

National Park Service
U.S. Department of the Interior

Florissant Fossil Beds National Monument
Colorado



Visitor Education and Research/Museum Facility Environmental Assessment

August 2007



Visitor Education and Research/Museum Facility

Environmental Assessment

Summary

Florissant Fossil Beds National Monument (Monument) proposes to construct a new visitor education and research/museum facility near the farmhouse which currently serves as the Monument's interim visitor center.

Visitor services within the Monument are currently situated in a 1924 farmhouse. The Monument's museum collection of 6,000 objects and archives are stored in the basement of a 1965 A-frame cabin (Jones Residence). Some objects from the fossil collection are displayed in the farmhouse visitor center. The new visitor education and research/museum facility would replace the existing A-frame cabin and the 1924 farmhouse, and all visitor services and curatorial storage would be relocated to the new building.

The proposal to remove the farmhouse and cabin and replace them with a new building is needed in part to address human health and safety risks associated with both of the existing buildings. In particular, the levels of rodent infestation in these facilities are unacceptably high, which increases the risk of employees and visitors to being exposed to diseases carried by rodents, particularly Hantavirus. Both of these facilities also have structural deficiencies that foster other health and safety problems. The farmhouse deficiencies include: lack of a sound foundation, a sagging roof, undersized electrical wiring, inadequate climate and humidity controls, limited ADA accessibility, a flood-prone crawlspace and subsequent mold/mildew, and lack of fire detection and suppression systems. The A-frame cabin deficiencies include: lack of fire detection and suppression systems, no telephone connection, no climate control, and high levels of radon. A new visitor education and research/museum building would eliminate the health and safety risks from these deficiencies, and would also consolidate visitor services and museum and research functions into one permanent facility.

This Environmental Assessment evaluates two alternatives; a no-action alternative and an action alternative. The no-action alternative describes the current conditions if no visitor education and research/museum building were constructed, while the action alternative addresses the removal of two existing buildings and construction of the new visitor education and research/museum building in roughly the same area as the farmhouse/interim visitor center. The action alternative also addresses the use of a temporary visitor center building during construction of the new building, as well as other connected actions such as building demolition, relocating and/or installing utilities (electric, water, sewer, etc.), landscaping and disturbed site restoration, and site work.

This Environmental Assessment has been prepared in compliance with the National Environmental Policy Act (NEPA) to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet objectives of the proposal, 2) evaluates potential issues and impacts to Florissant Fossil Beds National Monument's resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts. Resource topics that have been addressed in this document because the resultant impacts may be greater than minor include paleontological resources, museum collections, visitor use and experience, and park operations. All other resource topics have been dismissed because the project would result

in negligible or minor effects to those resources. No major effects are anticipated as a result of this project. Public scoping was conducted to assist with the development of this document and comments were received, mostly in support of the proposed project.

Public Comment

If you wish to comment on the environmental assessment, you may mail comments to the name and address below or post comments online at <http://parkplanning.nps.gov/>. This environmental assessment will be on public review for 30 days. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment including your personal identifying information may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Keith Payne, Superintendent
Florissant Fossil Beds National Monument
P.O. Box 185
Florissant, Colorado 80816

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PURPOSE AND NEED

INTRODUCTION

Florissant Fossil Beds National Monument (Monument) is located near the town of Florissant, in central Colorado (Figure 1). The Monument was established by an Act of Congress on August 25, 1969, and is managed by the National Park Service. The 6,000 acres of the Monument were set aside as part of the national park system to preserve, research, and interpret the excellently preserved fossil flora and fauna and related geologic sites and objects in order to advance our knowledge and understanding of these paleontological and geologic resources.

The purpose of this Environmental Assessment is to examine the environmental impacts associated with the proposal to construct a new visitor education and research/museum building at Florissant Fossil Beds National Monument. The new visitor education and research/museum facility would be constructed near the farmhouse that currently serves as the interim visitor center, and would replace the existing 1924 farmhouse (interim visitor center) and 1965 A-frame cabin (research/museum facility).

This Environmental Assessment has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (CEQ) (40 CFR 1508.9), and the National Park Service Director's Order (DO)-12 (*Conservation Planning, Environmental Impact Analysis, and Decision-making*).

BACKGROUND

Visitor services at Florissant Fossil Beds National Monument are currently situated in a 1924 farmhouse structure that has served as the interim visitor center for over 30 years. This 2,000 square foot building provides for fee collection and remittance activities, visitor information and orientation services, some staff offices, restrooms (2 toilets), a small theater, and the cooperating association sales and storage areas. Up to 100% of the monument's 60,000 annual visitors pass through the farmhouse structure to begin their park visit.

On a site visit in 2003, the National Park Service's Intermountain Region's Occupational Health Manager found the levels of mice infestation in the farmhouse unacceptably high. In the United States, rodents carry Hantaviruses that cause Hantavirus pulmonary syndrome, a disease that can be transmitted to humans through the air. Rodents that carry the Hantaviruses are endemic to the general area, and while Hantavirus pulmonary syndrome is a relatively rare occurrence, there are life-threatening consequences if the disease is contracted. While the threat of Hantaviruses can be managed relatively easily in outbuildings, the levels of infestation occurring in office workspace environments are not so easily mitigated. An epidemiologist with the State of Colorado's Department of Health and Environment recommended that the Monument take immediate measures to mitigate for Hantavirus in the office work environment.

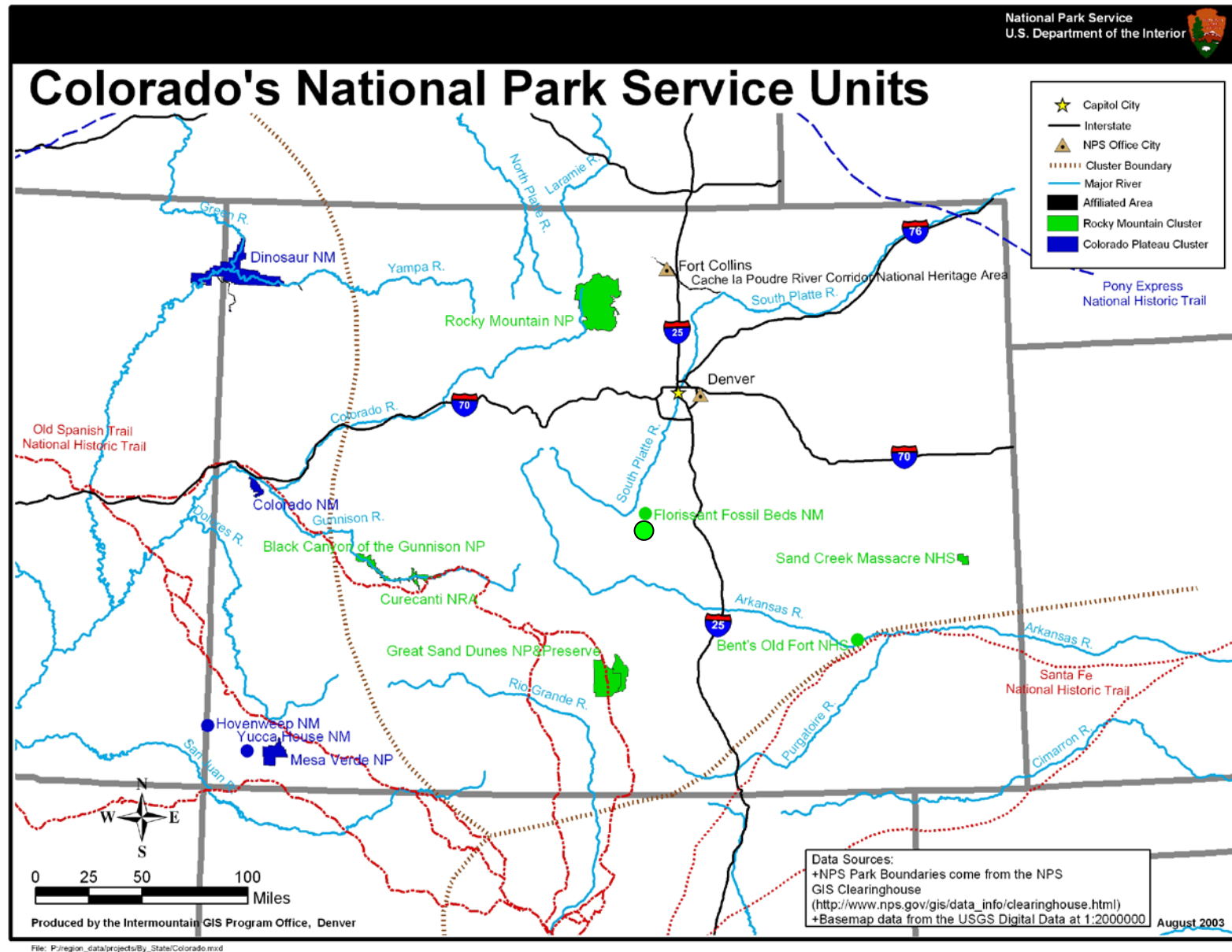
The existing visitor center was always intended to serve only as a temporary facility, but has housed employee offices and visitor service functions for over 30 years. Time and wear on the structure has resulted in structural deficiencies including an overloaded electrical wiring system, non-compliance with Americans with Disabilities Act access requirements, an

inadequate heating system, lack of a cooling system, a sagging roof, a leaking crawlspace, a lack of fire detection and suppression systems, and unacceptable levels of rodent infestation. The recently completed condition assessment (2003) found over \$200,000 in maintenance deficiencies (far more than the worth of the building), which indicated that the building should be replaced. Due to its age and condition, rodent-proofing the structure is likely to be difficult and expensive, and may not be feasible.

The existing A-frame cabin basement space that is currently being used as museum storage and curatorial workspace also lacks any fire detection or suppression systems. This deficiency consistently prevents the monument from meeting both curatorial standards for museum collections as well as basic employee health and safety standards. The basement area also has high levels of radon. Even with the positive venting system for radon mitigation, tests consistently show a radon contamination level of 5 picocuries, a level at which the EPA recommends mitigation. A recently completed condition assessment indicated a ranking of "Poor Condition." The deferred maintenance cost for that portion of the building that houses the museum storage and curatorial facilities is approximately \$42,000.

In 2004, a new administrative facility was constructed near the current visitor center to replace the 1970s house trailer that served as the administrative office. The new administrative building minimized health and safety risks and consolidated administrative functions into one permanent facility. An environmental assessment was completed in 2003 to examine the environmental impacts associated with the proposal to construct the new facility. That environmental assessment and this document cover the same basic topics and project area.

FIGURE 1: COLORADO AREA PARKS



PURPOSE

The purpose of the proposal is to provide a safe, healthy, and functional visitor services facility and working environment for Monument staff, and to provide a museum and curatorial storage area and work space that meets IMR and NPS curatorial standards.

NEED

This project is needed to address the following management concerns:

- According to the National Park Service's Intermountain Region's Occupational Health Manager and the State of Colorado's Department of Health and Environment, the level of rodent infestation in the existing building used for visitor services is unacceptably high. This building does not meet state or National Park Service health and safety recommendations for employee work areas.
- The current visitor education and research/museum facility contains structural deficiencies including an overloaded electrical wiring system, non-compliance with Americans with Disabilities Act access requirements, an inadequate heating system, lack of a cooling system, a sagging roof, and mold/mildew problems due to a leaking crawl space.
- The current museum/curatorial work area also lacks any fire detection or suppression system and has high levels of radon.
- The current museum and curatorial work area lacks appropriate climatic controls required by NPS standards for the storage of museum objects. Currently, 6,000 objects and archives are stored in this area.
- The current visitor education and research/museum facility does not have the capacity to accommodate the annual park visitation. The current facility reasonably accommodates 28 people; the needed capacity is 75-100 people.
- The current visitor center was originally intended to be used as a temporary visitor center to be replaced by a permanent facility. The new visitor education and research/museum facility would be a permanent facility.

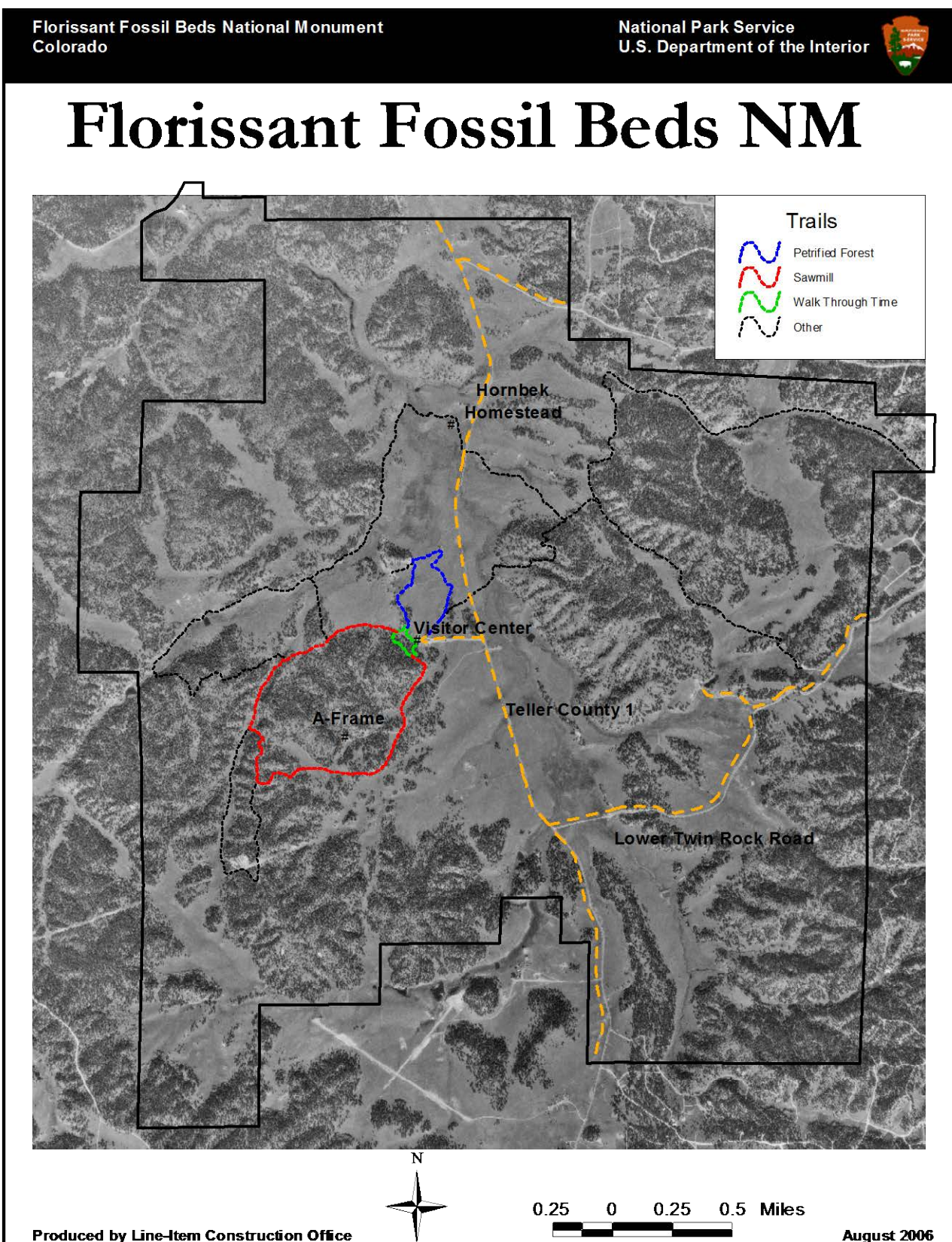
PROJECT OBJECTIVES

Based on scoping conducted with both the public and National Park Service staff, the following objectives have been identified to support the proposal for construction of a new visitor education and research/museum facility at Florissant Fossil Beds National Monument:

1. Meet federal and state health and safety recommendations for employee work areas.
2. Consolidate visitor services and research/museum functions into one building.
3. Provide a permanent visitor education and research/museum facility that meets current health and safety standards.

4. Provide an adequately sized-facility to meet the needs of the park's annual visitation of 60,000 people.
5. Identify a site for the new visitor education and research/museum building that minimizes impacts to park resources.

FIGURE 2: FLORISSANT FOSSIL BEDS NATIONAL MONUMENT



PUBLIC SCOPING

Scoping is a process to identify the resources that may be affected by a project proposal, and to explore possible alternative ways of achieving the proposal while minimizing adverse impacts. Florissant Fossil Beds National Monument conducted both internal scoping with appropriate National Park Service staff and external scoping with the public and interested/affected groups and agencies.

Internal scoping was conducted by an interdisciplinary team of professionals from Florissant Fossil Beds National Monument and the National Park Service Intermountain Regional Office. Interdisciplinary team members met on January 24, 2005 to discuss the purpose and need for the project; various alternatives; potential environmental impacts; past, present, and reasonably foreseeable projects that may have cumulative effects; and possible mitigation measures. Over the course of the project, team members also conducted a site visit to view and evaluate the proposed site for the new visitor education and research/museum facility.

External scoping was initiated with the distribution of a scoping letter to inform the public of the proposal to construct a new visitor education and research/museum facility, and to generate input on the preparation of this Environmental Assessment. The scoping letter dated March 16, 2005 was mailed to over 200 residents in the area including landowners adjacent to the Monument. In addition, the scoping letter was mailed to various federal and state agencies, affiliated Native American tribes, local governments, and local news organizations. Scoping information was also posted on the Monument's website.

During the 30-day scoping period, thirteen public responses were received. The majority of respondents were in favor of constructing a new visitor education and research/museum facility. Many people made comments regarding the design of the building or exhibits, while some commenters suggested incorporating the farmhouse or part of it into the new facility, if possible. Building design is beyond the scope of this EA and will not be discussed. Continued use of the farmhouse was examined by the interdisciplinary team and ultimately dismissed as not meeting the other objectives of the project; particularly resolving health and safety and structural problems.

RELATIONSHIP OF THE PROPOSED ACTION TO PREVIOUS PLANNING EFFORTS

This project has been developed in a manner consistent with NPS legal mandates and management policies and is in compliance with the goals and objectives of current plans and policy. Current plans and policy that pertain to this proposal include the 1985 Florissant Fossils Beds National Monument General Management Plan (NPS 1985), the 2004 Hantavirus Mitigation Plan for the Monument (NPS 2004), the National Park Service *Management Policies 2006* (NPS 2006), and the Intermountain Region Museum Collection Facilities Strategy (2005). The following is more information pertaining to how this proposal meets the goals and objectives of these plans and policies:

- This project is consistent with the 1985 Florissant Fossils Beds National Monument General Management Plan which proposes the development of a permanent visitor center and research/museum facility. The General Management Plan identifies the actions, impacts, and mitigating measures necessary to resolve the issues facing the

Monument. Many of these issues are the direct result of operating and occupying interim facilities which do not meet current health and safety codes.

- The new visitor education and research/museum facility would provide office, visitor services, and museum/curatorial space that comply with the Monument's 2004 Hantavirus Mitigation Plan. This plan recommends reducing current levels of rodent infestation in order to minimize the risk of an employee contracting an illness transmitted by rodents. The new visitor education and research/museum facility would be constructed on a foundation which should reduce the level of rodent infestation.

The proposal is consistent with the goals and objectives of the *Management Policies 2006* (NPS 2006) which states that major park facilities within park boundaries should be located so as to minimize impacts to park resources. The proposed site of the new visitor education and research/museum facility was identified to minimize harm to all park resources, particularly significant paleontological resources.

- The visitor education and research/museum facility proposal is consistent with the 2005 Museum Collection Facilities Strategy. The goal of the strategy is "to achieve the appropriate number of cost-effective facilities and adequate staffing levels to ensure the long-term preservation of and access to museum collections in the Intermountain Region" (NPS 2005).

IMPACT TOPICS RETAINED FOR FURTHER ANALYSIS

Impact topics for this project have been identified on the basis of federal laws, regulations, and orders; National Park Service *Management Policies 2006*; and National Park Service knowledge of resources at Florissant Fossil Beds National Monument. Impact topics that are carried forward for further analysis in this Environmental Assessment are listed below along with the reasons why the impact topic is further analyzed. For each of these topics, the following text also describes the existing setting or baseline conditions (i.e. affected environment) within the project area. This information will be used to analyze impacts against the current conditions of the project area in the *Environmental Consequences* chapter.

MUSEUM COLLECTIONS

According to Director's Order 24 *Museum Collections*, the National Park Service requires the consideration of impacts on museum collections (historic artifacts, natural specimens, and archival and manuscript material), and provides further policy guidance, standards, and requirements for preserving, protecting, documenting, and providing access to, and use of, National Park Service museum collections. Paleontological specimens are currently housed in the inadequate temporary curatorial facility in the basement of a 1965 A-frame cabin. Specimens are susceptible to extreme temperature fluctuations due to the lack of climate control in the facility. The building also lacks fire detection and suppression systems putting all the objects at risk of loss due to fire. The new facility would meet NPS curatorial standards for the storage of museum objects. The paleontological specimens would be moved to the new facility in consultation with the Monument's paleontologist, and this action is anticipated to have measurable effects to these items. Therefore, the topic of museum collections will be included for further analysis.

PALEONTOLOGICAL RESOURCES

According to *Management Policies 2006*, paleontological resources (fossils), including both organic and mineralized remains in body or trace form, will be protected, preserved, and managed for public education, interpretation, and scientific research (NPS 2006). The proposed site for the construction of the new visitor education and research/museum facility is located roughly on the previously disturbed site of the existing farmhouse visitor center. Geologically, this area is on the surface of the lower mudstone unit of the Florissant Formation, which contains abundant petrified wood. The proposed site is within the area of the Florissant Petrified Forest, which includes many large, buried, *in situ* redwood stumps. The stumps, when exposed, are the most prominent of Florissant's paleontological resources.

In order to assess and mitigate the potential impact of subsurface disturbance to paleontological resources during construction activity, the site was evaluated in September 2006. The sampling area encompassed the footprint of the new visitor education and research/museum facility and all other areas that would undergo excavation for this project; however, the footprint of the current visitor center and utility corridors were excluded. No new utility corridors were tested as they will most likely be placed in the location of the current visitor center. The testing for paleontological resources was done by drilling a grid pattern of 30 cm diameter holes spaced at one meter intervals to a depth of approximately one meter (slightly deeper than the frost depth of foundation footings), and examining the materials from those holes. Approximately 350 holes were drilled over two areas. The first area was 3 meters by 6 meters and the second area was 16 meters by 17 meters for a total area of about 3,000 square feet.

The results of this testing included a total of one hot spot (approximately 4m²) of a high concentration of freshly broken petrified wood fragments located within a moderate to high concern area (approximately 14 m²) containing concentrations of petrified wood pieces throughout at a depth from 0.4 to 1 meter. No other concentrations of petrified wood are known to exist within other areas that will be excavated during this project; however, in another location, the auger encountered a hard and impenetrable material at 0.5 meter deep, but the material was not identified. Because the potential exists for excavation and construction to encounter previously unknown paleontological resources, this topic has been retained for further analysis in the remainder of this document.

PARK OPERATIONS

The visitor center function for the Monument is currently located in two separate buildings. While the majority of visitor services activities are located in the existing visitor center (farmhouse), a yurt provides classroom/auditorium space on a seasonal basis. The museum curatorial/research function is located in the basement of an A-frame cabin.

On a 2003 site visit, the National Park Service's Intermountain Region Occupational Health Manager found the levels of rodent infestation in the existing farmhouse unacceptably high. Employees routinely complain of rodent sightings and droppings in and around the existing office workspaces. Rodents have the potential to carry Hantaviruses or other diseases. Hantaviruses in particular can be contracted by humans in the form of Hantavirus pulmonary syndrome. Hantavirus pulmonary syndrome is a deadly disease transmitted by infected rodents through urine, droppings, or saliva. Humans can contract the disease when they breathe in aerosolized virus. Hantavirus pulmonary syndrome was first recognized in 1993 and has since

been identified throughout the United States (CDC 2003). Although rare, Hantavirus pulmonary syndrome is potentially deadly.

A museum collection of 6,000 objects and archives is housed in the current museum facility, which is inadequate and does not meet NPS standards due to its poor condition, high level of radon, inadequate work space, and lack of climate controls, a fire suppression system, and security system.

Construction of a new visitor education and research/museum facility would have a measurable effect on the Monument's staff and how/where they conduct their work. For these reasons, the topic of park operations has been carried forward for further analysis in this document.

VISITOR USE AND EXPERIENCE

According to *Management Policies 2006*, providing for the enjoyment of park resources and values by present and future generations is part of the fundamental purpose of all park units (NPS 2006). The National Park Service is committed to providing appropriate, high quality opportunities for visitors to enjoy the parks, and will maintain within the parks an atmosphere that is open, inviting, and accessible to every segment of society. Further, the National Park Service will provide opportunities for forms of enjoyment that are uniquely suited and appropriate to the superlative natural and cultural resources found in the parks. The National Park Service *Management Policies 2006* also state that scenic views are considered highly valued associated characteristics that the National Park Service should strive to protect (NPS 2006).

The average visitor length of stay at Florissant Fossil Beds National Monument is 1.5 to 2 hours overall, with 30 minutes of that spent in the visitor center. The primary visitor activity is touring the farmhouse which serves as the interim visitor center and the petrified Sequoia stumps which are situated under protective shelters nearby. Approximately 95% of the Monument's 60,000 annual visitors view these stumps.

The present farmhouse visitor center is located between the new administration facility and the stump shelters and is undersized for current visitation levels. It has no space for orientation/education programs, and it is not uncommon for lines to form for the two small restrooms or for visitors to overcrowd the visitor center. The building does not meet ADA requirements for access and has numerous other structural deficiencies. Orientation to the fossil resources is the primary visitor service, but it can only be offered outdoors and is therefore subject to weather conditions. Detailed interpretation is not possible because of limited space, few and small exhibits, crowded conditions, limited publication space, and limited audio/visual capability. Because the proposed project would functionally and visually reconfigure the area used by visitors and change the visitor center experience, the topic of visitor use and experience has been carried forward for further analysis.

The NPS also will seek to provide a safe and healthful environment for visitors and employees (NPS 2006). The current visitor facility has several health and safety issues, including an unacceptably high level of mouse infestation. Mice are known carriers of Hantavirus, which can be life-threatening to humans. The levels of mouse infestation occurring in office and visitor space environments are not easily mitigated due to the lack of a solid foundation beneath the 1924 farmhouse/visitor center. In addition to the Hantavirus concerns, both of the current facilities also contain a number of structural deficiencies leading to health and safety problems. The farmhouse deficiencies include: a lack of a sound foundation, a sagging roof, undersized

electrical wiring, inadequate climate and humidity controls, limited ADA accessibility, flooded crawlspace and subsequent mold/mildew, and a lack of fire detection and suppression systems. The A-frame cabin lacks any fire detection or suppression system, has no telephone connection, lacks any climate control, and suffers from high levels of radon. As the proposed project would greatly reduce or eliminate these deficiencies and provide for a much safer visitor experience, this topic will be retained for further discussion.

IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

Some impact topics have been dismissed from further consideration, as listed below. The rationale for dismissing these specific topics is stated for each resource.

TOPOGRAPHY, GEOLOGY, AND SOILS

According to the National Park Service's *Management Policies 2006*, the National Park Service will preserve and protect geologic resources and features from adverse effects of human activity, while allowing natural processes to continue (NPS 2006). These policies also state that the National Park Service will strive to understand and preserve the soil resources of park units and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.

The proposed construction of a new visitor education and research/museum facility would be located in an area of the Monument that does not contain significant topographic or geologic features. Further, the general location for the new visitor education and research/museum facility has been previously disturbed by past construction of utilities, the temporary administration buildings, construction of the new administration facility, the temporary visitor center, and the two yurts. Minor modifications of the topography would be required to facilitate a level surface on which to construct the building which would have a negligible to minor effect to the topography of this area. The building construction would also require excavation which would displace and disturb soils, primarily in the footprint of the new building. Soils may also be disturbed and compacted on a temporary basis in the locations used to access the construction site as well as in the immediate area of the temporary trailer that would be used until construction of the new building is complete. Removal of the existing visitor center farmhouse and research/museum facility would also disturb soils.

Given that there are no significant topographic or geologic features in the project area, and that the area has been previously disturbed, the proposed actions would result in negligible to minor, temporary and permanent adverse effects to topography, geology, and soils. Because these effects are minor or less in degree, this topic has been dismissed from further analysis in this document.

VEGETATION

According to the National Park Service's *Management Policies 2006*, the National Park Service will maintain as parts of the natural ecosystems of parks all plants and animals native to park ecosystems. The Service will successfully maintain native plants and animals by preserving and restoring the natural abundances, diversities, dynamics, distributions, habitats, and behaviors of native plant and animal populations and the communities and ecosystems in which they occur (NPS 2006). The existing vegetation in the project area primarily consists of grasses including

Arizona fescue, mountain muhly, and Junegrass. The most abundant forbs are pussytoes, fringed sage, asters, and gumweed. The project area is surrounded on the south side by ponderosa pine trees and other conifers, and a small number of ponderosa pine trees exist in the project area.

Vegetation would be displaced, disturbed, and/or compacted in the areas of construction particularly in the footprint of the new building and along the utility line corridors. Several trees may be removed; however, new trees would be planted at the end of construction. Vegetation would also be disturbed and displaced when the current farmhouse/visitor center and A-frame cabin research/museum facility is removed and during occupation of a temporary facility (trailer) on the north side of the proposed construction site. Construction of new trails to connect to current trails and to provide access to the newly situated building and minimal rerouting of current trails would also disturb vegetation. Disturbed areas would be revegetated and rehabilitated following construction; therefore, removal and/or disturbance of vegetation in the project area is expected to result in negligible to minor adverse impacts to vegetation. Because these effects are minor or less in degree, this topic has been dismissed from further analysis in this document.

WILDLIFE

According to the National Park Service's *Management Policies 2006*, the National Park Service will maintain as parts of the natural ecosystems of parks all plants and animals native to park ecosystems. The Service will successfully maintain native plants and animals by preserving and restoring the natural abundances, diversities, dynamics, distributions, habitats, and behaviors of native plant and animal populations and the communities and ecosystems in which they occur (NPS 2006). Wildlife commonly found in the Monument include mule deer, elk, black bear, coyotes, porcupines, badgers, weasels, chipmunks, ground squirrels, Abert's squirrels, cottontail rabbits, bats, mice, and over 100 species of birds. There are also numerous insect species and an occasional garter snake. The project area is in a heavily used visitor service area and hence is little used by the larger animals.

The location of the proposed visitor education and research/museum facility is in a previously disturbed area of the Monument that contains little to no water, minimal vegetation, and is generally flat with no major geologic features. The presence of humans, human-related activities, and structures have removed or displaced much of the native wildlife habitat in the project area which has limited the number and variety of wildlife occurrences in the area. Some smaller wildlife such as rodents and reptiles and their habitat would be displaced or eliminated during construction of the new visitor education and research/museum facility and removal of the current farmhouse and A-frame cabin. Disturbed areas would be revegetated and rehabilitated following construction, which would result in a negligible to minor adverse impact to the wildlife and wildlife habitat in the immediate area of construction.

During construction, noise would also increase which may disturb wildlife in the general area. Construction-related noise would be temporary, and existing sound conditions would resume following construction activities. Therefore, the temporary noise from construction would have a negligible to minor adverse effect on wildlife.

Rodents are known to exist in the project area, particularly in and around the inhabited structures including the existing farmhouse. Previous attempts to eradicate the rodents from the buildings have been futile, and their occurrences in employee work areas have increased in the

past few years. Rodents living in and around the current visitor center (farmhouse) and museum curatorial building (A-frame cabin) would likely be displaced or eliminated during removal of these structures. This would have a negligible to minor impact on the rodent population in the area.

Because the effects to wildlife and wildlife habitat from the proposed project are minor or less in degree, this topic has been dismissed from further analysis in this document.

SPECIAL STATUS SPECIES

The Endangered Species Act of 1973 requires examination of impacts on all federally-listed threatened, endangered, and candidate species. Section 7 of the Endangered Species Act requires all federal agencies to consult with the U.S. Fish and Wildlife Service (or designated representative) to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitats. In addition, the *Management Policies 2006* and Director's Order 77 *Natural Resources Management Guidelines* require the National Park Service to examine the impacts on federally-listed species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species (NPS 2006). For the purposes of this analysis, the U.S. Fish and Wildlife Service (FWS) and the Colorado Division of Wildlife were contacted with regards to federally- and state-listed species to determine those species that could potentially occur on or near the project area.

During the NEPA process for the construction of the new Administrative Building, a letter was received from the U.S. Fish and Wildlife Service dated January 15, 2004 indicating that there were no records of threatened or endangered species in the project area. The project area for this project and the project area for the Administrative Building overlap. An initial scoping letter for the Visitor Education and Research Museum Facility was sent to the FWS in April 2005. A follow-up letter indicating that there is no threatened, endangered, or species of special interest in the park and requesting concurrence of that was sent in March 2007. No response was received from the FWS from either letter.

Further protection under the Migratory Bird Treaty Act makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition, this act serves to protect environmental conditions for migratory birds from pollution or other ecosystem degradations. Some migratory birds may be potential transients of the general area, but the immediate project area contains little to no suitable habitat for migratory birds. There are no known nesting sites in this area, and these lands are not vital for foraging or roosting. Construction-related noise could potentially disturb transient bird species, but these adverse impacts would be: 1) temporary, lasting only as long as construction; and 2) negligible, because suitable habitat for transient birds is found throughout the region.

Because no threatened, endangered, or other species of concern are known to occur in the project area, the topic of special status species was dismissed from further analysis.

WATER RESOURCES

National Park Service policies require protection of water quality consistent with the Clean Water Act. The purpose of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." To enact this goal, the U.S. Army

Corps of Engineers has been charged with evaluating federal actions that result in potential degradation of waters of the United States and issuing permits for actions consistent with the Clean Water Act. The U.S. Environmental Protection Agency also has responsibility for oversight and review of permits and actions, which affect waters of the United States.

The proposed project area does not contain surface waters, and is mostly dry, except for periodic runoff during storm events. Water quality, water quantity, and drinking water are not expected to be affected by the project. The size of the new visitor education and research/museum facility's footprint (approximately 4,050 square feet) would increase the amount of impervious surface in the area, which could possibly increase the erosion potential of the area; however, removal of the existing farmhouse/visitor center and A-frame cabin/museum facility should offset or mitigate this effect. To further assist with erosion and water quality, disturbed areas would be revegetated and recontoured following construction. Because the project results in negligible effects to water resources, this topic has been dismissed from further consideration.

WETLANDS

For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas."

Executive Order 11990 *Protection of Wetlands* requires federal agencies to avoid, where possible, adversely impacting wetlands. Further, Section 404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge or dredged or fill material or excavation within waters of the United States. National Park Service policies for wetlands as stated in *Management Policies 2006* state that the Service will manage wetlands in compliance with NPS mandates and the requirements of Executive Order 11990, the Clean Water Act, the Rivers and Harbors Appropriation Act of 1899, and the procedures described in Director's Order 77-1 *Wetland Protection*. The Service will (1) provide leadership and take action to prevent the destruction, loss, or degradation of wetlands; (2) preserve and enhance the natural and beneficial values of wetlands; and (3) avoid direct and indirect support of new construction in wetlands unless there are no practicable alternatives and the proposed action includes all practicable measures to minimize harm to wetlands. In addition, DO 77-1 *Wetlands Protection* requires that any proposed action having the potential to adversely impact wetlands must be addressed in a Statement of Findings for wetlands.

No wetlands are located in the project area; therefore, a Statement of Findings for wetlands will not be prepared, and the impact topic of wetlands has been dismissed.

FLOODPLAINS

Executive Order 11988 *Floodplain Management* requires all federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. The National Park Service under *Management Policies 2006* and Director's Order 77-2 *Floodplain Management* will strive to preserve floodplain values and minimize hazardous floodplain conditions. According to Director's Order 77-2 *Floodplain Management*, certain construction within a 100-year floodplain requires preparation of a Statement of Findings for floodplains.

The project area for the new visitor education and research/museum facility is not located within a 100-year floodplain. Therefore a Statement of Findings for floodplains will not be prepared, and the topic of floodplains has been dismissed.

ARCHEOLOGICAL RESOURCES

Section 106 of the National Historic Preservation Act, as amended in 1992 (16 USC 470 *et seq.*), the National Park Service's Director's Order 28 *Cultural Resource Management Guidelines*, and National Park Service *Management Policies 2006* (NPS 2006) require the consideration of impacts on historic properties that are listed on or eligible to be listed on the National Register of Historic Places. The National Register is the nation's inventory of historic places and the national repository of documentation on property types and their significance. The above-mentioned policies and regulations require federal agencies to coordinate consultation with State Historic Preservation Officers regarding the potential effects to properties listed on or eligible for the National Register of Historic Places.

The National Park Service, as steward of many of America's most important cultural resources, is charged to preserve historic properties for the enjoyment of present and future generations. Management decisions and activities throughout the National Park System must reflect awareness of the irreplaceable nature of these resources. The National Park Service will protect and manage cultural resources in its custody through effective research, planning, and stewardship and in accordance with the policies and principles contained in the *Management Policies 2006* and the appropriate Director's Orders.

For the purposes of the following discussion, cultural resources include archeological resources, historic structures, cultural landscapes, ethnographic resources, and museum collections. Consultation with the Colorado State Historic Preservation Officer (Colorado Historical Society) affirmed that the proposed project will not affect any historic properties. Letters dated March 31, 2007 and May 22, 2007 confirm the "no historic properties affected" determination for the project under Section 106 of the National Historic Preservation Act (CHS 2007). The visitor center is a historic 1924 farmhouse, but it was determined ineligible for the National Register of Historic Places by the Colorado State Historic Preservation Office on July 27, 1984. A regional historic architect determined that the A-frame cabin is not eligible for the National Register and sent a letter to the SHPO on May 16, 2007. The SHPO responded with a concurrence of ineligibility for the A-frame cabin (Jones Residence) on May 22, 2007.

In addition to the National Historic Preservation Act and the National Park Service *Management Policies 2006* (NPS 2006), the National Park Service's Director's Order 28B *Archeology*, affirms a long-term commitment to the appropriate investigation, documentation, preservation, interpretation, and protection of archeological resources within units of the National Park System. As one of the principal stewards of America's heritage, the National Park Service is charged with the preservation of the commemorative, educational, scientific, and traditional cultural values of archeological resources for the benefit and enjoyment of present and future generations. Archeological resources are nonrenewable and irreplaceable, so it is important that all management decisions and activities throughout the National Park System reflect a commitment to the conservation of archeological resources as elements of our national heritage.

The proposed location for the visitor education and research/museum facility was previously surveyed, and no archeological sites were identified in the immediate project area (NPS 1990).

Therefore, the proposed project area is not expected to contain archeological deposits; however, appropriate steps would be taken to protect any archeological resources that are inadvertently discovered during construction. Because the project will not disturb any known archeological sites, the affect of the project on archeological resources is expected to be negligible, and this topic has been dismissed from further analysis.

ETHNOGRAPHIC RESOURCES

Per the National Park Service's Director's Order 28 *Cultural Resource Management*, ethnographic resources are defined as any site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it. According to DO-28 and Executive Order 13007 on sacred sites, the National Park Service should try to preserve and protect ethnographic resources.

Ethnographic resources are not known to exist in the proposed project area based on the lack of cultural materials present. In addition, Native American tribes traditionally associated with the Monument were apprised of the proposed project in a letter dated April 26, 2005, and no responses were received from these tribes. In 2003, tribes were apprised of a similar project (construction of an administration building) in the same area. At that time, two responses were received. These responses confirmed their cultural affiliations with the area, but indicated that no impacts to significant ethnographic resources were expected and no impacts occurred during that project. Therefore, this topic has been dismissed from further consideration.

CULTURAL LANDSCAPES

According to the National Park Service's Director's Order 28 *Cultural Resource Management Guideline*, a cultural landscape is a reflection of human adaptation and use of natural resources, and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. Although a cultural landscape inventory has not been conducted for the Monument, the features within the general project area including the existing farmhouse and A-frame cabin are not likely to contribute to a significant cultural landscape. Therefore, this topic has been dismissed from further consideration.

AIR QUALITY

The Clean Air Act of 1963 (42 U.S.C. 7401 *et seq.*) was established to promote the public health and welfare by protecting and enhancing the nation's air quality. The act establishes specific programs that provide special protection for air resources and air quality related values associated with National Park Service units. Section 118 of the Clean Air Act requires a park unit to meet all federal, state, and local air pollution standards. Florissant Fossil Beds National Monument is designated as a Class II air quality area under the Clean Air Act. A Class II designation indicates the maximum allowable increase in concentrations of pollutants over baseline concentrations of sulfur dioxide and particulate matter as specified in Section 163 of the Clean Air Act. Further, the Clean Air Act provides that the federal land manager has an affirmative responsibility to protect air quality related values (including visibility, plants, animals, soils, water quality, cultural resources, and visitor health) from adverse pollution impacts (EPA 2000).

Construction activities such as hauling materials and operating heavy equipment could result in temporary increases of vehicle exhaust, emissions, and fugitive dust in the general project area. Any exhaust, emissions, and fugitive dust generated from construction activities would be temporary and localized, and would likely dissipate rapidly because air stagnation at Florissant Fossil Beds National Monument is rare. Overall, the project could result in a negligible degradation of local air quality, and such effects would be temporary, lasting only as long as construction. The Class II air quality designation for Florissant Fossil Beds National Monument would not be affected by the proposal. Therefore, air quality has been dismissed as an impact topic.

SOUNDSCAPE MANAGEMENT

In accordance with *Management Policies 2006* and Director's Order 47 *Sound Preservation and Noise Management*, an important component of the National Park Service's mission is the preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human caused sound considered acceptable varies among National Park Service units as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

The proposed location for the new visitor education and research/museum facility and all construction activity would occur in the developed zone of Florissant Fossil Beds National Monument. Existing sounds in this area are most often generated from vehicular traffic (visitors and employees entering/leaving the Monument), people, climate controls on the buildings, some wildlife such as birds, and wind. Sound generated by the long-term operation of the visitor education and research/museum facility may include climate controls such as heating or air conditioning units and people using the building. Because the area already contains human-made noises, the long-term operation of the building is not expected to appreciably increase the noise levels in the general area.

During construction, human-caused sounds would likely increase due to construction activities, equipment, vehicular traffic, and construction crews. Any sounds generated from construction would be temporary, lasting only as long as the construction activity is generating the sounds, and would have a negligible to minor adverse impact on visitors and employees. Therefore, the topic of soundscape management was dismissed as an impact topic.

LIGHTSCAPE MANAGEMENT

In accordance with *Management Policies 2006*, the National Park Service strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human caused light (NPS 2006). Florissant Fossil Beds National Monument strives to limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements. The Monument also strives to ensure that all outdoor lighting is shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. The visitor center and the new administrative facility are the primary sources of light in the Monument.

The proposed action may incorporate minimal exterior lighting on the visitor education and research/museum facility, but the lighting would be directed toward the intended subject with appropriate shielding mechanisms, and would be placed in only those areas where lighting is needed for safety reasons. The amount and extent of exterior lighting on the visitor education and research/museum facility would have negligible effects on the existing outside lighting or natural night sky of the area; therefore, this topic has been dismissed.

SOCIOECONOMICS

The proposed action would neither change local and regional land use nor appreciably impact local businesses or other agencies. Implementation of the proposed action could provide a negligible beneficial impact to the economies of nearby Florissant, Colorado, as well Teller County due to minimal increases in employment opportunities for the construction workforce and revenues for local businesses and governments generated from these additional construction activities and workers. Any increase in workforce and revenue, however, would be temporary and negligible, lasting only as long as construction. Because the impacts to the socioeconomic environment would be negligible, this topic has been dismissed.

PRIME AND UNIQUE FARMLANDS

The Farmland Protection Policy Act of 1981, as amended, requires federal agencies to consider adverse effects to prime and unique farmlands that would result in the conversion of these lands to nonagricultural uses. Prime or unique farmland is classified by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), and is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. According to the NRCS, the project area does not contain prime or unique farmlands. Therefore, the topic of prime and unique farmlands has been dismissed.

INDIAN TRUST RESOURCES

Indian trust assets are owned by Native Americans but held in trust by the United States. Requirements are included in the Secretary of the Interior's Secretarial Order No. 3206, *"American Indian Tribal Rites, Federal – Tribal Trust Responsibilities, and the Endangered Species Act (1997),"* and *Interior Departmental Manual Part 512: American Indian and Alaska Native Programs, Chapter 2: Departmental Responsibilities for Indian Trust Resources (1995)*.

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by the Department of Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

There are no Indian trust resources at Florissant Fossil Beds National Monument. The lands comprising the Monument are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, the project would have negligible effects on Indian trust resources, and this topic was dismissed as an impact topic.

ENVIRONMENTAL JUSTICE

Executive Order 12898 *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. Because the new visitor education and museum/research facility would be available for use by all park patrons and staff regardless of race or income, and the construction workforces would not be hired based on their race or income, the proposed action would not have disproportionate health or environmental effects on minorities or low-income populations or communities. Therefore, environmental justice has been dismissed as an impact topic in this document.

ALTERNATIVES CONSIDERED

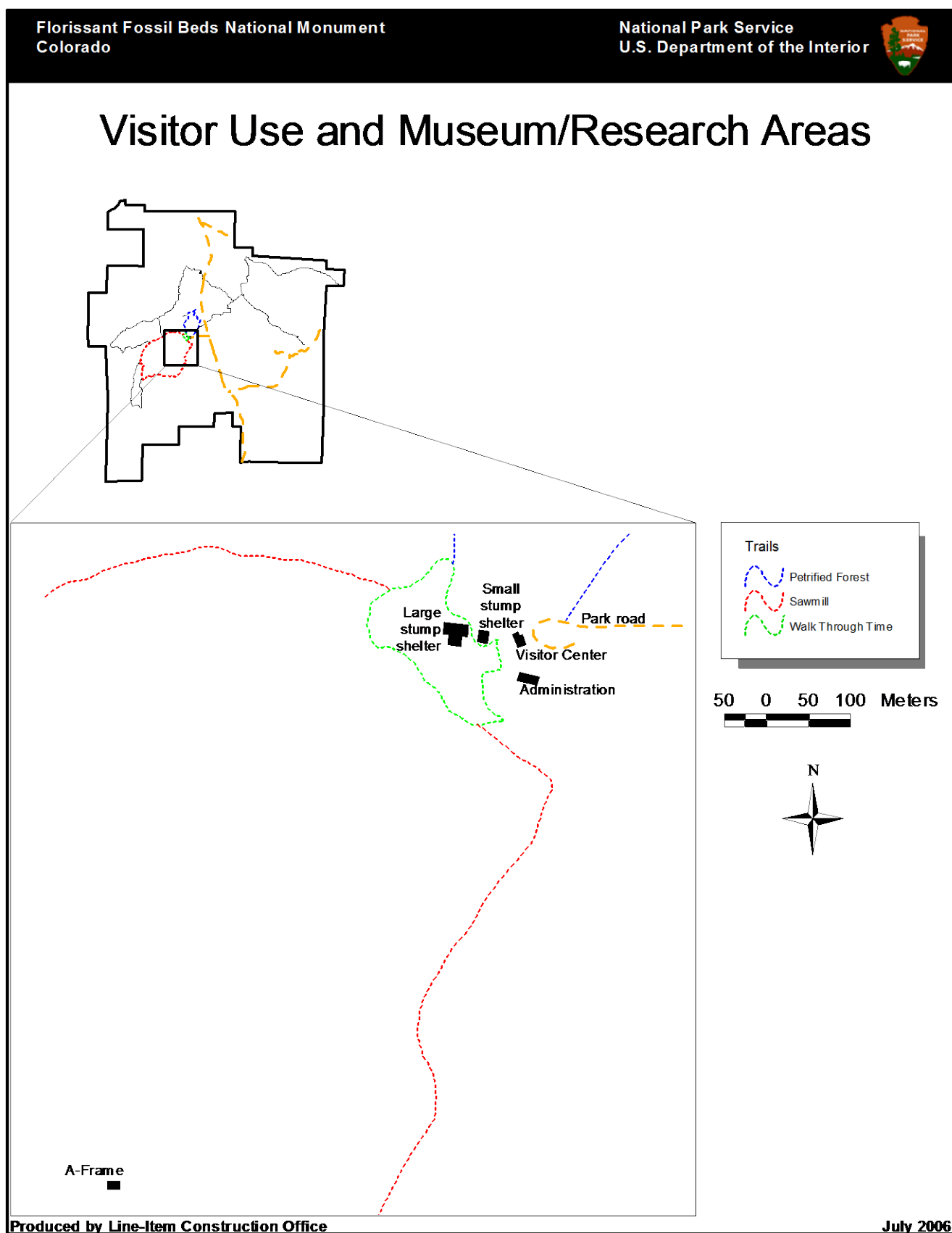
During January of 2005, an interdisciplinary team of National Park Service employees met for the purpose of developing project alternatives. This meeting resulted in the definition of project objectives as described in the *Purpose and Need*, and a list of alternatives that could potentially meet these objectives. A total of four action alternatives and the No-Action Alternative were originally identified for this project. Of these, three of the action alternatives were dismissed from further consideration for various reasons, as described later in this chapter. One action alternative and the No-Action Alternative are carried forward for further evaluation in this Environmental Assessment.

ALTERNATIVES CARRIED FORWARD

ALTERNATIVE A – NO-ACTION

Under this alternative, the visitor education and research/museum facility would not be constructed. The existing farmhouse would continue to provide visitor services and the A-frame cabin would continue to house the museum collection and research work. Structural problems with the existing facilities would be addressed only through routine maintenance and rodent control procedures now in place would continue. Should the No-Action Alternative be selected, the National Park Service would respond to future needs and conditions of the artifact storage and visitor education without major actions or changes in present course of action. See Figure 3 for existing conditions.

FIGURE 3: EXISTING CONDITIONS



ALTERNATIVE B – CONSTRUCT NEW VISITOR EDUCATION AND RESEARCH/MUSEUM FACILITY (PREFERRED ALTERNATIVE)

Alternative B is the agency (NPS) preferred alternative and defines the rationale for the proposed action in terms of resource protection and management, visitor and operational use, costs, and other applicable factors. All actions described in the preferred alternative are consistent with the approved 1985 General Management Plan and related park documents.

This alternative consists of constructing a new visitor education and research/museum facility located in approximately the same location as the existing 1924 farmhouse, but slightly more to the north (Figure 4). This general area has been previously disturbed by the construction of the parking area, utility corridors, trails, yurt structures, and the farmhouse visitor center, itself. The existing farmhouse and A-frame cabin would be removed and disposed of off-site. The following text further describes the components of Alternative B:

Building Features – The new visitor education and research/museum facility would be approximately 4,050 square feet in size. The building would include a visitor education center, curatorial storage, fossil exhibits, small auditorium, fossil laboratory, public restrooms, cooperating association retail space, and limited administrative office space. The building would be handicapped accessible. The visitor education and research/museum facility would be equipped with a modern climate control system, which would include heating, ventilation, and air conditioning (HVAC). A security system would be installed to protect from unauthorized entry, in addition to a fire protection system for the entire building, which would consist of smoke and heat detection alarms and sprinklers. In an effort to “green the parks,” construction of the new building would utilize renewable resources and approach the maximum attainable recycling of depletable resources, to the extent possible.

Use/Operation of the Facility – The visitor education and research/museum facility would primarily provide basic visitor services, curatorial storage and laboratory space. Satellite workstations would be provided for employees assigned to the visitor education and research/museum facility, while all other employee offices would be in the new administrative building.

Utilities - The building would be served by existing utilities located near the site, including water, sewer, electric, and gas. Connecting these existing utilities to the visitor education and research/museum facility would entail excavation and placement of additional underground piping/wiring to connect with these utilities. At most, this would require about 875 feet of trench, which would be through previously disturbed areas.

Access - Access to the new visitor education and research/museum facility would be via a system of trails (footpaths) leading to/from the administrative building and parking area. Signs may also be erected to direct employees and visitors around these trails.

Parking - The site of the new visitor education and research/museum facility would be located next to the existing visitor /employee parking area. No changes should be needed to the parking area to accommodate the new facility.

Revegetation – The existing trees in the project area would be preserved to the extent possible; however, roughly 10 to 15 trees may be removed during construction. All areas disturbed by

construction of the new visitor education and research/museum facility would be revegetated and recontoured to provide positive drainage and complement the style of the native landscape. Native vegetation, rocks, or other natural features would be used, as appropriate.

Pest Control – Pest control would likely not be needed in the new visitor education and research/museum facility due to its structural integrity. However, if rodents or other pests do enter the new building, they would be removed using biological, physical, or chemical controls.

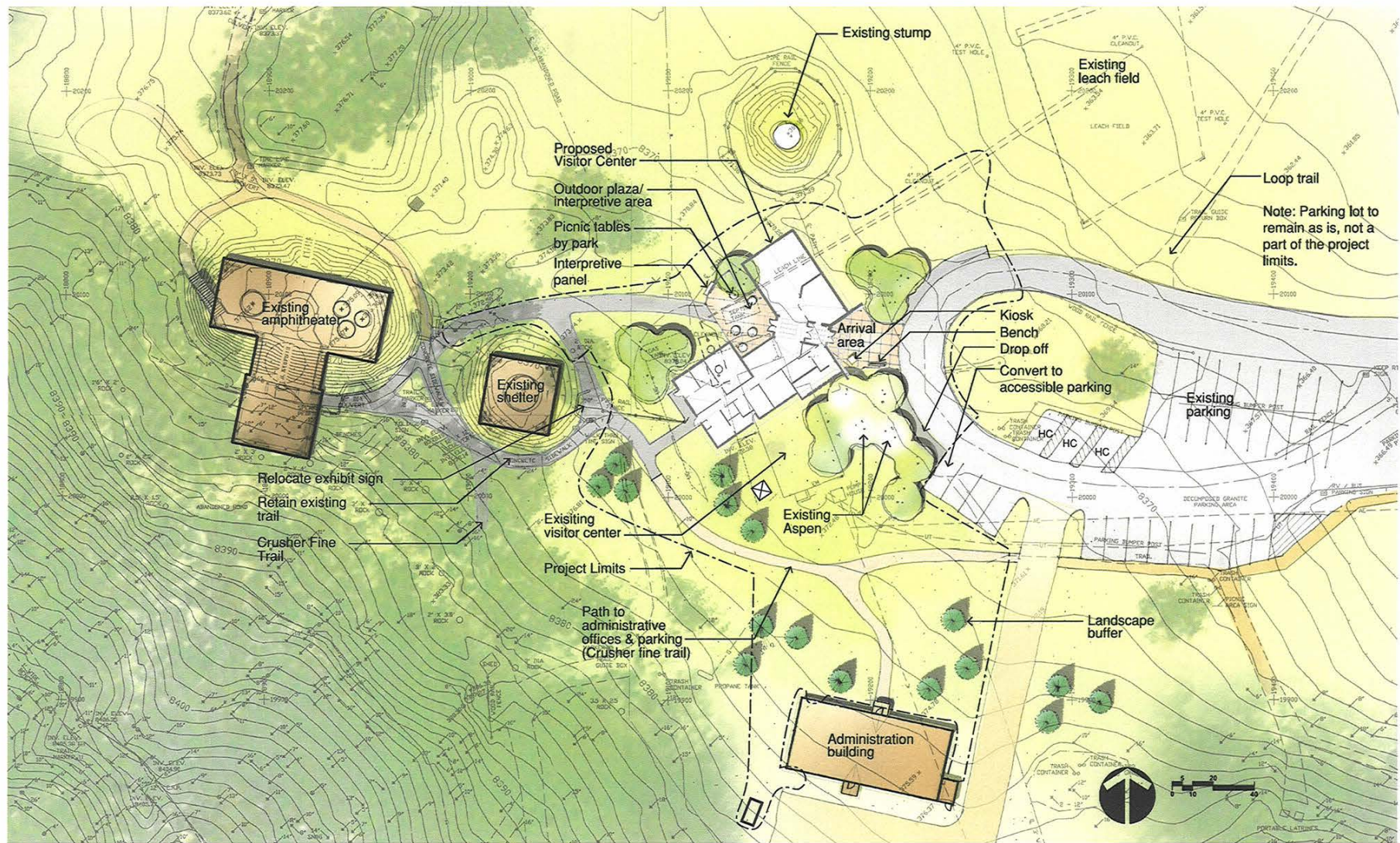
Temporary Visitor Center – As the building will take approximately 10-12 months to construct, some construction will occur during the busy visitor season. As a result, a temporary visitor center (a modular building) would be erected away from the construction zone, northeast of the administrative building near the parking lot to provide basic visitor services during construction of the new visitor education and research/museum facility. This temporary building would be removed following completion of the new building.

Construction Staging – To implement this alternative, an area near the new visitor education and research/museum facility would be used for construction staging, material stockpiling, and equipment storage. This area would likely be located in a previously disturbed area, away from visitor use areas and will be fenced off from public access. Portions of the existing parking lot may be used for construction purposes as well.

Traffic – Traffic will not need to be re-routed. If such a need arises a system of signs, construction fencing, and barricades will be used to direct visitor traffic elsewhere. Timing of construction events will also be used to avoid conflicts in most traffic on site. Also, construction will be started either prior to or after the busiest part of the season -- most heavy equipment would be used at start-up of construction and required less so during the remaining construction. Heavy equipment will be using the same roads as visitor traffic, but timing, traffic control, and law enforcement staff will eliminate most of the conflicts. The park is only open from 9 am to 5 pm, which leaves an ample window in the morning to get heavy equipment and supplies into the park before visitors arrive. Heavy equipment transport will be coordinated between the contractor and park staff to eliminate any conflicts with visitors.

This alternative is based on preliminary designs and best information available at the time of this writing. Specific distances, areas, and layouts used to describe the alternative are only estimates and could change during final site design. If changes during final site design are not consistent with the intent and effects of the selected alternative, then additional compliance would be completed, as appropriate.

Figure 4: Preferred Alternative – Construct Visitor Education and Research/Museum Facility (Abo et al., 2006)



FLORISSANT FOSSIL BEDS NATIONAL MONUMENT - Visitor Center Site Study

Preferred Alternative

Revised Aug. 11, 2006

ALTERNATIVES CONSIDERED AND DISMISSED

The following three alternatives were considered for project implementation, but were ultimately dismissed from further analysis (the second paragraph that follows describes two alternatives). Reasons for their dismissal are provided in the following alternative descriptions.

Utilizing Other Existing Space – This alternative consisted of removing the existing visitor center and finding other spaces to use either within or outside the Monument, without having to construct a new building. Finding space outside the Monument to use for a visitor center was considered but eliminated because of the small staff size, the location of primary resources, and the need to provide visitor services on-site. The administration building is located adjacent to the visitor center to provide staffing when visitor services personnel are not available. Many of the primary paleontological resources (fossil redwood stumps) had been exposed by private concessions before the establishment of the monument. Development near or adjacent to these resources is necessary to provide staff monitoring to ensure their preservation for future generations. Therefore, finding space outside the Monument would not be feasible. Finding alternate space to use within the Monument was also considered, but ultimately eliminated. Therefore, the alternative of utilizing other spaces within or outside the Monument was eliminated for feasibility reasons and not meeting the project's objectives.

Alternative Locations for a New Visitor Education and Research/Museum Facility – Two alternate locations were considered for constructing a new visitor education and research/museum facility. Both locations were situated north and west of the existing visitor center. The site farthest north was dismissed due to its location within the viewshed of the amphitheater and distance from the current parking area. The second site was between the small stump shelter and another petrified stump. This site would have required relocation of some utilities. Because connecting to existing utilities from this location would have resulted in higher costs and greater environmental impacts, this alternative location was also dismissed.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which guides the Council on Environmental Quality (CEQ). The CEQ provides direction that “[t]he environmentally preferable alternative is the alternative that would promote the national environmental policy as expressed in NEPA’s Section 101:

- 1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- 2) assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- 3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- 4) preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;

- 5) achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
- 6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative A, No-Action, only minimally meets the above six evaluation factors because it retains facilities that do not meet health and safety standards in terms of structural deficiencies and rodent and radon problems. While it minimizes potential impacts to significant park resources such as paleontological resources, it does not achieve a balance between these resources and the health and safety of the visiting public and Monument staff. Originally intended for use as an interim visitor center, the farmhouse has exceeded its usable lifespan. This alternative also does not meet the criteria for improving renewable resources because the existing visitor center and curatorial facilities are inefficient with regard to energy and water use.

Alternative B is the environmentally preferred alternative because it best addresses these six evaluation factors. Alternative B, *Construct Visitor Education and Research/Museum Facility*, would provide a working environment for Monument staff that meets health and safety recommendations, while minimizing environmental impacts to the extent possible. The new facility would also provide a safe and pleasant environment for park visitors to learn about and enjoy the resources of the park, and gain a sense of stewardship for those resources. As a permanent facility, the new visitor education and research/museum facility would be used by future generations. The park's 6,000 museum objects will be stored in a facility that meets NPS standards for museum collection storage, eliminating the threat of loss of these valuable resources. The new building would also be more energy efficient and more environmentally-friendly than the existing visitor center and curatorial facility. Alternative B would also reduce the NPS backlog of maintenance deficiencies by \$250,000.

No new information came forward from public scoping or consultation with other agencies to necessitate the development of any new alternatives, other than those described and evaluated in this document. Because it meets the Purpose and Need for the project, the project objectives, and is the environmentally preferred alternative, Alternative B is also recommended as the National Park Service Preferred Alternative. For the remainder of the document, Alternative B will be referred to as the Preferred Alternative.

MITIGATION MEASURES

The following mitigation measures have been developed to minimize the degree and/or severity of adverse effects, and would be implemented during construction of the action alternative, as needed:

- To minimize the amount of ground disturbance, staging and stockpiling areas would be located in previously disturbed sites, away from visitor use areas to the extent possible. All staging and stockpiling areas would be returned to pre-construction conditions following construction.
- To minimize impacts to unknown paleontological specimens during construction, the Monument's paleontologist would monitor all ground disturbing activities. If any paleontological materials are inadvertently discovered during construction, all construction

activities would be halted until the materials can be analyzed and recovered by the Monument's paleontologist and staff.

- Construction zones would be identified and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. The fencing would define the construction zone and confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.
- Employees and construction crews would be required to park at the far end of the parking lot to ensure enough capacity and easier access to the Monument for visitors.
- Revegetation and re-contouring of disturbed areas would take place following construction, and would be designed to minimize the visual intrusion of the structure. Revegetation efforts would strive to reconstruct the natural spacing, abundance, and diversity of native plant species using native species. All disturbed areas would be restored as nearly as possible to pre-construction conditions shortly after construction activities are completed. Weed control methods would be implemented to minimize the introduction of noxious weeds. Some trees may be removed, but other existing vegetation at the site would not be disturbed to the extent possible.
- Because disturbed soils are susceptible to erosion until revegetation takes place, standard erosion control measures such as silt fences and/or sand bags would be used to minimize any potential soil erosion.
- Fugitive dust generated by construction would be controlled by spraying water on the construction site, if necessary.
- To reduce noise and emissions, construction equipment would not be permitted to idle for long periods of time.
- To minimize possible petrochemical leaks from construction equipment, the contractor would regularly monitor and check construction equipment to identify and repair any leaks.
- Should construction unearth previously undiscovered cultural resources, work would be stopped in the area of any discovery and the Monument would consult with the state historic preservation officer and the Advisory Council on Historic Preservation, as necessary, according to §36 CFR 800.13, *Post Review Discoveries*. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed.
- The National Park Service would ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging paleontological materials, archeological sites, or historic properties. Contractors and subcontractors would also be instructed on procedures to follow in case previously unknown paleontological or archeological resources are uncovered during construction.
- To minimize the potential for impacts to park visitors, variations on construction timing may be considered. One option includes conducting the majority of the work in the off-

season (winter) or shoulder seasons. Another option includes implementing daily construction activity curfews such as not operating construction equipment between the hours of 6 PM to 7 AM in summer (May – September), and 6 PM to 8 AM in the winter (October – April). The National Park Service would determine this in consultation with the contractor.

- Construction workers and supervisors would be informed about the special sensitivity of Monument’s values, regulations, and appropriate housekeeping.
- According to *Management Policies 2006*, the National Park Service would strive to construct facilities with sustainable designs and systems to minimize potential environmental impacts. Development would not compete with or dominate Monument’s features, or interfere with natural processes, such as the seasonal migration of wildlife or hydrologic activity associated with wetlands. To the extent possible, the design and management of facilities would emphasize environmental sensitivity in construction, use of nontoxic materials, resource conservation, recycling, and integration of visitors with natural and cultural settings. The National Park Service also reduces energy costs, eliminates waste, and conserves energy resources by using energy-efficient and cost-effective technology. Energy efficiency is incorporated into the decision-making process during the design and acquisition of buildings, facilities, and transportation systems that emphasize the use of renewable energy sources.

ALTERNATIVE SUMMARIES

Table 1 summarizes the major components of Alternatives A and B, and compares the ability of these alternatives to meet the project objectives (the objectives for this project are identified in the *Purpose and Need* chapter). As shown in the following table, Alternative B meets each of the objectives identified for this project, while the No-Action Alternative does not address all of the objectives.

TABLE 1 – ALTERNATIVES SUMMARY AND EXTENT TO WHICH EACH ALTERNATIVE MEETS PROJECT OBJECTIVES

	Alternative A (No-Action)	Alternative B (Construct Visitor Education and Museum/Research Facility)
Alternative Description	A new visitor education and research/museum building would not be constructed. The existing farmhouse would continue to be used for visitor services purposes with no improvements to structural deficiencies or pest control. The A-frame cabin would continue to serve as the curatorial storage and museum facility with no improvements to structural deficiencies or safety hazards.	A new visitor education and research/museum facility would be constructed in close proximity to the existing visitor center (farmhouse). All visitor services and museum collection storage, work and research would be consolidated into the new building. The existing visitor center and research/museum buildings would be removed off-site. Connected actions include utility connections, construction staging areas, temporary offices, demolishing the two existing buildings, and minor trail relocation.
Meets Project Objectives?		
Objective		
Meet federal and state health and safety recommendations for employee work areas.	No. Continuing the existing conditions would not provide for an employee work area that meets current health and safety recommendations in terms of the existing building's structural deficiencies and pest problems.	Yes. Constructing a new visitor education and research/museum facility would provide for an employee work area that meets current health and safety recommendations, particularly with regard to the existing building's structural deficiencies and pest problems, including hantavirus.
Consolidate visitor services and research/museum functions into one building.	No. This alternative does not consolidate all visitor services and research/museum functions into one permanent building because visitor services would still be located in the farmhouse and the research/museum space would still be located in the basement of the A-frame cabin.	Yes. The new building would be situated in convenient location for Monument staff and all visitor services and research/museum functions would be consolidated into the new permanent building.
Provide a permanent visitor education and research/museum facility that meets current health and safety standards.	No. This alternative does not provide one permanent building that meets health and safety standards, because visitor services would still be located in the farmhouse and the research/museum space would still be located in the basement of the A-frame cabin.	Yes. The new building would provide a permanent visitor services and research/museum facility, which would meet current health and safety standards.
Provide an adequately sized-facility to meet the needs of the park's annual	No. The current facility that would continue to serve as the visitor center is inadequately sized to meet the	Yes. The new visitor education and research/museum facility would be adequately sized to meet the needs of the park's annual

visitation of 60,000 people.	needs of the park's annual visitation.	visitation of approximately 60,000 people.
Identify a site for the new visitor education and research/museum building that minimizes impacts to park resources.	Partial. This alternative does meet the objective for minimizing impacts to park resources because no construction would be required; however, museum objects would continue to be housed in inadequate conditions.	Yes. This alternative minimizes environmental impacts to the extent possible, and would not result in impairment to any park resources. This alternative would provide adequate protection for 6,000 museum objects.

Table 2 summarizes the anticipated environmental impacts for Alternatives A and B. Only those impact topics that have been carried forward for further analysis are included in this table. The *Environmental Consequences* chapter provides a more detailed explanation of these impacts.

TABLE 2 – ENVIRONMENTAL IMPACT SUMMARY BY ALTERNATIVE

Impact Topic	Alternative A – No-Action	Alternative B – Preferred Alternative
Museum Collections	Minor to moderate, long-term, adverse impacts resulting from objects being stored in building with no environmental controls and no fire detection or suppression systems.	Minor to moderate beneficial effects from storage facilities that meet NPS museum collection storage guidelines. Includes proper climate control and fire suppression/detection systems. Negligible adverse impacts due to moving specimens from a-frame to new facility.
Paleontological Resources	Negligible impacts to the paleontological resources as no excavation or disturbance activities would be conducted.	Negligible to minor adverse effects on paleontological resources in the project area as a result of excavation for the foundation. The potential also exists for unknown specimens to be disturbed during excavation activities.
Park Operations	Minor to moderate adverse impacts resulting from employees working in an unsafe environment and additional maintenance required on the structurally deficient buildings.	Minor to moderate beneficial effects from an improved work environment that meets health and safety standards. Minor adverse impacts from additional time needed to move visitor services to a temporary building before construction and offices, exhibits, museum specimens, and materials associated with the visitor center and research/museum facility after construction of the new building.
Visitor Use and Experience (including Health and Safety)	Negligible or less than negligible impacts to visitor use and experience because the area around the visitor center and admin building, and visitor services would remain unchanged. Health and safety issues, as well as long bathroom lines would remain.	Moderate beneficial effects due to new adequately-sized visitor education and research/museum facility that meets current health and safety standards and ADA requirements and includes expanded interpretive exhibits, a small auditorium, public restrooms, and bookstore space. Construction disturbances (noise, dust, limited areas) and the demolition of the visitor center and A-frame cabin would have a minor, temporary adverse effect. Impacts to visitor safety would be long-term, moderate and beneficial due to the elimination of the hantavirus risk and ADA compliance.

ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the potential environmental consequences, or impacts, that would occur as a result of implementing the proposed project. Topics analyzed in this chapter include paleontological resources, visitor use and experience, park operations, and museum collections. Direct, indirect, and cumulative effects, as well as impairment are analyzed for each resource topic carried forward. Potential impacts are described in terms of type, context, duration, and intensity. General definitions are defined as follows, while more specific impact thresholds are given for each resource at the beginning of each resource section.

- **Type** describes the classification of the impact as either beneficial or adverse, direct or indirect:
 - Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
 - Adverse: A change that moves the resource away from a desired condition or detracts from its appearance or condition.
 - Direct: An effect that is caused by an action and occurs in the same time and place.
 - Indirect: An effect that is caused by an action but is later in time or farther removed in distance, but is still reasonably foreseeable.
- **Context** describes the area or location in which the impact will occur. Are the effects site-specific, local, regional, or even broader?
- **Duration** describes the length of time an effect will occur, either short-term or long-term:
 - Short-term impacts generally last only during construction, and the resources resume their preconstruction conditions following construction.
 - Long-term impacts last beyond the construction period, and the resources may not resume their preconstruction conditions for a longer period of time following construction.
- **Intensity** describes the degree, level, or strength of an impact. For this analysis, intensity has been categorized into negligible, minor, moderate, and major. Because definitions of intensity vary by resource topic, intensity definitions are provided separately for each impact topic analyzed in this Environmental Assessment.

CUMULATIVE EFFECTS

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 USC 4321 et seq.), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what

agency (federal or nonfederal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the No-Action and Preferred Alternatives.

Cumulative impacts were determined by combining the impacts of the Preferred Alternative with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Florissant Fossil Beds National Monument and, if applicable, the surrounding region. The geographic scope for this analysis includes elements mostly within the Monument's boundaries, while the temporal scope includes projects within a range of approximately ten years. Given this, the following projects were identified for the purpose of conducting the cumulative effects analysis, listed from past to future:

- **Construction of stump shelters, 2003:** Permanent shelters were constructed over some of the Monument's primary exposed petrified stumps located near the visitor center in the spring of 2003. As part of this project, a mini-amphitheater was also constructed, as well as some interpretive displays. These shelters are located within close proximity of the existing visitor center.
- **Teller County Road 1 rehabilitation, 2004:** Teller County Road 1 runs north-south through the Monument. When the road was initially paved in 1990s, minimal work was done to construct roadbed able to sustain current levels of traffic. This project provided for a 12" lift of the roadbed, an additional 3" of pavement, repaired some drainage problems, and allowed for some safety enhancements within the right-of-way. The road project scaled back some of the steeper embankments on Monument property immediately adjacent to the road right-of-way.
- **Administration building construction, 2004:** A new administrative facility was constructed in late 2004 and early 2005. The building is modular in design and is located south and slightly east of the current visitor center.
- **Maytag building parking lot expansion, 2007:** The Maytag building is used as the maintenance facility for the park. Over the past several years, trash trucks and delivery trucks have had problems turning around in the current parking area, which has resulted in vehicles driving on the vegetated area beyond the gravel surface. The parking area will be expanded approximately 30 feet by adding gravel.
- **Small scale projects, ongoing (as funding allows):** fence replacement, entrance sign replacement, minor trail reroutes (for accessibility), exotic species management.
- **Sewer system expansion, future:** While the current sewer system is handling the Monument's current visitation, a future increase in the number of visitors may necessitate an expanded sewer system.
- **Visitor center parking area expansion, future:** As the number of vehicles entering the park increases, particularly bus and RV traffic, the current parking area may need to be expanded. This may include some reconfiguration and re-striping for greater capacity and also some fill and pavement expansion.

IMPAIRMENT

National Park Service's *Management Policies 2006* require analysis of potential effects to determine whether or not actions would impair park resources (NPS 2006). The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values.

Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values. An impact to any park resource or value may constitute an impairment, but an impact would be more likely to constitute an impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is:

1. necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
2. key to the natural or cultural integrity of the park; or
3. identified as a goal in the park's general management plan or other relevant National Park Service planning documents.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. A determination on impairment is made in the Conclusion section for each of the resource topics carried forward in this chapter.

MUSEUM COLLECTIONS

INTENSITY LEVEL DEFINITIONS

Museum collections may be threatened by fire, theft, vandalism, natural disasters, and careless acts. The preservation of museum collections is an ongoing process of preventative conservation, supplemented by conservation treatment when necessary. The primary goal is preservation of artifacts in as stable condition as possible to prevent damage and minimize deterioration. For the purposes of analyzing potential impacts, the intensity thresholds are as follows:

- Negligible:** Impact is at the lowest levels of detection — barely measurable with no perceptible consequences, either adverse or beneficial, to museum collections.
- Minor:** **Adverse:** would affect the integrity of few items in the museum collection but would not degrade the usefulness of the collection for future research and

interpretation.

Beneficial: would stabilize the current condition of the collection or its constituent components to minimize degradation.

Moderate: **Adverse:** would affect the integrity of many items in the museum collection and diminish the usefulness of the collection for future research and interpretation.

Beneficial: would improve the condition of the collection or protect its constituent parts from the threat of degradation.

Major: **Adverse:** would affect the integrity of most items in the museum collection and destroy the usefulness of the collection for future research and interpretation.

Beneficial: would secure the condition of the collection as a whole or its constituent components from the threat of further degradation.

IMPACTS OF ALTERNATIVE A (NO-ACTION ALTERNATIVE)

Impact Analysis

Under Alternative A, there would be no change to the existing situation. The inadequate A-frame cabin would continue to house the museum collection of 6,000 objects and archives. In the facility, specimens are exposed to extreme temperatures due to the lack of any climate control in the facility, which may contribute to cracking and de-lamination of shale fossils. The building also lacks fire detection and suppression systems putting all the objects at risk of loss due to fire. While it is believed that the specimen cases are pest-proof, it is impossible to mouse- and insect-proof the building. These conditions would result in an adverse, long-term impact of minor to moderate intensity.

Cumulative Impacts

Over the decades, lack of adequate curatorial space with appropriate environmental controls has most likely contributed to the deterioration and decay of museum collections at the monument. Such adverse impacts were long-term and ranged in intensity from negligible to minor. The no-action alternative would contribute minor to moderate impacts to this cumulative impact resulting in an overall minor to moderate cumulative impacts on museum collections.

Conclusion

The No-Action Alternative would result in minor to moderate adverse impacts to museum collection resources because the collection would continue to be housed in an inadequate facility. As such, this alternative would result in minor to moderate impacts when considered with other past, present, and reasonably foreseeable future actions. Considering these effects, this alternative would not impair museum collection resources.

IMPACTS OF ALTERNATIVE B (PREFERRED ALTERNATIVE)

Impact Analysis

The Preferred Alternative would result in minor to moderate long-term beneficial impacts to the museum collection. The over 6,000 specimens and archives currently housed in an inadequate facility would be moved to a facility that meets the NPS curatorial standards for museum collections. The visitor education and research/museum facility would be equipped with a modern climate control system, which would include heating, ventilation, and air conditioning (HVAC). A security system would be installed to protect from unauthorized entry, in addition to a fire protection system for the entire building, which would consist of smoke and heat detection alarms and sprinklers. The building would also be pest-proof, ensuring that the museum collections would not be damaged due to mice and/or insects.

While all care would be taken during the move, there may be negligible adverse impacts to individual pieces in the museum collection during the move from the a-frame cabin to the new facility. The park's resource specialist (paleontologist) would oversee the move to reduce the risk of damage.

Cumulative Impacts

As described under Alternative A, the lack of adequate curatorial space with appropriate environmental controls has most likely contributed to the deterioration and decay of museum collections at the monument resulting in adverse, long-term, negligible to minor impacts. Such impacts cannot be reversed; only additional damage can be prevented. The Preferred Alternative would contribute long-term, minor to moderate, beneficial impacts to this cumulative impact, resulting in an overall negligible to minor cumulative impacts on museum collections.

Conclusion

The Preferred Alternative would have minor to moderate beneficial impacts to museum collection resources because the collection would be moved to a facility that meets NPS curatorial standards for museum collections. As such, this alternative would have a negligible to minor cumulative impact on the collections. Considering these effects, this alternative would not impair museum collection resources.

PALEONTOLOGICAL RESOURCES

INTENSITY LEVEL DEFINITIONS

Florissant Fossil Beds National Monument was established to research and interpret its excellently preserved fossil flora and fauna and related geologic sites. The methodology used for assessing impacts to paleontological resources are based on the results of the September 2006 paleontological survey in comparison to the areas that would be disturbed or excavated during construction of the new visitor education and research/museum facility. The thresholds for this impact assessment are as follows:

Negligible: The impact to paleontological resources is at the lowest levels of detection, not perceptible and not measurable.

- Minor:** The impact to paleontological resources would be noticeable, but would not alter the integrity of the deposit.
- Moderate:** The impact to paleontological resources would be more noticeable, and may alter the integrity of the deposit.
- Major:** The impact to paleontological resources would be readily apparent, and would alter the integrity of the deposit.

IMPACTS OF ALTERNATIVE A (NO-ACTION ALTERNATIVE)

Impact Analysis

The No-Action Alternative would result in negligible impacts to the paleontological resources at Florissant Fossil Beds National Monument because no excavation or disturbance activities would be conducted.

The existing visitor center and the research/museum buildings would continue to be used as such, and the continued use of these structures would have negligible effects on the paleontological resources in the area.

Cumulative Impacts

Any construction activities that require excavation or ground disturbance have the potential to affect paleontological resources. The stump shelters constructed over some of the primary exposed stumps at the Monument were erected to ultimately protect and preserve the stumps; however, some paleontological materials were disturbed during excavation for this project. A new administrative facility was recently constructed and two paleontological resources were discovered during a pre-construction survey. One was incorporated into the building's crawlspace, while the other was left undisturbed as it was located below the level of construction activities. Similarly, routine projects such as fence replacement, entrance sign replacement, minor trail reroutes, and possible sewer system replacement have the potential for excavation activities which can disturb paleontological deposits.

Under this alternative, paleontological resources would not be disturbed; therefore, this project would not cumulatively affect paleontological resources when considered with other past, present, and reasonably foreseeable future actions.

Conclusion

The No-Action Alternative would result in negligible impacts to paleontological resources because no ground disturbance activities would be conducted. As such, this alternative would not contribute to any cumulative disturbance of paleontological resources, when considered with other past, present, and reasonably foreseeable future actions. Considering these negligible effects, this alternative would not impair paleontological resources.

IMPACTS OF ALTERNATIVE B (PREFERRED ALTERNATIVE)

Impact Analysis

The Preferred Alternative would result in negligible to minor adverse impacts to paleontological materials from ground disturbance and excavation activities. The results of the paleontological survey conducted in September 2006 included a total of one hot spot (approximately 4m²) of a high concentration of freshly broken petrified wood fragments located within a moderate to high concern area (approximately 14 m²) containing concentrations of petrified wood pieces throughout at a depth from 0.4 to 1 meter. It is unknown how deep, extensive, or important these resources are at this time. These areas will not be avoided during construction unless they present an insurmountable obstacle to construction. If it is determined during construction that these resources should be avoided, additional options for the buildings foundation will be considered. No other concentrations of petrified wood are known to exist within other areas that will be excavated during this project; however, in another location, the auger encountered a hard and impenetrable material at 0.5 meter deep, but the material was not identified.

The September 2006 sampling area encompassed the footprint of the new visitor education and research/museum facility and all other areas that would undergo excavation for this project; however, the footprint of the current visitor center and current utility corridors were excluded. No new utility corridors were tested as they will most likely be placed in the location of the current visitor center. Any excavation or ground disturbance activities related to construction of the new visitor education and research/museum building or connected activities such as utility relocates have the potential to reveal and disturb unknown paleontological resources. To minimize potential harm to these resources, the Monument's paleontologist would monitor all excavation activities.

If a paleontological deposit is discovered during construction, all construction activities would cease until the Monument's paleontologist assesses the resource and determines the appropriate manner in which to proceed.

Cumulative Impacts

As described under Alternative A, any construction activities that require excavation or ground disturbance have the potential to affect paleontological resources. The stump shelters constructed over some of the primary exposed stumps at the Monument were erected to ultimately protect and preserve the stumps; however, some paleontological materials were disturbed during excavation for this project. A new administrative facility was recently constructed and two paleontological resources were discovered during a pre-construction survey. One was incorporated into the building's crawlspace, while the other was left undisturbed as it was located below the level of construction activities. Similarly, projects such as fence replacement, entrance sign replacement, minor trail reroutes, and possible sewer system replacement and parking area expansions have the potential for excavation activities which can disturb paleontological deposits. Impacts associated with the current and future use of the proposed visitor education and research/museum building are expected to have a negligible to minor adverse effect on paleontological materials in the Monument. Cumulatively, this would contribute a negligible to minor amount of disturbance to paleontological resources when considered with other past, present, and reasonably foreseeable future actions.

Conclusion

The Preferred Alternative would have negligible to minor adverse effects on paleontological resources in the project area as a result of excavation for the foundation of the new visitor education and research/museum building. Only one small area of petrified wood fragments was discovered during sampling. No paleontological materials are expected to be disturbed as a result of construction activities for connected actions such as utility connections and trail relocates; however, a monitor would be present to minimize potential disturbance to unknown deposits. Considering these actions, this alternative would contribute a negligible to minor degree of cumulative disturbance to paleontological resources, when considered with other past, present, and reasonably foreseeable future actions. With these effects being minor or less, this alternative would not impair paleontological resources.

PARK OPERATIONS

INTENSITY LEVEL DEFINITIONS

The monument staff's knowledge regarding operational efficiency, protection and preservation of important resources, and providing an effective visitor experience was used to determine the intensity levels of potential impacts. For the purpose of this analysis, the human health and safety of park employees is also evaluated. The methodology used to assess potential changes to park operations is defined as follows:

- Negligible:** Park operations would not be affected or the effect would be at or below the lower levels of detection, and would not have an appreciable effect on park operations.
- Minor:** The effect would be detectable, but would be of a magnitude that would not have an appreciable adverse or beneficial effect on park operations. If mitigation were needed to offset adverse effects, it would be relatively simple and successful.
- Moderate:** The effects would be readily apparent and would result in a substantial adverse or beneficial change in park operations in a manner noticeable to staff and the public. Mitigation measures would probably be necessary to offset adverse effects and would likely be successful.
- Major:** The effects would be readily apparent and would result in a substantial adverse or beneficial change in park operations in a manner noticeable to staff and the public, and be markedly different from existing operations. Mitigation measures to offset adverse effects would be needed, could be expensive, and their success could not be guaranteed.

IMPACTS OF ALTERNATIVE A (NO-ACTION ALTERNATIVE)

Impact Analysis

The No-Action Alternative would not measurably change current park operations at Florissant Fossil Beds National Monument. The existing visitor center would continue to function as such and the museum collection would remain in the a-frame cabin. Employees would continue to work in the a-frame building with its structural deficiencies, high levels of radon and lack of

communication (no telephone), and lack of potable water. Visitor center employees would still be at risk of hantavirus exposure, structural deficiencies, and crowded conditions.

The existing visitor center contains numerous structural deficiencies, which could potentially endanger the visitors and employees. Over time, these structural deficiencies would also require the expertise and time of the maintenance crew to repair, which increases the current workload of these employees.

The added workload and health and safety issues would have an adverse, long-term minor to moderate impact on park operations.

Cumulative Impacts

Any project that occurs in the Monument has an effect on park operations; therefore, most of the actions listed in the cumulative scenario in the introduction of this chapter would have some degree of effect on employees and park operations. Construction of the new administrative building contributed minor to moderate beneficial long-term impacts due to improved work environment. Fence replacement, entrance sign replacement and Maytag barn parking expansion would primarily involve the maintenance staff. Visitor contact, interpretation, and safety activities usually involve rangers and interpretive specialists. Exotic species management may involve various members of the staff. All of these actions would impact staff time. Under this alternative, park operations associated with the current and future use of the existing visitor center and a-frame cabin are not expected change; therefore, park operations would not appreciably change when considered with other past, present, and reasonably foreseeable future actions.

Conclusion

The No-Action Alternative would not measurably change current park operations because the existing visitor center and museum collection (a-frame) buildings would continue to function as such. The impact; however, of increased maintenance to repair structural deficiencies in the existing buildings coupled with the health and safety issues related to the rodent problems would have a minor to moderate adverse effect on park operations and employee health and safety.

Cumulatively, these effects would have a negligible impact to park operations when considered with other past, present, and reasonably foreseeable future actions.

IMPACTS OF ALTERNATIVE B (PREFERRED ALTERNATIVE)

Impact Analysis

The preferred alternative would enhance visitor and employee safety. The new building will have a solid foundation eliminating the problem of mice infestation and possible exposure to hantavirus. This alternative will also eliminate all of the other structural deficiencies associated with the current visitor center. Because of the improved integrity of the building, maintenance crews would likely have a lighter work load than if the existing buildings were to continue to be used. The new facility will have proper climate controls, fire detection and suppression systems, appropriate wiring meeting current safety codes and it will meet ADA requirements for access. This alternative would also eliminate employee exposure to high radon levels in the a-

frame cabin, as well as the hazards associated with the structural deficiencies in that building. As a result, impacts to visitor use and experience will be moderate, beneficial and long-term.

The new visitor center and museum/research building would also provide improved work areas for employees including handicapped accessible office space, general work areas, a break room, and storage space. Light, ventilation, heating, and air quality would also be improved in the new administration building. These effects would have a minor to moderate benefit on employees.

During construction, the contents of the visitor center would be relocated to a temporary visitor center and then moved to the new building when it is completed. The contents of the a-frame building would be moved to the new building after completion. These moves would temporarily disrupt employee efficiency to a minor degree. The typical work load for employees would also be increased during implementation of this project from the need to finalize project plans, hire contractors, and monitor construction. Once the new building is constructed, normal work loads and patterns should return. Construction noise and dust may also adversely affect the Monument's employees, but these inconveniences would be temporary, lasting only as long as construction.

Cumulative Impacts

Cumulative impacts are similar to those listed under Alternative A. In addition, Alternative B would contribute minor adverse effects in the short-term, but moderate beneficial impacts in the long-term. When considered with other past, present, and reasonably foreseeable future actions, the cumulative impacts to park operations would be minor and beneficial.

Conclusion

Construction of a new visitor education and research/museum facility would have moderate, beneficial and long-term impacts on park operations because the new building would provide a safer and healthier work environment and would reduce the amount of work required to maintain the building. The new building would rectify the structural deficiencies and rodent problems associated with the existing visitor center and a-frame building. Adverse effects to park operations would occur during construction which would require employees to move visitor center operations and manage the construction of the project.

Cumulatively, the improvements associated with this alternative would have a minor beneficial effect on park operations when considered with other past, present, and reasonably foreseeable future actions.

VISITOR USE AND EXPERIENCE

INTENSITY LEVEL DEFINITIONS

Florissant Fossil Beds National Monument was established to preserve and protect its paleontological resources for the benefit and enjoyment of the public. The methodology used for assessing impacts to visitor use and experience is based on how a new visitor education and research/museum facility would affect the visitor, particularly with regards to the visitors' enjoyment of the Monument's primary resource. The thresholds for this impact assessment are as follows:

- Negligible:** Visitors would not be affected or changes in visitor use and/or experience would be below or at the level of detection. Any effects would be short-term. The visitor would not likely be aware of the effects associated with the alternative.
- Minor:** Changes in visitor use and/or experience would be detectable, although the changes would be slight and likely short-term. The visitor would be aware of the effects associated with the alternative, but the effects would be slight.
- Moderate:** Changes in visitor use and/or experience would be readily apparent and likely long-term. The visitor would be aware of the effects associated with the alternative, and would likely be able to express an opinion about the changes.
- Major:** Changes in visitor use and/or experience would be readily apparent and have substantial long-term consequences. The visitor would be aware of the effects associated with the alternative, and would likely express a strong opinion about the changes.

IMPACTS OF ALTERNATIVE A (NO-ACTION ALTERNATIVE)

Impact Analysis

The No-Action Alternative would result in negligible or less than negligible impacts to visitor use and experience because the area around the visitor center and admin building would remain unchanged. In particular, the network of trails in this area would not change, and visitors would continue to use these trails to access the visitor center, stump shelters, and the administration building. Visitor services would still be provided in the interim visitor center (farmhouse), which is currently inadequate, has several structural deficiencies leading to health and safety hazards, and does not meet ADA requirements. Visitors would still wait in lines to use the restrooms, and the visitor center would still get crowded. In addition, the visual resources of the area would remain unchanged because no new building would be constructed.

Cumulative Impacts

Any construction activities have the potential to affect visitor use and experience. The construction of the stump shelters likely had an adverse effect on the visitor experience as a result of noise, dust, and unavailability to view some of the primary attractions in the Monument. The visitor experience may have also been affected adversely in the short-term by the construction of the administrative building due to noise, dust and general construction activity. Projects such as road improvements, fence replacement, exotic species management, sewer system work, and parking lot expansion have had or could have an adverse effect on visitor use and experience because of the inconvenience of construction noise, dust, and possible off-limit areas. Ultimately, however, these actions would have or have had a beneficial effect on visitor use and experience because of long-term improvements to the human health and safety aspects of the Monument; the visual and natural environment; interpretive opportunities; and functionality of the Monument. Overall, the cumulative impacts would be minor to moderate and beneficial.

Under this alternative, visitor functions in the project area are not expected to change; therefore, cumulatively, visitor use and experience would not appreciably change when considered with other past, present, and reasonably foreseeable future actions.

Conclusion

The No-Action Alternative would result in primarily negligible effects to visitor use and experience because the features and visitor functions in the project area would not change. Cumulatively, this alternative would have a negligible effect on visitor use and experience when considered with other past, present, and reasonably foreseeable future actions.

IMPACTS OF ALTERNATIVE B (PREFERRED ALTERNATIVE)

Impact Analysis

Construction of a new visitor education and research/museum facility would result in a long-term, moderate beneficial impact to visitor use and experience. Un-crowded conditions in the lobby of the visitor center would permit monument staff to more cordially greet visitors and collect fees. Visitors would also have more space to unhurriedly browse exhibits, interpretive materials, and educational books on display. Space will also be available inside for orientation/education programs. The restrooms will be adequate to deal with the number of people visiting the park, eliminating the long lines that often form currently.

During construction, traffic flow and vehicle access to the visitor center parking area, where staging and stockpiling would occur, may be temporarily restricted. Construction vehicles, equipment, or material would not be stored outside the boundaries of the identified staging and stockpiling area without prior approval of monument staff. Impacts would be adverse, but minor and short-term, lasting only as long as construction.

Construction activities would also introduce temporary visual, audible, and atmospheric intrusions into the setting of Florissant Fossil Beds NM. Such intrusions could reduce the quality of the visitor experience during the construction period. Building demolition would also add to these impacts, resulting in short-term, minor, adverse impacts lasting only as long as construction.

The primary visual changes would result from the removal of the existing visitor center and A-frame cabin, although the cabin is not in the primary visitor use area, and construction of the larger visitor education and museum/research facility. Additional visual changes would include the use of a temporary trailer for visitor services, slight reconfiguration of the trail system in the project area, excavation for utility connections, and the temporary presence of construction equipment, materials, and crews. Despite these changes to the visual environment, the visitor education and museum/research building would likely be more visually pleasing to visitors in comparison to the existing buildings as the location, size, and aesthetics of the new building were chosen so as not to visually interfere with the visitor experience.

The preferred alternative would enhance visitor safety. The new building will have a solid foundation eliminating the problem of mice infestation and possible exposure to hantavirus. This alternative will also eliminate all of the other structural deficiencies associated with the current visitor center. The new facility will have proper climate controls, fire detection and suppression systems, appropriate wiring meeting current safety codes and it will meet ADA requirements for access. As a result, impacts to visitor use and experience will be moderate, beneficial and long-term.

Cumulative Impacts

As described under Alternative A, any construction activities have the potential to affect visitor use and experience. The cumulative impacts for Alternative B would be the same as Alternative A, but under this alternative, there would be additional long-term, moderate, beneficial impacts to visitor use and experience. Overall, cumulative impacts would be moderate, long-term, and beneficial.

Conclusion

Under the Preferred Alternative, structural improvements and the additional space and uses created by the new facility would have a moderate beneficial effect on visitor use and experience. Construction disturbances (noise, dust, limited areas) and the demolition of the visitor center and A-frame cabin would have a minor, temporary adverse effect to visitor use and experience. Impacts to visitor safety would be long-term, moderate and beneficial due to the elimination of the hantavirus risk and ADA compliance. Cumulatively, this alternative would have a moderate beneficial effect to visitor use and experience because ultimately this project combined with other past, present, and reasonably foreseeable future actions would benefit a number of visitor resources.

CONSULTATION/COORDINATION

EXTERNAL SCOPING

External (public) scoping was conducted to inform various agencies and the public about the proposal to construct a new visitor education and museum/research facility Florissant Fossil Beds National Monument and to generate input on the preparation of this Environmental Assessment. This effort was initiated with the distribution of a scoping letter which was bulk-mailed to over 200 residents in the area. All adjacent landowners on the Monument's mailing list database were included in the mailing. In addition, the scoping letter was mailed to various federal and state agencies, affiliated Native American tribes, local governments, and local news organizations. Scoping information was also posted on the Monument's website. With this press release and scoping letter, the public was given 30 days to comment on the project beginning March 16, 2005.

FEDERAL AGENCIES

U.S. Department of the Interior – Fish and Wildlife Service

STATE AGENCIES

Colorado Historical Society (office of the State Historic Preservation Officer)
Colorado Division of Wildlife

AFFILIATED NATIVE AMERICAN GROUPS

Northern Ute Tribe
Southern Ute Tribe
Ute Mountain Tribe
Jicarilla Apache Nation

During the 30-day scoping period, thirteen public responses were received. The majority of respondents were in favor of constructing a new visitor education and research/museum facility. Many people made comments regarding the design of the building or exhibits, while some commentators suggested incorporating the farmhouse or part of it into the new facility, if possible. Building design is beyond the scope of this EA and will not be discussed. Continued use of the farmhouse was examined by the interdisciplinary team and ultimately dismissed as not meeting the other objectives of the project; particularly resolving health and safety and structural problems.

INTERNAL SCOPING

Internal scoping was conducted by an interdisciplinary team of professionals from Florissant Fossil Beds National Monument and the National Park Service Intermountain Regional Office. Interdisciplinary team members met on January 24, 2005 to discuss the purpose and need for the project; various alternatives; potential environmental impacts; past, present, and reasonably foreseeable projects that may have cumulative effects; and possible mitigation measures. The team also gathered background information and discussed public outreach for the project. Team members also conducted a site visit to view and evaluate the proposed site for the new

visitor education and research/museum facility. The results of the January 2005 meeting are documented in this Environmental Assessment.

ENVIRONMENTAL ASSESSMENT REVIEW AND LIST OF RECIPIENTS

The Environmental Assessment will be released for public review in **August 2007**. To inform the public of the availability of the Environmental Assessment, the National Park Service will publish and distribute a letter or press release to various agencies, tribes, and members of the public on the National Monument's mailing list, as well as place an ad in the local newspaper. Copies of the Environmental Assessment will be provided to interested individuals, upon request. Copies of the document will also be available for review at the Monument's visitor center and on the internet at <http://parkplanning.nps.gov/>.

The Environmental Assessment is subject to a 30-day public comment period ending **September xx, 2007**. During this time, the public is encouraged to submit their written comments to the National Park Service address provided at the beginning of this document. Following the close of the comment period, all public comments will be reviewed and analyzed, prior to the release of a decision document. The National Park Service will issue responses to substantive comments received during the public comment period, and will make appropriate changes to the Environmental Assessment, as needed.

PREPARERS

- Keith Payne, Superintendent, National Park Service, Florissant Fossil Beds National Monument, Florissant, Colorado.
- Ann Gavin, Environmental Protection Specialist, National Park Service, Intermountain Regional Office, Denver, Colorado.

CONSULTANTS (PROVIDED INFORMATION):

National Park Service, Florissant Fossil Beds National Monument, Florissant, Colorado

- Jeff Mow, former Superintendent
- Herb Meyer, Paleontologist
- Rick Wilson, Chief Ranger
- Jeff Wolin, Chief of Interpretation
- Ken Springer, Facility Manager

REFERENCES

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- 2003 Occupational Health and Safety Site Visit Report, Florissant Fossil Beds National Monument, October 2003.
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- 2003 *Hantavirus Mitigation Plan for Florissant Fossil Beds National Monument.*
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- 2006 *Management Policies.* December 2006.

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Colorado Historical Society

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APPENDIX A: PUBLIC INVOLVEMENT



United States Department of the Interior

NATIONAL PARK SERVICE
FLORISSANT FOSSIL BEDS NM

P.O. Box 185
Florissant, CO 80816



IN REPLY REFER TO:

SCOPING LETTER FOR PROPOSED VISITOR EDUCATION AND MUSEUM/RESEARCH FACILITY

March 16, 2005

Contacts

Reginald M. Tiller 719.748.3253

Rick Wilson

Dear Interested Party:

Florissant Fossil Beds National Monument (FLFO) was established to “preserve and interpret...the excellently preserved insect and leaf fossils...at the Florissant lakebeds...” This is currently being done by providing visitor services and interpretation at the Monument visitor center, maintaining curatorial storage at the Monument for its fossil collections, and by promoting research for nationally and internationally significant fossil resources. The visitor center, built in 1924 as a private residence, was renovated in the 1970’s to serve as a temporary visitor center and administrative facility. The museum collection of approximately 7,000 objects and archives is stored in the basement of an A-frame cabin located ½ mile from the visitor center and is not accessible by the public. The A-frame cabin was built in the 1950’s and adapted for use as both the Fowler Environmental Education Center and the interim museum/research facility.

The National Park Service proposes to replace the current farmhouse/visitor center and the Fowler Environmental Education Center/curatorial facility with one new permanent structure approximately 6,000 square feet in size. This concept is consistent with the Monument’s General Management Plan, signed in 1985, which proposes the development of a new permanent visitor/administrative facility. However, the administrative office portion of that need has recently been addressed by the construction of a separate administration building, accomplished as one of seven key steps in the Monument’s Hantavirus Mitigation Plan. This latest proposal for a Visitor Education and Museum/Research Facility addresses Hantavirus concerns in the current farmhouse/visitor center, radon and curatorial storage deficiency problems at the A-frame environmental education center/curatorial building, and several other visitor service related and operational issues.

On a site visit in 2003, the National Park Service’s Intermountain Region’s Occupational Health Manager found the level of mouse infestation in the farmhouse unacceptably high. Mice are known to carry and transmit Hantavirus which, if contracted by humans, can be life-threatening. Mice that carry the Hantavirus are endemic to the area, and Florissant Fossil Beds National Monument is located within a zone with known Hantavirus occurrences. An epidemiologist with the State of Colorado’s Department of Health and Environment has also recommended that the Monument take immediate measures to mitigate

for Hantavirus in the office work environment. Their studies have shown that, on average, 10% of deer mice carry Hantavirus with year-to-year variations up to 40%. On a daily basis, park staff encounters mouse feces and urine deposits on work surfaces such as desktops, food counters, worktables, bookshelves and even in desk drawers. Mice are readily observed in the evenings, occasionally in the daylight, and have often been found trapped in the office trashcans. Staff regularly set mouse traps throughout the administrative and visitor areas in attempt to reduce the mouse population. The levels of mouse infestation occurring in office and visitor space environments are not easily mitigated due to the lack of a solid foundation beneath the 1924 farmhouse/visitor center. The foundation is made of stone rubble loosely mortared, and in some places the flooring is laid directly on timbers set on grade. The loose nature of the foundation, coupled with its many cracks and openings, makes the exclusion of rodents in the visitor center nearly impossible. Moreover, the age and construction of the farmhouse/visitor center makes it impossible to replace the existing foundation with a more solid one without severely damaging the aged existing structure.

The existing farmhouse and A-frame cabin basement (currently in use as the museum storage and curatorial workspace) lack fire detection or suppression systems. These deficiencies consistently prevent the monument from meeting NPS curatorial standards for museum collections and basic visitor/employee health and safety standards. The A-Frame building basement also has radon levels high enough to warrant mitigation recommendations from the Environmental Protection Agency (EPA). The 7,000 museum objects currently stored there are at risk of loss or disintegration due to the lack of any climate control and fire detection or suppression systems. The new visitor education and museum/research facility will provide approximately 6,000 square feet of office, museum, curatorial, and visitor space that will correct all these deficiencies.

Several alternatives to building a new structure were considered but were deemed unfeasible for a variety of reasons such as prohibitive costs or that the alternative presented a risk to the Monument's paleontological resources. In addition to the Hantavirus concerns, both of the current facilities also contain a number of structural deficiencies leading to health and safety problems. The farmhouse deficiencies include: a lack of a sound foundation, a sagging roof, undersized electrical wiring, inadequate climate and humidity controls, no ADA accessibility, flooded crawlspace and subsequent mold/mildew, and a lack of fire detection and suppression systems. The A-frame cabin lacks any fire detection or suppression system, has no telephone connection, lacks any climate control, and suffers from high levels of radon.

To evaluate the alternatives and determine the environmental consequences, the National Park Service will be preparing an environmental assessment. Superintendent Reginald Tiller would like to hear your concerns regarding the proposed plan to establish a permanent visitor education and museum/research building in the Monument. The Monument welcomes your questions and comments to further public understanding and seeks your input in developing alternatives for resolving these management issues as well as corollary issues concerning this proposal's effects on health and safety, water quality, air quality, soils, vegetation, wildlife, paleontological resources, cultural resources, and visitor experience. Under the current National Park Service 5-year Line Item Construction Priority List, the Monument could receive funding for this proposed visitor facility in 2008.

Please send your comments to: Superintendent, Florissant Fossil Beds National Monument, P.O. Box 185, Florissant, CO 80816 or via e-mail to: flfo_superintendent@nps.gov. Please submit your comments by May 26, 2005. Please note that the names and addresses of people who comment become part of the public record. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comments. We will make all submissions from organizations, businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available

for public inspection in their entirety.

Thank you,

Reginald M. Tiller
Superintendent