

**National Park Service  
U.S. Department of the Interior**



**Wind Cave National Park  
South Dakota**

## **Project to Rehabilitate Highway 87 and Visitor Center Access Roads**

**Finding of No Significant Impact**

**March 2006**

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### **BACKGROUND**

Wind Cave National Park is located in western South Dakota, on the southern edge of the Black Hills. The park was established in 1903 to protect Wind Cave and the underground resources of this unique site. Since the original designation, the purpose of the park has expanded from cave preservation alone to protection of both surface and subsurface resources. The primary attraction of the park is the worldwide recognized cave; however, an important part of the park experience is tied to scenic and wildlife viewing. Travel to and around the park is almost entirely by automobile with visitors accessing the park from the south or west via US Highway 385 and from the north via State Highway 87. Wind Cave, the Visitor Center/Park Headquarters is accessed by a paved, two-lane park road that enters and exits off Highway 385. In 2003 approximately 386,000 vehicles utilizing these highways entered the park with approximately 60 percent being recreational visits.

Since their opening in the mid-1950s, and despite periodic upkeep, State Highway 87 and the north and south Visitor Center access roads have deteriorated under increasingly heavy traffic. This has resulted in rutting, settling, and cracking of the pavement and roadbed at rates faster than can be repaired. Additionally, the historic Beaver Creek and Pigtail bridges, which were constructed in 1929 and 1930 along the Highway 87 route, were recently inspected and found to be deficient in their deck surfacing, structure, and guardrails. The Beaver Creek Bridge exhibited an eroded and undermined north bridge abutment, deteriorated decking and curbing, and detached guard rail. The Pigtail Bridge did not meet current load capacities, the guard rails did not meet current crash-test requirements, and the northern approach needed realignment. In addition, Highway 87 has 33 culverts beneath the roadbed of varying ages and condition that contribute to deterioration of the road. Interpretive pullouts require enhancements to clearly define their placement and ease traffic flow conflicts.

The National Park Service, in conjunction with the Federal Highway Administration, will make improvements to the bridges to enhance their structural integrity and safety and will rehabilitate the surfaces of Highway 87 and its interpretive pullouts, and the north and south Visitor Center

access roads to provide the public with a safe driving surface that enhances the visitor experience, protects cultural and natural resources, and improves park operational efficiency.

An environmental assessment was prepared to analyze the impacts of continuing current management (Alternative A, the no action alternative) and of implementing an alternative that makes improvements to the routes and interpretive pullouts (Alternative B, the preferred alternative). The preferred alternative will protect public health and safety, preserve and protect cultural and natural resources, and improve park operational efficiency with few adverse effects to park resources. The analysis was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (40 CFR 1508.9), the National Park Service *Director's Order #12: Conservation Planning, Environmental Impact Analysis and Decision-making*, and Section 106 of the National Historic Preservation Act of 1966, as amended.

## **SELECTED ACTION**

Alternative B, the preferred alternative, is the selected action. The selected action will rehabilitate 7.2 miles of Highway 87 and 1.4 miles of the Visitor Center north and south access roads and improve the structural integrity of the Beaver Creek and Pigtail bridges. Road surface rehabilitation will involve pulverizing the surface of the existing asphalt and applying a new road surface. The width of the existing roads will remain unchanged at 22 feet. New, crash-tested guardrails will be installed where necessary. Several paved and unpaved pullouts and parking areas along Highway 87 and the Visitor Center north access road, including the picnic area loop and parking spurs, will be improved in a manner similar to the roadway. Informal or social pullouts that can be safely used will be formalized in order to minimize resource damage from unauthorized use. At interpretive parking areas, timber curbs and bollards will be replaced by concrete curbing, gutters, and sidewalks. Informal pullouts not intended for use will be restored and revegetated with native plants. Portions of two former roadways along Highway 87 will also be reclaimed and revegetated with native plants.

Rehabilitation of the Beaver Creek Bridge will include stripping the concrete deck using highly pressurized water and applying a new overlay. Water and debris generated by this process will be captured and disposed of per applicable federal, state, and local disposal regulations. Deck expansion joints will be cleaned and replaced with elastomer to reduce visibility, debris accumulation, and maintenance. Damaged stone curbing will be replaced in kind and areas on the bridge exhibiting concrete spalling will be patched. Where steel reinforcing is exposed, the concrete will be repaired with patching colored to match the existing concrete. New metal approach rails will be attached to each corner of the bridge. The slope protection and backfill beneath the north abutment will be repaired by injecting grout, rebuilding the stone, and installing a catch basin to collect roadway runoff that may exacerbate the erosion.

The existing 4-inch thick wooden deck of the Pigtail Bridge will be replaced with either 5 1/8-inch or 5 1/2-inch thick laminated or timber wood deck panels to meet load capacity criteria. The new bridge deck will maintain the existing, single lane passage width. A new guard rail system, designed by the NPS and Federal Highway Administration in consultation with the South Dakota State Historic Preservation Officer (SHPO), will be installed. The railing consists of a double rail constructed from laminated timber and posts that have been crash tested. The rail heights and post spacing will match the existing bridge configuration. New crashworthy timber approach and

transition railing will also be constructed at all four corners of the bridge. The eleven underlying steel girders of the middle and south spans will be replaced with higher tensile strength steel having the same dimensions and appearance as those currently supporting the deck. The steel girders under the north span will be refurbished and reused. The original bridge abutments and piers will remain untouched. However, the sandstone bases, which constrict passage between the bridge piers, will be widened by shaving the rock face. Similarly, a slight adjustment to the northern alignment of the roadway will be made by extending the centerline of the approach roadway and excavating protruding bedrock. Reconfiguration of the rock faces beneath the bridge and at the northern bridge approach will be done in a manner that will maintain the natural appearance of the stone. Overall, the multidisciplinary design process for the Pigtail Bridge addressed aesthetic, historical, and environmental concerns, which will allow the structure to be preserved and maintained to the extent possible while incorporating current design and safety factors.

During the project, areas identified as having inadequate or damaged drainage will be improved to reduce deterioration of the highway. Improvements may include replacement of culverts, removal of silt and sediment, clearing of vegetation, culvert realignment, or repairing damaged headwalls and support structures. Where improvements occur, historic stone culverts that retain integrity of materials and design will be recorded, disassembled, and reconstructed in the same design, using appropriate techniques and salvaged materials (and compatible materials if needed). In areas where natural springs or wetlands occur, or drainage areas provide ecological benefit, drainage modifications will be limited to prevent any adverse effects to the cultural and natural resources.

The selected action is expected to be completed in one summer construction season, with a possible closure of up to six to eight weeks for improvements to Beaver Creek and Pigtail bridges. Information regarding delays, rerouting, or possible closures will be disseminated to park visitors and nearby towns.

## **MITIGATION MEASURES OF THE SELECTED ACTION**

Mitigation measures or conditions are presented as part of the selected action and have been developed to lessen adverse effects. The following mitigation measures will be implemented for the selected action:

### **Public Health and Safety**

Measures to reduce effects of road repair and construction on visitor safety and experience will be implemented (e.g., flagmen, speed reduction/directional signage, night reflectors when equipment is left onsite overnight, etc.). Visitors, contractors, and park personnel will be safeguarded from hazardous activities. A barrier plan indicating locations and types of barricades will be used to protect public health and safety.

Visitor safety will be ensured both day and night by fencing the construction limits in areas that may pose safety risks. Unsafe conditions will be inspected for and corrected as soon as practicable to minimize the potential for staff or visitor injury.

Care will be taken to ensure that rerouting could safely accommodate all sizes of vehicles that are legally allowed to use the park roads.

All trucks hauling demolition debris and other loose materials that could spill onto paved surfaces will be covered or will maintain adequate freeboard.

Federal Highway Administration staff will monitor contractor activities to ensure compliance with safety standards.

### **Visitor Experience**

The NPS and the contractor will manage rerouting and closures (e.g., reduce traffic speed, directional signage, flagmen, etc.) to reduce the inconvenience to park visitors as much as possible.

The length of roads to be resurfaced at any one time will be minimized, and road closures will be avoided where possible and the length of road detours will be as short as possible.

The number of wayside exhibit pullouts that will be closed at any one time will be minimized.

When possible, road resurfacing on the Visitor Center access roads will be scheduled to coincide with the low visitor season because these two roads carry the majority of visitor traffic.

Information on road closures or bridge closures will be disseminated to visitors. Road rerouting and closure information will be provided on the internet, local newspapers, local Chambers of Commerce, the park's Traveler's Information Station (TIS), a low-wattage radio station, and at the Visitor Center to alert visitors to road conditions within the park.

Visitor information will be developed and distributed to park visitors, to minimize adverse effects to visitors, such as changes in parking availability.

All paved areas subject to vehicular and pedestrian traffic will be kept clear of construction debris.

### **Cultural Resources**

While working near/at historic walls, bridges, or other historic features, care will be taken to avoid undermining structural stability.

Bridge repairs will be conducted in an unobtrusive manner that does not diminish the integrity of the structures, which are included on the National Register of Historic Places. Work will be guided by the Secretary of the Interior's Standards for the Treatment of Historic Properties to minimize damage to historic resources.

Damaged or deteriorated stone culvert headwalls will be repaired in a manner that will maintain their historic appearance and integrity and will follow the Secretary of the Interior's Standards for the Treatment of Historic Properties.

Undamaged stone curbing or other historic fabric will be salvaged for reuse.

Ground-disturbing actions will be designed to avoid known archeological sites and historic features, and resource sensitive areas will be identified in the construction operations plan without calling attention to the specific type of resource.

Work limits will be established and clearly marked to protect resources, and all protection measures will be clearly stated in the construction specifications. Areas for contractor activities include but are not limited to staging areas, turnarounds, equipment parking, and materials storage. These will be clearly delineated (staked) on the ground to ensure that activities occur

only in designated areas. Workers will be instructed to avoid conducting activities beyond the construction zone and their compliance will be monitored by the project contracting officer's technical representative. Construction documents will include stop-work provisions, should archeological or paleontological resources be uncovered, and the contractor will be apprised of these protective measures during the pre-construction conference.

All project documentation, including but not limited to plans, photographs, and notes, will be permanently retained in the park's museum collection.

To reduce unauthorized collecting, construction personnel will be educated about cultural resources in general and the need to protect and report any cultural resources encountered. Work crews will be instructed regarding the illegality of collecting artifacts on federal lands to avoid any potential Archeological Resources Protection Act violations.

New landscape features will be compatible with the original design and character of the Wind Cave National Park Administrative and Utility Area Historic District and other historic features along the park road.

If previously unknown archeological resources or human remains are discovered, work will be stopped in the area of the discovery and the park will consult with traditionally associated peoples, the South Dakota SHPO and the Advisory Council on Historic Preservation, as appropriate. Procedures outlined in 36 Code of Federal Regulations 800 and the Native American Grave Protection and Repatriation Act (NAGPRA) will be followed.

Discovered resources will be evaluated for their significance, and if needed, mitigation measures will be developed in consultation with the South Dakota SHPO. Best management practices will emphasize changes in project design to avoid and protect sites and features, and/or may include archeological monitoring of the project and data recovery.

### **Cave Resources**

Although it is extremely unlikely the cave will be encountered because road excavation will not exceed a depth of three feet, construction activities will be monitored and stop-work provisions will be included in construction documents should cave resources be encountered.

### **Wildlife and Habitats**

A defined work area perimeter will be maintained to keep all construction-related impacts within the affected area in order to minimize adverse impacts to wildlife habitats. The five-foot boundary along the highway will be strictly adhered to and there will be no physical disturbance outside the project corridor.

Construction workers will be educated about the dangers of intentional or unintentional feeding of park wildlife, and on inadvertent harassment through observation or pursuit.

Construction will be expected to occur during daylight hours only. However, if night lighting ever became necessary on an isolated basis, lighting will be minimal, directed downward, and shielded.

### **Air Quality**

Contractors will implement vehicle emissions controls such as keeping equipment properly tuned and maintained in accordance with manufacturers' specifications and implementing best management construction practices to avoid unnecessary emissions (e.g., engines will not idle).

To the degree possible, impacts will be mitigated by the use of best management practices to reduce generation of dust, such as covering loose soil and watering activities, and by limits on the types of chemicals (low Volatile Organic Chemicals [VOC] ratings) used in new construction and the rehabilitation work.

The contractor will be encouraged to use carpooling and other techniques to minimize the trip generation of the construction activity. Shipment of materials in full loads will also be encouraged and heavy equipment and vehicles will be maintained to minimize pollution generation.

### **Natural Soundscape**

If deemed necessary, demolition work on weekends or federal government holidays may be authorized, with prior written approval. To the extent possible, all on-site noisy construction work above 76 A-weighted decibels (dBA) (such as the operation of heavy equipment) will be done between the hours of 7:30 A.M. and 5:00 P.M. This will minimize impacts to the natural soundscape during quieter morning and evening hours.

All construction equipment will be equipped with mufflers that are kept in proper operating condition, and when possible, equipment will be shut off rather than be allowed to idle. Standard noise abatement measures will include the following elements: a schedule that minimizes impacts to adjacent noise-sensitive areas, use of the best available noise control techniques wherever feasible, use of hydraulically or electrically powered impact tools when feasible, and location of stationary noise sources as far from sensitive public use areas as possible.

### **Soils and Vegetation**

To minimize disturbance to the surrounding prairie and forest, the construction limits will be marked prior to beginning any work under the proposed contract. Construction limits will remain marked until completion of the contract to ensure no disturbance to native vegetation beyond the narrowly defined area.

Areas disturbed during the project will be revegetated with native plants.

To reduce the potential of topsoil losing its important biological components, topsoil will be stripped from within the construction limits and stockpiled in a designated staging area for use in revegetation efforts.

Imported soils and other materials will be specified sterile and weed free. Erosion control will be in the form of sterile matting. No seeding of exotic materials will be permitted. To prevent accidental introduction of exotic seed, only certified weed free straw bales will be used. Washing of heavy equipment will occur prior to importation to the park to minimize the potential for non-native or exotic seed spreading through the park. Such equipment will also be inspected regularly to ensure that no oil or fuel leaks are present that could result in contamination of the park environment.

### **Water Resources and Wetlands**

Silt fencing will be used to prevent siltation from heavy runoff during rainstorms or snowmelt. Stockpiling of materials will occur on pavement or in areas of previous disturbance. Other materials with the potential to cause sedimentation will be stored similarly. Adequate erosion control or drainage structures will be installed and maintained.

A defined work area perimeter will be maintained to keep all construction-related impacts within the affected area. When appropriate, fencing will be used to demarcate construction limits from sensitive natural resources such as wetlands.

An adequate hydrocarbon spill kit, with such items as absorbent pads and material, gloves, and disposal bag, will be available on site to contain any unexpected spills.

## **OTHER ALTERNATIVES CONSIDERED**

The **no action alternative** would continue present management and conditions. It does not imply or direct discontinuing the present action or removing existing uses, development, or facilities. The no action alternative provided the basis for comparing the management direction and environmental consequences of the preferred alternative.

Current management of the bridges and road corridors would continue. No major efforts would be undertaken to minimize unsafe driving conditions; make corrections to the structural integrity, alignment, or railing systems of the historic bridges; and no drainage improvements would occur. Routine road surface maintenance and cyclical activities including periodic chip and seal coats and annual pothole repairs and ongoing maintenance patching to bridge deck surfaces of the historic bridges would continue on an “as needed” basis.

### **Alternatives Considered and Dismissed**

**Widening the Road.** This alternative considered widening the highway to better accommodate large recreational vehicles and truck traffic with installation of paved shoulders to provide room for visitors to safely pull over. This alternative was dismissed because such alterations would negatively affect the historic and cultural nature of the original highway design. In addition, the amount of disturbance to soils and vegetation required for implementation was not acceptable to park staff and management.

**New Route to Bypass Pigtail Bridge.** This alternative considered abandoning the Pigtail Bridge and building a new section of highway to bypass the bridge in order to protect this important historic structure and would have required about 0.5 miles of new road to be constructed in previously undisturbed areas. It was dismissed due to the magnitude of impacts to natural resources and the cultural landscape, as well as the impacts from eliminating this interesting and unique historic feature from the visitor experience.

**Replace Wooden Components of Pigtail Bridge.** This alternative considered replacing the existing wooden bridge deck and guardrail with a new timber deck and guardrail to match in kind the existing wooden components. This alternative was dismissed as the vehicle load limit would not have been upgraded to meet current needs.

**Total Replacement of Pigtail Bridge.** Under this alternative the existing Pigtail Bridge would be demolished and replaced with a modern 2-lane bridge that would meet current safety standards and accommodate all road traffic. Total bridge replacement was dismissed because of the loss of the historic bridge and negative changes in the character of the landscape.

**Resurface Pigtail Bridge.** This alternative considered resurfacing the asphalt roadway over the bridge without replacing or upgrading bridge features. The new surface overlay option was dismissed because this alternative would not have upgraded the vehicle load limit on the bridge deck.

## **ENVIRONMENTALLY PREFERRED ALTERNATIVE**

The environmentally preferred alternative is the alternative that will best promote national environmental policy expressed in the National Environmental Policy Act. The environmentally preferred alternative will cause the least damage to the biological and physical environment, and will best protect, preserve, and enhance historical, cultural, and natural resources.

Section 101(b) of the National Environmental Policy Act identifies six criteria to help determine the environmentally preferred alternative. The act directs that federal plans should:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- Preserve important historical, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
- Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Continuing the current conditions under Alternative A would not be effective in meeting these criteria. Without rehabilitation of the historic Beaver Creek and Pigtail bridges and historic culvert headwalls, the National Park Service would be unable to preserve, to the greatest extent possible, important historic resources that are part of the cultural landscape of Wind Cave National Park. Without upgrading the Highway 87 road surface and historic bridge deck surfaces, railing and alignment, unsafe driving conditions to park visitors and staff would persist.

Overall, the selected action will eliminate public health and safety risks and protect the historic Beaver Creek and Pigtail bridges and historic headwalls. With implementation of the selected action, the National Park Service will better be able to:

- Protect and rehabilitate some of the park's important cultural resources and improve the NPS' ability to "preserve important historical, cultural, and natural aspects of our national heritage." The Beaver Creek and Pigtail bridges are listed on the National Register of Historic Places, and the stone culvert headwalls along the highway are part of the park's historic resources and contribute visually to the historic landscape of the highway (Criteria 1 and 4).
- Protect the health, safety, and welfare of the public by improving the condition of the road surface and structural stability of the Beaver Creek and Pigtail bridges (Criterion 2).
- Enhance the visitor experience and provide "safe, healthful ... surroundings" (Criterion 2).

Therefore, Alternative B, the selected action, is the environmentally preferred alternative.

## THE SELECTED ACTION AND SIGNIFICANCE CRITERIA

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

*1. Impacts that may have both beneficial and adverse aspects and which on balance may be beneficial, but that may still have significant adverse impacts which require analysis in an EIS.*

No long-term major adverse or beneficial impacts were identified that require analysis in an environmental impact statement.

Overall, the project will have moderate long-term benefits as a result of the preservation and stabilization of historic resources. Negligible to minor long-term adverse effects on archeological, ethnographic, and historic resources will result from rehabilitation of the roadways and historic bridges. See discussion under Criteria 8 for further details on effects to cultural resources.

Negligible to minor, long-term, beneficial effects on water resources and wetlands will result from the improved drainage and reduced sediment loading in runoff. Project activities will have negligible localized short and long-term adverse effects on water and wetland resources and up to minor adverse effects on wildlife, soils, and geologic resources. Short-term adverse effects of moderate intensity may occur to natural soundscapes during construction activities. Because the project will help protect natural resources over the long term, the geologic and soil resources and vegetative and wildlife communities will also have negligible to minor beneficial effects.

There will be long-term minor benefits to visitor use and experience from improved driving conditions, wayside exhibit pullouts, and interpretive stops. Short-term, moderate adverse effects will occur during construction activities from the re-routing of visitors or from driving in the construction zones.

Park operations will experience long-term minor to moderate, benefits from the reduced road/bridge maintenance activities once rehabilitation work is completed. Project implementation will have short-term, adverse effects of minor intensity during the year-long period of construction due to managing and rerouting visitor traffic, and monitoring construction activities and rehabilitation work to ensure protection of park resources.

*2. The degree to which the proposed action affects public health or safety*

Public health and safety was an important issue addressed during development of the preferred alternative. Long-term, minor to moderate, benefits will result by reducing the potential for traffic accidents related to poor road conditions and merging traffic. Specifically, resurfacing the roadways; improving pullouts; rehabilitating deficient bridge railings, decks, and abutments will contribute to the overall safety benefits. However, during project implementation, localized adverse effects of minor to moderate intensity are expected due to re-routing traffic around road construction activities, and six to eight week closure of the historic bridges.

*3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas*

There are no prime farmlands, wild and scenic rivers, or ecologically critical areas within the project area. The U.S. Department of Agriculture-Natural Resources Conservation Service, in a

letter dated January 18, 2006, concurred with the park's finding that there will be no impact to prime or unique farmland as a result of the project.

A wetland is present along Highway 87 and affects to this feature are included in Significance Criteria 1 described above. Although the park's cave resources have not been designated as ecologically critical areas, the unique nature of their ecosystem and the importance of the cave to American Indian tribes associated with the park warrant a high level of protection. The selected action is not expected to have any effects on the cave resources, as Highway 87 does not traverse rock formations associated with the cave formation. Cave resources could potentially be affected during roadwork activities on the north and south Visitor Center access roads as these roads do occur above the cave. However, no effects are anticipated as the project activities will not exceed three feet. Mitigation measures will be employed to ensure that no impacts occur.

The project area is outside the Wind Cave National Park Administrative and Utility Area Historic District. The project corridor does contain the historic Beaver Creek and Pigtail bridges as well as the Highway 87 corridor with its historic culvert headwalls, terrain, and landscape that have been proposed to be eligible for the National Register of Historic Places. The National Park Service determined, with concurrence from the South Dakota SHPO, that pursuant to 36CFR800.5, the selected action with identified mitigation measures will have *no adverse effects* to archeological resources, historic structures and districts, cultural landscapes, traditional cultural properties and ethnographic resources eligible for or presently listed on the National Register of Historic Places.

*4. The degree to which the effects on the quality of the human environment is likely to be highly controversial*

There were no highly controversial effects identified during the preparation of the environmental assessment or during the public review period which ended February 22, 2006.

*5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks*

There were no highly uncertain, unique or unknown risks identified during either preparation of the environmental assessment or during the public review period which ended February 22, 2006.

*6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration*

The selected action neither establishes a National Park Service precedent for future actions with significant effects nor will it represent a decision in principle about a future consideration.

*7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts*

No significant cumulative impacts will result from implementation of the selected action.

Projects that were considered in conjunction with the selected action for their cumulative effects include development and implementation of facility improvements, including Wind cave lighting, new wastewater lagoons, Elk Mountain Campground improvements; construction of a

new visitor center parking lot and associated stormwater management; interpretive plan; exotic plant management plan; and completion of the Wind Cave National Park Cultural Landscape Report. Short-term, adverse effects will occur to public health and safety and visitor experience from implementation of the selected action; however, no other actions are expected to contribute adverse effects. The project's minor to moderate long-term beneficial effects on public health and safety, cultural resources, visitor use and experience, and park operations, in conjunction with the beneficial effects from facility improvements, interpretive plan, exotic plant management, and cultural landscape report, will produce long-term, moderate, beneficial cumulative effects. The negligible to minor construction-related adverse impacts of the selected action, in conjunction with the adverse impacts of other past, present, and reasonably foreseeable future actions, will result in minor adverse cumulative impacts to soils and geological resources. Wildlife, water quality, wetlands, and vegetation will experience up to minor level cumulative beneficial effects from the combination of actions occurring in the park.

*8. Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources*

With mitigation, rehabilitation of the existing highway and roadways will have a negligible to minor, adverse effect on archeological and ethnographic resources. In general, the rehabilitation of the roadway, its landscape, and its historic features (bridges and culverts) will have a long-term, moderate, beneficial effect on these resources by extending life expectancy and preserving integrity.

The selected action will help restore the structural and visual integrity of the Beaver Creek Bridge, slow degradation of the structure, and improve the durability of the structure. Overall, the long-term results of the above actions on the Beaver Creek Bridge will be moderately beneficial.

Replacement in kind of the deck and girders, installation of new guardrails and approach rails at the Pigtail Bridge will have long-term, negligible to minor adverse effects on the bridge and the landscape, but these renovations will help protect the bridge during vehicle encounters and help ensure its long-term preservation. Shaving the bedrock on the north Pigtail Bridge approach and on bedrock beneath the bridge will have a minor adverse effect on the landscape and a moderate benefit for the bridge by reducing the potential for vehicle-bridge encounters.

Reconstruction of the stone culvert headwall on the north side of the road will be compatible with the rest of the historic headwalls, using the same types of material and design. By helping to retain the area's historic appearance, these improvements and the other improvements noted above will have a long-term, moderate beneficial effect on the roadway.

The National Park Service determined, with concurrence from the South Dakota SHPO in a letter dated February 13, 2006, that pursuant to 36CFR800.5, the selected action with identified mitigation measures will have *no adverse effects* to archeological resources, historic structures and districts, cultural landscapes, traditional cultural properties and ethnographic resources eligible for or presently listed on the National Register of Historic Places.

*9. Degree to which the action may adversely affect an endangered or threatened species or its critical habitat*

There will be no effect to threatened or endangered species or critical habitat as a result of implementation of the selected action because no federally listed species occur in the project area. The U.S. Fish & Wildlife Service was contacted by the park on January 13, 2006. In a response letter dated January 30, 2006, the agency concurred with the park's finding that no federally listed threatened or endangered species will be affected by the project.

*10. Whether the action threatens a violation of Federal, state or local environmental protection law*

The selected action will not violate any federal, state, or local environmental protection laws.

## **IMPAIRMENT**

In addition to reviewing the list of significant criteria, the National Park Service has determined that implementation of the selected action will not constitute an impairment to Wind Cave National Park resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the project's environmental assessment, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in National Park Service Management Policies 2001. As described in the environmental assessment, implementation of the selected action will not result in major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Wind Cave National Park, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document.

Although implementation of the project will cause short- and long-term, localized adverse effects, in all cases these result from actions taken to preserve vital park resources. Overall, implementation of the selected action will result in benefits to natural and cultural resources, public health and safety, park operations, and visitor use and experience.

## **PUBLIC INVOLVEMENT AND CONSULTATION**

National Park Service internal discussions led to identification of the main issues and impact topics addressed in the environmental assessment. The primary goals of the project are to protect public health and safety, protect natural and cultural resources, and improve visitor understanding and appreciation of the natural and cultural resources of the park.

The environmental assessment process under NEPA requires agencies to seek outside suggestions and other input about what should be considered in the environmental assessment. This process, called "scoping," involves contacting other federal, state, and local agencies that might have an interest in the proposed action.

Several Native American Tribes have demonstrated interest in the areas within Wind Cave National Park. The following tribes and tribal representatives received copies of the environmental assessment for review and comment.

Apache Tribe of Oklahoma	Oglala Sioux Tribal Council
Arapaho Business Committee	Ponca Tribe of Nebraska
Cheyenne River Sioux Tribe	Ponca Tribe of Oklahoma
Cheyenne-Arapaho Tribes of Oklahoma	Rosebud Sioux Tribal Council
Crow Creek Sioux Tribal Council	Santee Sioux Tribal Council
Flandreau Santee Sioux Executive Committee	Sisseton-Wahpeton Sioux Tribal Council
Fort Belknap Community Council	Standing Rock Sioux Tribal Council
Fort Peck Tribal Executive Board	Three Affiliated Tribes Business Council
Lower Brule Sioux Tribal Council	Yankton Sioux Tribal Business and Claims Committee
Northern Cheyenne Tribal Council	

No comments on the environmental assessment were received from the tribes during the comment and review period ending February 22, 2006.

The public was invited to comment on the project in a press release issued on April 6, 2004, and posted the same day on the park's website at [www.nps.gov/wica](http://www.nps.gov/wica). No new issues were identified by the public as a result of the request for public input.

The environmental assessment was made available for public review and comment from January 22, 2006 to February 22, 2006. An electronic copy of the environmental assessment was placed on the park's website during the same period. The National Park Service also sent copies of the environmental assessment to various local organizations, interested parties, and government agencies for their review and comment. One comment letter, supporting the selected action, was received.

On January 17, the park issued a press release inviting the public to attend an open house on February 6, 2006 at the park to comment on project and EA. Two attendees visited the park, and both submitted comments supporting the selected action.

No substantive comments on the EA were received. No NPS response is required, and no changes to the text of the EA will be made. This FONSI presents the National Park Service decision.

## CONCLUSION

The selected action will not constitute an action that normally requires preparation of an environmental impact statement (EIS). The selected action will not have a significant effect on the human or natural environment. Negative environmental impacts that could occur are short- or long-term and of negligible to moderate intensity. There will be no significant impacts on public health, public safety, threatened or endangered species, or other unique characteristics of the region. There are no unmitigated adverse impacts on sites or districts listed in or eligible for listing in the National Register of Historic Places. No uncertain or controversial impacts, unique risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law nor result in the impairment of park resources or values.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

	/s/ Linda L. Stoll	3/3/06
Recommended:	_____	_____
	Superintendent	Date

	/s/ David N. Given (Acting)	3/10/06
Approved:	_____	_____
	Midwest Regional Director	Date