Gorge National River, West Virginia (volume 2). Report submitted to the National Park Service (Contract No. CX4000-0-0034) by Paul D. Marshall & Associates, Charleston, WV

McDonald, B.R., and P.J. Harmon
1989 Rare species of the Cunard, Stonecliff, and Southside Junction areas, New River Gorge National River. Report to New River Gorge National River. West Virginia Natural Heritage Program. Elkins, WV.

McDonald, B.R., and P. Trianosky
1995 Assessment of and management recommendations for the plant communities and rare species of Camp Brookside, New River Gorge National River. West Virginia Natural Heritage Program Technical Report 95-5. West Virginia Natural Heritage Program, Elkins, WV.

McMillan, M.H., J.C. Nekola, and D.W. Larson
2003 Effects of rock-climbing on the vegetation of the Niagara escarpment in southern Ontario, Canada. Conservation Biology 16.

Messinger, T.
2002 Reconnaissance for selected pathogens, and review of pertinent literature, for the New River Gorge National River, West Virginia, 2000. U.S. Geological Survey, Charleston, WV.

Messinger, T., and C.A. Hughes
2000 Environmental setting and its relation to water quality in the Kanawha River basin. U.S.G.S. Water-Resources Investigations Report 00-4020. Charleston, WV.

Miller, R., and J. Williams
1989 Extinctions of North American fishes during the last century. Fisheries 14:22-38.

Mott, D.N.
1995 Water resources issues overview: New River Gorge National River, Gauley River National Recreation Area, and Bluestone National Scenic River, West Virginia. National Park Service. Glen Jean, VA.

Moyle, P., and J. Williams
1990 Biodiversity loss in the temperate zone: decline of the native fish fauna of California. Conservation Biology 4:275-284.

Mueller, B.J.
1997 Kaymoor Mine historic structure report. National Park Service. Denver, CO.

Naiman, R., H. Decamps, and M. Pollock
1993 The role of riparian corridors in maintaining regional biodiversity. Ecological Applications 3.

New River Parkway Authority
1992 New River Parkway master plan – northern and central segments. Hinton, WV.

Nielsen, L.A., and D.J. Orth
1988 The hellgrammite-crayfish bait fishery of the New River and its tributaries, West Virginia. North American Journal of Fisheries Management 8.

Norris, S.J.
2002 Final report of review of plant species lists for New River Gorge National River, Bluestone National Scenic River and Gauley River National Recreation Area. National Park Service, Inventory and Monitoring Program. University Park, PA.

O'Connell, T., R. Brooks, M. Lanzone, and J. Bishop
2003 A bird community index for the Mid-Atlantic Piedmont and Coastal Plain. Final report to the U.S. Environmental Protection Agency. Report No. 2003-02. Penn State Cooperative Wetlands Ctr., The Pennsylvania State University. University Park, PA.

O'Dell, P.
2003 Oil and gas potential and reasonable foreseeable development activity in the Gauley River National Recreation Area and New River Gorge National River. National Park Service, Geologic Resources Division. Denver, CO.

O'Dell, P., and L. Norby
2002 Gauley River National Recreation Area and New River Gorge National River September, 2002 trip report – Geologic Resources Division. National Park Service, Geologic Resources Division. Denver, CO.

Pauley, T.K.
1993 Report of upland vertebrates in the New River Gorge National River (3 volumes). Report submitted to New River Gorge National River. Glen Jean, WV.

Pauley, T.K., G. Kees, L. Ordiway, and M. Turner
1997 Report of vertebrates in developmental areas of the New River Gorge National River. Final report. New River Gorge National River, Glen Jean WV.

Parsons Brinckerhoff Quade & Douglas, Inc.
2000 National Coal Heritage Area strategic management action plan. State of West Virginia Division of Culture and History and the National Park Service. Philadelphia, PA.

Pennak, R.W.
1989 Fresh-water invertebrates of the United States, Protozoa to Mollusca. 3rd Ed. John Wiley and Son, NY.

Pennington and Associates, Inc.
2002 Mollusca survey New River, Stone Cliff Bridge, Fayette County, West Virginia. Report. KCI Technologies, Bensalem, PA.

Pollack, D., and G. Crothers
2005 Archaeological overview and assessment of New River Gorge National River, West Virginia. Kentucky Archaeological Survey. Lexington, KY.

Power, M., and W. Matthews
1983 Algae-grazing minnows (*Campostoma anomalum*), piscivorous bass (*Micropterus* spp), and the distribution of attached algae in a small prairie-margin stream. Oecologia 60:328-332.

Purvis, J.M. and L. Wilson
1999 Hydrologic influences on fecal coliform bacteria in a tributary to New River Gorge National River. pp. 24-31 in Proceedings New River Symposium. April 15-16, 1999. Boone, North Carolina. National Park Service. Glen Jean, WV.

Purvis, J.M., M. Mathes, T. Messinger, J. Wiley, and K. Paybins.
2002 Water resources management plan, New River Gorge National River, Gauley River National Recreation Area, Bluestone National Scenic River, West Virginia. National Park Service. Glen Jean, WV.

Purvis, J.M., L. Wilson, and K. Vandersall
2006 Water quality monitoring program 2001-2003, New River Gorge National River, Bluestone National Scenic River, Gauley River National Recreation Area, West Virginia. National Park Service. Glen Jean, WV.

Raleigh County
1997 Raleigh County comprehensive plan. Beckley, WV.

Remo, J.W.F.
1999 Geologic controls on mass-movement in the New River Gorge, West Virginia. Master's Thesis. West Virginia University. Morgantown, WV.

Ritters, K., J Wickham, R. O'Neill, B. Jones, and E. Smith
2000 Global-scale patterns of forest fragmentation. Conservation Ecology 4(2).

Roell, M.J., and D.J. Orth
1992 Production of three crayfish populations in the New River of West Virginia, USA. Hydrobiologia 228(3):186-194.

1985 Impacts of commercial harvest invertebrate baits on the predator-prey interactions in the New River. Final report. National Park Service. Glen Jean, WV.

Rosenberg, K.V., S.E. Barker, and R.W. Rohrbaugh
2000 An atlas of cerulean warbler populations. Cornell Lab of Ornithology. Ithaca, NY.

Rutherford, R.H.
1999 Periphyton of ten selected tributaries of the New River Gorge National River. Final report. New River Gorge National River. Glen Jean, WV.

Schwietering, J.F.
1984 Beneath the New River Gorge. Mountain State Geology*: 23-24*.

Sheldon, A.L.
1988 Conservation of stream fishes: patterns of diversity, rarity, and risk. Conservation Biology 2.

Small, Sally, Louis Torres and Larry Reynolds
1992 Thurmond commercial buildings, New River Gorge National River. National Park Service, Denver, CO.

Southern Appalachian Biodiversity Institute
2003 www.sabionline.org.

Stahlgren, L., M. Jones, R. Burdin, and B. Mabelitini
2007 Historical archaeological survey: New River Gorge National River and Gauley River National Recreation Area. Kentucky Archeological Survey Report 143. Prepared for NPS by Kentucky Archaeological Survey, University of Kentucky, Lexington, KY.

Stauffer, J.R., Jr., C.H. Hocutt, and S.L. Markham
1980 Final report, aquatic biological survey of the New River, Virginia and West Virginia. Appalachian Environmental Laboratory, University of Maryland, Frostburg State College Campus, Frostburg, MD.

Sullivan, R.J.
1995 Peregrine falcon survey report. Final report. New River Gorge National River. Glen Jean, WV.

Summers County Commission
2002 Summers County 2020 – a community shared vision. Hinton, WV.

Taylor, R.W.
1983 A survey of the freshwater mussels of the Kanawha River from riverhead to river mouth – Final repor*t.* U.S. Army Corps of Engineers, Huntington District, WV.

U.S. Access Board
2002 ADA accessibility guidelines for buildings and facilities. Washington, D.C.

U.S. Department of Agriculture, Natural Resource Conservation Service
2007 Final watershed plan – final environmental impact statement for the Dunloup Creek watershed. (Prepared for the West Virginia State Conservation Committee and the Southern Conservation District.) Morgantown, WV.

2003 West Virginia prime farmland soils and soils of statewide importance. Charleston, WV.

1984 Soil survey of Mercer and Summers Counties, West Virginia. Washington, D.C.

1975 Soil survey of Fayette and Raleigh Counties, West Virginia. Washington, D.C.

U.S. Department of Homeland Security, Federal Emergency Management Agency
1988 Flood insurance study, unincorporated areas of Fayette County, West Virginia: March 1988. Federal Emergency Management Agency, Washington, D.C.

1980 Flood insurance study, unincorporated areas of Summers County, West Virginia: May 1980. Federal Emergency Management Agency, Washington, D.C.

U.S. Department of the Interior, Fish and Wildlife Service
1999 Partners in Flight watchlist. USGS Patuxent Wildlife Research Center. Laurel, MD.

U.S. Department of the Interior, National Park Service
2009 Foundation for planning – New River Gorge National River. National Park Service. Glen Jean, WV.

2008a http://www2.nature.nps.gov/mpur/index.cfm. NPS Public Use Statistics Office, Washington, D.C.

2008b National Park Service general management planning dynamic sourcebook. National Park Service, Denver, CO.

2008c Nuttallburg visitor use area implementation plan/environmental assessment. National Park Service. Glen Jean, WV.

2008d Park museum collection storage plan. National Park Service. Glen Jean, WV.

2008e Potential development of the natural gas resources in the Marcellus Shale, New York, Pennsylvania, West Virginia, and Ohio. National Park Service, Natural Resource Program Center. Washington, D.C.

2008f State rare species list – New River Gorge National River. National Park Service. Glen Jean, WV.

2007 New River Gorge National River superintendent's compendium to 36 Code Federal Regulations – compendium of designations, closures, permit request requirements, and other restrictions imposed under the discretionary authority of the Superintendent of New River Gorge National River. National Park Service, Glen Jean, WV.

2006a National Park Service management policies 2006. Washington Office, Washington, D.C.

2006b New River Gorge National River general management plan – scoping report. National Park Service, Glen Jean, WV.

2006c New River Gorge National River list of classified structures. National Park Service, Glen Jean, WV.

2006d Red Ash Island preliminary site investigation. National Park Service, Glen Jean, WV.

2006e Strategic plan for New River Gorge National River, Gauley River National Recreation Area, Bluestone National Scenic River (Fiscal Year 2007 – 2011) National Park Service, Glen Jean, WV.

2006f Visitation and visitor use – New River Gorge National River (1984 to 2006). National Park Service, Glen Jean, WV.

2005a New River Gorge National River cultural landscapes inventory. Northeast Regional Office, National Park Service, Boston, MA.

2005b New River Gorge National River climbing management plan environmental assessment. National Park Service, Glen Jean, WV.

2005c Vista management plan, New River Gorge National River. National Park Service. Glen Jean, WV.

2004a Collections management plan, New River Gorge National River. (NPS Northeast Museum Services Center) National Park Service. Glen Jean, WV.

2003a Integrated pest management plan – New River Gorge National River, Gauley River National Recreation Area, Bluestone National Scenic River. National Park Service, Glen Jean, WV.

2003b Nuttallburg level II cultural landscapes inventory. National Park Service, Glen Jean, WV.

2002a Camp Brookside level I cultural landscapes inventory. National Park Service, Glen Jean, WV.

2002b Christina Vallandingham house level II cultural landscapes inventory. National Park Service, Glen Jean, WV.

2002c Harrah Homestead level II cultural landscapes inventory. National Park Service, Glen Jean, WV.

2002d Procedural manual #77-1: wetland protection. National Park Service, Denver Service Center, Denver, CO.

2002e Richmond-Hamilton Farm level I cultural landscapes inventory. National Park Service, Glen Jean, WV.

2002f Thurmond Historic District level II cultural landscapes inventory. National Park Service, Glen Jean, WV.

2001a Director's Order 12: conservation planning, environmental impact analysis, and decision-making. National Park Service, Washington, D.C.

2001b New River Gorge floods 2001: emergency rehabilitation plan. National Park Service, Glen Jean, WV.

2000 Thurmond development concept plan and interpretive prospectus – Amendment. National Park Service, Glen Jean, WV.

1999 Grandview development concept plan/interpretive prospectus/ environmental assessment. (NPS D-176) National Park Service, Glen Jean, WV.

1997a Resource management plan – New River Gorge National River, Gauley River National Recreation Area, Bluestone National Scenic River. (not adopted) National Park Service, Glen Jean, WV.

1997b Visitor experience and resource protection (VERP) framework – a handbook for planners and managers. NPS Denver Service Center, Denver, CO.

1996a NPS-28 cultural resource management guideline. National Park Service, Washington, D.C.

1996b New River Gorge National River, Gauley River National Recreation Area, and Bluestone National Scenic River, West Virginia, water resource scoping report. (Technical Report NPS/NRWRS/NRTR-96/76.) National Park Service, Water Resources Division, Fort Collins, CO.

1995a Baseline water quality data inventory and analysis, New River Gorge National River. National Park Service, Fort Collins, CO.

1995b Development concept plan/environmental assessment – Teays. (NPS D-86) National Park Service, Glen Jean, WV.

1995c Environmental assessment - Fayette Station: designs for parking areas and comfort stations. National Park Service, Glen Jean, WV.

1995d Estimates of non-commercial whitewater use. National Park Service, Glen Jean, WV.

1995e Secretary of the Interior's standards for the treatment of historic properties, as amended. National Park Service, Washington D.C.

1994a Middle gorge development concept plan/environmental assessment. (NPS D-79A) National Park Service, Glen Jean, WV.

1994b New River Gorge National River, Gauley River National Recreation Area, Bluestone National Scenic River: Gypsy Moth Monitoring Project Report 1994. National Park Service, Glen Jean, WV.

1994c Reconnaissance vegetation study of the Bluestone, New, and Gauley River Gorge. National Park Service, Glen Jean, WV.

1993a National Park Service floodplain management guideline. National Park Service, Washington, D.C.

1993b Reconnaissance vegetation study of the Bluestone, New, and Gauley River Gorges. National Park Service, Glen Jean, WV.

1993c Winter fecal coliform bacteria study, New River Gorge National River, Bluestone National Scenic River, Gauley River National Recreation Area. (Prepared by Scott Gibson.) National Park Service, Glen Jean, WV.

1992a Bluestone National Scenic River and Gauley River National Recreation Area – water quality monitoring program, April – October 1992. (Prepared by R.J. Sullivan.) National Park Service, Glen Jean, WV.

1992b Kaymoor development concept plan/environmental assessment. (NPS D-45A) National Park Service, Glen Jean, WV.

1992c Thurmond development concept plan/environmental assessment. (NPS D-34A) National Park Service, Glen Jean, WV.

1992d Mine and gas well inventory: Gauley River NRA and Bluestone NSR. National Park Service, Glen Jean, WV.

1992e Oil and gas development within and adjacent to Gauley River National Recreation Area, with a section on New River Gorge National River. Land Resources Division, Mining and Minerals Branch, Denver, CO.

1990a Cunard development concept plan/environmental assessment. (NPS D-34A) National Park Service, Glen Jean, WV.

1990b Glade Creek development concept plan/interpretive prospectus. (NPS D-36A) National Park Service, Glen Jean WV.

1990c Stone Cliff site development plan/environmental assessment, National Park Service, Glen Jean, WV.

1988a Canyon Rim/Burnwood development concept study/environmental assessment. (NPS D-17B) National Park Service, Oak Hill, WV.

1988b Deviations to the land protection plan for New River Gorge National River. National Park Service, Philadelphia, PA.

1986 Glen Jean headquarters site development plan. National Park Service, Oak Hill, WV.

1984 Land protection plan – New River Gorge National River. National Park Service, Oak Hill, WV.

1982 New River Gorge National River general management plan. National Park Service, Oak Hill, WV.

U.S. Department of the Interior, U.S. Fish and Wildlife Service
1992 National wetlands inventory. U.S. Fish and Wildlife Service, Washington D.C.

U.S. Department of Transportation, Federal Highway Administration and West Virginia Department of Transportation, Division of Highways
2004 Record of decision: New River Parkway, I-64 to Hinton – Raleigh and Summers County West Virginia. WV DOT, DOH, Charleston, WV

2003 New River Parkway, I-64 to Hinton – Raleigh and Summers Counties, West Virginia final environmental impact statement. (Prepared by Virginia Polytechnic Institute and State University, Department of Landscape Architecture.) WV DOT, DOH, Charleston, WV.

U.S. Environmental Protection Agency
1996 Draft environmental justice guidance. U.S. EPA, Washington, D.C.

U.S. Government Accountability Office
2006 Major operational funding trends and how selected park units responded to those trends for fiscal years 2001 through 2005. U.S. GAO, Washington, D.C.

Unrau, H. D.
1996 Special history study/historic context study. National Park Service. Glen Jean, WV.

Vanderhorst, J.P.
2007 Vegetation classification and mapping of New River Gorge National River, West Virginia. Technical Report NPS/NER/NRTR. National Park Service. Philadelphia PA.

2003 Roadless block analysis for New River Gorge National River, Final Report. West Virginia Natural Heritage Program, Elkins, WV.

2001 Plant communities of the New River Gorge National River, West Virginia (Northern and Southern Thirds). (Non-Game Wildlife and Natural Heritage Program, West Virginia Department of Natural Resources). West Virginia Natural Heritage Program, Elkins, WV.

Versel, D.E.
2006 A study of the economic impact of New River Gorge National River on Fayette, Nicholas, Raleigh, and Summers Counties, West Virginia. National Park Service. Glen Jean, WV.

Virginia Polytechnic Institute and State University
1998 A use potential study of recreation opportunities and design features for the proposed New River Parkway. WV DOT, Division of Highways, Charleston, WV.

Voshell, J.R., Jr.
1985 Trophic basis of production for macroinvertebrates in the New River below Bluestone Dam. Report to West Virginia Department of Natural Resources. Virginia Polytechnic Institute and State University. Blacksburg,VA.

1984 The ecology of black flies in the New River and its major tributaries in southern West Virginia. *in* Proceedings. New River Symposium April 12-14, 1984. Boone, North Carolina. National Park Service. Oak Hill, WV.

Voshell, J.R., Jr., D.J. Orth, S.W. Hiner, and R.S. Easton
1996 New River Gorge National River long-term ecological monitoring system user manual field and laboratory methods. Virginia Polytechnic Institute and State University, Blacksburg, VA.

Weaks, T.E., D. Nash, and M. Nowland
1997 Lichen and non-vascular flora of New River Gorge National River, West Virginia. Final report. New River Gorge National River. Glen Jean, WV.

Welsh, S., and D. Wellman
2001 Fishes of New River Gorge National River. Final report. New River Gorge National River, Glen Jean, WV.

West Virginia Department of Transportation
2007 West Virginia statewide transportation improvement program (STIP) (federal fiscal years 2008-2013) (proposed)

2005 – 2006 West Virginia transportation improvement program (STIP) (federal fiscal years 2006-2008) (various amendments) (approved). Charleston, WV.

2006a Fayette County 2006 average daily traffic. Charleston, WV.

2006b Raleigh County 2006 average daily traffic. Charleston, WV.

2006c Summers County 2006 average daily traffic. Charleston, WV.

2005 West Virginia statewide transportation improvement program (STIP) (federal fiscal years 2006-2008) (approved). Charleston, WV.

2001 As a matter of fact. Charleston, WV.

West Virginia Division of Natural Resources
2008a Annual boater counts. Division of Water Resources, Charleston, WV.

2008b Letter from Barbara Sargent, Environmental Resources Specialist, Wildlife Diversity Program, Charleston, WV, to Deborah Darden, National Park Service, New River Gorge National River, Glen Jean, WV, December 8, 2008.

2006 West Virginia integrated water quality monitoring and assessment report 2006. Division of Water and Waste Management, Charleston, WV.

2003 www.wvdnr.gov

1989 New River Gorge National River: fecal coliform study, April – September 1987. Division of Water Resources, Monitoring Branch, Charleston, WV.

West Virginia Development Office
2003 West Virginia statewide comprehensive outdoor recreation plan. Charleston, WV.

West Virginia Gap Analysis Program
2003 http://www.nrac.wvu.edu/gap/pub.htm.

West Virginia Professional River Outfitters
2005 New River Gorge National River general management plan: shaping the next 20 years of the gorge and the economic vitality of her gateway communities. Fayetteville, WV.

Whisman, Stephen A.
1998 Limits of acceptable change river management plan, 1998 annual report. (Prepared for WV Division of Natural Resources.) West Virginia University, Charleston, WV.

Wiley, Jeffrey B.
1992 Flow and solute-transport models for the New River in the New River Gorge National River, West Virginia. (U.S. Geological Survey, Open-File Report 92-65) Charleston, WV.

1989 River depths and other characteristics of the New River downstream from Hinton, West Virginia, in New River Symposium, Radford, Virginia, April 20-22, 1989, Proceedings: National Park Service, p. 129-139.

Wiley, Jeffrey B., and Michael K. Cunningham
1994 Flood characteristics for the New River in the New River Gorge National River. (US Geological Survey, Open-File Report 93-77) Charleston, WV.

Wilson, L., and J.M. Purvis
2003 Water quality monitoring program 1998-2000 - New River Gorge National River, Bluestone National Scenic River, Gauley River National Recreation Area. National Park Service, Glen Jean, WV.

2000 Water quality monitoring program 1994-1997 - New River Gorge National River, Bluestone National Scenic River, Gauley River National Recreation Area. National Park Service, Glen Jean, WV.

Wilson, L., K. Vandersall, and J.M. Purvis
2006 Water quality monitoring program 2001-2003 - New River Gorge National River, Bluestone National Scenic River, Gauley River National Recreation Area. National Park Service, Glen Jean, WV.

Wood, J. M.
1999 Hemlock ecosystem inventory and monitoring project of the New River Gorge National River and Gauley River National Recreation Area. National Park Service, Glen Jean, WV.

Wood, P. B.
2001 Characteristics of Allegheny woodrat (*Neotoma magister*) habitat in the New River Gorge National River, West Virginia. Final report. National Park Service, New River Gorge National River. Glen Jean, WV.

2000 Point count surveys for birds in hemlock stands at New River Gorge National River. Progress report to Resource Management, New River Gorge National River. Glen Jean, WV.

Workman, M.E., L.R. Maddex, and D.J. Bonenberger
2005 Historic resources study, New River Gorge National River. (NERI-02-038 HRS). National Park Service, Glen Jean, WV.

Wuebber, I., T.J. Powell, and M.L. Alterman
1993 Historical research and archeological monitoring at Cunard, West Virginia. (Louis Berger & Associates, Inc.). National Park Service. Glen Jean, WV.

Wuellner, M.J., D.B. Heck and C.D. Cheek
1996 Documentary research for the rehabilitation of the Thurmond Depot and Southside site development, New River Gorge National River. (John Milner Associates, Inc.) National Park Service. Denver, CO.

Yuill, A. A.
1988 Abandoned mine land survey of the New River Gorge National River (3 volumes). Report submitted to the National Park Service, New River Gorge National River. Glen Jean, WV.

Acronyms

Acronyms

ACHP – Advisory Council on Historic Preservation

ADT – average daily trip

AML – abandoned mine lands

API – Asset priority index

ATV – all terrain vehicle

BMPs – best management practices

CBA – Choosing By Advantages

CCC – Civilian Conservation Corps

CEQ – Council on Environmental Quality

CFR – Code of Federal Regulations

cfs – cubic feet per second

CLI – Cultural Landscape Inventory

CLR – Cultural Landscape Report

CVB – Convention and Visitors Bureau

DO – Director's Order

DCP – Development Concept Plan

EA – Environmental Assessment

EAP – Emergency Action Plan

EIS – Environmental Impact Statement

EO – Executive Order

EOP – Emergency Operations Plan

ESEP – Early Flood Warning, Search, Rescue, Evacuation and Recovery Plan

EPA – U.S. Environmental Protection Agency

FCI – Facilities condition index

FEMA – Federal Emergency Management Agency

FHWA – Federal Highway Administration

FMSS – Facility Management Software System

FONSI – Finding of No Significant Impact

FR – Federal Register

FTE – Full-time equivalent (staff positions)

GAO – U.S. Government Accountability Office

GMP – General Management Plan

GPRA – Government Performance and Results Act

IMBA – International Mountain Bicycling Association

LMS – Land Management System

LPP – Land Protection Plan

MOA – Memorandum of Agreement

NAAQS – National Ambient Air Quality Standards

NCHA – National Coal Heritage Area

NERI – New River Gorge National River

NEPA – National Environmental Policy Act

NERI – New River Gorge National River

NERO – National Park Service Northeast Region Office

NHPA – National Historic Preservation Act

NOA – Notice of Availability

NOI – Notice of Intent

NOAA – National Oceanic and Atmospheric Administration

NPDES – National Pollutant Discharge Elimination System

NPS – National Park Service

NR – National River

NRCS – U.S Department of Agriculture Natural Resources and Conservation Service

NRPA – New River Parkway Authority

NWI – U.S. Fish and Wildlife Service National Wetland Inventory

ONPS – Operations of National Park System

PEPC – Planning, Environment and Public Comment System

PL – Public Law

ppm – parts per million

ROD – Record of Decision

ROW – right-of-way

ROD – Record of Decision

RL – river left (includes the shoreline and adjacent upland on the left side of the New River when looking downstream)

RR – river right (includes the shoreline and adjacent upland on the right side of the New River when looking downstream)

SHPO – State Historic Preservation Officer/Office

SMCRA – Surface Mining Control and Reclamation Act

SR – West Virginia state road

SWPPP – Stormwater Pollution Prevention Plan

USC – U.S. Code

VIP – Volunteers in Park

WASO – National Park Service Washington Office

WV DEP – West Virginia Department of Environmental Protection

WV DNR – West Virginia Division of Natural Resources

WV DOT – West Virginia Department of Transportation

WV DT – West Virginia Division of Tourism

WV GES – West Virginia Geologic and Economic Survey

WV SHPO – West Virginia State Historic Preservation Officer

WVU – West Virginia University

US ACOE – U.S. Army Corps of Engineers

US DC – U.S. Department of Commerce, Bureau of the Census

US FWS – U.S. Fish and Wildlife Service

USGS – U.S. Geological Survey

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Glossary

Glossary

Accessibility. Accessibility occur when individuals with disabilities are able to reach, use, understand, or appreciate NPS programs, facilities, and services, or to enjoy the same benefits that are available to persons without disabilities. (see also, "universal design")

Affected environment. The existing biological, physical, cultural, social, and economic conditions that are subject to direct and indirect changes which result from actions described in alternatives under consideration.

Alternative. A possible course of action, one of several ways to achieve an objective or vision. The term is used in a GMP to describe different management actions.

Area-specific management prescriptions. Area-specific guidance about the desired resource conditions, visitor experience opportunities, and appropriate kinds and levels of management, development, and access (modes of transportation) for each area of a park, based on how it is zoned; also the kinds of changes needed to move from the existing to the desired conditions.

Best management practices (BMPs). Practices that apply the most current means and technologies available to not only comply with mandatory environmental regulations, but also maintain a superior level of environmental performance.

Carrying capacity. The type and level of visitor use that can be accommodated while sustaining the desired resource and visitor experience conditions in a park.

Cooperating agency. A federal action other than the one preparing the National Environmental Policy Act document (lead agency) that has jurisdiction over the proposal by virtue of law or special expertise and that has been deemed a cooperating agency by the lead agency. State of local governments, and/or Indian tribes, may be designated cooperating agencies as appropriate.

Cultural landscape. A geographic area (including both cultural and natural resources and the wildlife and domestic animals therein) associated with a historic event, activity or person or exhibiting other cultural or aesthetic values. There are four types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes.

Cultural resources. Aspects of a cultural system that are valued by or significantly representative of a culture or that contain significant information about a cultural. A cultural resource may be a tangible entity or a cultural practice. Tangible cultural resources are categorized as districts, sites, buildings, structures and objects for the National Register of Historic Places, and as archeological resources, cultural landscapes, structures, museum objects, and ethnographic resources for NPS management purposes.

Cumulative actions. Actions that, when viewed with other actions in the past, the present, or the foreseeable future regardless of who has undertaken or will undertake them, have an additive impact on the resource the proposal would affect.

Cumulative impact. The impacts of cumulative actions.

Desired condition. A qualitative description of the integrity and character for a set of resources and values, including visitor experiences, that park management has committed to achieve and maintain.

Developed area. An area managed to provide and maintain facilities (e.g. roads, campgrounds, housing) serving park managers and visitors. Includes areas where park development or intensive use may have substantially altered the natural environment or the setting for culturally significant resources.

Direct effect. An impact that occurs as a result of the proposed action or alternative in the same place and at the same time as the action.

Discovery sites. Cultural resource sites in remote areas of the park which visitors would come upon as they experience the park. Treatment would seek to balance natural and cultural resource management demands with the goal of maintaining ruins and mitigating degradation of cultural resources by natural resources and processes and by visitor use. Interpretive media would likely be present.

Environmental consequences. The scientific and analytic basis for comparing alternatives in an environmental impact statement, based on their environmental effects, including any unavoidable adverse effects. Environmental consequences include short-term, long-term, and cumulative impacts to ecological, aesthetic, historical, cultural, economic, and social environments.

Environmental impact statement. A detailed National Environmental Policy Act document that is prepared when a proposal or alternatives have the potential for significant impact on the human environment.

Ethnographic resources. Objects and places, including sites, structures, landscapes, and natural resources, with traditional cultural meaning and value to associated peoples. Research and consultation with people identifies and explains the places and things they find culturally meaningful. Ethnographic resources eligible for the National Register are called traditional cultural properties.

Environmentally preferred alternative. Of the action alternatives analyzed, the one that would best promote the policies in NEPA Section 101.

Fundamental resources and values. Those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes, including opportunities for visitor enjoyment, determined to warrant primary consideration during planning and management because they are critical to achieving the park's purpose and maintaining its significance.

General Management Plan (GMP). A National Park Service planning document which clearly defines direction for resource preservation and visitor use in a park, and serves as the basic foundation for decision making. GMPs are developed with broad public involvement.

Historic site. A landscape significant for its association with a historic event, activity or person.

Indicators of user capacity. Specific, measurable physical, ecological, or social variables that can be measured to track changes in conditions caused by public use, so that progress toward attaining the desired conditions can be assessed.

Impact topics. Specific natural, cultural, or socioeconomic resources that would be affected by the proposed action or alternatives (including no action). The magnitude, duration, and timing of the effect to each of these resources is evaluated in the impact section of an EIS.

Impairment. An impact so severe that, in the professional judgment of a responsible NPS manager, it would harm the integrity of park resources or values and violate the 1916 NPS Organic Act.

Indirect effect. Reasonably foreseeable impacts that occur removed in time or space from the proposed action.

Interpretation. Activities or media designed to help people understand, appreciate, enjoy, and care for the natural and cultural environment.

Issue. Some point of debate that needs to be decided. For GMP planning purposes issues can be divided into "major questions to be answered by the GMP" (also referred to as the decision points of the GMP) and the "NEPA issues" (usually environmental problems related to one or more of the planning alternatives).

Lead agency. The agency either preparing or taking primary responsibility for preparing the National Environmental Policy Act document.

Management concept. A brief, inspirational statement of the kind of place a park should be (a "vision" statement).

Management prescription. A description of the specific resource conditions and visitor experiences along with appropriate kinds and levels of management, use, and development for each area of a park that are to be achieved and maintained.

Mitigation. Modification of a proposal to lessen the intensity of its impact on a particular resource.

No Action Alternative. An alternative in an environmental impact statement that continues the current management direction. This alternative serves as a benchmark against which action alternatives are compared.

Notice of intent. The notice submitted to the *Federal Register* that an environmental impact statement will be prepared. It describes the proposed action and alternatives, identifies a contact person in the National Park Service, and gives time, place, and descriptive details of the agency's proposed scoping process.

Other important resources and values. Those attributes that are determined to be particularly important to park management and planning, although they are not related to the park's purpose and significance.

Park purpose. The specific reason(s) for establishing a particular park.

Preferred alternative. The alternative an NPS decision-maker has identified as preferred at the draft EIS stage. It is identified to show the public which alternative is likely to be selected to help focus its comments.

Primary interpretive themes. The most important ideas or concepts to be communicated to the public about a park.

Projected implementation costs. A projection of the probably range of recurring annual costs, initial one-time costs, and life-cycle costs of plan implementation.

Proposal. The stage at which the National Park Service has a goal and is actively preparing to make a decision on one or more alternative means of accomplishing that goal. The goal can be a project, plan, policy, program, and so forth. The National Environmental Policy Act process begins when the effects can be meaningfully evaluated.

Record of decision. The document that is prepared to substantiate a decision based on an environmental impact statement. It includes a statement of the decision made, a detailed discussion of decision rationale, and the reasons for not adopting all mitigation measures analyzed, if applicable.

River left. Includes the shoreline and adjacent upland on the left side of the New River when looking downstream.

River right. Includes the shoreline and adjacent upland on the right side of the New River when looking downstream.

Significance. Statements of why, within a national, regional, and systemwide context, the park's resources and values are important enough to warrant national park designation.

Scoping. Internal NPS decision-making on issues, alternatives, mitigation measures, the analysis boundary, appropriate level of documentation, lead and cooperating agency roles, available references and guidance, defining purpose and need, and so forth. External scoping is the early involvement of interested and affected public.

Special mandates. Legal mandates specific to the park that expand upon or contradict a park's legislated purpose.

Stakeholders. Individuals and organizations that are actively involved in the project, or whose interests may be positively or negatively affected as a result of the project execution/completion. They may also exert an influence over the project and its results. For GMP planning purposes, the term stakeholder includes NPS officials/staff as well as public and private sector partners and the public, which may have varying levels of involvement.

Universal design. The design of products and environments to be usable by all people to the greatest extent possible, without the need for adaptation or specialized design.

User capacity. The types and levels of visitor and other public use that can be accommodated while sustaining the desired resource conditions and visitor experiences that complement the purposes of a park.

Visitor experience. The perceptions, feeling, and interactions that visitors have with the park's environment and programs. The experience is affected by the setting, the types and levels of activities permitted, and the interpretive techniques used to convey park themes.

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New River Gorge National River

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