

Foundation Document Badlands National Park

South Dakota September 2017



Signatures 8-31-2017





Contents

Mission	of the National Park Service
Introduc	ction
Part 1: C	Core Components
	Brief Description of the Park
	Park Purpose
	Park Significance
	Fundamental Resources and Values
	Other Important Resources and Values
	Interpretive Themes
Part 2: D	Oynamic Components
	Special Mandates and Administrative Commitments
	Special Mandates
	Administrative Commitments
	Assessment of Planning and Data Needs
	Analysis of Fundamental Resources and Values
	Analysis of Other Important Resources and Values
	Identification of Key Issues and Associated Planning and Data Needs 33
	Planning and Data Needs
Part 3: C	Contributors
	Badlands National Park
	NPS Midwest Regional Office
	Other NPS Staff
	Partners
Append	ixes
,	Appendix A: Enabling Legislation and Legislative Acts for
	Badlands National Park
,	Appendix B: Inventory of Administrative Commitments 56
,	Appendix C: Basics for Wilderness Stewardship



Mission of the National Park Service

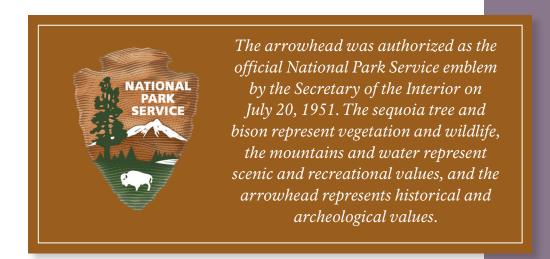
The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The NPS core values are a framework in which the National Park Service accomplishes its mission. They express the manner in which, both individually and collectively, the National Park Service pursues its mission. The NPS core values are:

- **Shared stewardship:** We share a commitment to resource stewardship with the global preservation community.
- Excellence: We strive continually to learn and improve so that we may achieve the highest ideals of public service.
- **Integrity:** We deal honestly and fairly with the public and one another.
- Tradition: We are proud of it; we learn from it; we are not bound by it.
- **Respect:** We embrace each other's differences so that we may enrich the well-being of everyone.

The National Park Service is a bureau within the Department of the Interior. While numerous national park system units were created prior to 1916, it was not until August 25, 1916, that President Woodrow Wilson signed the National Park Service Organic Act formally establishing the National Park Service.

The national park system continues to grow and comprises more than 400 park units covering more than 84 million acres in every state, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands. These units include, but are not limited to, national parks, monuments, battlefields, military parks, historical parks, historic sites, lakeshores, seashores, recreation areas, scenic rivers and trails, and the White House. The variety and diversity of park units throughout the nation require a strong commitment to resource stewardship and management to ensure both the protection and enjoyment of these resources for future generations.



1

Introduction

Every unit of the national park system will have a foundational document to provide basic guidance for planning and management decisions—a foundation for planning and management. The core components of a foundation document include a brief description of the park as well as the park's purpose, significance, fundamental resources and values, other important resources and values, and interpretive themes. The foundation document also includes special mandates and administrative commitments, an assessment of planning and data needs that identifies planning issues, planning products to be developed, and the associated studies and data required for park planning. Along with the core components, the assessment provides a focus for park planning activities and establishes a baseline from which planning documents are developed.

A primary benefit of developing a foundation document is the opportunity to integrate and coordinate all kinds and levels of planning from a single, shared understanding of what is most important about the park. The process of developing a foundation document begins with gathering and integrating information about the park. Next, this information is refined and focused to determine what the most important attributes of the park are. The process of preparing a foundation document aids park managers, staff, and the public in identifying and clearly stating in one document the essential information that is necessary for park management to consider when determining future planning efforts, outlining key planning issues, and protecting resources and values that are integral to park purpose and identity.

While not included in this document, a park atlas is also part of a foundation project. The atlas is a series of maps compiled from available geographic information system (GIS) data on natural and cultural resources, visitor use patterns, facilities, and other topics. It serves as a GIS-based support tool for planning and park operations. The atlas is published as a (hard copy) paper product and as geospatial data for use in a web mapping environment. The park atlas for Badlands National Park can be accessed online at: http://insideparkatlas.nps.gov/.

(Note: Due to the sensitive nature of paleontological and archeological locations, this data will not be made available as a layer file in the park atlas.)



Part 1: Core Components

The core components of a foundation document include a brief description of the park, park purpose, significance statements, fundamental resources and values, other important resources and values, and interpretive themes. These components are core because they typically do not change over time. Core components are expected to be used in future planning and management efforts.

Foundation elements for South Unit of Badlands National Park were completed during the *South Unit General Management Plan / Environmental Impact Statement* in 2012. This foundation updates those foundation elements to include the North Unit and serves the entire park.

Brief Description of the Park

The White River Badlands in southwestern South Dakota contain spiritual, historical, geological, and paleontological resources. The scenic landscape of the Badlands has great historical and spiritual significance to the Lakota Sioux. Educational opportunities and scientific research offer visitors insight into the area's geological and paleontological wonders. The striking geologic formations contain one of the world's richest fossil beds. Ancient mammals such as rhinos, horses, and saber-toothed cats once roamed here. The Oglala Sioux Tribe and federal land management agencies protect an expanse of mixed-grass prairie where bison, bighorn sheep, prairie dogs, and black-footed ferrets live today.

Badlands National Park is 70 miles east of Rapid City. The park, established in 1939, totals 242,756 acres. The North Unit includes the 64,250-acre Badlands Wilderness Area. The South Unit is within the Pine Ridge Indian Reservation and is managed by the National Park Service in cooperation with the Oglala Sioux Tribe under a memorandum of agreement signed in 1976.

In addition to the national park, the White River Badlands includes Buffalo Gap National Grassland, the Pine Ridge Indian Reservation, private lands, primarily ranches and farms, and Minuteman Missile National Historic Site. This region of sharply eroded buttes, pinnacles,

and spires is blended with the largest, protected mixed-grass prairie in the United States. There are two visitor centers in Badlands National Park, one in the North Unit and one in the South Unit. In addition, there are two visitor centers in proximity to Badlands National Park: the National Grasslands Visitor Center in Wall, South Dakota, and the Minuteman Missile National Historic Site Visitor Center just off Interstate 90 at Badlands Exit 131.



Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for Badlands National Park was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development. The park was established when the enabling legislation adopted by Congress was signed into law on March 4, 1929 (see appendix A for enabling legislation). The purpose statement lays the foundation for understanding what is most important about the park.

The purposes of Badlands National Park are based on the various pieces of legislation that resulted in the creation of Badlands National Park and the legislation governing the National Park Service. Badlands National Park is to be managed to accomplish the following:

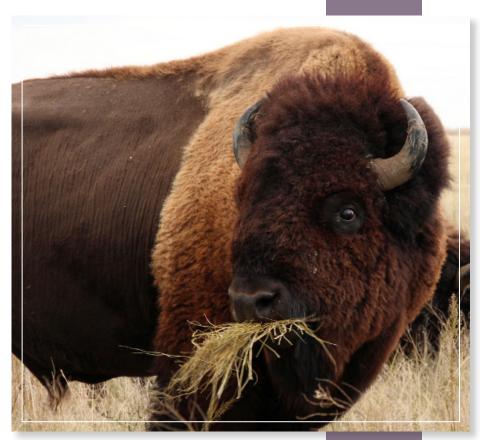
- Protect the unique landforms and scenery of the White River Badlands for the benefit, education, and inspiration of the public.
- Preserve, interpret, and provide for scientific study of the paleontological and geological resources of the White River Badlands.
- Preserve the flora, fauna, and natural processes of the mixed-grass prairie ecosystem.
- Preserve the Badlands Wilderness Area and associated wilderness values.
- Preserve and interpret the history, culture, and heritage of the Sioux Nation and Lakota people.
- Preserve and interpret the archeological and contemporary history of use and settlement of lands within the park.

Park Significance

Significance statements express why a park's resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of Badlands National Park, and are supported by data, research, and consensus. Statements of significance describe the distinctive nature of the park and why an area is important within a global, national, regional, and systemwide context. They focus on the most important resources and values that will assist in park planning and management.

According to the 2006 North Unit General Management Plan and the 2012 South Unit General Management Plan, Badlands National Park is significant for the following reasons:

- The park's geological and paleontological resources provide insight into climatic history, biological diversity, evolution, and geological processes particular to the boundary between the Eocene and Oligocene epochs, as well as a unique opportunity to trace the evolution of the prairie ecosystems of the Great Plains.
- The long history of research in the White River Badlands has contributed greatly to the science of vertebrate paleontology in North America.
- The park contains spectacular scenery, predominantly highly eroded landforms that comprise a concentrated collection of rutted ravines, serrated towers, pinnacles, and precipitous gulches.
- The park protects places of spiritual and historical significance to the Lakota people, including the site of one of the last Ghost Dances, which precipitated the 1890 massacre at Wounded Knee.
- The harsh climate and extreme geography of the Badlands region influenced both aboriginal use and contemporary settlement patterns of lands now administered by the National Park Service and contributed to the establishment of the park.
- The North Unit preserves 64,250 acres of designated wilderness comprising badlands and prairie that offer outstanding opportunities for exploration and solitude.
- The park protects a substantial remnant of native prairie and encloses the largest mixed-grass prairie within the national park system.
- The park provides unparalleled opportunities to observe bison, bighorn sheep, swift fox, pronghorn, coyotes, prairie dogs, blackfooted ferrets, and other native animals in their natural habitat.



Fundamental Resources and Values

Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are more specific than significance statements.

Fundamental resources and values help focus planning and management efforts on what is truly significant about the park. One of the most important responsibilities of NPS managers is to ensure the conservation and public enjoyment of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. If fundamental resources and values are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

The following fundamental resources and values have been identified for Badlands National Park:

- Archeological and Ethnographic Resources The White River Badlands are a place of spiritual and historical significance for many Native American groups, especially for the Lakota people. Its unique landforms have dictated human settlement and use patterns for the past 12,000 years.
- Scenic Views The erosion of sediments provides an array of dramatically changing vistas. The spectacular shapes and colors of the landscape range from the low rolling hills to tall walls and spires. The rural, rugged landscape enhances viewing of the clear and dark night skies.
- Paleontological Resources The White River Badlands preserves one of the most
 extensive records of the Eocene/Oligocene transition in North America, providing
 insight into climatic history, biological diversity, and evolution. Badlands National Park
 manages the largest paleontological museum collection in the National Park Service and
 is the source of more than 200 type and potential type specimens.
- Geological Resources The rocks and sediments of the White River Badlands provide valuable information on the ancient environments that existed in western South Dakota millions of years ago. Badlands National Park protects a striking geologic landscape composed of a diverse and multilayered assemblage of buttes, spires, and ravines, as well as many notable features of interest including hoodoos and the Badlands Wall. These landscapes and features were formed by geologic processes, such as sedimentation, erosion, and tectonics, operating over millions of years and continuing today. The park includes three stratigraphic type sections of the White River Group.



- Native Wildlife Badlands National Park supports range for wildlife
 native to the mixed-grass prairie of the northern Great Plains. Visitors can
 encounter bison, bighorn sheep, and pronghorn. Habitat is also provided
 for numerous small, iconic prairie animals, including vast populations of
 prairie dogs, occasional burrowing owls, and the black-footed ferret, the
 most endangered animal in North America.
- Wilderness Experience/Values The expanse of the remote and wild landscape within the Sage Creek Wilderness area provides the opportunity for exploration and solitude. The lack of urban noise pollution allows visitors to experience the natural soundscape of the prairie.
- Mixed-Grass Prairie Ecosystem Badlands National Park is at the
 western edge of what was once a mixed-grass prairie ecosystem. The
 mixed-grass prairie of the central United States was a transition zone
 between the arid short-grass prairie to the west and the tall-grass prairie
 to the east. Today the park supports one of the largest contiguous native
 mixed-grass prairies under federal protection in the United States.



Other Important Resources and Values

Badlands National Park contains other resources and values that are not fundamental to the purpose of the park and may be unrelated to its significance, but are important to consider in planning processes. These are referred to as "other important resources and values" (OIRV). These resources and values have been selected because they are important in the operation and management of the park and warrant special consideration in park planning.

The following other important resources and values have been identified for Badlands National Park:

- Cedar Pass Developed Area Cultural Landscape This area is a vernacular and designed cultural landscape that originated as a commercial venture by Ben Millard and his sister to promote the White River Badlands as a destination. Millard worked with the National Park Service and other local interest groups to have the area set aside as a unit of the National Park Service. The Civilian Conservation Corps and National Park Service continued development in the area. The Cedar Pass Developed Area that visitors and staff see and experience today contains remnants from the Early Tourism, the Civilian Conservation Corps, and the Mission 66 development periods of the National Park Service. These remnants, including the circulation patterns, buildings, structures, viewsheds, and vegetation, contribute to the significance of the cultural landscape. Large parts of this cultural landscape have been added to the NPS List of Classified Structures database and may eventually be added to the National Register of Historic Places, along with the park road and other developed areas.
- Highway 240 Loop Road (Badlands Scenic Byway) The primary park road developed from an informal local road system that was roughly in place by 1912.
 As part of the proclamation authorizing Badlands National Monument in 1929, the State of South Dakota agreed to formalize and consolidate this road system. The park was not officially designated until this work, primarily done by the Works Progress Administration, was complete. The road is listed on the NPS List of Classified Structures database and may eventually be added to the National Register of Historic Places, along with its associated developed areas.
- Museum Collection (This OIRV does not include paleontological, ethnographic, and archeological resources that are fundamental to the park.) The museum collection preserves archives and records related to the development of Badlands National Monument (later Badlands National Park). The collection also helps to document the modern and historic flora and fauna of the area.

Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from, and should reflect, park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all park significance statements and fundamental and other important resources and values.

Interpretive themes are an organizational tool that reveal and clarify meaning, concepts, contexts, and values represented by park resources. Sound themes are accurate and reflect current scholarship and science. They encourage exploration of the context in which events or natural processes occurred and the effects of those events and processes. Interpretive themes go beyond a mere description of the event or process to foster multiple opportunities to experience and consider the park and its resources. These themes help explain why a park story is relevant to people who may otherwise be unaware of connections they have to an event, time, or place associated with the park.

The following interpretive themes have been identified for Badlands National Park:

- **Human History** For the last 12,000 years, environmental and topographical conditions in the White River Badlands have challenged humans to adapt, persevere, and survive. Different cultural groups from historic to present-day American Indians and allottees have had and continue to have spiritual and physical relationships to the Badlands.
- **Sacred Landscape** The sacred geography of the White River Badlands represents the survival, hope, and vision of the Lakota people.
- Wilderness The Badlands Wilderness Area engages the very deepest aspects of human connection to the Badlands and mixed-grass prairies and reflects an inherent contrast between that natural world and our modern existence. It offers excellent possibilities for solitude and contemplation and an unusual opportunity to experience wilderness in a prairie setting.



- Mixed-Grass Prairie The Badlands National Park mixed-grass prairie ecosystem is a surviving fragment of the once expansive native sea of grass, deceptively complex and diverse, with the majority of life hidden below ground. Studying the mixed-grass prairie ecosystem and the human relationship to it helps to understand the changing grassland ecology of the Great Plains and helps us restore and protect this fragile and remarkably diverse ecosystem.
- Wildlife Badlands National Park's array of Northern Great Plains wildlife invites reflection on the interconnectedness of all living beings, the importance of diversity and healthy ecosystems, and the value of conserving wildlife.
- Fossil and Geologic Record The paleontological and geologic record of the White River Badlands provides scientific context for understanding the dynamics of climate and the evolution of life past, present, and future.
- Vast Landscapes The White River Badlands' vast, contrasting landscapes inspire people to appreciate the beauty and value of spectacular scenery both day and night. The Badlands, an evolving landscape formed by the processes of deposition and erosion and forces of the wind and water, offer lessons for all visitors on the impacts of natural forces on our communities and our lives.
- Science of Paleontology Mid-19th-century fossil discoveries in the Badlands were the catalyst for conducting the first major fossil explorations of the American West, initiating the modern science of paleontology, and improving our understanding of the transition and origins of the modern North American grasslands ecosystems.

The following themes are specific to the South Unit:

- One of the last Ghost Dances occurred on Stronghold Table and precipitated the 1890 Wounded Knee Massacre, the last battle between American Indians and Europeans.
- Families that historically lived on this land sometimes faced difficult choices and made sacrifices when the Bombing Range was created.



Part 2: Dynamic Components

The dynamic components of a foundation document include special mandates and administrative commitments and an assessment of planning and data needs. These components are dynamic because they will change over time. New special mandates can be established and new administrative commitments made. As conditions and trends of fundamental and other important resources and values change over time, the analysis of planning and data needs will need to be revisited and revised, along with key issues. Therefore, this part of the foundation document will be updated accordingly.

Special Mandates and Administrative Commitments

Many management decisions for a park unit are directed or influenced by special mandates and administrative commitments with other federal agencies, state and local governments, utility companies, partnering organizations, and other entities. Special mandates are requirements specific to a park that must be fulfilled. Mandates can be expressed in enabling legislation, in separate legislation following the establishment of the park, or through a judicial process. They may expand on park purpose or introduce elements unrelated to the purpose of the park. Administrative commitments are, in general, agreements that have been reached through formal, documented processes, often through memorandums of agreement. Examples include easements, rights-of-way, arrangements for emergency service responses, etc. Special mandates and administrative commitments can support, in many cases, a network of partnerships that help fulfill the objectives of the park and facilitate working relationships with other organizations. They are an essential component of managing and planning for Badlands National Park.

Special Mandates

- Congress designated 64,250 acres of Badlands National Park as wilderness when it passed Public Law 94-567 on October 20, 1976. As a result, these lands are managed under the provisions of the Wilderness Act (16 USC 1131 et seq.).
- The 1976 Memorandum of Agreement between the National Park Service and the Oglala Sioux Tribe is fundamental to management of the South Unit, affecting staffing, public recreation, law enforcement, management of natural and cultural resources, mineral rights, prairie restoration, grazing, and hunting. In the Cedar Pass District, the 1976 memorandum of agreement affects concessions operations and provides for sharing of recreational entrance fees between the National Park Service and the Oglala Sioux Tribe.
- Public Law 90-468 of August 8, 1968 [82 Stat. 663] provides that the Secretary of the Interior may acquire not to exceed 40 acres of tribally owned land on the reservation, but outside of park boundaries, for the purpose of erecting a visitor center to be used to interpret the natural phenomena of the area and the history of the Sioux Nation.
- Certain sites that are spiritually important to the Oglala Sioux Tribe cannot be developed without the tribe's written consent.
- The Clean Air Act (42 USC 7401 et seq.), as amended, requires all park units to meet federal, state, and local pollution standards. Additionally, the Sage Creek Wilderness Area is a mandatory Class I area under the prevention of significant deterioration provisions of the act. This gives the National Park Service an "affirmative responsibility" to protect the air quality and air quality related values within the park from the adverse effects of air pollution. Air quality related values are resources that are sensitive to air pollution, such as visibility, plants, animals, soils, water, and certain cultural resources. State and federal permitting authorities must consult with the National Park Service regarding new sources of air pollution, and impacts on park air quality related values must be considered in the permitting process. Further, the act requires NPS involvement in natural regulatory efforts aimed at eliminating human-caused visibility impairment in all Class I areas.



Administrative Commitments

For information about the existing administrative commitments for Badlands National Park, please see appendix C.

Assessment of Planning and Data Needs

Once the core components of part 1 of the foundation document have been identified, it is important to gather and evaluate existing information about the park's fundamental and other important resources and values, and develop a full assessment of the park's planning and data needs. The assessment of planning and data needs section presents planning issues, the planning projects that will address these issues, and the associated information requirements for planning, such as resource inventories and data collection, including GIS data.

There are three sections in the assessment of planning and data needs:

- 1. analysis of fundamental and other important resources and values
- 2. identification of key issues and associated planning and data needs
- 3. identification of planning and data needs (including spatial mapping activities or GIS maps)

The analysis of fundamental and other important resources and values and identification of key issues leads up to and supports the identification of planning and data collection needs.

Analysis of Fundamental Resources and Values

The fundamental resource or value analysis table includes current conditions, potential threats and opportunities, and planning and data needs related to management of the identified resource or value.

Fundamental Resource or Value	Archeological and Ethnographic Resources
Related Significance Statements	 The park protects places of spiritual and historical significance to the Lakota people, including the site of one of the last Ghost Dances, which precipitated the 1890 massacre at Wounded Knee. The harsh climate and extreme geography of the Badlands region influenced both aboriginal use and contemporary settlement patterns of lands now administered by the National Park Service and contributed to the establishment of the park.
Current Conditions and Trends	 Conditions Dynamic natural processes occur throughout the park; rain and wind erosion are primary factors in archeological site preservation and exposure. Site condition assessment and ranger monitoring programs; database of site condition. Collaboration and consultation with the tribal historic preservation offices. Consultation required with the South Dakota state historic preservation office. Surveys tend to be small monitoring or inventory projects. Oral histories associated with homesteaders are kept in the park museum collection. Small portion of the park has been surveyed for archeological and ethnographic resources. There are 345 officially documented archeological sites in the park. 10,047 archeological artifacts. 14 ethnographic objects. Ethnographic uses ongoing in the park. Annual Chief Big Foot Memorial ride honors those who lost their lives during the Wounded Knee Massacre in 1890. This is an annual event and is considered an ethnographic resource. Trends Soils are eroding and exposing/removing/disturbing sites; eroded soil may be burying sites and exposures (discovering and losing sites).
Threats and Opportunities	 Threats Visitors obtaining hiking tours of the Badlands Wilderness Area from the internet with no conservation or preservation message results in sites being poached. Illegal collection (intentionally or accidentally). Ongoing erosion. Ungulate trampling, prairie dog town expansion/contraction damages sites. Inappropriate development within the park damages sites. Off-road motorized uses; trampling associated with that use damages sites. Opportunities Increase/expand archeological research in the park; focus on behavior through time, specifically climate change adaptation/response. Increase percentage of inventoried lands, particularly as erosion exposes more sites. Planning for development projects to include funding for natural and cultural compliance. Increased collaboration between tribal historic preservation office and park.

Fundamental Resource or Value	Archeological and Ethnographic Resources
Existing Data and Plans Related to the FRV	 Archeological surveys: 5.5% of total park has been surveyed, 10.7% of North Unit. Geoarcheological study. Site condition data. Wind erosion study (South Dakota School of Mines). Erosion study (NPS Midwest Archeological Center). South Unit inventory project, funded to begin in 2017. Ethnographic overview and assessment (2002).
Data and/or GIS Needs	 LiDAR for mapping of landforms (e.g., sod tables, alluvial terraces). Inventory archeological and ethnographic sites (ongoing). Determine National Register of Historic Places eligibility of archeological sites. Cultural resource condition assessment. Synthesis and analysis of homesteading documentation. Archeological overview and assessment. Administrative history. Ethnographic landscape survey. Cultural landscape survey for historical paleontological locations. Cultural affiliation study. Update museum collection condition survey.
Planning Needs	 Cultural resources management plan. Update collections management plan. Resource stewardship strategy. Visitor experience/use resource protection plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	 Laws, Executive Orders, and Regulations That Apply to the FRV Antiquities Act of 1906 Historic Sites Act of 1935 National Historic Preservation Act of 1966, as amended Archeological and Historic Preservation Act of 1974 Archaeological Resources Protection Act of 1979 Native American Graves Protection and Repatriation Act of 1990 Executive Order 11593, "Protection and Enhancement of the Cultural Environment" Executive Order 13007, "Indian Sacred Sites" "Protection of Historic Properties" (36 CFR 800) Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments" Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Management Policies 2006 (chapter 5) "Cultural Resource Management" Director's Order 28: Cultural Resource Management Director's Order 28A: Archeology The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation "Department of the Interior Policy on Consultation with Indian Tribes"



Fundamental Resource or Value	Scenic Views
Related Significance Statements	 The park contains spectacular scenery, predominantly highly eroded landforms that comprise a concentrated collection of rutted ravines, serrated towers, pinnacles, and precipitous gulches. The North Unit preserves 64,250 acres of designated wilderness comprising badlands and prairie that offer outstanding opportunities for exploration and solitude. The park protects a substantial remnant of native prairie and encloses the largest mixed-grass prairie within the national park system.
Current Conditions and Trends	 Conditions On the clearest days, the visibility is about 140 miles, approaching the 180-mile visual range seen under natural conditions. On hazy days, the visibility may be only about 55 miles, which is half of the 180-mile visual range that would occur with no pollution-caused haze. Air quality is considered satisfactory, and air pollution poses little or no risk. The Sage Creek Wilderness is a Class I airshed. Views include some cell towers and other structures, but views are not obstructed. The park has some of the darkest night skies in the country. Northern Lights are occasionally visible. The park has night-sky-friendly lighting in many locations. Aerial sightseeing tours intrude on views and soundscape; the Federal Aviation Administration is responsible for managing airspace over the park. Purposeful routing of trails and Scenic Byway provide access to key views. Scenic overlooks are in fair condition. Annual astronomy festival brings in visitors, enhances partnerships. Night sky programs are provided four nights a week during summer months. Trends Episodic weather events cause erosion that impacts overlooks; some will have to be moved back from edge. Increase in wildfires causes more hazy days. Foot traffic creates more social trails.

Fundamental Resource or Value	Scenic Views
Threats and Opportunities	 Threats Increased development in surrounding communities will result in increased light pollution. At night, air pollution scatters artificial light, increasing the effect of light pollution on the night sky. Fencing related to the potential expansion of bison herd has the potential for adverse impacts on scenery. Dust from wind storms across prairie dog towns and other areas impacts the views. Potential wind turbine development. Predicted climate-change-related increases in fire frequencies in the region would result in more low-visibility days and nights. Opportunities International Dark Sky Park designation. Work cooperatively with federal and state air quality agencies and local stakeholders to reduce air quality impacts in the park from sources of air pollution. Partnering with nearby neighbors, communities, planners, and developers could help increase awareness and protection of the park's air quality, scenic views, and night sky. Add and improve conditions of scenic overlooks. Expand interpretive and educational tools to communicate the connections between scenic views, air quality, night sky, mixed-grass prairie ecosystem, wilderness, recreation, climate change, and other associated resources. School groups camp at the park, look at night skies with park staff. Educate helicopter pilots on importance of adhering to flight plans over the park. Educate concessioners on park resources related to scenic views. Store/stage equipment used during new construction in a way that causes less of an impact on viewshed. Retrofit old fixtures and ensure that new fixtures in the park are night-sky friendly. Improve park sustainability and environmental leadership through the Climate Friendly Park certification with Environmental Management System (Director's Order 13A).
Existing Data and Plans Related to the FRV	 Air quality data; ongoing visibility monitoring provides updated conditions. Night sky analysis by NPS Natural Resource Stewardship and Science. Condition assessment of trails and overlooks (~10 years). Viewshed analysis.
Data and/or GIS Needs	Visual resource inventory.New night sky analysis.Scenery conservation management class data.
Planning Needs	 Lighting management plan. Visitor experience/use resource protection plan. Visual resource management plan.

Fundamental Resource or Value	Scenic Views
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	Laws, Executive Orders, and Regulations That Apply to the FRV Clean Air Act of 1977 Executive Order 11593, "Protection and Enhancement of the Cultural Environment" Executive Order 13287, "Preserve America" Executive Order 13352, "Facilitation of Cooperative Conservation" Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance" Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" "Resource Protection, Public Use, and Recreation" (36 CFR 2) NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Management Policies 2006 (§1.4.6) "What Constitutes Park Resources and Values" NPS Management Policies 2006 (§4.7) "Air Resource Management" NPS Management Policies 2006 (§4.10) "Lightscape Management" NPS Management Policies 2006 (§4.10) "Lightscape Management" Director's Order 25: Land Protection Director's Order 28: Cultural Resource Management Director's Order 32: Cooperating Associations Director's Order 75A: Civic Engagement and Public Involvement NPS Natural Resource Management Reference Manual 77



Fundamental Resource or Value	Paleontological Resources
Related Significance Statements	 The park's geological and paleontological resources provide insight into climatic history, biological diversity, evolution, and geological processes particular to the boundary between the Eocene and Oligocene epochs, as well as a unique opportunity to trace the evolution of the prairie ecosystems of the Great Plains. The long history of research in the White River Badlands has contributed greatly to the science of vertebrate paleontology in North America.
	Conditions
	 Fossils are abundant throughout the park. Fossils are extremely fragile and only a small percentage may be collected. The remainder are lost to weather, erosion, theft, and vandalism.
	Museum collection has more than 173,650 paleontological specimens; majority is housed at South Dakota School of Mines and other institutions around the world.
	Many are scientifically significant specimens.
	Anyone can find specimens on the ground.
	Episodic weather events have caused loss of fossils.
	 Dynamic natural processes are allowed to occur; fossils are salvaged/collected as time and staffing allow.
Current Conditions and Trends	Fossils are documented in situ, later collected.
and nemus	Once a location is documented, it is not revisited because of a lack of time, staffing, and money to document again.
	Twenty-eight type specimens have been confirmed within park boundaries; 213 type specimens are potentially present.
	Trends
	Loss of fossils increasing due to poaching, higher rates of soil erosion, and weathering.
	Increased rate of reporting of fossils in the field by visitors.
	Increased collaboration between/within park divisions.
	 Increased collaboration/communication between law enforcement and resource management staff.
	Increased education about paleontological resources.
	Threats
	Poaching and vandalism of fossil resources; most common in high visitor use areas.
	Weathering and erosion of fossil material.
Threats and	Increased intensity and frequency of storm events due to climate change. Damage to fossile due to epop biking policy.
Opportunities	 Damage to fossils due to open hiking policy. Possible unintentional damage to fossils through construction.
	Trampling of fossils by ungulates.
	 Reduced support in technical, interpretive, and law enforcement staff due to lack of funding, thus less protection for the resource.
	. aag, and less protection for the resource.

Fundamental Resource or Value	Paleontological Resources
Threats and Opportunities	 Opportunities Fossil preparation lab where fossils are prepared and are available for public viewing. Increased interpretive and education programs in the fossil preparation lab involving discussion of fossil resource protection, documentation and conservation, and development of a citizen science program. Decrease in backlog of unprepared fossil specimens in the park's museum collection. (The current collections management report lists the fossil specimens that are cataloged in the NPS museum collections. It does not list the fossils that need further preparation. Unprepared fossils are often cataloged and then prepared at a later date). Additional staff to increase monitoring of sites. More law enforcement rangers for reduction of poaching and increased interagency cooperation. Additional surveys and condition assessments to monitor, manage, and preserve sites. Cooperation/collaboration with other parks and labs. With more staff, opportunity to do more research and contribute to scientific community. Partner with other institutions, universities, and/or scientists to conduct research in the park.
Existing Data and Plans Related to the FRV	 Pristine fossil locations within Badlands Wilderness Area offer research potential. Paleontological location database with 313 documented locations in the park. Construction monitoring program. Visitor site reports. GIS data for every location. Scope of collection statement. Yearly paleontological location surveys pending funding (less than 10% of the park has been surveyed). Paleontological lab pending funding. Museum collection condition assessment (needs updating). The White River Badlands, Geology and Paleontology (2015) by Benton, Terry Jr., Evanoff, and McDonald.
Data and/or GIS Needs	 Rare earth element analysis to support anti-poaching efforts. Update museum collection condition survey. Conservation needs assessment for fossils, especially Pig Dig collection. Locating Badlands National Park specimens around the world. LiDAR data for the entire park.
Planning Needs	 Update collection management plan. Paleontological resources management plan (currently in draft form). Visitor experience/use resource protection plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	 Laws, Executive Orders, and Regulations That Apply to the FRV Paleontological Resources Preservation Act of 2009 Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Management Policies 2006 (§4.8) "Geologic Resource Management" NPS Natural Resource Management Reference Manual 77

Fundamental Resource or Value	Geological Resources
Related Significance Statements	The park's geological and paleontological resources provide insight into climatic history, biological diversity, evolution, and geological processes particular to the boundary between the Eocene and Oligocene epochs, as well as a unique opportunity to trace the evolution of the prairie ecosystems of the Great Plains.
Current Conditions and Trends	 Conditions Dynamic geological processes are at work. Continual weathering causes erosion. Human impacts associated with inappropriate mitigation efforts directly affect the integrity of the resource. Episodic weather events affect geological resources and increase instability. Visitor impacts affect geological resources through trampling in high use areas including the Door and Window Trail system and Fossil Exhibit Trail. Trends Increased damage to road, unstable land forms, erosion, faster moving slumps as a direct effect of inadequate repair and weathering. Increased visitor impacts in high-use areas.
Threats and Opportunities	 Threats Inappropriate mitigation efforts in response to dynamic nature of the resource, due to inadequate repair oversight and a lack of knowledge regarding soil character. Effects of poor planning decisions in the past. Visitor injury from falling/unstable rocks may become more common because of predicted climate change-driven increases in the frequency of and severity of rainstorms. Opportunities Enhance education of threats to visitors. Proactive planning needed in terms of Loop Road repairs and hydrogeological controls and stabilization. Educational programs for geology. Scientific studies/research of badland geological formations.
Existing Data and Plans Related to the FRV	 Digitized geologic map. The White River Badlands, Geology and Paleontology (2015) by Benton, Terry Jr., Evanoff, and McDonald. Incident reports associated with visitor injuries. Ongoing geomorphology, sedimentation, stratigraphy research. Map of geological faults.
Data and/or GIS Needs	 Hydrologic study and comprehensive survey of potential geohazards related to Badlands Loop Road. Visitor experience/use resource protection plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	 Laws, Executive Orders, and Regulations That Apply to the FRV National Environmental Policy Act of 1969 Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Natural Resource Management Reference Manual 77 NPS Management Policies 2006 (§4.8) "Geologic Resource Management"

Fundamental Resource or Value	Native Wildlife
Related Significance Statements	 The park provides unparalleled opportunities to observe bison, bighorn sheep, swift fox, pronghorn, coyotes, prairie dogs, black-footed ferrets, and other native animals in their natural habitat.
Current Conditions and Trends	 Conditions Bison: excellent health; fertile; disease-free; genetically diverse. Ferret: suffer from plague; decreased amount of prairie dog town acreage; most endangered land mammal in North America; Badlands ecosystem has more than any other location in the world (+30%). Bighorn sheep: healthiest population in South Dakota; fertile; disease-free; genetically diverse. Swift fox: declining population; imperiled by plague; predated by coyotes; commonly roadkill because they like to be where views are expansive; could disappear in near future. Prairie dogs: keystone species; affected by plague; dusting kills the fleas that carry plague, but fleas are becoming resistant to delta dust; declining habitat in Conata ecosystem (75% reduction). Ungulates: stable; white-tailed deer increasing; pronghorn rebounding. Coyotes increasing. Trends Bison and bighorn sheep: herds increasing; healthy. Ferret: declining; need greater attention; continuing vaccination and dusting. Prairie dogs: annual dusting preserving prairie dog towns; decline in population if dusting does not occur; exist only where dusting occurs. Swift fox: declining due to predation by coyotes; plague; they could disappear in the near future. Ungulates: stable-to-increasing. Coyotes: population increasing.
Threats and Opportunities	 Threats Bison and bighorn sheep: disease; interaction with domestic livestock; poaching; annual culling may not occur because of funding constraints; lack of funding for fencing (relations with neighbors negatively affected). Ferret: plague; in-breeding; predators. Prairie dogs: plague; lack of funding for dusting; disease. Swift fox: plague; predators; increased vegetation. Ungulates: chronic wasting and other diseases; poaching of trophy animals. Effects of climate change on water availability and forage availability; increased frequency of fires; shift in composition of vegetation; more intense storms. Winter ranges of bird species across the United States are shifting northward because of climate change. Opportunities Centennial year activity expanding range. Cooperate with Department of Interior to manage 17 bison herds. Expand bison herd size. Collaborate with the NPS Midwest Region Bison Leadership Team (NPS Midwest Region, Theodore Roosevelt National Park, Tallgrass Prairie National Preserve, Badlands National Park). Agreements with U.S. Forest Service, U.S. Fish and Wildlife Service, others for research into effects of increased dusting, vaccination on plague.

Fundamental Resource or Value	Native Wildlife
Existing Data and Plans Related to the FRV	 Bison stewardship plan / environmental assessment (ongoing). Black-footed ferret management plan. Prairie dog management plan. Management strategy for bighorn sheep. Management plan for swift fox by U.S. Forest Service. Genetic research (ongoing). U.S. Geological Survey bison tracking (collars). Ten-year dataset from bison roundups. Fifteen-year dataset on bighorn sheep. Analysis of cam data (ongoing). Climate change vulnerability report.
Data and/or GIS Needs	 Continued monitoring and locational data for all species. Organize and analyze wildlife data. Black-footed ferret research project. Grazing and carrying capacity estimates needed for bison and other ungulates.
Planning Needs	 Ungulate management plan. Visitor experience/use resource protection plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	Laws, Executive Orders, and Regulations That Apply to the FRV Clean Air Act of 1977 Clean Water Act of 1972 National Invasive Species Act Volunteers in the Parks Act Executive Order 13112, "Invasive Species" Executive Order 13352, "Facilitation of Cooperative Conservation" Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" Executive Order 13443, "Facilitation of Hunting Heritage and Wildlife Conservation" Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance" Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" "Endangered and Threatened Wildlife and Plants" (50 CFR 17) NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Management Policies 2006 (chapter 4) "Natural Resource Management" NPS Management Policies 2006 (chapter 7) "Interpretation and Education" Director's Order 7: Volunteers in Parks Director's Order 18: Wildland Fire Management Director's Order 25: Land Protection Director's Order 75A: Civic Engagement and Public Involvement NPS Reference Manual 18: Wildland Fire Management Interagency Burned Area Emergency Response Guidebook NPS-75 Natural Resources Inventory and Monitoring Guideline NPS Natural Resource Management Reference Manual 77 NPS Integrated Pest Management Manual

Fundamental Resource or Value	Wilderness Experience/Values
Related Significance Statements	The North Unit preserves 64,250 acres of designated wilderness comprising badlands and prairie that offer outstanding opportunities for exploration and solitude.
Current Conditions and Trends	 Conditions Natural quality Degraded by the presence, abundance, and distribution of nonnative plant species in wilderness areas. Overall, natural quality is in fair to good condition despite past and continuing alterations to the native plants and animals (extirpated and reintroduction) in the wilderness. Untrammeled Affected primarily by the forces of nature, with few exceptions related to nonnative or invasive plant controls, fire suppression (active suppression when greater than 10,000 acres), and management of bison herd (culling and fence maintenance) within Sage Creek Unit of North Unit Badlands National Park. Undeveloped No authorized or unauthorized nonrecreational installations or developments within wilderness areas (e.g., scientific equipment, radio repeaters). Several Civilian Conservation Corps stock ponds/dams and features associated with homesteads in each unit of the wilderness predate wilderness designation. Use of authorized motorized equipment / mechanized travel (vehicle travel along the boundary fence for maintenance, rare emergency aircraft landing), and rare unauthorized motor vehicle uses (off-highway vehicle, motorcycle, mountain bike use) degrade undeveloped quality, allowed as the minimum requirements for administration of the area as wilderness. Solitude or Primitive and Unconfined Recreation The unique and special qualities of solitude or a primitive and unconfined type of recreation within the wilderness areas of the park include self-reliance and choosing where to explore; listening to the sounds of nature; and the opportunity to explore wilderness without observing large numbers of other visitors, structures, and installations. Primitive (nonmotorized) forms of recreation are allowed in wilderness. At the park, these
Threats and Opportunities	 Threats Non-natural sounds from speeding vehicles on road beside wilderness (Sage Creek Road). Lights visible from surrounding areas. Structures visible from within wilderness (e.g., cell towers, roads, low-flying aircraft). Invasive plant species. Fence maintenance; bison getting out, cattle getting in. Unauthorized vehicle use by visitors. Fossil and archeological resource poaching. Plague causing reduction in prairie dogs and black-footed ferrets.

Fundamental Resource or Value	Wilderness Experience/Values
Threats and Opportunities	 Opportunities Wildlife viewing up close and personal. Educate visitors on Leave No Trace principles. Educate visitors on wilderness ethics, principles. Pristine fossil locations within the Badlands Wilderness Area offer research potential. Work with local communities on lighting, structures placement, etc. Remove nonhistoric features (e.g., fence remnants).
Existing Data and Plans Related to the FRV	Minimum tools analysis.Park and regional air quality monitoring (ongoing).
Data and/or GIS Needs	Visitor use survey.Definitive wilderness GIS layer/dataset.
Planning Needs	 Wilderness character narrative and assessment. Wilderness permitting plan. Visual resource management plan. Visitor experience/use resource protection plan.
	 Laws, Executive Orders, and Regulations That Apply to the FRV Clean Air Act of 1977 Federal Lands Recreation Enhancement Act (related to fees) Outdoor Recreation Act Volunteers in the Parks Act Wilderness Act Executive Order 13287, "Preserve America" Executive Order 13352," Facilitation of Cooperative Conservation" "Resource Protection, Public Use, and Recreation" (36 CFR 2) Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	 NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Management Policies 2006 (§4.7) "Air Resource Management" NPS Management Policies 2006 (§4.9) "Soundscape Management" NPS Management Policies 2006 (§4.10) "Lightscape Management" NPS Management Policies 2006 (chapter 6) "Wilderness Preservation and Management" NPS Management Policies 2006 (chapter 7) "Interpretation and Education" NPS Management Policies 2006 (chapter 8) "Use of the Parks" Director's Order 7: Volunteers in Parks Director's Order 17: National Park Service Tourism Director's Order 18: Wildland Fire Management Director's Order 25: Land Protection Director's Order 41: Wilderness Stewardship Director's Order 47: Soundscape Preservation and Noise Management Director's Order 75A: Civic Engagement and Public Involvement NPS Reference Manual 18: Wildland Fire Management Interagency Burned Area Emergency Response Guidebook NPS Reference Manual 41: Wilderness Stewardship NPS-75 Natural Resources Inventory and Monitoring Guideline NPS Natural Resource Management Reference Manual 77



Fundamental Resource or Value	Mixed-Grass Prairie Ecosystem
Related Significance Statements	The park protects a substantial remnant of native prairie and encloses the largest mixed- grass prairie within the national park system.
Current Conditions and Trends	Conditions Generally, mixed-grass prairie ecosystem in fair condition. Infested with exotic species. Size of park allows ecosystem to operate on a large scale. Grazed by wildlife (both undergrazed and overgrazed). Exotic plants managed using fire, mechanical, biological, and chemical methods. Many sites disturbed; trampling by bison / visitors / construction activities. Erosion creates habitat for early successional plants. Provides forage and shelter to wildlife. Reduces erosion by stabilizing soils. Ethnographic resources for Native Americans. Several rare plant species in the park (Barr's milkvetch, Dakota buckwheat, secund bladderpod, and Parry's rabbitbrush). Trends Increase in exotic species. Shift in species composition as a result of climate change. More disturbed sites (construction activities). Expansion of bison herds resulting in increased grazing and trampling of rare plants. Prescribed fire decreasing due to funding constraints. Lack of funding for exotic plant management. Decrease in pollinators.

Fundamental Resource or Value	Mixed-Grass Prairie Ecosystem
	 Threats Unnatural grazing / overgrazing patterns by fenced-in bison. Climate change effects; more intense erosion, wildland fires, extreme storm events. More disturbed sites due to construction activities, trampling by visitors and bison. Loss of pollinators. Lack of funding for invasive plant control. Visitors bringing in invasive species (seeds carried on footwear, contaminated construction equipment). Loss of endangered plant species/habitat.
Threats and Opportunities	 Opportunities Enhanced chemical application and use of biocontrols. Research on invasive plant control techniques (mechanical, biological, and chemical). Cooperation with other federal, state, local agencies to preserve mixed-grass prairie. Revegetation with native species and ecotypes local to region. Education on invasive species and prairie ecology. Stabilize unstable slopes/areas; reduce erosion. Funding for research about exotic plant management. Funding for prescribed fire and associated compliance (e.g., National Historic Preservation Act, National Environmental Policy Act).
Existing Data and Plans Related to the FRV	 Integrated pest management plan (park-specific). Fire management plan. Inventory and monitoring plan. Mowing management plan. Natural resource condition assessment (draft). Climate change vulnerability assessment. Northern Great Plains Exotic Plant Management Plan and Environmental Assessment. Natural resources conservation service soil mapping. Aerial imagery. Erosion study (South Dakota School of Mines). Erosion study (NPS Midwest Archeological Center). Various wildlife management plans.
Data and/or GIS Needs	 Data collection and analysis of effects of fire. Grazing and carrying capacity estimates needed for bison and other ungulates. LiDAR data for vegetation cover. Research herbicides for new invasive plant species. Research pollinators.
Planning Needs	 Update integrated pest management plan. Resource stewardship strategy. Update fire management plan. Visitor experience/use resource protection plan.

Fundamental Resource or Value	Mixed-Grass Prairie Ecosystem
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	Laws, Executive Orders, and Regulations That Apply to the FRV Clean Air Act of 1977 Volunteers in the Parks Act Endangered Species Act of 1973, as amended National Invasive Species Act Lacey Act, as amended Migratory Bird Treaty Act National Environmental Policy Act of 1969 Federal Noxious Weed Act of 1974, as amended Clean Water Act of 1972 Paleontological Resources Preservation Act of 2009 Executive Order 11593, "Protection and Enhancement of the Cultural Environment" Executive Order 13112, "Invasive Species" Executive Order 13287, "Preserve America" Executive Order 13423, "Facilitation of Cooperative Conservation" Executive Order 13423, "Facilitation of Gooperative Conservation" Executive Order 13443, "Facilitation of Hunting Heritage and Wildlife Conservation Management" Executive Order 13443, "Facilitation of Hunting Heritage and Wildlife Conservation Performance" Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance" Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" "Endangered and Threatened Wildlife and Plants" (50 CFR 17) NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Management Policies 2006 (§4.1) "General Management Concepts" NPS Management Policies 2006 (§4.1) "General Principles for Managing Biological Resources" NPS Management Policies 2006 (§4.1) "General Principles for Managing Biological Resources" NPS Management Policies 2006 (§4.1) "General Principles for Management" NPS Management Policies 2006 (§4.6.1) "Protection of Surface Waters and Groundwaters" NPS Management Policies 2006 (§4.6.1) "Beneral Principles for Management" NPS Management Policies 2006 (§4.7) "Air Resource Management" NPS Management Policies 2006 (§4.7) "Air Resource Management" NPS Management Policies 2006 (§4.7) "Lightscape Management" NPS Management Policies 2006 (§4.7) "Lightscape Management" NPS Reference Manual 18: Wildland Fire Management Director's Order 75

Analysis of Other Important Resources and Values

Other Important Resource or Value	Cedar Pass Developed Area Cultural Landscape
Related Significance Statements	The harsh climate and extreme geography of the Badlands region influenced both aboriginal use and contemporary settlement patterns of lands now administered by the National Park Service and contributed to the establishment of the park.
Current Conditions and Trends	 Conditions Civilian Conservation Corps, early tourism, and Mission 66 program influenced the development of Cedar Pass. Post-Mission 66 development was not properly planned. Some structures are in poor condition (e.g., lodge basement includes fuel contaminants). Small structures associated with the lodge are in poor condition. Landscape is in poor condition as a result of construction. The original cabins were removed in 2011-2012 and replaced with pre-fab structures. The new structures did not meet requirements in the memorandum of agreement for the removal of the old cabins, and an updated memorandum of agreement was established with new mitigation requirements. These mitigations (e.g., varying roof styles, front porches, windows, road repair, revegetation) are still being done. The rehabilitation of the visitor center has impacted the building's historic integrity and its potential eligibility for listing in the National Register of Historic Places. The administration building was meant for temporary use but has been used long-term. Drainage issues in Cedar Pass cultural landscape. Inadequate revegetation of Cedar Pass. ADA/ABA not compliant throughout Cedar Pass. Cedar Pass includes historic viewsheds. Campground still has Mission 66 character. Visitor center cannot handle current visitation levels during peak season. Entire area built on paleontological resources. Trends Increased flooding events affecting buildings and landscape. More deferred maintenance throughout Cedar Pass. Facilities are aging.
Threats and Opportunities	 Threats Increase in episodic storm events causes more flooding of historic (and nonhistoric) structures. More storm events will also increase disruptions to circulation patterns and structures, as well as the potential for damage to contributing features and elements. Increased visitation leads to more pressure on facilities and spaces to accommodate additional visitors, as well as to adapt to new uses of these facilities and spaces. Increased visitation leads to demand for new and updated visitor facilities, as well as facilities to accommodate staff needed to handle the visitors. This pressure is both internal (National Park Service) and external (cooperating association and concession). Opportunities University of Texas Design Standards and Cedar Pass Development Concept Plan / Environmental Assessment will provide direction on design standards, and possible development opportunities. Explore joint/shared housing with U.S. Forest Service or other federal agencies. Expand interpretation/education in Cedar Pass. Permanent paleontology lab with public outreach.

Other Important Resource or Value	Cedar Pass Developed Area Cultural Landscape
Existing Data and Plans Related to the OIRV	 Cultural landscape report (2005). Housing plan (2016). Housing needs assessment plan (2011). General management plan (2006). Badlands National Park geodatabase or University of Texas Studio GIS (2015).
Data and/or GIS Needs	 Phase I environmental site assessment; if necessary, phase II to determine if contamination is present. Complete National Register of Historic Places nomination for Cedar Pass developed area.
Planning Needs	 Historic structure report for concession lodge. Accessibility assessment and plan. Visitor experience/use resource protection plan. Cedar Pass development concept plan.
Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance	 Laws, Executive Orders, and Regulations That Apply to the OIRV Americans with Disabilities Act of 1990 Architectural Barriers Act of 1968 (42 USC 4151-4157) Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" Historic Sites Act of 1935 National Historic Preservation Act of 1966, as amended Executive Order 11593, "Protection and Enhancement of the Cultural Environment" "Protection of Historic Properties" (36 CFR 800) Council on Environmental Quality Guidance, "Prime and Unique Agricultural Lands and the National Environmental Policy Act" (1980) NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Management Policies 2006 (§4.4.5) "Pest Management" NPS Management Policies 2006 (chapter 5) "Cultural Resource Management" NPS Management Policies 2006 (chapter 7) "Interpretation and Education" Director's Order 6: Interpretation and Education Director's Order 28: Cultural Resource Management Director's Order 42: Accessibility for Visitors with Disabilities in National Park Service Programs and Services The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation



Other Important Resource or Value	Highway 240 Loop Road
Related Significance Statements	The harsh climate and extreme geography of the Badlands region influenced both aboriginal use and contemporary settlement patterns of lands now administered by the National Park Service and contributed to the establishment of the park.
Current Conditions and Trends	 Conditions Condition is poor to fair, depending upon location along the 28-mile road. Requires minimum resurfacing applications of chip and seal every 5 years and traffic marking paint every 2 years. Major movement of sub-base and slumping areas causing damage and cracks in road surface. Continued drainage and erosional issues in areas based upon improper road design by incorporating curbs to capture water in areas not required where normal sheet drainage originally worked. Presence of unseen hazards (e.g., piping and erosional voids). The road is built directly on paleontological, cultural, and geological resources. The park has experienced an increase in intensity and frequency of storms, expediting erosional factors with soils and road base makeup in association with hydrological effects. Trends Temporary or general engineered construction repairs not adequate in fixing or addressing issues such as removing abandoned culverts. Culverts continue to become plugged and do not drain areas efficiently, or culverts are improperly located based upon movement/disposition of sediment. Culvert repairs continue to fail where culvert material and reaction of erosional factors were not taken into account based on badlands geology in soils, materials, and engineering concepts. Discovery of piping and voids more frequent in number and greater in volume (size). Predicted increases in weather severity increasing road problems.
Threats and Opportunities	 Threats Erosion a major factor. Road becoming more unstable in areas around major passes of the Loop Road because they were built on badland features or close to the Badlands Wall (unstable soils). Abandoned culverts creating erosion under roadway, producing large voids or caves that create sinkholes. Episodic weather events negatively impacting stability of the road. Opportunities Identify and use park geotechnical specialist to help engineer repairs around badland features. Develop better understanding of hydrogeological processes acting on Loop Road. Educate visitors, park neighbors, and staff regarding road issues. Use applicable engineering practices to ensure longer stability and safety of road.
Existing Data and Plans Related to the OIRV	 Scenic byway management plan. Climate change vulnerability assessment for park.
Data and/or GIS Needs	 Hydrologic study and comprehensive survey of potential geohazards related to Badlands Loop Road. Compile / merge all previously collected data regarding park's culverts.

Other Important Resource or Value	Highway 240 Loop Road
Planning Needs	 Highway 240 Loop Road redesign plan (in particular around Badlands Wall / features and passes). Visitor experience/use resource protection plan.
Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance	 Laws, Executive Orders, and Regulations That Apply to the OIRV National Environmental Policy Act of 1969 National Historic Preservation Act of 1966, as amended Clean Air Act of 1977 Public Transportation Programs for National Park System Areas (16 USC 49 2301(b)) Transportation Service and Facility Programs (16 USC 49 2302(a)) Highways—Planning Assistance and Standards (23 CFR 450) Motor Vehicle Management (41 CFR 102.34) Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Management Policies 2006 (chapter 9) "Park Facilities" NPS Transportation Planning Guidebook Park Road Standards (1984) Park Road Standards (1984) Park Roads and Parkways Program Handbook Director's Order 50C: Public Risk Management Program Director's Order 52C: Park Signs Director's Order 55: Incident Management Program Director's Order 87A: Park Roads and Parkways



Other Important Resource or Value	Museum Collection
Related Significance Statements	 The park's geological and paleontological resources provide insight into climatic history, biological diversity, evolution, and geological processes particular to the boundary between the Eocene and Oligocene epochs, as well as a unique opportunity to trace the evolution of the prairie ecosystems of the Great Plains. The long history of research in the White River Badlands has contributed greatly to the science of vertebrate paleontology in North America. The harsh climate and extreme geography of the Badlands region influenced both aboriginal use and contemporary settlement patterns of lands now administered by the National Park Service and contributed to the establishment of the park. The park protects a substantial remnant of native prairie and encloses the largest mixed-grass prairie within the national park system. The park provides unparalleled opportunities to observe bison, bighorn sheep, swift fox, pronghorn, coyotes, prairie dogs, black-footed ferrets, and other native animals in their natural habitat.
Current Conditions and Trends	 Conditions Archival backlog due to inadequate staffing and park priorities. Malfunctioning heating, ventilation, and air conditioning system in storage area. Inadequate data on poaching of archeological resources; park focus is on paleontological material. Inadequate seal on doors to vault. Fire suppression system inadequate for vault. Space and staff time shared with Minuteman Missile National Historic Site. Current collection size: 260,191 objects. 9,689 historical artifacts. 62,496 (~40 linear feet) of archival collections/objects. 92 pieces of artwork. 3,636 known biological objects (suspected to be much higher due to recent U.S. Geological Survey collections). 543 geological objects. Trends Increase in intake of archival material due to staff turnover or maintenance projects. Increase in insoct activity in vault. Increase in insect activity in vault. Increase in staff time required for projects for other park (Minuteman Missile National Historic Site).
Threats and Opportunities	 Threats Rapid increase in collection size due to rapid increase in collection of artifacts and specimens to prevent loss due to increased weathering, erosion, mitigation efforts. Inadequate staff to process and care for collection. Limited space for collection storage. Lack of permanent prep lab leads to backlog of unprepared specimens (biological and paleontological). Fire suppression system installed before HVAC system and prior to installation of mobile storage system.

Other Important Resource or Value	Museum Collection
Threats and Opportunities	 Opportunities Increase in seasonal and volunteer project time to decrease backlog on archival processing (for both parks). Addition of carriages, cabinets, and shelves to storage space. Conversion of D09 garage to oversize storage for Minuteman Missile National Historic Site collections (would free up space for Badlands National Park collections).
Existing Data and Plans Related to the OIRV	 Scope of collection statement. Museum collection condition assessment (needs updating).
Data and/or GIS Needs	 Update museum collection condition survey. Oral histories of past and current employees. Archival assessment. Administrative history.
Planning Needs	 Update collection management plan. Housekeeping plan for museum. Integrated pest management plan for museum. Emergency operations plan.
	 Laws, Executive Orders, and Regulations That Apply to the OIRV National Historic Preservation Act of 1966, as amended Antiquities Act of 1906 Historic Sites Act of 1935 Museum Properties Management Act of 1955, as amended "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79) "Protection of Historic Properties" (36 CFR 800) Executive Order 11593, "Protection and Enhancement of the Cultural Environment"
Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance	 NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders) NPS Management Policies 2006 (§2.3.1.4) "Science and Scholarship" NPS Management Policies 2006 (§4.2) "Studies and Collections" NPS Management Policies 2006 (§5.1) "Research" NPS Management Policies 2006 (§5.3.5.5) "Museum Collections" NPS Management Policies 2006 (§8.10) "Natural and Cultural Studies, Research, and Collection Activities" NPS Management Policies 2006 (§9.4.2) "Museum Collections Management Facilities" Director's Order 24: NPS Museum Collections Management Director's Order 28: Cultural Resource Management Director's Order 28A: Archeology NPS Museum Handbook, parts I, II, and III The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation

Identification of Key Issues and Associated Planning and Data Needs

This section considers key issues to be addressed in planning and management and therefore takes a broader view over the primary focus of part 1. A key issue focuses on a question that is important for a park. Key issues often raise questions regarding park purpose and significance and fundamental and other important resources and values. For example, a key issue may pertain to the potential for a fundamental or other important resource or value in a park to be detrimentally affected by discretionary management decisions. A key issue may also address crucial questions that are not directly related to purpose and significance, but which still affect them indirectly. Usually, a key issue is one that a future planning effort or data collection needs to address and requires a decision by NPS managers. Many of the following key issues are applicable to both the North and South Units of Badlands National Park.

The following are key issues for Badlands National Park and the associated planning and data needs to address them:

- Integrating South Unit into Park's Operations and Management The management strategy for South Unit needs to be affirmed. The park needs to revisit and reaffirm or craft a new vision for future effective management of the South Unit. This would include in-depth review of the legislation, the 1976 Memorandum of Agreement with the Oglala Sioux Tribe, and the 2012 South Unit General Management Plan. It would require extensive discussions with the Oglala Sioux Tribe and the Oglala Sioux Park and Recreation Authority. Future effective management of the South Unit may require reprioritizing and redirecting park resources and seeking new resources and partnerships.
 - Associated planning and data needs: White River Visitor Center development concept plan, South Unit trails plan, Red Shirt Overlook plan, and Cottonwood Road development plan
- Overall Park Staffing / Budget The park has minimal staff presence and focus on the South Unit. Several parkwide key issues and planning/data needs identified to support park FRV/OIRVs require project and staffing increases. Without project and staffing increases or reprioritizing resources, these needs will not be fulfilled. The park first needs to take a strategic look at a five-year budget and staffing plan and reprioritize or redirect resources as possible and appropriate. This would include reviewing how staff resources are being allocated to support the South Unit. The park is working on a five-year position management plan that will be completed by the end of FY 2017. If critical shortfalls remain, the park needs to work to document and justify the unfunded needs within established processes and systems.
 - Associated planning and data needs: position management plan
- History of Government-to-Government Relationship The history between the United States federal government/National Park Service and the Oglala Sioux Tribe is framed by treaty rights, the 1976 Memorandum of Agreement, and the 2012 General Management Plan. These documents establish how the United States and the National Park Service collaborate with the Oglala Sioux Tribe. The 1976 Memorandum of Agreement and pertinent legislation need an in-depth review to ensure that appropriate and effective management persists at the South Unit.
 - Associated planning and data needs: none identified

- Illegal Collection and Unintentional Trampling and Scarring of Archeological, Paleontological, Biological, and Geological Resources The loss of fossils and other sensitive resources from the park through poaching and visitor off-trail use continues to be a challenge for the park. A strategy to reduce/prevent paleontological and other resource thefts, including more enforcement, is needed. Visitor use off-trail continues to result in scars on the buttes and damages fossil resources and archeological sites.
 - Associated planning and data needs: paleontological theft prevention plan, rare earth element analysis to support anti-poaching efforts, expanded paleontological database survey through continued field work, continued inventory of archeological and ethnographic sites
- Aging Park Facilities; Development of Appropriate Facilities The park needs to identify and prioritize deferred maintenance on park facilities, including the Cedar Pass Lodge, Ben Reifel and White River Visitor Centers, and park administrative facilities. Drainage and erosion are a concern for Cedar Pass area. The park's water and sewage systems also need attention. Without regular maintenance, these facilities will deteriorate and become more expensive to maintain. During the high season (4-5 months of the year), the park's visitor centers do not have adequate capacity. The building ventilation is poor, the restrooms have issues, and the spaces are not adequate. The last remodeling was done in 2005-2006. The park administrative modular structures are not a long-term solution.
 - Associated planning and data needs: Cedar Pass development concept plan, visitor experience/use resource protection plan
- Control of Nonnative Species There is so little remaining prairie that maintaining its
 integrity is critical. Control of exotic invasive plant species is a management challenge.
 Exotic plant species continue to spread throughout the park. Exotic invasive plant
 species can alter the composition of the grasslands and out-compete and displace native
 species, reduce habitat for wildlife, change food-webs, and degrade recreation areas.
 - Associated planning and data needs: integrated pest management plan (update), green park / climate friendly park plan, resource stewardship strategy, fire management plan (update), data collection and analysis of effects of fire, grazing and carrying capacity estimates needed for bison and other ungulates, LiDAR data for vegetation cover, research pollinators
- Cultural Resource Management There is a need to increase cultural resource staffing and incorporate cultural resources into all project planning and to identify and document cultural resources for purposes of Section 106 and 110 of the National Historic Preservation Act. Overall, the park lacks cultural resources staff, and has only one museum technician. More attention is needed for planning and compliance of cultural resources in the park to ensure preservation of these resources.
 - Associated planning and data needs: cultural resources management plan, historic structure reports, archeological overview and assessment, cultural affiliation study, archeological and ethnographic site inventories, cultural resource condition assessment, ethnographic landscape survey, cultural landscape survey for historical paleontological locations, synthesis and analysis of homesteading documentation, determine National Register of Historic Places eligibility of archeological sites, National Register of Historic Places nomination for Cedar Pass developed area, Cedar Pass development concept plan

- Review Hiking Policy in Badlands Areas to Provide Visitor Experience Opportunities and Promote Visitor Safety – An undocumented perception is that many visitors value and enjoy the opportunities to hike and climb largely unrestricted as a means to explore and experience the park. An unknown percentage of emergency medical response incidents are the result of visitors injuring themselves while climbing on fragile and slippery rocks. The park leadership team needs to continue to work to find the right balance of enhancing visitor experiences/use while ensuring safety.
 - Associated planning and data needs: visitor use survey, visitor experience/use resource protection plan
- Challenges of Maintaining Highway 240 Loop Road Continued repair and
 addressing issues from erosion, including deferred maintenance, hydrology associated
 with the road, and identifying historic culverts is a challenge. Soil characteristics and
 geological hazards in the Badlands highlight the challenges of maintaining the Loop Road.
 - Associated planning and data needs: hydrologic study and comprehensive survey
 of potential geohazards related to Badlands Loop Road, study of traffic flow and
 weight of vehicles on Highway 240 Loop Road
- Need for Permanent Fossil Preparation Lab The Badlands National Park Fossil Preparation Lab provides valuable information on the importance of protecting fossil resources. On average, about 50,000 people visit the lab each year and witness the curation process for specimens. Unfortunately, the lab is not currently sustainable and needs further enhancement, promotion, and expansion. There is a need for dedicated space because the current laboratory is temporary. This would include funding for state of the art equipment, secure storage area for uncurated fossils, and additional staffing.
 - Associated planning and data needs: paleontological resources management plan, resource stewardship strategy, conservation needs assessment for fossils, especially the Pig Dig collection
- Housing Shortage There is a shortage of both permanent and seasonal housing at the park. This is fundamental to mission accomplishment because the housing shortage significantly impacts the park's ability to recruit and retain adequate numbers of personnel and top level personnel. The park is remote and there is an acute shortage of suitable housing in local communities within a reasonable commuting distance.
 - Associated planning and data needs: Cedar Passdevelopment concept plan, White River Visitor Center development plan

Planning and Data Needs

To maintain connection to the core elements of the foundation and the importance of these core foundation elements, the planning and data needs listed here are directly related to protecting fundamental resources and values, park significance, and park purpose, as well as addressing key issues. To successfully undertake a planning effort, information from sources such as inventories, studies, research activities, and analyses may be required to provide adequate knowledge of park resources and visitor information. Such information sources have been identified as data needs. Geospatial mapping tasks and products are included in data needs.

Items considered of the utmost importance were identified as high priority, and other items identified, but not rising to the level of high priority, were listed as either medium- or low-priority needs. These priorities inform park management efforts to secure funding and support for planning projects.

Planning Needs – Where A Decision-Making Process Is Needed				
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes	
Key Issue	White River Visitor Center development concept plan	Н	Complete plan to upgrade the White River Visitor center and associated structures including the ranger station and staff housing.	
Key Issue	South Unit trails plan	Н	As called for in 2012 South Unit General Management Plan to develop trails, trailhead, and parking at Cedar Butte and Coffin table. Complete site-specific plan.	
Key issue	Red Shirt Overlook plan	Н	Develop plan and design/build to expand and improve the Red Shirt Overlook to enhance visitor experience of South Unit.	
FRV, OIRV, and Key Issue	Visitor experience/use resource protection plan	Н	Identify current visitor use/ impacts, including safety issues related to open hiking policy.	
Key Issue and OIRV	Cedar Pass development concept plan	Н	Unified concept plan for Cedar Pass developed area and specific facilities recommendations.	
OIRV	Accessibility assessment and plan	Н	Infrastructure not in compliance with ADA/ABA standards.	
Key Issue	Position management plan	Н	Five-year outlook for staffing.	
OIRV	Highway 240 Loop Road redesign plan	Н	Focus onBadlandsWall/features and passes.	
Key Issue	Paleontological theft prevention plan	Н	Develop strategy to reduce/ prevent paleontological theft. Expand locations for rare earth element analysis, which entail continuing surveys to identify new locations in the park.	
FRV	Wilderness character narrative and assessment	Н	Required.	
FRV and Key Issue	Paleontological resources management plan	Н	Currently in draft form, needs to be finalized.	

Planning Needs – Where A Decision-Making Process Is Needed				
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes	
FRV	Update fire management plan	Н	The current plan is more than 10 years old. It should be updated to reflect new FIREPRO directives for development of fire management plans and new National Environmental Policy Act guidelines (DO-12) for prescribed fire on NPS lands.	
OIRV	Historic structure report for concession lodge	Н	Cedar Pass developed area.	
OIRV	Emergency operations plan	Н	For museum collection.	
OIRV	Integrated pest management plan for museum	М	In progress, needs to be finalized.	
Key issue	Cottonwood Road development plan	М	Plan to improve Cottonwood Road as called for in the 2012 South Unit General Management Plan.	
FRV and Key Issue	Cultural resources management plan	М	Holistic look at cultural resources in park.	
FRV and OIRV	Update collection management plan and collections condition survey	М	Applies to all resources subject to collection procedures.	
FRV	Ungulate management plan	М	Wildlife densities and stocking rates for park ungulates; including bison, bighorn sheep, deer.	
FRV and Key Issue	Update integrated pest management plan (plants)	М	Comprehensive management plan to control numerous exotic species of plants throughout the park.	
FRV	Lighting management plan	М	Priority would increase if park seeks International Dark Sky Park designation.	
Key Issue	Green Park / Climate Friendly Park plan	М	NPS Certified Green Park or Climate Friendly Park schedule for 2017.	
OIRV	Housekeeping plan for museum	М	Guidelines for care of collections facility. In progress, needs to be finalized.	

Planning Needs – Where A Decision-Making Process Is Needed				
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes	
FRV and Key Issue	Resource stewardship strategy	L	Plan for resource management beyond year-to-year, making park operations more efficient.	
FRV	Wilderness permitting plan	L	For visitor safety and protection of wilderness character.	
FRV	Visual resource management plan	L	The visual resource inventory would be used as a basis for developing goals, objectives, and specific strategies for management of important views within park boundaries, as well as collaboration and conservation strategies for areas beyond park boundaries. No current development planned or known.	



Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes
FRV and Key Issue	Rare earth element analysis to support anti-poaching efforts	Н	Extra funding required to support contract with cooperating institutions. Poaching will continue as long as trade in fossils is lucrative. Other valuable uses for this besides anti-poaching.
FRV and Key Issue	Conservation needs assessment for fossils, especially the Pig Dig collection	Н	Specimens are degrading. Need long-term solution.
FRV, OIRV, Key Issue	Hydrologic study and comprehensive survey of potential geohazards related to Badlands Loop Road	Н	Funding needed for geotechnical specialist toevaluate strategies for locating abandoned culverts, finding vendors for engineered fill, and developing database listing of known potential geohazards. Compile geodatabase of geohazards and hydrologic data concerning Loop Road issues. Inventory of potential geohazards related to Loop Road.
			Survey/mapping of the park's geohazards located at/near the road, including slumps, voids, piping, faults, etc.
			A better understanding of the hydrogeological processes as they relate to the Loop Road.
			Need to move from reactive mode to a more pro-active state to address some of these issues before the road completely fails.
			Need a more reliable source for engineered fill.
FRV	Black-footed ferret research project	Н	Research project (expected in FY18) to determine effects of different types of insecticide on fleas to manage plague.
FRV	Definitive wilderness GIS layer/dataset	Н	Accurate and concise GIS data areneeded for park. An accurate GIS data layer needs to be created from the original establishment documentation in order to achieve the Wilderness Vision for Badlands National Park by 2020.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes
Key Issue	Expand paleontological database survey through continued field work	Н	Formal surveys started in 2004; ongoing as funding permits.
FRV and Key Issue	LiDAR for mapping of landforms (sod tables, alluvial terraces, etc.) and vegetation cover	Н	Need LiDAR mapping parkwide.
FRV and Key Issue	Archeological overview and assessment	Н	Identify what is known about archeological resources in the park. Outline long-term archeology needs/deficiencies. Should include direction and recommendations for compliance withSections 106 and 110 of the National Historic Preservation Act.
FRV and Key Issue	Cultural affiliation study	Н	Identify tribes with whom the park should consult.
FRV and OIRV	Administrative history	Н	Park lacks an overview of administration since its inception.
FRV	Continued monitoring and locational data for allspecies	Н	Information needed to guide management of these species.
OIRV	Complete National Register of Historic Places nomination for Cedar Pass developed area	Н	Completion and submission of this documentation will provide the park with answers about how to manage the area.
FRV and Key Issue	Data collection and analysis of effects of fire	М	Need a managementstrategy that maximizes the benefits of fire for fuel reduction and for management of natural resources.
FRV	Grazing and carrying capacity estimates needed for bison and other ungulates	М	Needed for ungulate management plan.
FRVand Key Issue	Inventory archeological and ethnographic sites	М	Only a small percentage of the park has been surveyed for archeological resources.None of the park has been surveyed for ethnographic resources.
FRV and Key Issue	Determine National Register of Historic Places eligibility of archeological sites	M	Only a few of the 380+ archeological sites have been formally evaluated.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes
FRV and Key Issue	Cultural resource condition assessment	М	Provides baseline data.
FRV and Key Issue	Ethnographic landscape survey	М	Look at significance of areas such as Big Foot Pass.
FRV and Key Issue	Cultural landscape survey for historical paleontological locations	М	Look at history of areas such as the National Geographic camp.
FRV	Organize and analyze wildlife data	М	Would inform management efforts.
FRV	Locating Badlands National Park paleontological specimens around the world	М	PMIS statement drafted but not funded. Park needs to better understand where specimens are located.
FRV	Research herbicides for new invasive plant species	М	Herbicides not available for new exotic invasive species.
FRV and Key Issue	Research pollinators	М	Recent observations have documented population declines of several North American species of pollinators. An essential part of natural ecosystems that are in decline.
OIRV	Oral histories of past and current employees	М	Needed for completion of administrative history.
OIRV	Archival assessment	М	Needed for completion of administrative history.
OIRV	Phase I environmental site assessment; if necessary, Phase II to determine if contamination is present	М	Cedar Pass Lodge fuel contamination. Preliminary fuel cleanup has been completed.
FRV and Key Issue	Synthesis and analysis of homesteading documentation	L	Need complete data set about homesteading including history of ownership.
FRV and Key Issue	Visitor use survey (wilderness)	L	Related to permitting and safety issues in wilderness.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes
FRV	Visual resource inventory	L	Scenery/ visual resource inventory classes are assigned through the inventory process based on a combination of three steps to characterize scenic quality, sensitivity level and distance zones. Each of these three analyses is mapped as an individual spatial layer and the combined overlay, based on the categorization of each, establishes the inventory class. This analysis has not been completed at the park.
FRV	New night sky analysis	L	Priority wouldincrease if International Dark SkyPark designation is sought.
Key Issue	Study traffic flow and weight of vehicles on Highway 240 Loop Road	L	Comparison of cars to semis, and their impacts on the road.
FRV	Scenery conservation management class data collection	L	Geographic analyses consisting of on-ground scenic inventory/ evaluation, viewshed sensitivity spread analysis, distance zone analysis, scenic integrity measures, and visual intrusion vulnerability are combined to produce a final scenery inventory class geographic dataset. This dataset, when combined with park scenic values and desired conditions as well as other resource values, results in the scenery management class objectives. This analysis has not been completed at the park.
FRV	Museum collection condition survey (update)	L	Last completed in 2002.

Part 3: Contributors

Badlands National Park

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Appendixes

Appendix A: Enabling Legislation and Legislative Acts for **Badlands National Park**

SEVENTIETH CONGRESS. Sess. II. Chs. 692, 693. 1929.

1553

CHAP. 693.—An Act To establish the Teton National Park in the State of South Dakota, and for other purposes.

March 4, 1929. [S. 4385.] [Public, No. 1021.]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That when a Badlands National quantum, satisfactory to the Secretary of the Interior, of the privately vately owned lands lying within the area hereinafter described shall owned lands within the area hereinafter described shall owned lands within the purposes, without expense to the United States for monubeen acquired, the land ment purposes, without expense to the Federal Treasury, such areas shall be, and are hereby, dedicated and set apart as a national monument for the benefit and orionwent of the popular under the page. ment for the benefit and enjoyment of the people, under the name

Areas described.

Proviso.
Highways to be constructed by South Das South Dakota shall have first constructed the highways hereinafter

Sec. 2. That the areas to be included in said Badlands National Monument are situated in the State of South Dakota and lie within the boundaries particularly described as follows: Beginning at the northeast corner section 13, township 3 south, range 18 east, Black Hills meridian; thence west one-fourth mile; thence south one mile; thence west one-fourth mile; thence south one-fourth mile; thence west one mile; thence south one-fourth mile; thence west one-fourth mile; thence north one mile; thence west one and one-fourth miles; thence north one-half mile; thence west three miles, to the northwest corner section 18, township 3 south, range 18 east, Black Hills meridian.

Thence north one-fourth mile; thence west one-half mile; thence north one-fourth mile; thence west three-fourths mile; thence south one-fourth mile; thence west one-fourth mile; thence north one-fourth mile; thence west one-fourth mile; thence north one-fourth mile; thence west three-fourths mile; thence south one-fourth mile; thence west one-half mile; thence south one-half mile; thence west one mile; thence north one-fourth mile; thence west one-fourth mile; thence north one-fourth mile; thence west one and one-fourth miles; thence north one-fourth mile; thence west one-fourth mile; thence north three-fourths mile; thence west one and one-fourth miles; thence north one-half mile, to the northeast corner section 2, township 3 south, range 16 east, Black Hills meridian.

Thence west one-half mile; thence north one mile; thence west one-fourth mile; thence north one-half mile; thence west threefourths mile; thence north one-half mile; thence west one-half mile; thence north two miles; thence west eight miles; thence south one-half mile; thence west one mile; thence north one-half mile, to the northeast corner section 13, township 2 south, range 14 east, Black Hills meridian.

Thence west one mile; thence south one mile; thence east one-half mile; thence south one-half mile; thence west one-half mile; thence south two and one-half miles; thence east one and one-fourth miles; thence south one mile; thence east three-fourths mile, to the northeast corner section 7, township 3 south, range 15 east, Black Hills meridian.

Thence south one-fourth mile; thence east one-fourth mile; thence south one-half mile; thence west one-fourth mile; thence south onefourth mile; thence west one mile, thence south one and three-fourths miles; thence east one mile; thence north three-fourths mile; thence east two miles; thence north one-half mile; thence east three-fourths mile; thence north one-fourth mile; thence east one-half mile; thence north three-fourths mile; thence west one-fourth mile; thence north three-fourths mile; thence west one-fourth mile; thence north onefourth mile; thence west one-fourth mile; thence north one-fourth mile; thence east one-fourth mile; thence north one-half mile; thence east one mile; thence south one-fourth mile; thence east one and three-fourths miles; thence north one-half mile; thence west one-half mile; thence north one-half mile, to the northwest corner section 31, township 2 south, range 16 east, Black Hills meridian.

Thence east one-half mile; thence south one-fourth mile; thence east one mile; thence south one-fourth mile; thence east one and three-fourths miles; thence south three-fourths mile; thence east three-fourths mile; thence south three-fourths mile; thence east one-half mile; thence south one-fourth mile; thence east one-fourth mile; thence south one-fourth mile; thence east one-fourth mile; thence south one-fourth mile; thence east one-fourth mile; thence

1555

south one-fourth mile; thence east one-fourth mile; thence south one-fourth mile; thence east one-half mile; thence south one and one-fourth miles; thence east three-fourths mile; thence north onehalf mile; thence east one-fourth mile, to the northeast corner section 19, township 3 south, range 17 east, Black Hills meridian.

Thence north one-half mile; thence east three-fourths mile; thence south two miles; thence east one and one-half miles; thence north one and one-half miles; thence east two miles; thence south onefourth mile; thence east one-fourth mile; thence south one-fourth mile; thence east one-half mile; thence south one-fourth mile; thence east one-half mile; thence south one-fourth mile; thence east one-half mile, to the northeast corner section 30, township 3 south, range 18 east, Black Hills meridian.

Thence south three-fourths mile; thence east one-fourth mile; thence south one-fourth mile; thence east one-half mile; thence north one-fourth mile; thence east one and one-fourth miles; thence south one-fourth mile; thence east three miles, to the northeast corner of section 36, township 3 south, range 18 east, Black Hills meridian.

Thence north one mile; thence east one mile; thence north one-half mile; thence west one-fourth mile; thence north one-fourth mile; thence west one-fourth mile; thence north one and one-fourth miles;

thence west one-half mile to the point of beginning.

Sec. 3. That the establishment of said monument is conditioned structed by South Daupon the State of South Dakota first constructing the following kota. highway in a manner satisfactory to the Secretary of the Interior: A highway commencing at the corporation limits of the town of Interior, thence going in a northwesterly direction to and over Big Foot Pass, and through the region known as The Pinnacles; thence in a westerly direction to Sage Creek, being a total distance of about thirty miles.

Sec. 4. That the administration, protection, and promotion of said National Park Service. Badlands National Monument shall be exercised under the direction of the Secretary of the Interior by the National Park Service, subject to the provisions of the Act of August 25, 1916, entitled "An Act to establish a National Park Service, and for other purposes," as amended by the Act of June 2, 1920 (Forty-first United States Statutes at Large, page 732): *Provided*, That in advance of the fulfillment of the conditions herein the Secretary of the Interior may grant etc., may be granted. franchises for hotel and for lodge accommodations under the provisions of this section.

Sec. 5. That the Secretary of the Interior be, and he is hereby, Examinations, exca-authorized to permit examinations, excavations, and gathering of permitted. objects of interest within said monument by any person or persons whom he may deem properly qualified to conduct such examinations, excavations, or gatherings, subject to such rules and regulations as he may prescribe: Provided, That the examinations, excavations, instead for benefit of some reputable of educational institutions, etc. museum, university, college, or other recognized scientific or educational institution, with a view to increasing the knowledge of such objects and aiding the general advancement of geological and zoological science.

Sec. 6. That this Act shall become effective if and when all of the maily dedicated above conditions shall have been fully complied with to the satisfac-proclamation of the proclamation tion of the President of the United States, who shall then issue a proclamation declaring that the conditions precedent herein required have been complied with, and said proclamation shall formally dedicate and set aside the areas herein described in accordance with the provisions of section 1 hereof.

Approved, March 4, 1929.

Vol. 41, p. 732,

Proviso. Franchise for hotels,

Examinations, exca-

90 STAT. 2692

PUBLIC LAW 94-567-OCT. 20, 1976

Public Law 94–567 94th Congress

An Act

Oct. 20, 1976 [H.R. 13160]

To designate certain lands within units of the National Park System as wilderness; to revise the boundaries of certain of those units; and for other purposes.

Wilderness areas. Designation. 16 USC 1132 note. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in accordance with section 3(c) of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1132(c)), the following lands are hereby designated as wilderness, and shall be administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act:

Bandelier National Monument, N. Mex. (a) Bandelier National Monument, New Mexico, wilderness comprising twenty-three thousand two hundred and sixty-seven acres, depicted on a map entitled "Wilderness Plan, Bandelier National Monument, New Mexico", numbered 315–20,014–B and dated May 1976, to

Gunnison National Monument, Colo. be know as the Bandelier Wilderness.

(b) Black Canyon of the Gunnison National Monument, Colorado, wilderness comprising eleven thousand one hundred and eighty acres, depicted on a map entitled "Wilderness Plan, Black Canyon of the

Gunnison National Monument, Colorado", numbered 144-20,017 and dated May 1973, to be known as the Black Canyon of the Gunnison

Wilderness.

Chiricahua National Monument, Ariz.

(c) Chiricahua National Monument, Arizona, wilderness comprising nine thousand four hundred and forty acres, and potential wilderness additions comprising two acres, depicted on a map entitled "Wilderness Plan, Chiricahua National Monument, Arizona", numbered 145–20,007–A and dated September 1973, to be known as the Chiricahua National Monument Wilderness.

Great Sand Dunes National Monument, Colo.

(d) Great Sand Dunes National Monument, Colorado, wilderness comprising thirty-three thousand four hundred and fifty acres, and potential wilderness additions comprising six hundred and seventy acres, depicted on a map entitled "Wilderness Plan, Great Sand Dunes National Monument, Colorado", numbered 140-20,006-C and dated February 1976, to be known as the Great Sand Dunes Wilderness.

Haleakala National Park, Hawaii. February 1976, to be known as the Great Sand Dunes Wilderness.

(e) Haleakala National Park, Hawaii, wilderness comprising nineteen thousand two hundred and seventy acres, and potential wilderness additions comprising five thousand five hundred acres, depicted on a map entitled "Wilderness Plan, Haleakala National Park, Hawaii", numbered 162–20,006–A and dated July 1972, to be known as the Haleakala Wilderness.

Isle Royale National Park, Mich.

(f) Isle Royale National Park, Michigan, wilderness comprising one hundred and thirty-one thousand eight hundred and eighty acres, and potential wilderness additions comprising two hundred and thirty-one acres, depicted on a map entitled "Wilderness Plan, Isle Royale National Park, Michigan", numbered 139–20,004 and dated December 1974, to be known as the Isle Royale Wilderness.

Joshua Tree National Monument, Calif.

(g) Joshua Tree National Monument, California, wilderness comprising four hundred and twenty-nine thousand six hundred and ninety acres, and potential wilderness additions comprising thirty-seven thousand five hundred and fifty acres, depicted on a map entitled

PUBLIC LAW 94-567-OCT. 20, 1976

90 STAT. 2693

"Wilderness Plan, Joshua Tree National Monument, California", numbered 156-20,003-D and dated May 1976, to be known as the Joshua Tree Wilderness.

(h) Mesa Verde National Park, Colorado, wilderness comprising eight thousand one hundred acres, depicted on a map entitled "Wilderness Pan, Mesa Verde National Park, Colorado", numbered 307-20,007-A and dated September 1972, to be known as the Mesa Verde Wilderness.

(i) Pinnacles National Monument, California, wilderness comprising twelve thousand nine hundred and fifty-two acres, and potential wilderness additions comprising nine hundred and ninety acres, depicted on a map entitled "Wilderness Plan, Pinnacles National Monument, California", numbered 114-20,010-D and dated September 1975, to be known as the Pinnacles Wilderness.

(j) Saguaro National Monument, Arizona, wilderness comprising Saguaro National seventy-one thousand four hundred acres, depicted on a map entitled "Wilderness Plan, Saguaro National Mounment, Arizona", numbered 151-20,003-D and dated May 1976, to be known as the Saguaro

(k) Point Reyes National Seashore, California, wilderness comprising twenty-five thousand three hundred and seventy acres, and potential wilderness additions comprising eight thousand and three acres, depicted on a map entitled "Wilderness Plan, Point Reyes National Seashore", numbered 612-90,000-B and dated September 1976, to be known as the Point Reyes Wilderness.

(1) Badlands National Monument, South Dakota, wilderness comprising sixty-four thousand two hundred and fifty acres, depicted on a map entitled "Wilderness Plan, Badlands National Monument, South Dakota", numbered 137-29,010-B and dated May 1976, to be known as the Badlands Wilderness.

(m) Shenandoah National Park, Virginia, wilderness comprising seventy-nine thousand and nineteen acres, and potential wilderness additions comprising five hundred and sixty acres, depicted on a map entitled "Wilderness Plan, Shenandoah National Park, Virginia" numbered 134-90,001 and dated June 1975, to be known as the Shenandoah Wilderness.

SEC. 2. A map and description of the boundaries of the areas designated in this Act shall be on file and available for public inspection in the office of the Director of the National Park Service, Department of the Interior, and in the office of the Superintendent of each area designated in the Act. As soon as practicable after this Act takes effect, maps of the wilderness areas and descriptions of their boundaries shall be filed with the Interior and Insular Affairs Committees of the United States Senate and House of Representatives, and such maps and descriptions shall have the same force and effect as if included in this Act: Provided, That correction of clerical and typographical errors in such maps and descriptions may be made.

Sec. 3. All lands which represent potential wilderness additions, upon publication in the Federal Register of a notice by the Secretary of the Interior that all uses thereon prohibited by the Wilderness Act 16 USC 1131 have ceased, shall thereby be designated wilderness.

Sec. 4. The boundaries of the following areas are hereby revised, and those lands depicted on the respective maps as wilderness or as potential wilderness addition are hereby so designated at such time and in such manner as provided for by this Act:

Mesa Verde National Park, Colo.

Pinnacles National Monument, Calif.

Monument, Ariz.

Point Reyes National Seashore. Calif.

Badlands National Monument, S. Dak.

Shenandoah National Park, Va.

description, public inspection.

Publication in Federal Register.

Boundary

90 STAT. 2694

PUBLIC LAW 94-567—OCT. 20, 1976

Isle Royale National Park, Mich.

(a) Isle Royale National Park, Michigan: The Act of March 6, 1942 (56 Stat. 138; 16 U.S.C. 408e-408h), as amended, is further amended as follows:

(1) Insert the letter "(a)" before the second paragraph of the first section, redesignate subparagraphs (a), (b), and (c) of that paragraph as "(1)", "(2)", "(3)", respectively, and add to that section the following new paragraph:

"(b) Gull Islands, containing approximately six acres, located in section 19, township 68 north, range 31 west, in Keweenaw County, Michigan.".

16 USC 408g.

(2) Amend section 3 to read as follows:

"SEC. 3. The boundaries of the Isle Royale National Park are hereby extended to include any submerged lands within the territorial jurisdiction of the United States within four and one-half miles of the shoreline of Isle Royale and the surrounding islands, including Passage Island and the Gull Islands, and the Secretary of the Interior is hereby authorized, in his discretion, to acquire title by donation to any such lands not now owned by the United States, the title to be satisfactory to him.".

Pinnacles National Monument, Calif.

(b) Pinnacles National Monument, California:(1) The boundary is hereby revised by adding the following described lands, totaling approximately one thousand seven hundred and seventeen and nine-tenths acres:

(a) Mount Diablo meridian, township 17 south, range 7 east: Section 1, east half east half, southwest quarter northeast quarter, and northwest quarter southeast quarter; section 12, east half northeast quarter, and northeast quarter southeast quarter; section 13, east half northeast quarter and northeast quarter southeast quarter.

(b) Township 16 south, range 7 east: Section 32, east half.

(c) Township 17 south, range 7 east: Section 4, west half; section 5, east half.

(d) Township 17 south, range 7 east: Section 6, southwest quarter southwest quarter; section 7, northwest quarter north half southwest

Publication in Federal Register.

(2) The Secretary of the Interior may make minor revisions in the monument boundary from time to time by publication in the Federal Register of a map or other boundary description, but the total area within the monument may not exceed sixteen thousand five hundred acres: Provided, however, That lands designated as wilderness pursuant to this Act may not be excluded from the monument. The monument shall hereafter be administered in accordance with the Act of August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), as amended and supplemented.

(3) In order to effectuate the purposes of this subsection, the Secretary of the Interior is authorized to acquire by donation, purchase, transfer from any other Federal agency or exchange, lands and interests therein within the area hereafter encompassed by the monument boundary, except that property owned by the State of California or any political subdivision thereof may be acquired only by donation.

Appropriation authorization.

(4) There are authorized to be appropriated, in addition to such sums as may heretofore have been appropriated, not to exceed \$955,000 for the acquisition of lands or interests in lands authorized by this subsection. No funds authorized to be appropriated pursuant to this Act shall be available prior to October 1, 1977.

PUBLIC LAW 94-567—OCT. 20, 1976

90 STAT. 2695

Sec. 5. (a) The Secretary of Agriculture shall, within two years after the date of enactment of this Act, review, as to its suitability or nonsuitability for preservation as wilderness, the area comprising approximately sixty-two thousand nine hundred and thirty acres located in the Coronado National Forest adjacent to Saguaro National Monument, Arizona, and identified on the map referred to in section 1(j) of this Act as the "Rincon Wilderness Study Area," and shall report his findings to the President. The Secretary of Agriculture shall conduct his review in accordance with the provisions of subsections 3(b) and 3(d) of the Wilderness Act, except that any reference in such subsections to areas in the national forests classified as "primitive" on the effective date of that Act shall be deemed to be a reference to the wilderness study area designated by this Act and except that the President shall advise the Congress of his recommendations with respect to this area within two years after the date of enactment of this Act.

(b) The Secretary of Agriculture shall give at least sixty days' advance public notice of any hearing or other public meeting relating

to the review provided for by this section.

Sec. 6. The areas designated by this Act as wilderness shall be Administration. administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act governing areas designated nated by that Act as wilderness areas, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this Act, and, where appropriate, any reference to the Secretary of Agriculture shall be deemed to be a reference to the Secretary of the Interior.

Sec. 7. (a) Section 6(a) of the Act of September 13, 1962 (76 Stat. 16 USC 459c-6. 538), as amended (16 U.S.C. 459c-6a) is amended by inserting "without impairment of its natural values, in a manner which provides for such recreational, educational, historic preservation, interpretation, and scientific research opportunities as are consistent with, based upon, and supportive of the maximum protection, restoration and preservation of the natural environment with the area" immediately after "shall be administered by the Secretary".

(b) Add the following new section 7 and redesignate the existing 16 USC 459c-7.

section 7 as section 8:

"Sec. 7. The Secretary shall designate the principal environmental education center within the Seashore as 'The Clem Miller Environmental Education Center,' in commemoration of the vision and leadership which the late Representative Clem Miller gave to the creation and protection of Point Reyes National Seashore.".

Sec. 8. Notwithstanding any other provision of law, any designation of the lands in the Shoshone National Forest, Wyoming, known as the Whiskey Mountain Area, comprising approximately six thousand four hundred and ninety-seven acres and depicted as the "Whiskey Mountain Area—Glacier Primitive Area" on a map entitled "Proposed Glacier Wilderness and Glacier Primitive Area", dated September 23, 1976, on file in the Office of the Chief, Forest Service, Department of Agriculture, shall be classified as a primitive area until the Secretary of Agriculture or his designee determines otherwise pursuant to classification procedures for national forest primitive areas. Provisions of any other Act designating the Fitspatrick Wilderness in said Forest shall continue to be effective only for the approximately one hundred and ninety-one thousand one hundred and three acres depicted as the "Proposed Glacier Wilderness" on said map.

Approved October 20, 1976.

Rincon Wilderness Study Area, suitability 16 USC 1132 note.

Report to President. 16 USC 1132.

Notice and

The Clem Miller Environmental Education Center, designation. 16 USC 459c-6a. Whiskey Mountain Area, classification as a primitive area.

BAD LANDS NATIONAL MONUMENT IN THE STATE OF SOUTH DAKOTA

FEBRUARY 19, 1929.—Committed to the Committee of the Whole House on the state of the Union and ordered to be printed

Mr. Colton, from the Committee on the Public Lands, submitted the following

REPORT

[To accompany S. 4385]

The Committee on the Public Lands, to whom was referred the bill (S. 4385) to establish the Teton National Park in the State of South Dakota, and for other purposes, having considered the same, report thereon with the recommendation that it do pass with the following amendments:

Strike out all after the enacting clause and insert the following:

That when a quantum, satisfactory to the Secretary of the Interior, of the privately owned lands lying within the area hereinafter described shall have been acquired and transferred to the United States for monument purposes, without expense to the Federal Treasury, such areas shall be, and are hereby, dedicated and set apart as a national monument for the benefit and enjoyment of the people, under the name of the Badlands National Monument: Provided, That the State of South Dakota shall have first constructed the highways hereinafter described. Sec. 2. That the areas to be included in said Badlands National Monument

Sec. 2. That the areas to be included in said Badlands National Monument are situated in the State of South Dakota and lie within the boundaries particularly described as follows: Beginning at the northeast corner section 13, township 3 south, range 18 east, Black Hills meridian; thence west one-fourth mile; thence south one mile; thence west one-fourth mile; thence west one-fourth mile; thence west one-fourth mile; thence west one-fourth mile; thence north one mile; thence west one and one-fourth miles; thence north one-half mile; thence west three miles, to the northwest corner section 18, township 3 south, range 18 east, Black Hills meridian.

Thence north one-fourth mile; thence west one-half mile; thence north one-fourth mile; thence west three-fourths mile; thence south one-fourth mile; thence west one-fourth mile; thence north one-fourth mile; thence west one-fourth mile; thence south one-fourth mile; thence west one-half mile; thence south one-half mile; thence west one-fourth mile; thence west one-fourth mile; thence morth one-fourth mile; thence west one-fourth mile; thence north one-fourth mile; thence west one-fourth mile; thence west one-fourth mile; thence west one-fourth mile; thence west one-fourth mile; thence morth one-half mile, to the northeast corner section 2, township 3 south, range 16 east, Black Hills meridian.

Thence west one-half mile; thence north one mile; thence west one-fourth mile; thence north one-half mile; thence west three-fourths mile; thence north one-half mile; thence west one-half mile; thence north two miles; thence west eight miles; thence south one-half mile; thence west one mile; thence north one-half mile, to the northeast corner section 13, township 2 south, range 14 east, Black Hills meridian.

Thence west one mile; thence south one mile; thence east one-half mile; thence south one-half mile; thence west one-half mile; thence south two and one-half miles; thence east one and one-fourth miles; thence south one mile; thence east three-fourths mile, to the northeast corner section 7, township 3 south, range 15 east, Black Mills meridian.

Thence south one-fourth mile; thence east one-fourth mile; thence south one-half mile; thence west one-fourth mile; thence south one-fourth mile; thence west one mile; thence south one and three-fourths miles; thence east one mile; thence north three-fourths mile; thence east two miles; thence north one-half mile; thence east one-half mile; thence north three-fourths mile; thence west one-fourth mile; thence north one-fourth mile; thence north one-fourth mile; thence west one-fourth mile; thence east one-fourth mile; thence west one-fourth mile; thence east one-fourth mile; thence north one-half mile; thence east one mile; thence south one-fourth mile; thence east one and three-fourths miles; thence north one-half mile; thence west one-half mile; thence north one-half mile, to the northwest corner section 31, township 2 south, range 16 east, Black Hills meridian.

Thence east one-half mile; thence south one-fourth mile; thence east one mile; thence south one-fourth mile; thence east one and three-fourths miles; thence south three-fourths mile; thence east three-fourths mile; thence south three-fourths mile; thence east one-half mile; thence south one-fourth mile; thence east one-fourth mile; thence east one-fourth mile; thence south one-fourth mile; thence south one-fourth mile; thence south one-fourth mile; thence east one-fourth mile; thence east one-fourth mile; thence east one-fourth mile; thence east three-fourths mile; thence north one-half mile; thence east one-fourth mile, to the northeast corner section 19, township 3 south, range 17 east, Black Hills meridian.

Thence north one-half mile; thence east three-fourths mile; thence south two miles; thence east one and one-half miles; thence north one and one-half miles; thence east two miles; thence south one-fourth mile; thence east one-fourth mile; thence south one-fourth mile; thence south one-fourth mile; thence east one-half mile; thence east one-half mile, to the northeast corner of section 30, township 3 south, range 18 east, Black Hills meridian.

Thence south three-fourths mile; thence east one-fourth mile; thence south one-fourth mile; thence east one-half mile; thence north one-fourth mile; thence east one and one-fourth miles; thence south one-fourth mile; thence east three miles, to the northeast corner of section 36, township 3 south, range 18 east, Black Hills meridian.

Thence north one mile; thence east one mile; thence north one-half mile; thence west one-fourth mile; thence north one-fourth mile; thence west one-fourth mile; thence north one and one-fourth miles; thence west one-half mile to the point of beginning.

SEC. 3. That the establishment of said monument is conditioned upon the State of South Dakota first constructing the following highway in a manner satisfactory to the Secretary of the Interior: A highway commencing at the corporation limits of the town of Interior, thence going in a northwesterly direction to and over Big Foot Pass, and through the region known as The Pinnacles; thence in a westerly direction to Sage Creek, being a total distance of about thirty miles.

SEC. 4. That the administration, protection, and promotion of said Badlands National Monument shall be exercised under the direction of the Secretary of the Interior by the National Park Service, subject to the provisions of the act of August 25, 1916, entitled "An act to establish a National Park Service, and for other purposes," as amended by the act of June 2, 1920 (Forty-first United States Statutes at Large, page 732): Provided, That in advance of the fulfillment of the conditions herein the Secretary of the Interior may grant franchises for hotel and for lodge accommodations under the provisions of this section.

for lodge accommodations under the provisions of this section.

SEC. 5. That the Secretary of the Interior be, and he is hereby, authorized to permit examinations, excavations, and gathering of objects of interest within said monument by any person or persons whom he may deem properly qualified to

conduct such examinations, excavations, or gatherings, subject to such rules and regulations as he may prescribe: *Provided*, That the examinations, excavations, and gatherings are undertaken only for the benefit of some reputable museum, university, college, or other recognized scientific or educational institution, with a view to increasing the knowledge of such objects and aiding the general advancement of geological and zoological science.

Sec. 6. That this act shall become effective if and when all of the above conditions shall have been fully complied with to the satisfaction of the President of the United States, who shall then issue a proclamation declaring that the conditions precedent herein required have been complied with, and said proclamation shall formally dedicate and set aside the areas herein described in accordance with

the provisions of section 1 hereof.

Amend the title of the bill so as to read:

A bill to establish the Bad Lands National Monument in the State of South Dakota, and for other purposes.

The substitute measure provides for the creation of a national monument of the area therein described, instead of a national park as proposed in Senate bill 4385, which passed the Senate on May 23, 1928, and carries out the recommendations of the Secretary of the Interior contained in his letter to the chairman of this committee, under date of February 18, 1929, which sets forth the reasons for this legislation. Same is appended hereto and made a part of this report. It will be noted therefrom that the bill as amended is not in conflict with the financial program of the President.

This proposed national monument, which embraces a great part of the most scenic and interesting section of the South Dakota Bad Lands, is to be established by presidential proclamation, when certain

requirements provided in the bill have been met.

The total area proposed to be set aside in the substitute measure comprises approximately 50,760 acres (a reduction of 18,360 acres from the area proposed in the original bill), of which approximately 3,760 acres are privately owned.

The boundaries of the monument are fully set out in the bill, in which provision is made for its administration, protection, and promo-

tion under the National Park Service act.

The following are the conditions precedent, which must first be

met, before the proposed act shall become effective:

1. A quantum of the privately owned lands within the proposed area, satisfactory to the Secretary of the Interior, must be acquired and transferred to the United States for monument purposes without cost to the Government; and

2. Construction by the State of South Dakota, in a manner satisfactory to the Secretary of the Interior, of approximately 30 miles of highway, same to extend from the town of Interior in a northwesterly direction to and over Big Foot Pass and through the region known as The Pinnacles, thence in a westerly direction to Sage Creek.

The bill also provides that only recognized scientific and educational institutions, upon permit from the Secretary of the Interior, shall be allowed to conduct expeditions within the monument area for the

advancement of geological and zoological science.

The topography of the South Dakota Bad Lands is so unique, varied, and interesting, and the fame of the region as a large field for scientific exploration of the geological past is so extensive, the committee feels that its scenic and educational features should be preserved for the use and enjoyment of the people.

4 BAD LANDS NATIONAL MONUMENT IN SOUTH DAKOTA

LOCATION AND EXTENT

The White River Bad Lands consist of the most important badland area of the world, several of the most interesting parts of which are included in the proposed bill. They lie generally in southwestern South Dakota, the most scenic part being in Pennington and Jackson Counties, and cover an area of about 1,000 square miles. A prominent arm, known as Pine Ridge, extends through northwestern Nebraska into eastern Wyoming. From Pennington County the Bad Lands extend northward for miles and miles in the form of lesser ranges, isolated mounds, buttes, and offshoots.

The Bad Lands country does not readily lend itself to accurate

definition or brief description.

The appellation "Bad Lands" was given to the region by the Indians, which name was thereafter adopted by the early French-Canadian trappers and handed down to the white man. It signifies a country difficult to travel through, generally because of the extremely rugged surroundings and the infrequency of passes through the Great Wall.

TOPOGRAPHY

The chief topographical features of the area embraced in the bill are The Pinnacles and the Great Wall. Viewing the former from the tableland, the spectator beholds a vast area of rutted ravines, high ridges, hills and cliffs of gravish white soil with varied stratas of coloring, extending as far as the eye can reach. The contour is so rugged that considerable of this region has never been surveyed. The fantastic outlines of these formations are constantly being changed by erosion.

The Great Wall stretches for miles in an east and west direction, and discloses for much of the distance a continuous serrated sky-line series of towers, pinnacles, and precipitous gulches. The landscape is strange and weird in the extreme. World travelers pronounce the panoramic scenery of the Bad Lands of rare magnificence, which can

not be duplicated elsewhere.

FOSSILS

In this region abound vast beds of vertebrate fossil remains. Geologic formations, peculiar to this locality, appear in great variety. The whole area is a vast storehouse of the biological past, and for three-quarters of a century it has been the scene of operations for scientific expeditions from all parts of the world. Specimens of these fossil remains repose in the world's principal museums.

DEPARTMENT OF THE INTERIOR, Washington, February 18, 1929

Hon. Don B. Colton, Chairman Committee on the Public Lands,

House of Representatives.

My Dear Mr. Colton: I have your request of February 13 for report on amended bill S. 4885 to establish the Bad Lands National Monument in the State of South Dakota, and for other purposes.

The area proposed for preservation as a national monument appears to merit such status as it is unquestionably of great scientific interest. Ordinarily, specific legislation would not be required for the establishment of a national monument, but in view of the conditions of the act which require that the privately

owned lands be first turned over to the United States without expense to the Federal Treasury and that certain roads be constructed by the State without Federal expense, the proposed congressional legislation appears necessary.

On page 3 of the amended bill, lines 18 to 24, inclusive, it appears that the

On page 3 of the amended bill, lines 18 to 24, inclusive, it appears that the authority to exchange alienated lands within the area of the proposed monument for unappropriated and unreserved public lands of approximately equal value elsewhere in South Dakota is in conflict with the proviso that the privately owned lands shall be acquired and transferred to the United States for monument pur poses without expense to the Federal Treasury. If the language on page 3, lines 18 to 24, inclusive, is eliminated from the measure, I have to recommend that the amended bill receive favorable consideration by your committee.

Under date of February 15 I am advised by the Director of the Bureau of the Budget that if the bill is further amended as suggested above, the proposed legislation would not be in conflict with the financial program of the President.

As requested the copy of the bill inclosed with your letter is returned herewith. Two corrections in the description of the boundaries are indicated on page 2. These corrections should be made.

O

Very truly yours,

ROY O. WEST.

Appendix B: Inventory of Administrative Commitments

Name	Start Date – Expiration Date	Stakeholders (other than park)	Purpose
Agreement between park and Town of Interior	2013 – 2018	Town of Interior	Standard operating procedure for roads and through Town of Interior.
Inter Tribal Buffalo Council Agreement	2014 – Yearly	Inter Tribal Bison Council	Outlines how excess bison will be distributed.
Oglala Sioux Parks and Recreation Authority Agreement	2013 – 2018	Oglala Sioux Tribe	Agreement for operating White River Visitor Center and funding to operate.
Cedar Pass Lodge Contract	2009 – 2019	Forever Resorts	Operation of lodge and cabins.
Scenic Byway Plan	2000 Draft –	State and local communities	The Badlands Scenic Byway would link several existing and proposed recreational resources and provide additional incentive for travelers to divert from Interstate 90 to explore the region.
Golden West right- of-way	2014 – 2024	Golden West	Right-of-way for fiber optics and phone lines.
West River Electric right-of-way	2002 – 2022	West River Electric	Right-of-way for electrical lines.
West River Lyman Jones	Being updated	West River Lyman Jones	Maintenance and operation of water supply line in park.
Service First Agreement	2015 – 2020	Various agencies in locality	Establishes framework for general terms and conditions for fund-obligating interagency agreements.
Interior Voluntary Fire Department (IVFD)	2009 – 2019	Town of Interior	Establishes standards, terms, and conditions under which fire department and National Park Service will operate for structural fire response.
Air Tour Management Agreement	To be determined	Federal Aviation Administration	Joint agreement to manage commercial air tours in the park.

Appendix C: Basics for Wilderness Stewardship

Wilderness Background Information

(This includes wilderness legislation and associated congressional subcommittee reports and hearings, wilderness areas, and designation status.)

In 1976 Congress designated 64,250 acres of the North Unit of Badlands National Park as the Badlands Wilderness (PL 94-567). Within the North Unit, the designated wilderness is divided into two geographically separated units, referred to as the Sage Creek Unit and Conata Basin Unit.

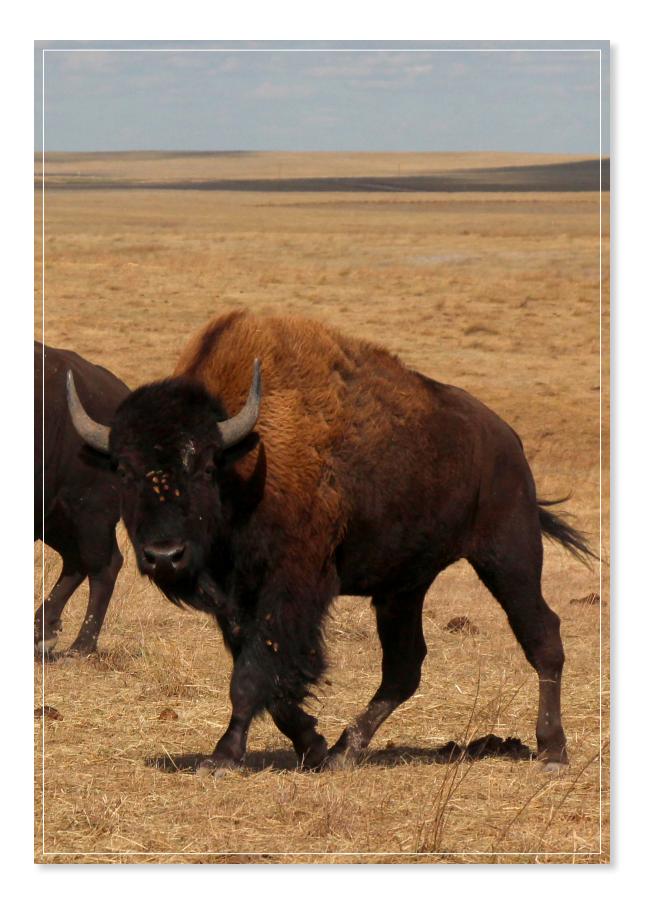
Wilderness Character Narrative

Badlands National Park has not completed a wilderness character aarrative.

Issues for Wilderness Planning

The following important current or anticipated issues could impact wilderness planning at Badlands National Park.

- 1. Develop wilderness character narrative.
- 2. Develop wilderness permitting plan.
- Fence maintenance/construction along the Sage Creek and Conata Basin Units of the Badlands Wilderness.
- 4. Research permits issued within the boundary of the wilderness.
- 5. Developing/repairing water sources for wildlife.
- 6. Rotational grazing.
- 7. Exotic plant removal/spraying.
- 8. Paleontology concerns: The Badlands Wilderness Area preserves many pristine fossil sites. Because poachers are forced to walk many miles to access these remote locations, they are less likely to carry out as many fossils; however, many virtual hiking tours of the Badlands Wilderness Area can now be found on the internet. Unfortunately, many of these tours do not contain a "no collecting" message. So, well-intentioned backcountry visitors raid these fragile locations and bring back armloads of fossils. Companies that post these backcountry wilderness tours should be contacted by park personnel and encouraged to develop a "no collecting" message. More funding is needed to survey these remote locations, expand visitor education programs, and increase backcountry patrols.



Midwest Region Foundation Document Recommendation Badlands National Park

September 2017

This Foundation Document has been prepared as a collaborative effort between park and regional staff and is recommended for approval by the Midwest Regional Director.

RECOMMENDED

Mike Pflaum, Superintendent, Badlands National Park

Date

APPROVED

Cameron H. Sholly, Regional Director, Midwest Region

Date





As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

BADL xxx/xxxxxx September 2017

Foundation Document • Badlands National Park

