National Park Service
U.S. Department of the Interior
Capitol Reef National Park
Torrey, Utah

Rehabilitate and Resurface the 8-Mile Scenic Drive Road Environmental Assessment

February 2010

Rehabilitate and Resurface the 8-Mile Scenic Drive Road

Environmental Assessment

Summary

Capitol Reef National Park (park), in cooperation with the Federal Highway Administration (FHWA), Central Federal Lands Highway Division (CFLHD), proposes to rehabilitate and resurface eight miles of the Scenic Drive roadway from the intersection with Utah State Route 24 (SR-24) (milepost 0.0) and the parking lot for Capitol Gorge (milepost 8.0).

The proposal to rehabilitate and resurface the Scenic Drive is needed because the roadway surface has deteriorated with signs of shoving and rutting, as well as deteriorated pavement edges, potholes, and bleeding and cracking failures. Cracking of the pavement is common within the travel lanes and along the shoulders. The roadway is threatened in some locations by eroding ditches and drainage channels. Some culverts are plugged with debris. Numerous culvert headwalls have become weakened because of erosion and deterioration of the mortar.

This environmental assessment evaluates two alternatives: a no-action alternative and an action alternative. The no-action alternative describes the current road maintenance regimen of spot repairs and chip-sealing of the roadway as needed, with periodic repairs to individual drainage structures as the need arises. The park would respond to future needs and conditions without substantial actions or changes in the present maintenance regimen.

Under the proposed alternative, Rehabilitate and Resurface the Scenic Drive, the roadway would be rehabilitated and repaved with asphalt pavement or with chip-seal throughout its 8-mile length. From the intersection with State Route 24, milepost (MP) 0.00, to the park fee station at MP 1.70, the existing pavement on the Scenic Drive would be pulverized and the roadway would be paved with asphalt concrete. Between the fee station and the Capitol Gorge parking area the existing chip-seal pavement would be pulverized, and the roadway would be paved with a double chip-seal overlay. Painted centerline striping would be applied from the picnic area and campground in the Fruita Historic District to the intersection with SR-24. Centerline striping may also be applied at some of the sharpest curves, to enhance safety. Rumble strips would be installed at the beginning of the 15-mile-per-hour speed zone. Minor improvements would be made to the Fruita Campground entrance to provide additional width for turning movements into and out of the campground. Paved asphalt aprons would be developed and extended into the entrances of Grand Wash and the Pleasant Creek Road.

Existing concrete low water crossings would be repaired or replaced in kind as needed. Cut and fill slope erosion and slumping along the roadway would be repaired as needed. The Capitol Gorge parking area would be paved with asphalt pavement. Some existing minor parking areas and pullouts would be reconstructed and formalized. Vegetated areas disturbed by construction activities would be revegetated with native plants and seeds. Existing roadway signs would be replaced.

Damaged and deteriorating culverts (historic and non-historic) would be repaired and/or reconstructed, and new culverts would be installed where needed. The NPS considers the Scenic Drive as potentially eligible for listing in the National Register of Historic Places. Therefore, all masonry stone rehabilitation would be completed in accordance with the *Secretary of the Interior's Standards for the Preservation of Historic Properties*. Consultation with the Utah State Historic Preservation Office (SHPO) was conducted under a separate

submittal in compliance with Section 106 of the National Historic Preservation of 1966, as amended.

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 Capitol Reef National Park's resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts. Resource topics analyzed in detail in this document include cultural landscapes; soundscape; soils and geology; health and safety; visitor use and experience; and park operations and management. All other resource topics were dismissed because the project would have negligible or minor impacts on those resources. No major impacts are anticipated as a result of this project.

Public Comment

If you wish to comment on the environmental assessment, you may post comments online at http://parkplanning.nps.gov/care or mail comments to: Superintendent; Capitol Reef National Park, HC70 Box 15, Torrey, Utah 84775.

This environmental assessment will be available for 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. Although 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.

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PURPOSE AND NEED

Introduction

Capitol Reef National Park (park) is located in southern Utah in Wayne, Garfield, Sevier, and Emery Counties, Utah. The headquarters area and the project areas are located east of the town of Torrey, in Wayne County, Utah. Capitol Reef was first established as a national monument on August 2, 1937 by Presidential Proclamation 2246 (50 Stat. 1856). The monument originally comprised 37,060 acres. Additional lands were added to the monument by Presidential Proclamation 3249 of July 2, 1958 and Presidential Proclamation 3888 of January 20, 1969. On December 18, 1971, Congress abolished Capitol Reef National Monument and established Capitol Reef National Park, with its final boundaries encompassing 241,903 acres (85 Stat. 639, 16 U.S.C. §273 et seq.). The park is managed by the National Park Service.

This environmental assessment (EA) will examine the environmental impacts associated with the proposal to repair and resurface the entire 8-mile length of the asphalt-paved and chip-sealed Scenic Drive roadway between SR-24 and the parking lot for Capitol Gorge. This EA was 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*). Figure 1 depicts the location of the Scenic Drive.

Background

The Scenic Drive is a hard-surfaced road that extends between Utah State Road 24 (Utah SR-24) and Capitol Gorge. The narrow and twisting road, a popular driving route used by park visitors, has numerous concrete-paved low water crossings that are sometimes impassable during seasonal flash flooding. It connects with spur roads accessing popular hiking and scenic locales, and it is the primary scenic tour road within the park. Much of the Scenic Drive was chip-sealed in 1988. The improvements made the road more attractive to visitors in passenger vehicles and motor homes, and traffic and use of trails in the area increased. The use of large recreational vehicles on the narrow, winding, and shoulderless road has created safety concerns. Cyclists and pedestrians, in combination with the large vehicles and other traffic, add to those concerns.

Purpose and Need

The purpose of the proposal to repair and resurface the Scenic Drive between SR-24 and the parking lot for Capitol Gorge is to maintain a safe and reliable roadway, while providing the National Park Service (NPS) the opportunity to meet and uphold its mandate to administer and protect the park for the enjoyment of natural, cultural, and scientific resources in a manner that leaves these resources unimpaired.

The Scenic Drive is in need of repair. The roadway surface has deteriorated, with signs of shoving and rutting, as well as deteriorated pavement edges, potholes, and bleeding and cracking failures. Such damage occurs within the travel lanes in locations where the subgrade becomes saturated because of poor drainage, and along the edges of the pavement where there is little shoulder support. The roadway is threatened in some locations by eroding ditches and drainage channels. Plugged or undersized culverts in some locations force seasonal runoff to flow across the road, eroding the pavement and the roadway bench. Numerous stone headwalls have become weakened and are threatened with failure, because of erosion and deterioration of the mortar.

Figure 1 -- Project Location.
DSC/Sept. 09/158/100328

Poorly defined drainage ditches also cause roadway overtopping and roadway shoulder erosion in some locations. Some concrete paved low water crossings have erosion damage. Figures 2 through 11 illustrate some of the repair needs.

The objectives of the proposed project are to:

Improve the Efficiency of Park Operations

- Repair damaged and deteriorating road pavement, drainage, stone masonry retaining walls, headwalls, and other structural features
- Reduce maintenance requirements and costs due to deficiencies in the condition of the road

Provide for Visitor Enjoyment and Safety

- Improve the roadway condition to more safely accommodate traffic
- Reduce the incidence and risk of traffic accidents
- Efficiently implement rehabilitation work while minimizing visitor impact

Protect Park Resources

- Maintain the scenic quality of the road
- Protect park natural and cultural resources and values

Relationship to Other Plans and Policies

This proposal is consistent with the objectives of the *Capitol Reef National Park Final Environmental Impact Statement, General Management Plan, and Development Concept Plan* (1998), which outlines the management, use, and development of the Park through the year 2013. The proposal is consistent with the *2006 National Park Service Management Policies* goals and objectives for natural resource and cultural resource management, use of the park, transportation systems, park facilities, and visitor facilities.

It is consistent with the objectives of the 1984 NPS *Park Roads Standards*, which states that roads in national parks serve a distinctly different purpose from most other road and highway systems. Park roads are to be designed with extreme care and sensitivity to provide access for the protection, use, and enjoyment of the resources that constitute the national park system.

It is consistent with Director's Order – 87A, which states that park roads are constructed only where necessary to provide access for the protection, use, and enjoyment of the natural, historical, cultural, and recreational resources that constitute our national park system. Park roads should enhance the visitor experience while providing safe and efficient accommodation of park visitors and to serve essential management action needs. Park roads are designed with extreme care and sensitivity with respect to the terrain and environment through which they pass—they are laid lightly onto the land.

Appropriate Use

Section 1.5 of *2006 National Park Service Management Policies*, "Appropriate Use of the Parks," directs that the National Park Service must ensure that park uses that are allowed would not cause impairment of, or unacceptable impacts on, park resources and values. A form of park use may be allowed within a park only after a determination has been made in the professional judgment of the park manager that it will not result in unacceptable impacts.

Section 8.1.2 of *2006 National Park Service Management Policies*, Process for Determining Appropriate Uses, provides evaluation factors for determining appropriate uses. All proposals for park uses are evaluated for:

- consistency with applicable laws, executive orders, regulations, and policies;
- consistency with existing plans for public use and resource management;
- actual and potential effects on park resources and values;
- total costs to the Service; and
- whether the public interest will be served.

Park managers must continually monitor all park uses to prevent unanticipated and unacceptable impacts. If unanticipated and unacceptable impacts emerge, the park manager must engage in a thoughtful, deliberate process to further manage or constrain the use, or discontinue it.

From Section 8.2 of *2006 National Park Service Management Policies*: "To provide for enjoyment of the parks, the National Park Service will encourage visitor use activities that

- are appropriate to the purpose for which the park was established, and
- are inspirational, educational, or healthful, and otherwise appropriate to the park environment; and
- will foster an understanding of and appreciation for park resources and values, or will promote enjoyment through a direct association with, interaction with, or relation to park resources; and
- can be sustained without causing unacceptable impacts to park resources and values.

The Scenic Drive, in its present configuration, has been in continuous use since it was constructed. The proposed rehabilitation of the Scenic Drive is consistent with the park's general management plan and other related park plans. The NPS finds that maintaining automobile access along the Scenic Drive and to trailheads and other points of interest along the road is an acceptable use at Capitol Reef National Park.

Scoping

Capitol Reef National Park conducted internal scoping with appropriate National Park Service staff, as described in more detail in the *Consultation and Coordination* chapter. The park also conducted external scoping with the State of Utah Historic Preservation Office and interested/affected groups. More information regarding external scoping can be found in *Comments and Coordination*.

Figure 2 - Area of pavement distress near Gifford Homestead

Figure 3 - Pavement near Gifford Homestead has failed from saturated subgrade

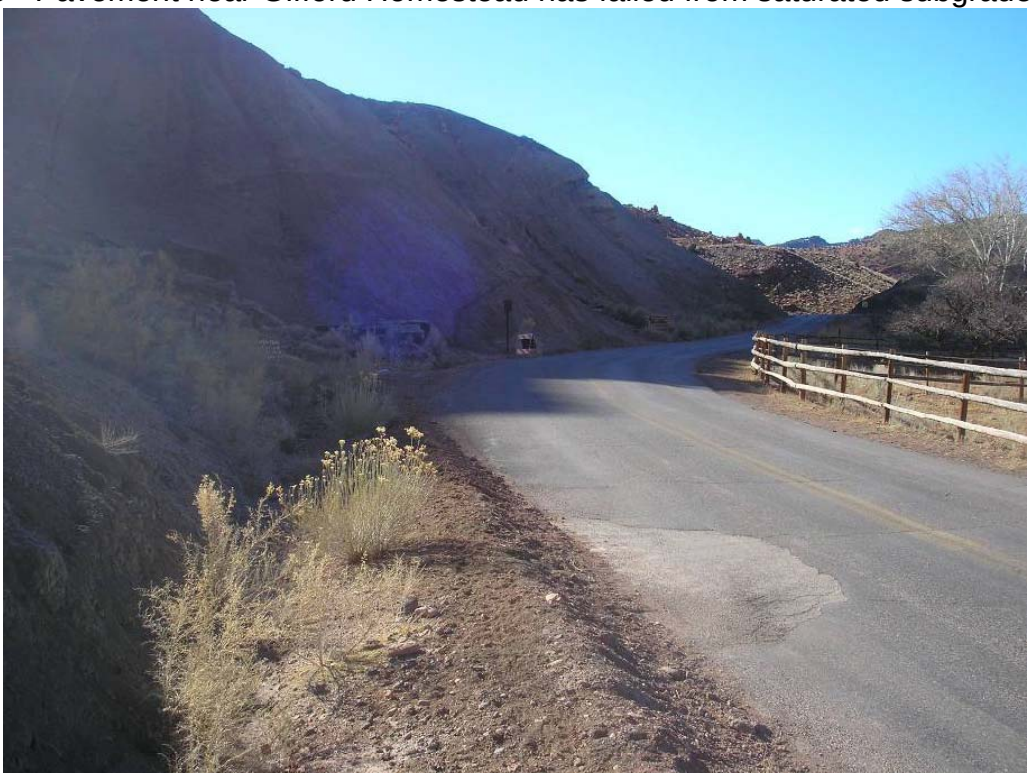

Figure 4 – Runoff escapes ditch above Gifford Homestead Barn

Figure 5- Subgrade settlement in the vicinity of the Gifford Homestead Barn

Figure 6 - Typical subgrade failure within the chip-seal portion of the road

Figure 7 - Bulging retaining wall at culvert crossing

Figure 8 – Drainage ditch adjacent to the roadway

Figure 9 - Vertical ditch bank adjacent to the roadway

Figure 10 - Low water crossing with scouring on downstream side

Figure 11 - Low water crossing with exposed cutoff wall on downstream side

Impact Topics Retained for Further Analysis

In this section and the following section on Impact Topics Dismissed from Further Analysis, the NPS analyzes all potential impacts by considering the direct, indirect, and cumulative effects of the proposed action on the environment, along with connected and cumulative actions. Impacts are described in terms of context and duration. The context or extent of the impact is described as localized or widespread. The duration of impacts is described as short-term or long-term. The intensity and type of impact is described as negligible, minor, moderate, or major, and as beneficial or adverse. The NPS equates "major" effects as "significant" effects. The identification of "major" effects would trigger the need for an EIS. Where the intensity of an impact could be described quantitatively, the numerical data are presented; however, most impact analyses are qualitative and use best professional judgment in making the assessment.

If there is no effect or no measurable effect, there would either be no contribution to cumulative effects, or the contribution would be low. For each issue or topic presented below, if the resource is found in the analysis area or the issue is applicable to the proposal, then a limited analysis of direct and indirect, and cumulative effects is presented. There is no impairment analysis included in the limited evaluations for the dismissed topics because the NPS's threshold for considering whether there could be an impairment is based on "major" effects.

Impact topics for this project have been identified on the basis of federal laws, regulations, and orders; *2006 National Park Service Management Policies*; and National Park Service knowledge of resources at Capitol Reef National Park. Impact topics that are carried forward for further analysis in this EA are listed below along with the reasons why the impact topic is further analyzed.

Cultural Landscapes

According to the 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. The character of a cultural landscape is defined by both physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values."

The NPS has identified the Scenic Drive/Capitol Gorge landscape as potentially eligible for listing in the National Register of Historic Places. Constructed in 1883, the road now known as the Scenic Drive was little more than a wagon trail that connected the farming community of Fruita to Torrey, Notom and other communities nearby. Prior to the rerouting and paving of a section of Utah Highway 24 through Fremont Canyon in 1962, the old route south of Fruita through Capitol Gorge (now part of the Scenic Drive) was the main road through the Waterpocket Fold, a route formerly used by Native Americans for centuries. Fruita, a Mormon farming community, was founded in 1880. The northern 1.7-mile section of the Scenic Drive that passes through the community is considered a contributing feature of the Fruita Rural Historic District, which was listed in the National Register of Historic Places in 1997.

Properties more than fifty years old may be eligible for the National Register if they meet the criteria for listing and for contributions at the national, state, or local level. In order for a property to be listed in the National Register, it also must possess historic integrity of those features necessary to convey its significance, i.e., location, design, setting, workmanship, materials, feeling, and association. The Fruita landscape was determined eligible because its original land use patterns, particularly its historic fruit orchards, remain relatively intact. The Fruita Historic

District landscape also contains 14 historic buildings, including a schoolhouse, two homes, outbuildings and cellars, and a distilling site.

In the early 1940s, the Civilian Conservation Corps (CCC) completed improvements to the Scenic Drive, including construction of culverts and other drainage features. However, historic records do not indicate how many of these features pre-dated the CCC era. It is unclear which drainage features date to the CCC era, and which were constructed earlier and simply repaired or rebuilt between 1938 and 1942. The Scenic Drive currently has 64 culverts and 22 low water crossings. An inventory of culverts completed by park staff in 2009 identified six that are known or are likely to have been constructed by the CCC, in addition to another 31 possible CCC-era drainage features. Alterations were subsequently made to the road during the later Mission 66 period of NPS development (1945-1967), but the overall historic alignment and drainage structures of the road remain relatively intact. The proposed Scenic Drive rehabilitation project described in this EA would have the potential to impact the historic features of the Scenic Drive and Fruita landscapes. For these reasons, the topic of cultural landscapes has been carried forward for further analysis in this document.

Soundscape

Soundscape refers to the total ambient acoustic environment associated with a given environment (sonic environment) in an area such as a national park. It is also refers to the total ambient sound level for the park. In a national park setting, this soundscape is usually composed of both natural ambient sounds and a variety of human-made sounds.

In accordance with *2006 National Park Service Management Policies* 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 a park unit, together with the physical capacity for transmitting natural sounds.

With either alternative discussed in this EA, human-caused noise, caused by visitors and their vehicles as well as by park maintenance activities, would intrude upon the natural soundscape. The preferred alternative would result in more construction noise than the no action alternative. The majority of construction noise would occur from April to October. Effects to the natural soundscape during daylight hours would be clearly detectable, localized, and periodic. Therefore, soundscape was addressed as an impact topic in this EA.

Geology and Soils

According to the *2006 National Park Service Management Policies*, 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 repairs and rehabilitation of the Scenic Drive would be mostly confined to the existing road bench, but some excavation would be needed to widen the roadway in a few locations to achieve a consistent width, and to widen some sharp "S-shaped" curves to improve safety. The proposed project would also require excavation in selected areas under the road surface to reconstruct the subgrade, displacing and disturbing soils. Soils would also be disturbed and compacted in one of the staging areas.

Because the proposed actions would impact geology and soils this topic has been carried forward for further analysis.

Health and Safety

The NPS is committed to providing appropriate, high-quality opportunities for visitors and employees to enjoy the parks in a safe and healthful environment. The goals of the park include ensuring that basic visitor needs are met in keeping with the park purposes, and that visitor and employee safety and health are protected. To the extent feasible, facilities, programs, and services in the park are accessible to and usable by all people, including those with disabilities (NPS 2004b).

One of the primary purposes of this proposed project is to improve safety. The NPS also wants to keep the roadway and associated park resources open during construction and, as a result, protective measures need to be studied and implemented to ensure safety to motorists and visitors. Because the proposed project would affect health and safety of park staff and visitors, this topic has been carried forward for further analysis.

Visitor Use and Experience

According to *2006 National Park Service Management Policies*, the enjoyment of park resources and values by people 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 *2006 National Park Service Management Policies* also state that scenic views and visual resources are considered highly valued associated characteristics that the National Park Service should strive to protect (NPS 2006).

Taking a self-guided tour of the Scenic Drive is one of the principal activities available to park visitors. The average number of visitors who travel the Scenic Drive annually is around 70,000. The average visitor length of stay for people who travel to the visitor center and the Scenic Drive is 3 hours. Those who opt for the self-guided tour along the Scenic Drive are able to travel through the historic settlement of Fruita and stop at eleven locations along the western face of the Waterpocket Fold that offer spectacular scenic views of notable geologic formations. The Scenic Drive also offers access to exploration of Grand Wash and Capitol Gorge. Because the proposed project would affect visitor use and experience of these park resources, this topic has been carried forward for further analysis.

Park Operations and Management

Park operations and management would be affected by implementation of either the no-action alternative or the action alternative (alternative B). Either alternative would require repair and maintenance activities on the Scenic Drive. Construction activities on the Scenic Drive would require temporary changes in park operations to address traffic control and keep the public informed about road conditions. Therefore, the topic of park operations has been carried forward for further analysis in this document.

Impact Topics Dismissed From Further Analysis

In this section of the EA, NPS provides a limited evaluation and explanation as to why some impact topics are not evaluated in more detail. Impact topics are dismissed from further evaluation in this EA if:

- they do not exist in the analysis area, or
- they would not be affected by the proposal, or the likelihood of impacts are not reasonably expected, or
- through the application of mitigation measures, the effects from the proposal would be minor or less, and there is little controversy on the subject or reasons to otherwise include the topic.

Vegetation and Invasive Exotic Plants

According to the *2006 National Park Service Management Policies*, the National Park Service strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants (NPS 2006).

Construction activities on the roadway shoulders and immediately adjacent areas would displace native vegetation and would provide conditions favorable for the establishment of invasive exotic plants, but the impacts would be mitigated by control measures, such as a revegetation plan, restricting construction activities to specified areas, and other mitigation measures identified in this EA. The impacts would be negligible to minor, because the areas where conditions would be favorable for invasion by exotic plants would be relatively small, including the road shoulders and areas immediately adjacent to the roadway. The impacts would be short-term because those areas would be revegetated with native species and the spread of invasive exotic plants would be controlled.

Such negligible or minor impacts would not result in any unacceptable impacts; the proposed actions are consistent with §1.4.7.1 of *2006 National Park Service Management Policies*. Because these effects are minor or less in degree and would not result in any unacceptable impacts, this topic is dismissed from further analysis in this document.

Wildlife

The NPS Organic Act, which directs parks to conserve wildlife unimpaired for future generations, is interpreted by the NPS to mean that native animal life should be protected and perpetuated as part of the park's natural ecosystem. Natural processes are relied on to control populations of native species to the greatest extent possible; otherwise they are protected from harm by human activities. Management goals for wildlife include maintaining components and processes of naturally evolving park ecosystems, including natural abundance, diversity, and the ecological integrity of plants and animals.

Wildlife commonly found in the proposed project area include mule deer, coyotes, bighorn sheep, marmots, fox, woodrats, ringtails, chipmunks, ground squirrels, jackrabbits, bats, kangaroo rats, mice, and many species of birds. There are also numerous insect species, amphibians, and reptiles.

Neither of the alternatives would impact the overall abundance, diversity, or ecological integrity of animals, nor inhibit the processes of park ecosystems. Wildlife habitat would be adversely affected adjacent to the road along its length, e.g. through the removal of vegetation and soils. Those impacts would be measurable, but they would not affect native species' populations or the natural processes sustaining them, beyond their natural range of variability. Mitigation measures, such as replanting disturbed areas with native vegetation, would be in accordance with conventional best management practices, and would have a high likelihood of success. The long-term adverse impact to wildlife would be minor.

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.

Such negligible to minor impacts would not result in any unacceptable impacts; the proposed actions are consistent with §1.4.7.1 of *2006 National Park Service Management Policies*. Because these effects are minor or less in degree and would not result in any unacceptable impacts, this topic is dismissed from further analysis in this document.

Special Status Species

For federally sponsored projects, the Endangered Species Act (Act) of 1973 (as amended) requires examination of potential impacts to Threatened, Endangered, and Candidate Species. Section 7 of the Act requires federal agencies to ensure that any activities they authorize, fund, or implement, do not jeopardize the continued existence of any wildlife species federally listed as threatened or endangered and do not destroy or adversely modify designated critical habitat. NPS policy requires examination of potential impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species with potential to occur within the project area. For simplicity, the federal and state-listed species identified in this EA are collectively described as Special Status Species.

A population of a National Park Service sensitive plant, the rush lomatium, has been identified in the vicinity of the Scenic Drive. Park staff have determined that those plants will not be affected by the proposed repair and rehabilitation of the Scenic Drive.

Park staff reviewed the Utah Conservation Data Center website and generated a list of Species of Special Concern for the project area. The database identified five state-listed animal species that could potentially occur within the project area (Utah Conservation Data Center 10/30/2009); Table 1.

The NPS has no record of federally listed species occurring within the project area, and recent field examinations by park staff confirm that. The southwestern willow flycatcher has the potential to occur within the project area, but there is no suitable nesting habitat for the species in or near the project area.

Table 1 – Special Status Species

Common Name	Scientific Name	Federal Status	State Status
Barneby reed-mustard	*Schoencrambe barnebyi*	Endangered	NA
Despain's cactus	*Pediocactus despainii*	Endangered	NA
Jones cycladenia	*Cycladenia humilis var. jonesii*	Threatened	NA
Last chance townsendia	*Townsendia aprica*	Threatened	NA
Maguire's daisy	*Erigeron maguirei*	Threatened	NA

Table 1 – Special Status Species

Common Name	Scientific Name	Federal Status	State Status
Western nodding ladies'-tresses	*Spiranthes diluvialis*	Threatened	NA
Winkler cactus	*Pediocactus winkleri*	Threatened	NA
Wright fishhook cactus	*Sclerocactus wrightiae*	Endangered	NA
Rush lomatium	*Lomatium junceum*	National Park Service Sensitive Species due to limited distribution	NA
Mexican Spotted Owl	*Strix occidentalis lucida*	Threatened	NA
Yellow-billed cuckoo	*Coccyzus americanus*	Candidate	NA
Southwestern Willow Flycatcher	*Empidonax traillii extimus*	Endangered	NA
Allen's Big-eared Bat	*Idionycteris phyllotis*	NA	State Sensitive Species due to limited distribution
Spotted bat	*Euderma maculatum*	NA	State Sensitive Species due to limited distribution
Fringed myotis	*Myotis thysanodes*	NA	State Sensitive Species due to limited distribution
Big free-tailed bat	*Nyctinomops macrotis*	NA	State Sensitive Species due to declining populations and limited distribution
Townsend's Big-eared Bat	*Corynorhinus townsendii*	NA	State Sensitive Species due to declining populations and limited distribution

NA – Not applicable; indicates that a species was not included on a federal/state list during consultation during this project.

A portion of the proposed project area lies within designated critical habitat for the Mexican spotted owl, and is near a protected activity center (PAC). The PAC has historically been occupied by young and adult owls. However, a nest site has never been found. The most recent detection of a Mexican spotted owl in the area was in1996, when a single male was observed. Subsequent surveys were conducted in 1997, 2001, 2008, and 2009; no owls have been detected. Based upon those survey data, construction activities associated with the proposed project would not be expected to affect nesting or roosting Mexican spotted owls. Construction activities are not expected to adversely affect any of the primary constituent elements of the critical habitat or to adversely modify critical habitat. In a letter dated December 3, 2009 the NPS provided a list of federally listed and candidate species that could potentially occur in the project area to the U.S. Fish and Wildlife Service (USFWS), and sought concurrence that the proposed action would not adversely affect listed or candidate species or proposed or designated critical habitat. The USFWS concurred on December 15, 2009 that the proposed

action was "not likely to adversely affect" any listed species, including Mexican spotted owls. The NPS consultation and the USFWS concurrence are presented in Appendix A of this EA. No adverse impacts to Threatened and Endangered Species would be anticipated with implementation of the proposed action, and the proposed action would not result in any unacceptable impacts. The proposed actions are consistent with §1.4.7.1 of *2006 National Park Service Management Policies*. Because there would be no adverse impacts or any unacceptable impacts, this topic is 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 Scenic Drive crosses the Fremont River at one location in the Fruita Historic District, but the rest of the proposed project area does not contain surface waters. It is mostly dry, except for periodic flooding during sudden storm events.

A National Pollution Discharge Elimination System (NPDES) permit would be prepared by CFLHD and submitted to the Utah Division of Water Quality prior to commencing any near-water activities. As authorized by the Clean Water Act, the NPDES permit program controls water pollution by regulating conveyances such as pipes or man-made ditches that discharge pollutants into waters of the United States.

A hazardous spill plan would be required from the contractor prior to the start of construction stating what actions would be taken in the case of a spill and preventive measures to be implemented. Hazardous spill clean-up materials would be on-site at all times.

Because of the mitigation benefits of the NPDES permit and a hazardous spill plan, and because most of the Scenic Drive is well removed from surface waters, the impacts to water quality and drinking water would be negligible. Water quantity would not be affected. Because the effects on water resources would be no greater than negligible and would not result in any unacceptable impacts, the topic is dismissed from further analysis in this document.

Wetlands

For the purpose of implementing Executive Order 11990 *Protection of Wetlands*, any area that is classified as a wetland according to the U.S. Fish and Wildlife Service's "*Classification of Wetlands and Deepwater Habitats of the United States*" *(Cowardin et al. 1979*) is subject to *Director's Order #77-1: Wetland Protection* (D.O. 77-1) and its implementation procedures as presented in *Procedural Manual #77-1: Wetland Protection* (2008). The Cowardin classification system forms the basis for the U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI) mapping program. Under the Cowardin definition, a wetland must have one or more of the following three attributes:

1. at least periodically, the land supports predominantly hydrophytes (wetland vegetation);

2. the substrate is predominantly undrained hydric soil; or

3. the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

Most of the dry washes within the project area meet the third attribute listed above, and therefore are considered wetlands.

Channels or similar features that are used for the sole purpose of active stormwater or wastewater are not considered wetlands for purposes of Procedural Manual #77-1. Therefore, drainage ditches alongside the Scenic Drive road bed are not considered wetlands.

Executive Order 11990 requires federal agencies to avoid, where possible, adversely impacting wetlands. Further, §404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge of dredged or fill material or excavation within waters of the United States. National Park Service policies for wetlands, as stated in *2006 National Park Service Management Policies* and D.O. 77-1 strive to prevent the loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. In accordance with D.O. 77-1, proposed actions that have the potential to adversely impact wetlands must be addressed in a statement of findings for wetlands.

Some actions may be excepted from the statement of findings and compensation requirements (D.O. 77-1, 4.2.1). They include maintenance, repair, or renovation (but not full reconstruction or expansion) of currently serviceable facilities or structures:

- that were under construction or were completed prior to May 28, 1980, but whose retention has been reviewed and justified, or

- that were completed after publication of the May 28, 1980 guidelines, and for which compliance with them is on record.

This exception allows for minor deviations (total of 0.1 acre or less throughout the entire project) in the structure's configuration or fill footprint in wetlands due to subsequent changes in construction codes, methods, or safety standards (e.g., handicap accessibility), but does not apply to other types of reconstruction/expansion (e.g., road widening to increase capacity, road re-routing) or conversion to other uses that would have additional adverse impacts on wetlands.

In order to eliminate future erosion, which could create scour holes, it is anticipated that outlet protection would be constructed below drain outfalls in some naturally-occurring dry washes. Some of the washes meet the Cowardin definition of riverine intermittent wetlands. Such dry washes are common throughout the park and the geographic area. The outlet protection features would vary in size, depending on conditions in the washes. The outlet protection features might incorporate stone riprap or concrete in colors matching the surrounding soil.

The FHWA estimated in the October 5, 2009 *Preliminary Design Study Report – Draft*, *Appendix C*, that less than 0.1 acre would be impacted by construction of outlet protection in the washes. Because the repair and rehabilitation of the Scenic drive would adversely impact less than 0.1 acre of wetlands, and because the impacts of the proposed work meet the conditions in Appendix 2 of D.O. 77-1, that rehabilitation work would be an excepted action. Therefore, it will not be necessary to prepare a wetland statement of findings as part of this environmental assessment, and compensation for the wetland impacts will not be required.

The adverse effects on wetlands would be minor or less. They would be detectable, but relatively small in terms of area and the nature of the change. The action would affect a limited number of individuals of plant or wildlife species within the wetland, but all species would remain viable. Because the effects would be no greater than minor and would not result in any unacceptable impacts, this topic has been dismissed from further analysis in this document.

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 *2006 National Park Service Management Policies* 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.

A floodplain statement of findings was completed for the park GMP EIS in 1998 (NPS 1998, Appendix F), based on mapping of the Fruita area in 1995. The northern portion of the Scenic Drive from the picnic area to the Gifford barn is within the 100-year floodplain. Areas to the south have not been mapped. However, the Scenic Drive is considered an excepted action under the NPS final procedures for implementing Executive Order 11988, because the section of the Scenic Drive that passes through the Fruita area is considered a contributing feature of the Fruita Rural Historic District, which was listed in the National Register of Historic Places in 1997. The NPS also considers the Scenic Drive/Capitol Gorge as a separate component landscape within the park that is potentially eligible for listing in the National Register of Historic Places. The *Floodplain Management* manual does not apply to historic structures whose location is integral to their significance.

Pavement pulverization and road repaving within the existing roadway footprint, and repairs to culverts and low water crossings would be the only work on the floodplain. There would be no change in the ability of a floodplain to convey floodwaters, or its values and functions. The proposed project would not contribute to flooding. The proposed project would not result in significant or unacceptable impacts to floodplain values, and the proposed actions are consistent with §1.4.7.1 of *2006 National Park Service Management Policies*. Therefore, this topic is dismissed from further analysis in this document.

Historic structures

There are 14 historic structures within the park. Only one of these, the Gifford barn, is situated in close proximity to the Scenic Drive within the Fruita Rural Historic District. The structure is separated from the road by a non-historic post-and-rail fence (see Figure 5). The barn is associated with the Gifford farm complex, which was constructed circa 1900. It is a rectangular, post-and-beam building with vertical plank siding.

The proposed road work may include resetting two fence posts in proximity to the Gifford Barn to allow for a clear zone at the road shoulder. However, there would be negligible impacts to the setting of this historic structure. Because these effects are less than minor in degree and would not result in unacceptable impacts, this topic is dismissed from further analysis in this document.

Archeological Resources

In August 2009, a Phase I archeological survey of the Scenic Drive was completed (Bonnifield 2009). A total of eight sites were recorded in proximity to the Scenic Drive; two are considered eligible for listing in the National Register of Historic Places. However, the proposed road construction activities are not expected to impact archeological resources because construction activities would be confined to the road bench and designated staging areas. In addition, all construction activities conducted in proximity to the two National Register-eligible sites would be monitored by a professional archeologist.

The survey report was included in a submittal package to the Utah SHPO on January 19, 2010, as required under the consultation provisions of Section 106 of the NHPA of 1966, as amended. The SHPO consultation letter, with SHPO concurrence, is included in Appendix B of this EA.

Because these effects are less than minor in degree and would not result in unacceptable impacts, this topic is dismissed from further analysis in this document. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3002) of 1990 would be followed.

Ethnographic Resources

National Park Service's Director's Order-28 *Cultural Resource Management* defines ethnographic resources 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. Native American tribes traditionally associated with the park will receive copies of this document for their review and comment. If subsequent issues or concerns are identified, appropriate consultations will be undertaken. Because these effects are less than minor in degree and would not result in any unacceptable impacts, this topic is dismissed from further analysis in this document.

Museum Collections

Museum collections include historic artifacts, natural specimens, and archival and manuscript material. They may be threatened by fire, vandalism, natural disasters, and careless acts. 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. The proposed activities would not require additional curatorial services or increase the number of museum objects at the park; therefore, museum objects were dismissed from further analysis in this document.

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. Capitol Reef National Park is designated as a Class I air quality area under the Clean Air Act. A Class I area is subject to the most stringent regulations of any designation, and must not exceed the maximum allowable increment over baseline concentrations of sulfur dioxide and particulate matter as specified in Section 163 of the 1963 Clean Air Act. Further, the 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). The air quality at Capitol Reef is generally very good; occasionally, particulate levels in the area are high due to high winds, as is typical in a desert environment.

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.

During construction the contractor would be required to implement dust control mitigation procedures to reduce the particulate matter. Additional mitigation measures that would be implemented include: allowing construction vehicles to idle up to but not exceeding 5 minutes when parked. Any exhaust, emissions, and fugitive dust generated from construction activities would be temporary and localized and would likely dissipate rapidly because air stagnation at Capitol Reef National Park 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 I air quality designation for Capitol Reef National Park would not be affected by the proposal. Because the Class I air quality would not be affected and the proposed actions are consistent with §1.4.7.1 of *2006 National Park Service Management Policies*, and because there would negligible effects on air quality, this topic is dismissed from further analysis in this document.

Lightscape Management

In accordance with *2006 National Park Service Management Policies*, the National Park Service strives to preserve natural ambient lightscapes, which are natural resources and values that exist in the absence of human caused light (NPS 2006). Capitol Reef National Park strives to limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements. The park 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 current impact of light pollution along the Scenic Drive is localized and negligible, lasting as long as it takes for a vehicle to pass. No additional artificial lighting or any actions that would increase nighttime visitors are proposed under the preferred alternative. Further, such impacts are negligible in degree. Because the effects are negligible and would not result in any unacceptable impacts, this topic is dismissed from further analysis in this document.

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 economy of the gateway community of Torrey and Wayne 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 is dismissed.

Prime and Unique Farmlands

In August 1980, the Council on Environmental Quality (CEQ) directed that federal agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) as prime or unique. Prime or unique farmland 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. There are 68 acres of prime and unique agricultural lands in the Fruita Valley in the park. These lands are composed of orchards, pastures, and open fields, which are part of a National Register-listed cultural landscape. As such, these lands are protected under the National Historic Preservation Act, which limits development and use of the district. Neither alternative will affect the manner in which these lands are managed. Specifically, the portion of the project that passes through the Fruita Rural Historic District orchards will not affect fruit trees

or orchard operation. Because there would be no effects on prime and unique farmlands, this topic is dismissed from further analysis in this document.

Indian Trust Resources

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 Native American and Alaska Native tribes.

There are no Indian trust resources at Capitol Reef National Park. The lands comprising the park are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Because there are no Indian trust resources, this topic is dismissed from further analysis in this document.

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 administration facility would be available for use by all park 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. Because there would be no disproportionate effects, this topic is dismissed from further analysis in this document.

Climate Change and Sustainability

Although climatologists are unsure about the long-term results of global climate change, it is clear that the planet is experiencing a warming trend that affects ocean currents, sea levels, polar sea ice, and global weather patterns. Although these changes will likely affect winter precipitation patterns and amounts in the parks, it would be speculative to predict localized changes in temperature, precipitation, or other weather changes, in part because there are many variables that are not fully understood and there may be variables not currently defined. Therefore, the analyses in this document are based on past and current weather patterns, and the effects of future climate changes are not discussed further.

ALTERNATIVES

During October 2009, an interdisciplinary team of National Park Service and Federal Highway Administration employees met for the purpose of discussing the scope of the proposed project and 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. An action alternative and the no-action alternative were originally identified for this project. A number of options that were considered for the action alternative 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. A summary table comparing alternative components is presented at the end of this chapter.

Alternatives Carried Forward

Alternative A – No-Action

The no-action alternative consists of the park's ongoing routine of maintenance and repairs. It does not imply or direct discontinuing day-to-day maintenance and repairs. The park would continue to clear culverts, stabilize slopes, patch potholes, and complete other isolated repairs as the need arises. The road would continue to deteriorate, and repair costs would continue to escalate. Temporary road closures for repairs would become more frequent. Should the no-action alternative be selected, the NPS would respond to future needs and conditions without major actions or changes in the present course.

Alternative B – Rehabilitate and Resurface the Scenic Drive (Preferred Alternative)

The Scenic Drive would be rehabilitated and repaved throughout its 8-mile length between SR-24 and the Capitol Gorge parking area. The existing roadway width would be maintained, but the pavement would be widened at "S-shaped" curves to help prevent vehicles from off-tracking onto the shoulders. The roadway would also be widened at its southern end to provide a consistent width. The subgrade throughout the length of the Scenic Drive would be excavated as needed in spot locations, and replaced with appropriate fill material. From milepost (MP) 0.00, the intersection with SR-24, to the park fee station at MP 1.70, the existing pavement on the Scenic Drive would be pulverized and the roadway would be paved with asphalt concrete. Between the fee station and the Capitol Gorge parking area the existing chip-seal pavement would be pulverized, and the roadway would be paved with a double chip-seal overlay. Painted centerline striping would be applied from the picnic area and campground in the Fruita Historic District to the intersection with SR-24. Centerline striping may also be applied at some of the sharpest curves, to enhance safety. Rumble strips would be installed at the beginning of the 15-mile-per-hour speed zone. Minor improvements would be made to the Fruita Campground entrance to provide additional width for turning movements into and out of the campground. Paved asphalt aprons would be developed and extended into the entrances of Grand Wash and the Pleasant Creek Road.

At locations where drainage ditches are close to and parallel with the road bed, existing stone retaining walls would be extended or new walls would be constructed to prevent future erosion. The roadside ditch along the east side of the Scenic Drive across from the historic Gifford Barn (MP 1.25) would be improved to better accommodate storm flows. Options being considered include reconstructing and paving the ditch with a consistent cross section and slope to more easily accommodate mechanical maintenance, or retaining the current native soil ditch while implementing a schedule of more frequent maintenance. The native soil ditch would be

reshaped and hardened with compaction as needed. More analysis will be conducted to determine the proper solution. Plugged culverts would be cleaned.

Existing concrete low water crossings would be repaired or replaced in kind as is needed. In some drainages where existing culverts have become plugged with soil and rock, the culverts would be replaced with low water crossings. Some such culverts would remain in place and be permanently plugged, to ensure that they do not deteriorate and collapse beneath the road bed.

Stone headwalls that have become weakened would be reconditioned, with grout, resin, or new mortar applied as needed. Some stone headwalls would be dismantled and reconstructed, using the original stone as much as is feasible. Any replacement stone would be native stone of a similar appearance. All masonry stone rehabilitation would be in accordance with the *Secretary of the Interior's Standards for the Preservation of Historic Properties*. Stone riprap would be placed at culvert outlets as needed.

The roadway pavement would be widened on curves between approximately mileposts 4.3 to 4.5, although the widened pavement would still be on the existing road bench. In other isolated locations throughout the length of the Scenic Drive the roadway would be widened by 1 to 2 feet, to provide a consistent road width as much as is feasible. Warning signs would be installed in locations where the roadway narrows, but cannot be widened because of the proximity of important park resources.

Near the Capitol Gorge parking area, from approximately milepost 7.4 to 7.9, the adjacent hillside would be cut back to create slopes with gradients of approximately two-to-one or three-to-one (2:1 or 3:1), depending on conditions at the sites. Drainage ditches would be cut at the toe of the slope alongside the roadway. The purpose of those excavations would be to widen the road to a consistent width through that stretch of narrow roadway. It is estimated that approximately 2,000 to 2,500 cubic yards of shale, shale residuum soils, and sandstone would be excavated.

The parking area at the entrance to Capitol Gorge would be paved with asphalt and the existing sandstone curbing would be reset. Some new matching curbing would be installed to formalize the parking area. A raised median would be added, and access to the existing restroom would be improved.

Approximately nine minor parking areas and pullouts along the length of the Scenic Drive would be reconstructed with formalized layouts. Others would be abandoned and rehabilitated.

Staging Areas

Construction staging and stockpile areas for repairing and rehabilitating the Scenic Drive would be located in the Cal Pendleton Field south of the Fruita Campground. There is also potential for use of the park's "boneyard" for storage of materials and equipment. The access for Cal Pendleton Field and the boneyard is by a gravel road immediately south of the Fee Station. Cal Pendleton Field is adjacent to the Scenic Drive while the boneyard is approximately one-half mile west. Materials for park use are commonly stored at the boneyard now and it has been disturbed by park vehicles. It has been used as a construction staging area in the past. Cal Pendleton Field is a pasture area but is not currently being used in any capacity by the park.

The parking area at the entrance to Capitol Gorge would also be utilized as a staging area. That would provide a staging area at each end of the Scenic Drive.

General Construction Schedule and Costs

It is anticipated that the repair and rehabilitation of the Scenic Drive would be accomplished in 2011. The total cost of the repair and rehabilitation of the Scenic Drive would be approximately $4 million.

Mitigation Measures

The following mitigation measures were 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 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.
- Fugitive dust generated by construction would be controlled by spraying water on the construction site, if necessary.
- Contractors would be required to properly maintain construction equipment (i.e., mufflers and brakes) to minimize noise. 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.
- All tools, equipment, barricades, signs, surplus materials, and rubbish would be removed upon project completion.
- Revegetation efforts would strive to reconstruct the natural spacing, abundance, and diversity of native plant species using native species. A revegetation plan approved by NPS would be developed for disturbances in the project area.
- All disturbed areas would be restored as much as is feasible to pre-construction conditions shortly after construction activities were completed. Weed control methods would be implemented to minimize the introduction of noxious weeds. Remedial actions would include installation of erosion-control structures, reseeding, topsoil placement, and/or replanting the area, and controlling non-native plant species with herbicide.
- Because disturbed soils would be susceptible to erosion, until the soil was stable and vegetation was established, standard erosion control measures would be used to minimize any potential soil erosion and prevent sediment from reaching streams.
- Treatment of non-native vegetation would be completed in accordance with *NPS–13, Integrated Pest Management Guidelines*. Monitoring and follow-up treatment of exotic vegetation would occur after project activities are completed.
- To prevent the introduction of, and minimize the spread of, nonnative vegetation and noxious weeds, the following measures would be implemented during construction:
    - Soil disturbance would be minimized.
    - To avoid introduction of non-native/noxious plant species, no hay bales would be used for temporary erosion control or during revegetation.
    - All construction equipment would be pressure washed and/or steam cleaned before entering the park to ensure that all equipment is weed-free.

  - All haul trucks bringing fill materials from outside the park would be covered to prevent seed transport.
  - Vehicle and equipment parking would be limited to within construction limits or approved staging areas.
  - Staging areas outside the park would be surveyed for noxious weeds and treated appropriately prior to use.
  - All fill, rock, and additional topsoil would be obtained from stockpiles from previous projects or excess material from this project, if possible; and if not possible, then weed-free fill, rock, or additional topsoil would be obtained from sources outside the park. NPS personnel would certify that the source is weed-free.

- Erosion control BMPs for drainage and sediment control, as identified and used by the FHWA and NPS, would be implemented to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas. These practices may include, but would not be limited to, silt fencing, filter fabric, temporary sediment ponds, check dams of pea gravel-filled burlap bags or other material, and/or immediate mulching of exposed areas to minimize sedimentation and turbidity impacts as a result of construction activities. The placement and specific measures used would be dictated to a large degree by the steepness of the topography immediately adjacent to the roadway. Silt fencing fabric would be inspected daily during project work and weekly after project completion, until removed. Accumulated sediments would be removed when the fabric was estimated to be approximately 75% full. Silt removal would be accomplished in such a way as to avoid introducing sediments into any flowing water bodies.
- Regular site inspections would be conducted to ensure that erosion control measures were properly installed and functioning effectively.
- The operation of ground-disturbing equipment would be temporarily suspended during large precipitation events to reduce the production of sediment that may be transported to streams.
- A National Pollution Discharge Elimination System (NPDES) permit would be prepared by CFLHD and submitted to the Utah Division of Water Quality prior to commencing any near-water activities.
- A hazardous spill plan would be required from the contractor prior to the start of construction stating what actions would be taken in the case of a spill and preventive measures to be implemented. Hazardous spill clean-up materials would be on-site at all times. This measure would be designed to avoid/minimize the introduction of chemical contaminants associated with machinery (e.g., fuel, oil, and hydraulic fluid) used in project implementation.
- Construction workers and supervisors would be informed about special status species. Contract provisions would require the cessation of construction activities if a species was discovered in the project area, until park staff re-evaluates the project. This would allow modification of the contract for any protection measures determined necessary to protect the discovery.
- If there were night construction, lights would be shielded and directed downward to minimize the areas impacted by the artificial light, and to avoid light pollution.
- The construction contractor would be required to keep all garbage and food waste contained and removed daily from the work site, to avoid attracting wildlife. Construction workers would be instructed to remove food scraps and not feed or approach wildlife.

- Should construction unearth previously undiscovered cultural resources, work would be stopped in the area of any discovery and the park 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 were 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 were 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 were uncovered during construction.
- To minimize the potential for impacts to park visitors, variations on construction timing may be considered. One option would include conducting the majority of the work in the off-season or shoulder seasons.
- Visitors would be informed in advance of construction activities.
- As much as was feasible, park staff would be posted at construction traffic stops to answer visitor questions and provide information during traffic delays.
- Provisions for emergency vehicle access through construction zones would be developed.

Alternatives Considered and Dismissed

No action alternatives other than to repair and rehabilitate the Scenic Drive throughout its length were considered feasible, but a number of options were considered for the action alternative. Options were considered for rehabilitating a ditch at approximately milepost 1.25. The existing ditch does not effectively intercept and convey storm flows from the adjacent steep slopes. Sediment-laden stormwaters sometimes overflow the ditch, damaging the roadway and flowing into the nearby historic Gifford barn. The following options for preventing those flows were considered, but were dismissed.

1. Install a relief culvert halfway down the existing ditch. Although a relief culvert would convey a portion of the water under the road, it is likely that the culvert would plug with sediment and become inoperative.
2. Raise the roadway profile . It was determined that raising the roadway profile would not be feasible, because the increased cost would not provide a correspondingly higher level of protection for the roadway or the barn. The option that was selected as part of the preferred alternative (a concrete-lined ditch) would provide equivalent protection for the roadway and the barn and would cost appreciably less.

The option of painting white edge striping (sometimes referred to as a fog line) along the outside edge of each travel lane was considered as roadway striping option, but that option was dismissed. Park Service and FHWA interdisciplinary team members felt that such striping could induce vehicle operators to drive closer to the centerline, actually decreasing safety.

Alternative Summaries

Table 2 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 2 – Summary of Alternatives and How Each Alternative Meets Project Objectives

Project Objectives	Alternative A – No Action	Alternative B – Preferred Alternative
Improve the Efficiency of Park Operations	Under the No Action Alternative, the NPS would not implement road rehabilitation or improvements. The efficiency of park operations would not be improved and maintenance requirements and costs would increase. Routine road maintenance would continue, but the road pavement and structural integrity would continue to deteriorate, requiring increasingly frequent spot repairs. Seasonal flows across and alongside the roadway would continue damaging the roadway and increasingly threatening the integrity of the road prism and some stone masonry drainage structures. The need for repairs would increase.	The efficiency and cost of park operations would improve from better road conditions and reduced maintenance requirements. The improvements would repair damaged areas of road subgrade, correct cross-slope and drainage issues, repave the entire roadway, protect existing retaining walls and headwalls and install new walls as needed. Damaged low water crossings would be replaced in kind, and new low water crossings would replace some culverts that are completely filled with debris.
Provide for Visitor Enjoyment and Safety	Visitor enjoyment and safety concerns would not be fully addressed, because problems with the road surface, slope, drainage, guard walls, retaining walls, and low water crossings would not be corrected, except by spot repairs as needed. A deteriorating road surface and delays during repair efforts would adversely affect visitor enjoyment. Existing safety concerns would remain; the pavement would not be widened to a consistent width, and turning widths for entering and exiting Fruita Campground would not be increased.	Visitor enjoyment and safety would benefit from measures to improve the condition of the roadway. Upgrades to the road and associated structures would make travel by vehicles easier and safer. The pavement would be widened to a consistent width where feasible. Improvements at Fruita Campground would increase turning widths for entering and exiting the campground.
Protect Park Resources	Park natural and cultural resources and the scenic quality of the road would be compromised by deteriorating road conditions, poor drainage, erosion, and damage to historic cultural features.	Park natural and cultural resources would be protected by drainage improvements, repair and construction of retaining walls and headwalls, and other structural repairs that reduce the potential for deterioration of historic features. Road repairs and improvements would decrease erosion along the roadway, reducing adverse impacts to vegetation, soils, and water quality.

Table 3 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 3 – Environmental Impact Summary by Alternative

Impact Topic	Alternative A – No Action	Alternative B – Preferred Alternative
Cultural Landscapes	Alternative A would have short-term minor, and long-term minor to moderate adverse impacts on both the Scenic Drive and Fruita cultural landscapes. The condition and integrity of the Scenic Drive would continue to degrade due to deferred maintenance and the ongoing effects of erosion.	Alternative B would have short-term minor adverse impacts to the Scenic Drive and Fruita cultural landscapes. The visual impact to individual drainage features and the overall landscape settings would be apparent during the construction process. In the long term, the impacts to these landscapes would be beneficial. The condition of the Scenic Drive roadbed would be improved, and the road's historical drainage features would be rehabilitated.
Soundscape	Alternative A would have short-term, moderate, adverse impacts on the soundscape. Repair operations and their short-term impacts on the soundscape would become more frequent.	Alternative B would have short-term, moderate, adverse impacts and long-term beneficial impacts on the soundscape. The noise levels from road repair operations would be very noticeable to visitors and would adversely affect wildlife in the surrounding area, but the noise would not have an effect on the regional level. However, the rehabilitation and resurfacing of the entire length of the Scenic Drive would reduce the frequency of periodic repairs. Noise associated with such road repairs would be correspondingly reduced.
Geology and Soils	Alternative A would have long-term, minor, adverse impacts on geology and soils. Erosion would continue, because repairs and rehabilitation efforts would not be completed throughout the length of the Scenic Drive.	Alternative B would have long-term beneficial impacts on geology and soils by reducing erosion, rutting, and soil compaction throughout the length of the Scenic Drive. There would be long-term minor adverse impacts from the removal of rock and soil to accommodate some widening of the roadway, the excavation and paving of an earthen ditch, and the cleaning, realignment, and widening of other ditches along the Scenic Drive, but impacts would be predominantly beneficial.
Health and Safety	Alternative A would have long-term, minor, adverse impacts on health and safety. Some repairs would have to be deferred, and intermittent repairs at individual locations in the roadway would create minor safety hazards for park staff and for motorists.	Alternative B would have short-term minor adverse impacts on health and safety, due to road repair operations, as motorists approach and pass through the construction area. Alternative B would also have beneficial long-term impacts. The correction of existing roadway deficiencies and improved safety features would increase safety for motorists on the Scenic Drive.
Visitor Use and Experience	Alternative A would have long-term, minor to moderate, adverse impacts on visitor use and experience. Periodic maintenance projects would require traffic delays at	Alternative B would have short-term minor to moderate adverse impacts, long-term minor adverse impacts, and long-term beneficial impacts on visitor use and experience. There would be short-term minor adverse impacts on visitor use and experience during road repair and rehabilitation activities, and long-term minor adverse impacts associated with maintenance activities. The

Impact Topic	Alternative A – No Action	Alternative B – Preferred Alternative
	random times and locations. Roadway conditions would deteriorate to the point that the quality of the visitor experience is diminished from a visibly damaged road, eroded low water crossings, or deterioration of other structural features.	Scenic Drive would be closed between Grand Wash and the Capitol Gorge parking area for as long as a month, creating a short-term moderate adverse impact on visitor use and experience. However, rehabilitation and resurfacing of the Scenic Drive would also have long-term beneficial impacts.
Park Operations and Management	Alternative A would have long-term, moderate, adverse impacts on park operations and management. Continuing and increasing operational and maintenance demands would be readily apparent and would have a substantial effect on park operations and management in a manner noticeable to staff and the public.	Alternative B would have short- term and long-term, minor, adverse impacts, as well as a long-term beneficial impact on park operations and management. Planning for and assisting in the completion of the repair and rehabilitation of the Scenic Drive would require time and attention from park staff, which would add to their workloads. Travel on the Scenic Drive would be impeded during road rehabilitation and resurfacing activities. Those impacts would end when construction was finished. With the rehabilitation and resurfacing of the Scenic Drive completed, maintenance workloads and costs would decrease, creating a long-term beneficial impact.

Identification of the 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 as goals in NEPA's §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.

While the no action alternative (alternative A) would preserve existing conditions, it would not be considered the environmentally preferred alternative because not rehabilitating the

Scenic Drive, repairing damaged road and drainage problems, and implementing other improvements would not meet environmental goals in the same manner as the preferred alternative. Alternative A is not the environmentally preferred alternative for the following reasons: **1.** not rehabilitating the Scenic Drive would not meet the stewardship responsibility for protecting park resources (goal 1, as expressed in NEPA's §101); **2.** it would not improve road safety or protection of environmental and cultural resources (goals 2, 3, and 4); **3.** damaged road sections would continue to deteriorate and result in increased maintenance costs (and would not fully meet goal 3); and **4.** there is a higher likelihood of road failure, which would result in road closure, making it more difficult for visitors and staff to access park facilities (goal 5). Thus, alternative A does not fully meet the provisions of NEPA §101 goals 1, 2, 3, 4, and 5.

The NPS determined that the environmentally preferred alternative is the preferred alternative (alternative B) because it surpasses alternative A in realizing the full range of national environmental policy goals as stated in §101 of NEPA. Alternative B would provide the widest range of beneficial uses without degradation, and would reduce risks to health and safety because it would provide sustainable vehicular access to the facilities and trailheads along the Scenic Drive. Implementing alternative B would best preserve the natural and cultural features along the road because it implements structural improvements while providing long-term protection of environmental and cultural resources (goals 1 and 4). Road improvements would allow for unimpeded access to recreational opportunities and regional access (goals 2, 3, and 5). Alternative B provides for the reuse of asphalt in place or milled asphalt that could be used on other road projects outside of the project area (goal 6).

AFFECTED ENVIRONMENT

Detailed information on the natural, cultural, and human resources at Capitol Reef National Park may be found in the final general management plan (NPS, 2001). A summary of the resources that may be impacted from the proposed project are described below.

Location and General Description of the Park

Capitol Reef National Park is located in south-central Utah approximately 225 miles south of Salt Lake City. The entrance to the park is on Utah State Road 24 between the towns of Torrey and Hanksville. The park was established by Congress as a national monument on August 2, 1937, to preserve the geologic resources of the area. It was redesignated a national park in 1971 and increased six times it original size. The park protects Cathedral Valley, ancient sand dunes and other objects of scientific interest, and the majority of the Waterpocket Fold. The Waterpocket Fold is the largest wrinkle in the earth's crust (monocline) in North America.

Approximately 617,208 recreational visitors came to Capitol Reef National Park in 2009. In the past 30 years annual visitation has fluctuated between a low of 516,000 in 2002 to a high of 681,000 in 1999.

The primary mode of transportation to the park is the private automobile. The park's main driving tours include the Scenic Drive and two mainly unpaved, loop tours through the park's Cathedral and Waterpocket Districts. The park offers a brochure for a self-guided tour of the Scenic Drive with eleven stops that highlight the geologic and historical features of interest in the park.

Ninety-one percent of park visits include the Scenic Drive. Approximately 70,000 vehicles a year travel the road, based on a traffic study completed in 2004. The average number of vehicles per day traveling along the Scenic Drive is over 200, with the peak in May of over 400 vehicles per day.

Visitor services include a picnic area, three campgrounds and a visitor center. The Fruita Campground is developed, and the Cathedral and Cedar Mesa campgrounds are primitive. Backcountry camping is available by permit. The most common visitor activities are viewing scenery (93%), followed by photography/painting/drawing (78%) and hiking (70%) (Capitol Reef National Park Visitor Study, 2008). There are fifteen hiking trails in the park, ranging in degree of difficulty from easy to strenuous. Additional recreational opportunities available at the park include climbing, biking, horseback riding and camping. Other popular activities consist of visiting the historic buildings and fruit picking in the orchards of the Fruita Historic District, a Mormon pioneer settlement. Capitol Reef has the largest historic orchards in the National Park System, with approximately 2,600 fruit and nut trees.

Cultural Landscapes

The Scenic Drive is a narrow, winding historic road that was originally built in 1883 to link the new settlement of Junction (later, Fruita) to other nearby settlements. The road followed traces of an ancient route used by Native Americans along the western edge of the Waterpocket Fold. Portions of the original route have also been known by other names, including the Blue Dugway, Capitol Gorge Highway, Reef Road, Monument Road, and old Utah State Route 24. A two-mile section of the road is a contributing landscape feature of the Fruita Rural Historic District. The NPS also considers the Scenic Drive/Capitol Gorge as a separate component landscape within the park that is potentially eligible for listing in the National Register of Historic Places.

The original route of the Scenic Drive was not highly engineered, and remained little more than a simple wagon road until the mid-twentieth century. Between 1938 and1942, workers from a Civilian Conservation Corps (CCC) sub-camp established in the park completed some improvements to the Scenic Drive. A section of the road southeast of the Fremont River Bridge was stabilized. Improvements were also completed at the Danish Hill area south of Fruita. Some portions of the route were widened from 11 feet to18 feet, and cut slope flattening to improve sight distance was also completed.

It is unclear which drainage features date to the CCC era, and which were constructed earlier and simply repaired or rebuilt between 1938 and 1942. The Scenic Drive currently has 64 culverts and 22 low water crossings. An inventory of culverts completed by park staff in 2009 identified six that are known or are likely to have been constructed by the CCC, in addition to another 31 possible CCC-era drainage features. Historical records also indicate that four hundred feet of rock wall was constructed during this period to improve the grade and drainage, and stone check dams were placed in eroding ditches.

By the late 1950s, when the NPS Mission 66 development period was well underway, the park initiated planning for the rerouting of State Highway 24. In 1962 the new highway was realigned to run east-west along the Fremont River, with portions following the general alignment of the historic route. The Old State Route 24 road from Fruita to Capitol Gorge was renamed the Scenic Drive, and the section that extended northeast through the gorge was closed. Minor alignments were also completed during this period. Park records note the addition of twelve new culverts to address drainage problems.

Over the years, the Scenic Drive was widened to approximately 20 feet, although some areas are narrower. The Fremont Bridge was replaced in 1985 and the section of road between Fruita and Capitol Gorge, formerly gravel, was chip-sealed in 1988. Gabion walls, at least four low water crossings, and pullouts were also constructed. However, despite these alterations, the Scenic Drive retains its rustic character.

Soundscape

Generally, ambient sound levels in the vicinity of the proposed project are low and are dominated by natural sounds. In the project area natural sounds include the sounds of wind, running water, birds, and occasionally other animal sounds.

Vehicle traffic is the main source of human-caused noise in the project area. Although roadway speeds are low, visitor traffic intermittently increases noise levels, particularly during the summer months when traffic levels are higher. Noise is also produced during road maintenance activities. Summer is the busiest season for road maintenance. Because of weather limitations, part of the construction work for the proposed project would occur during the summer.

Actual ambient sound levels along the Scenic Drive are not known, but as a frame of reference, the sound level on a totally quiet night in a desert would be around 30 decibels (dBA), while sound levels from light traffic on paved roads range from 45 to 50 dBA at a distance of 100 feet from the roadway.

Geology and Soils

The Scenic Drive follows the western face of the Waterpocket Fold. The geology in the area dates from the Permian (as old as 270 million years) to the Cretaceous (around 80 million years old). The Waterpocket Fold has tilted the geologic strata down to the east. The older rocks are found in the western part of the park, and the younger rocks are found near the east boundary. The geology of the area includes the reddish-brown mudstones, siltstones, claystones, and fine

grained sandstones of the Moenkopi Formation and the grayer band of Chinle shale (originally deposited as volcanic ash), to the distinctive red, white, and reddish-brown colors and various shapes assumed by the sandstones of the Wingate, Navajo, and Kayenta formations.

Soils in the area of the proposed project are typically very loose, fine-grained, poorly graded silty sand, with some gravel and boulders. The soils are derived from the sandstones and shales that predominate the geology of the park. Such soils are easily infiltrated and eroded by water, and can also become hydro-compacted.

Heavier soils, such as silty clay loams, can be found at the base of shale slopes and hills throughout the project area. Soils along the Fremont River floodplain are derived from alluvium deposited by the river. In the Fruita area, silty clay loam floodplain soils were successfully farmed, producing alfalfa, sorghum, vegetables, and a variety of fruit orchards. The NPS has continued that history of cultivation within the park.

Health and Safety

The rustic characteristics of the Scenic Drive make it suited for low volume traffic flow with slow travel speeds. This works well for visitors using the road to access park facilities, which include the visitor center, a campground, trailheads, and the Fruita Historic District with its homestead buildings and orchards. It is a park road only, and is not an element of the local or county traffic patterns. However, the volume and types of public use have increased since the establishment of the park. The Scenic Drive pre-dates the establishment of the park and was not constructed to currently accepted standards for the volume and types of public use the road now receives. Health and safety concerns include the narrow road width, tight curves, debris such as rocks in the roadway, the possibility of flash flooding in the washes crossed by the road, and seasonal heat and cold.

Collisions between vehicles are not frequent. Park records report two vehicle collisions on the Scenic Drive from 1990 through 1993, and two vehicle collisions from 2005 through 2008. The causes of the accidents were reported as inattention and speeding, and some were identified as sideswipe collisions on S-shaped curves. Sliding off the road and striking debris in the road are also identified as causes for accidents on the Scenic Drive.

Restroom facilities and potable water are located at the visitor center and the headquarters area (at the intersection of Highway 24 and the Scenic Drive) and in Fruita Campground. The campground is developed with 71 recreational vehicle (RV) and/or tent sites, each with a picnic table and grill but no individual water, sewage, or electrical hook-ups. An RV dump station is open during the summer. The campground restrooms are heated and feature potable running water and flush toilets, but not showers. There are toilet facilities at the southern end of the Scenic drive where it intersects unpaved spur roads into Grand Wash and Capitol Gorge.

The park coordinates law enforcement and related activities with neighboring counties. Most emergency services, such as search and rescue and initial-response emergency medical services for incidents within the park, are provided by park staff. Emergency medical response staff have offices in the park headquarters. A medical clinic is located in Bicknell, 19 miles west of the park on Utah Highway 24. The closest hospital is located in Richfield, 75 miles west of the park. There is limited cell phone service in most areas of the park, but park radios work well along the Scenic Drive corridor.

Fire personnel from the park and from other agencies work together to accomplish each agency’s fire management goals. Neighboring agencies will provide assistance with emergency fire suppression when requested, in accordance with the Annual Operating Plan for Fire

Management between the U.S. Forest Service, the Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, Bureau of Indian Affairs, and the State of Utah.

Visitor Use and Experience

About 665,000 people visited the park in 2009. The average length of stay for visitor groups who spend less than 24 hours in the park is about 6 hours. Approximately 92% stop at the visitor center and 91% travel the Scenic Drive. The primary visitor activities are driving the Scenic Drive, viewing the scenery, and visiting the Fruita Historic District. Besides the paved Scenic Drive, there are unpaved loop tours through the Cathedral and Waterpocket Districts of the park.

Hiking is a popular visitor activity. In the Fruita area, there are 15 day-hiking trails with trailheads located along Utah Highway 24 and the Scenic Drive. There are also numerous hiking options for serious backpackers and those who enjoy exploring remote areas.

Horse and pack animal use is also permitted in the park along several park roads and trails. There are limited overnight facilities for stock users, and backcountry use permits are available for backcountry camping with stock.

The park offers camping in the developed Fruita campground and the nearby group campground. There are two primitive campgrounds in more remote parts of the park, and backcountry camping is also permitted.

Rock climbing is becoming increasingly popular in the park, as in Utah's canyon country in general. Bicycling is allowed, though cyclists must stay on designated roads at all times. Cyclists may not travel off road, in washes, on closed roads, on hiking trails, or backcountry routes.

From May to September, the park offers a variety of ranger-guided programs at no charge. These include guided walks, talks, and evening programs at the campground amphitheater.

Park Operations and Management

The park has approximately 24 permanent employees, and additional seasonal employees in the summer months. Interns and volunteers augment the paid staff. Personnel resources are distributed among the superintendent's office, administration, interpretation, maintenance, resource management and science, and visitor and resource protection functions.

The park has a visitor center, an administrative headquarters complex, a maintenance building, a service yard, and a 15-unit residential area. The Fruita Rural Historic District within the park includes a 3,000-tree orchard complex. Many historic buildings within the park, including wood frame homes and barns, are used for staff and/or interpretive purposes, The park has equipment such as trucks, trailers, and construction equipment to support park operations.

The 71-site Fruita Campground is the only developed campground in the park, located south of the visitor center in the Fruita Historic District. A group campground, available by reservation for as many as 40 people, is located near the Fruita Campground. Two no-fee primitive campgrounds in more remote parts of the park have pit toilets and picnic tables, but no water.

The only paved roads within the park are State Road 24 and the Scenic Drive. Unpaved roads include the Capitol Gorge and Grand Wash spur roads, South Draw Road, Hartnet Road, Caineville Wash Road, Burr Trail Road, and Notom-Bullfrog Road.

For management purposes the park is divided into six types of zones: primitive, semi-primitive, threshold, rural developed, utility corridor, and road corridors.

In the primitive zone, management strategies focus on wilderness qualities, allowing natural processes and undeveloped native conditions to continue with minimal human interference. Native species are maintained or re-established, and sensitive species are protected or augmented. Attempts are made to eliminate non-native species. Some grazing and related development is allowed. The primitive zone can be approached via a limited number of roads, primarily four-wheel drive roads and high clearance, two-wheel drive dirt roads. Travel through this zone requires cross-country hiking or horseback riding on unimproved trails and routes.

The semi-primitive zone is similar in nature to the primitive zone, except that evidence of human activity is more pronounced. Road corridors are more abundant, and human access is easier. Grazing and related development is allowed. Maintenance activities should be rare, solely for protecting resources and restoring areas disturbed by human activities. The semi-primitive zone can be accessed by a number of roads, primarily two-wheel drive dirt roads. Travel through this zone requires cross-country hiking or horseback riding on unimproved trails and routes.

The threshold zone accommodates more varied human activities. Interpretation is provided along maintained hiking trails. A moderate degree of resource management is required. Natural processes are perpetuated and natural conditions are maintained as much as possible, but some human alterations and intrusions are evident. Access is on paved or two-wheel drive, low-clearance, all-weather roads. Access to the zone interior is along a variety of trails and routes that connect various destination points.

The rural developed zone encompasses the park headquarters, the Fruita campground, and the Sleeping Rainbow Ranch developed areas. The zone is moderately developed and it sustains the highest level of visitor use. It includes the Fruita Rural Historic District. Also located in the zone are the park visitor center, maintenance facilities, and employee housing. Vehicle access to and throughout the zone is by paved and unpaved roads suitable for most vehicles. Pedestrian access is provided by maintained trails that allow visitors to explore natural and cultural environments. Some trail sections are wheelchair-accessible.

The utility corridor zone contains the permanent physical plant and infrastructure developments relating to utilities delivery, such as electricity, irrigation water, and telephone service. Corridor widths vary according to right-of-way agreements or special use permits. Visitors can expect to encounter power lines, water developments, underground telephone lines, utility junction boxes, and other such developments. The natural character of the land is preserved, while accommodating utility development and maintenance. Visitor access to the zone varies considerably, depending on the terrain.

Road corridor zones identify all primary, secondary, and four-wheel drive vehicle routes established within the park. Bicycles and licensed vehicles manufactured for highway use may travel on park roads. Visitors can expect a variety of road conditions, ranging from a paved, well-maintained, state highway to minimally maintained, high clearance, variable-width dirt roads.

The Scenic Drive is one of the road corridors in the park. Users can expect a well-maintained, hard-surfaced road meandering through the rural cultural landscape and through the threshold zone, with turnouts, trailhead parking areas, interpretive signs, wayside exhibits, and picnic sites. Routine maintenance activities include filling potholes and depressions, repairing eroded shoulders, removing debris from roadway drains, and chip-sealing the roadway as needed.

ENVIRONMENTAL CONSEQUENCES

Methodology

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 cultural landscapes, soundscape, geology and soils, visitor use and experience, and park operations. Direct, indirect, and cumulative effects are analyzed for each resource topic carried forward. Natural and cultural resource topics are also analyzed for impairment. 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 pre-construction conditions following construction.
  - *Long-term* impacts last beyond the construction period, and the resources may not resume their pre-construction 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.

  Note: NPS policy requires that direct and indirect impacts be “considered.” However, directness is not to be specifically labeled or identified as “direct/indirect” in any of the impact topics in the environmental consequences chapter.

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 non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the no-action and preferred alternative.

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 projects at Capitol Reef National Park and, if applicable, the surrounding region. The following projects were identified for the purpose of conducting the cumulative effects analysis, listed from past to future:

Erosion control/bank stabilization measures along State Route 24: The NPS and the Utah Department of Transportation installed erosion control/bank stabilization measures along State Route 24 within Capitol Reef National Park.

Development of the Sleeping Rainbow Ranch as a research facility: The project included demolishing and replacing existing buildings and utilities on a mesa top approximately two miles southwest of the Capitol Gorge parking area. Additional facilities were constructed for use as a year-round educational site.

Replace administration trailer with permanent building: The park is in the process of replacing the existing administration offices trailer with a permanent structure. This project will construct a new, site-built structure of about 1,650-square feet that will provide replacement office space for all of the administrative functions and a small portion of space for functions that are located in two other buildings. The existing administrative trailer has been removed.

Construct drainage structures on Utah SR-24 to return the Fremont River into its natural channel: Capitol Reef National Park, in cooperation with the Utah Department of Transportation and the Federal Highways Administration, proposes to construct a set of drainage structures on Utah State Highway 24 to return the Fremont River into its natural channel. The proposed project includes the construction of two bridges, restoration of habitat for the threatened Ute ladies'-tresses orchid, elimination of a manmade waterfall, removal of a parking area near the waterfall, and returning the Fremont River to its natural course in the oxbow.

Replace the existing resources trailer and visitor and resources protection (VRP) shack with permanent structures: This project would construct a new, site-built structure that would provide replacement office space for all of the resources management and VRP functions. The existing resources and VRP structures would be removed.

Unacceptable Impacts

As described in *Purpose and Need*, the NPS must prevent any activities that would impair park resources and values. The impact threshold at which impairment occurs is not always readily apparent. Therefore, the NPS will apply a standard that offers greater assurance that impairment will not occur. The NPS will do this by avoiding impacts that it determines to be unacceptable. These are impacts that fall short of impairment, but are still not acceptable within a particular park's environment. Park managers must not allow uses that would cause unacceptable impacts; they must evaluate existing or proposed uses and determine whether the associated impacts on park resources and values are acceptable. Virtually every form of human activity that takes place within a park has some degree of effect on park resources or values, but that does not mean the impact is unacceptable or that a particular use must be disallowed. To determine if unacceptable impact could occur to the resources and values of the parks, the impacts of proposed actions in this environmental assessment were evaluated based on monitoring information, published research, and professional expertise, and compared to the guidance on unacceptable impacts provided in *2006 National Park Service Management Policies* 1.4.7.1 that defines unacceptable impacts as impacts that, individually or cumulatively, would:

- Be inconsistent with a park's purposes or values, or

- Impede the attainment of a park's desired future conditions for natural and cultural resources as identified through the park's planning process, or
- Create an unsafe or unhealthful environment for visitors or employees, or
- Diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values, or
- Unreasonably interfere with:
  - o Park programs or activities, or
  - o An appropriate use, or
  - o The atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park.
  - o NPS concessioner or contractor operations or services.

By preventing unacceptable impacts, park managers also ensure that the proposed use of park resources will not conflict with the conservation of those resources. In this manner, the park managers ensure compliance with the Organic Act's separate mandate to conserve park resources and values.

Impairment

2006 National Park Service Management Policies requires analysis of potential effects to determine whether or not actions would impair park resources. 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 park, 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, but does not necessarily, constitute an impairment, but an impact would be more likely to constitute an impairment when there is a major or severe adverse effect upon a resource or value whose conservation is:

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

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. A determination on impairment is made in the Environmental Consequences section for

natural and cultural resource topics.

The potential for impairment or unacceptable impacts from the proposed alternatives is provided at the end of this analysis of environmental consequences.

Cultural Landscapes

Intensity Level Definitions

The methodology used for assessing impacts is based on how the proposed repairs to the Scenic Drive would affect the Scenic Drive and Fruita cultural landscapes. The thresholds for this impact assessment are as follows:

Negligible	Minor	Moderate	Major
Negligible impacts would be at the lowest levels of detection-barely perceptible and not measurable. There would be no change to defining features that contribute to the resource's National Register eligibility.	Impacts would not affect the character-defining features of a cultural landscape or structure listed or eligible for the National Register. Impacts would be detectable but would not diminish the overall integrity of the resource.	Moderate impacts would alter a character-defining feature(s) of a cultural landscape and result in measurable changes, and they could diminish the overall integrity of the resource to the extent that its National Register eligibility would be jeopardized.	Major impacts would result from substantial and highly noticeable changes that would alter the character-defining features of a cultural landscape. These impacts would diminish the overall integrity of the resource to the extent that it would no longer be eligible to be listed in the National Register.

Short-term —occurs only during project construction
Long-term —continues after project construction

Impacts of Alternative A (No-Action Alternative)

Effects on the Fruita and the Scenic Drive cultural landscapes under the no-action alternative would be minor in the short term. In the long-term, impacts would be minor to moderate, and adverse. Despite periodic maintenance, the road conditions on the Scenic Drive would continue to deteriorate. The integrity of the landscapes would be visibly diminished due to the damaged roadbed, eroded low water crossings, and clogged or collapsed stone culverts. The integrity of the Scenic Drive, and therefore the settings of both cultural landscapes would be jeopardized due to degradation of their character-defining features. This could ultimately impact the National Register eligibility of these cultural landscapes.

Cumulative Effects: Other actions in the park will have negligible impacts to the park's cultural landscapes. For the erosion control/bank stabilization measures along State Route 24, impacts to cultural landscapes are negligible in the short-term and long-term. The development of the Sleeping Rainbow Ranch as a research facility had negligible impacts on cultural landscapes. Replacing the administration and resources trailers with permanent structures will also have negligible impact on cultural landscapes within the park. Constructing drainage structures on

Utah SR-24 to return the Fremont River into its natural channel will have negligible impacts to cultural landscapes. The impacts of the past, present, and future actions, in combination with the long-term, minor to moderate, adverse impacts of alternative A, would have minor to moderate, adverse impacts on visitor cultural landscapes.

Conclusion: Alternative A would have short-term minor adverse impacts, and long-term, minor to moderate, adverse impacts on cultural landscapes. Cumulative impacts would be minor in the short term, minor to moderate in the long term, and adverse.

Impacts of Alternative B (Preferred Alternative)

Alternative B would have short-term minor adverse impacts on cultural landscapes during road repair and rehabilitation activities. Work on the Scenic Drive roadbed and related drainage structures would visibly impact the character-defining features and the landscape setting during the construction phase. Periodic road maintenance would continue to impact the cultural landscapes of Fruita and the Scenic Drive, but maintenance needs and frequencies would be reduced.

Following construction, the landscape settings and individual character-defining features would be improved and would benefit from alternative B. With subgrade improvements, those segments of the road that are affected by subsidence or slumping would no longer require frequent repairs. The selective pavement widening of the S-curves at Grand Wash would occur within the existing road bench. Stone culverts, headwalls and low-water crossings would function properly, and contribute to the integrity of the Scenic Drive and improve the overall condition of the Fruita and the Scenic Drive landscapes. The setting, design, feeling and overall rustic quality of the Scenic Drive would be maintained.

Cumulative Effects: Other actions in the park will have negligible impacts to the park's cultural landscapes. For the erosion control/bank stabilization measures along State Route 24, impacts to cultural landscapes are negligible in the short-term and long-term. The development of the Sleeping Rainbow Ranch as a research facility had negligible impacts on cultural landscapes. Replacing the administration and resources trailers with permanent structures will also have negligible impact on cultural landscapes. Constructing drainage structures on Utah SR-24 to return the Fremont River into its natural channel will have negligible impacts to cultural landscapes. The impacts of the past, present, and future actions, in combination with the short-term, minor adverse and long term beneficial impacts of alternative B, would have minor adverse and beneficial impacts on cultural landscapes.

Conclusion: Alternative B would have short-term minor adverse impacts and long-term beneficial impacts on cultural landscapes. Cumulative impacts would be short-term, minor, adverse, and long-term beneficial.

Soundscape

Intensity Level Definitions

Capitol Reef National Park was established for the benefit and enjoyment of the public. Noise can adversely affect those benefits by intruding upon or disrupting experiences of solitude. Noise can also indirectly impact resources by interfering with sounds important for animal communication, navigation, mating, nurturing, predation, and foraging functions.

The methodology used to assess noise impacts in this document is consistent with *2006 National Park Service Management Policies* and Director's Order #47: *Soundscape Preservation and Noise Management.*

Context, time, and intensity together determine the level of impact for an activity. It is usually necessary to evaluate all three factors together to determine the level of noise impact. In some cases an analysis of one or more factors may indicate one impact level, while an analysis of another factor may indicate a different impact level, according to the criteria below. In such cases, best professional judgment based on a documented rationale must be used to determine which impact level best applies to the situation being evaluated. The thresholds for this impact assessment are as follows:

Negligible	Minor	Moderate	Major
Effects on the natural sound environment would be at the level of detection. Changes would be so slight that they would not be of any measurable or perceptible consequence to the visitor experience or to wildlife.	Effects on the natural sound environment would be detectable, although the effects would be localized. Impacts would be small and of little consequence to the visitor experience or to wildlife. Mitigation measures, if needed to offset adverse effects, would be simple and successful.	Effects on the natural sound environment would be readily detectable and have a noticeable effect on the visitor experience and wildlife. The impacts would be localized, with few if any consequences at the regional level. There would be measureable impacts on the local wildlife population level. Mitigation measures, if needed to offset adverse effects, would be extensive and likely successful.	Effects on the natural sound environment would be obvious and have substantial consequences for the visitor experience or for wildlife in the region. Extensive mitigation measures would be needed to offset any adverse effects and success would not be guaranteed.

Short-term - occurs only during the construction period
Long-term - occurs even after the construction period

Impacts of Alternative A (No-Action Alternative)

The no-action alternative would have recurrent, short-term, moderate, adverse impacts on the soundscape. Alternative A would maintain the existing circumstances, in which park staff would continue to clear culverts and roadside drainage ditches, stabilize slopes, patch potholes, and complete other isolated repairs as the need arose. Surface flows would continue to adversely affect the road in some locations, and pavement damage from poor subsurface drainage in some locations would require intermittent repairs. The road would continue to deteriorate, and repair operations and their short-term impacts on the soundscape would become more frequent.

Typical sound levels from road construction equipment such as trucks, front loaders, pavers, dozers, and graders can be in the range of 63 to 94 dBA at a distance of 100 feet from the sound source. Sound levels from light traffic on paved roads range from 45 to 50 dBA at a

distance of 100 feet from the roadway, and the sound level on a totally quiet night in a desert would be around 30 decibels (dBA).

Noise levels decrease at a rate of approximately 6 dBA per doubling of distance from a noise source. For example, if a sound level were 94 dBA at 100 feet, it would be 88 dBA at 200 feet, and 82 dBA at 400 feet. The rate of decrease is also dependent upon topography and weather conditions, but it is likely that within a mile of the roadway the sound from road repair operations would be greater than the intermittent sounds created by visitors traveling the Scenic Drive. Such sound levels would have a noticeable effect on the visitor experience, disrupting the normally tranquil setting, and on wildlife, impelling some animals to leave or avoid the area.

Cumulative Effects: Impacts to the soundscape were minor and adverse in the short-term during erosion control/bank stabilization measures along State Route 24. Noise from traffic (e.g., heavy equipment, propane trucks, and vans) occurred during the development of the Sleeping Rainbow Ranch as a research facility, creating short-term, moderate, adverse impacts. Noise from outdoor lectures, research activities, and general operations at the research facility now carries to the Pleasant Valley floor, creating long-term, minor, adverse impacts on the soundscape. The work required to replace the existing administration trailer creates short-term, minor, adverse impacts on the soundscape, and replacing the resources trailer will have similar adverse impacts. It is anticipated that constructing drainage structures on Utah SR-24 to return the Fremont River into its natural channel will have short-term, minor, adverse impacts on the soundscape. Those impacts on the soundscape, in combination with the short-term, moderate, adverse impacts of the no action alternative, would have short-term, moderate, adverse, cumulative impacts and long-term, minor, adverse, cumulative impacts on the soundscape.

Conclusion: The no-action alternative would have short-term, moderate, adverse impacts on the soundscape. Cumulative impacts would be short-term, moderate, adverse, and long-term, minor, adverse.

Impacts of Alternative B (Preferred Alternative)

The preferred alternative would have short-term, moderate, adverse impacts and long-term beneficial impacts on the soundscape. The noise levels from road repair operations would be very noticeable to visitors and would adversely affect wildlife in the surrounding area, but the noise would not have an effect on the regional level. However, the rehabilitation and resurfacing of the entire length of the Scenic Drive would reduce the frequency of periodic repairs. With erosion and slumping of the road shoulders repaired, drainage deficiencies and subgrade deficiencies remedied, and repaving of the road with asphalt concrete or chip-sealing, the need for future repairs would be reduced. Noise associated with such road repairs would be correspondingly reduced.

Cumulative Effects: The cumulative impacts on the soundscape from past, present, and future actions (as discussed above in alternative A), in combination with the short-term, moderate, adverse impacts and long-term beneficial impacts of the preferred alternative, would have short-term, moderate, adverse, and long-term beneficial cumulative impacts.

Conclusion: The preferred alternative would have short-term, moderate, adverse impacts and long-term beneficial impacts on the soundscape. Cumulative impacts would be short-term, moderate, adverse, and long-term beneficial.

Geology and Soils

Intensity Level Definitions

The planning team based the impact analysis and the conclusions for possible impacts to geology and soils on the on-site inspection of known and potential resources within the project areas. Where possible, map locations of geological and soils resources were compared with locations of potential areas of impact by the proposed project. The thresholds of change for the intensity of an impact are defined as follows:

Negligible	Minor	Moderate	Major
The action would result in a change to geology or soils, but the change would be so small that it would barely be of any measurable or perceptible consequence	The action would result in a change to geology or soils, but the change would be small and localized and of little consequence. Mitigation may be needed to offset adverse effects to soils, but they would be simple to implement and would likely be successful.	The action could result in a change to geology or soils; the change would be measurable and of consequence. The effect on soil would be readily apparent and would result in a change to the soil character over a relatively wide area. Mitigation measures would be needed to offset adverse effects and would likely be successful.	An action that would result in a noticeable change to geology or soils; the change would be measurable and result in a severely adverse impact. The action would substantially change the character of the soils over a large area in and out of the park. Mitigation measures would be needed and would be extensive, and their success could not be guaranteed.

Short-term: There are no short-term impacts to geological resources. Soils would recover in less than 3 years.

Long-term: All impacts to geological resources would be long-term. It would take more than 3 years to recover from impacts to soils.

Impacts of Alternative A (No-Action Alternative)

Alternative A would have long-term, minor, adverse impacts on geology and soils because repairs and rehabilitation efforts would not be completed throughout the length of the Scenic Drive. Seasonal high water flows in the drainages would sometimes exceed the carrying capacity of culverts and would plug others. The storm waters would be forced from their channels, eroding geologic resources and soils as they find a new flow pathway. Erosion and development of scour holes would continue below culvert outfalls if rock armoring were not installed.

Vehicle pull-outs would not be formalized and rehabilitated throughout the length of the Scenic Drive. Visitors would continue to use informal pull-outs, causing erosion, rutting, and compaction.

Cumulative Effects: Impacts to soils from erosion control/bank stabilization measures along State Route 24 were negligible and adverse in the short-term and beneficial in the long-term. Impacts on soils from the development of the Sleeping Rainbow Ranch as a research facility

resulted in a net beneficial effect. Replacement of administrative and research trailers with permanent structures will have negligible, long-term, adverse impacts on geology and soils. Returning the Fremont River to its natural channel will have long-term beneficial impacts on geology and soils. The long-term beneficial impacts of past, present, and future actions, in combination with the long-term, minor, adverse impacts of the no action alternative, would have long-term beneficial cumulative impacts on geology and soils.

Conclusion: Alternative A would have long-term, minor, adverse impacts on geology and soils. Cumulative impacts would be long-term beneficial.

Impacts of Alternative B (Preferred Alternative)

Alternative B would have long-term beneficial impacts on geology and soils by reducing erosion, rutting, and soil compaction throughout the length of the Scenic Drive. Drainage culverts would be replaced and cleaned as needed to better convey runoff flows and prevent erosion. Stone armoring would be placed in drainages as needed to prevent erosion and the development of scour holes below culvert outfalls. Vehicle pull-outs would be formalized and rehabilitated throughout the length of the Scenic Drive. Other informal pull-outs would be closed, rehabilitated and revegetated as needed to reduce and prevent erosion, rutting, and compaction along the Scenic Drive.

Alternative B would create some long-term minor adverse impacts on geology and soils from widening of the travel lanes and excavation of ditches. Near the Capitol Gorge parking area, from approximately milepost 7.4 to 7.9, the adjacent hillside would be cut back to create 2:1 to 3:1 slopes. Drainage ditches would be cut at the toe of the slope alongside the roadway. The roadway would be widened only slightly, if at all. It is estimated that approximately 2,000 to 2,500 cubic yards of shale, shale residuum soils, and sandstone would be excavated.

The subgrade throughout the 8-mile length of the Scenic Drive would be excavated as needed in spot locations, and replaced with appropriate fill material. In isolated locations throughout the length of the Scenic Drive the roadway would be widened by 1 to 2 feet, to provide a consistent road width as much as is feasible.

An existing earthen ditch at approximately milepost 1.25, south of the Gifford barn, would be improved to better convey sediment-laden runoff. Options being considered include reconstructing and paving the ditch with a consistent cross section and slope to more easily accommodate mechanical maintenance, or retaining the current native soil ditch while implementing a schedule of more frequent maintenance. The native soil ditch would be reshaped and hardened with compaction as needed. More analysis will be conducted to determine the proper solution. Other ditches throughout the length of the Scenic Drive would be cleaned, realigned, and widened as necessary to properly convey runoff.

There would be more beneficial impacts from the reduction of erosion, rutting and compaction, than adverse impacts, and overall, the impacts of alternative B on geology and soils would be long-term beneficial.

Cumulative Impacts: The negligible, adverse short-term and long-term impacts and the long-term beneficial impacts from past, present, and future actions (as discussed above in alternative A), in combination with the long-term beneficial impacts of alternative B, would have long-term beneficial cumulative impacts on geology and soils.

Conclusion: Alternative B would have long-term beneficial impacts on geology and soils. Cumulative impacts would be long-term beneficial.

Health and Safety

Intensity Level Definitions

The analysis of health and safety considered the effects caused by poor roadway conditions and the ability of park visitors to access park facilities along the Scenic Drive.

Negligible	Minor	Moderate	Major
The effects on health and safety would be at the lowest levels of detection and would not have an appreciable effect on health or safety. No mitigation measures would be needed.	The effects would be detectable but would not have an appreciable effect on health and safety. If mitigation were needed, it would be relatively simple and would likely be successful.	The effects would be readily apparent and result in substantial, noticeable effects to health and safety on a local scale. Mitigation measures would probably be necessary and would likely be successful.	The effects would be readily apparent and result in substantial, noticeable effects to health and safety on a regional scale. Extensive mitigation measures would be needed, and success would not be guaranteed.

Short-term: Impacts that occur during active construction and reclamation activities.

Long-term: Impacts that occur after construction and related activities are completed.

Impacts of Alternative A (No-Action Alternative)

Alternative A would have long-term, minor, adverse impacts on health and safety. Repairs would not be completed concurrently throughout the length of the Scenic Drive. Road repairs needed to protect health and safety would be completed as promptly as funding and staffing levels allowed, but some repairs would have to be deferred. Intermittent repairs at individual locations in the roadway would create minor safety hazards for the park staff completing the repairs and for the motorists who encountered the work site.

Examples of such necessary repairs include worn pavement with ruts in some locations, eroding road shoulders, drainage ditches where retaining walls are needed to prevent erosion of the road bed, plugged or undersized culverts that create drainage and erosion problems that can damage the road surface, and eroded low water crossings. Repairs needed for stone masonry drain headwalls would be delayed. Additionally, the no-action alternative would not correct the areas with inconsistent road widths. The safety hazards associated with such road conditions would be noticeable, but would not be substantial except in cases of excessive speed or driver inattention.

Cumulative Impacts: Construction efforts associated with the past, present, and future actions of the erosion control/bank stabilization measures along State Route 24, the development of the Sleeping Rainbow Ranch as a research facility, the replacement of the administration trailer and the resources trailer with permanent buildings, and the construction of drainage structures on Utah SR-24 to return the Fremont River into its natural channel all have created or would create

short-term, minor, adverse impacts on health and safety. Construction of permanent administration and resource buildings will have a long-term beneficial impact on health and safety, because of the potential for hantavirus infection by staff and visitors in the existing trailers. The impacts of the past, present, and future actions in combination with the impacts of the no-action alternative would have long-term, minor, adverse, cumulative impacts on health and safety.

Conclusion: Alternative A would have long-term, minor, adverse impacts on health and safety. Cumulative impacts would be long-term, minor, adverse.

Impacts of Alternative B (Preferred Alternative)

Alternative B would have short-term minor adverse impacts on health and safety. The adverse impacts would occur due to road repair operations, as motorists approach and pass through the construction area. The adverse impacts would be limited to the construction period. During construction, a traffic control plan would be implemented to provide visitors with safe driving conditions during construction. The traffic control plan would include temporary closing of lanes, sequencing of construction events to minimize impacts to traffic, and restricting contractor work. Visitors would be notified of changes in traffic patterns, detours, and traffic delays through the use of signs and public notifications. The Scenic Drive would be completely closed for as much as a month between Grand Wash and the Capitol Gorge parking area, but it would remain passable by administrative and emergency vehicles. All of these actions would be designed to reduce short-term impacts on safety. Routine road maintenance would continue to impact health and safety with noise, delays, and diminished visual quality, but maintenance needs and frequencies would be reduced. With these measures, there would be a minor short-term adverse impact on safety from changes in traffic patterns, construction activities, and continuing routine maintenance on the Scenic Drive.

The correction of existing roadway deficiencies and improved safety features would increase safety for motorists on the Scenic Drive. The long-term impacts would be beneficial. The rustic character of the road would be retained, but visitors would be able to drive more safely on the newly surfaced roadway and repaired low water crossings. The improved turning width at the Fruita Campground would provide a safer traffic flow through there.

Cumulative Impacts: The effects of other past, present, and future actions (as discussed above in alternative A) would have short-term, minor, adverse impacts and long-term beneficial impacts on health and safety. Those actions, in combination with the short-term minor adverse impacts and beneficial long-term impacts of alternative B, would have short-term minor adverse impacts and beneficial long-term cumulative impacts on health and safety.

Conclusion: Alternative B would have short-term minor adverse impacts and beneficial long-term impacts on health and safety. Cumulative impacts would be short-term, minor, adverse and long-term beneficial.

Visitor Use and Experience

Intensity Level Definitions

Capitol Reef National Park was established in 1937 for the benefit and enjoyment of the public. The methodology used for assessing impacts to visitor use and experience is based on how the proposed repairs to the Scenic Drive would affect the visitor experience. The thresholds for this impact assessment are as follows:

Negligible	Minor	Moderate	Major
Changes in visitor experience and recreational resources would be barely noticeable. The visitor would not likely be aware of the effects associated with the action.	Changes in visitor experience and recreational resources would be noticeable. The visitor would be aware of the effects associated with the action, but the effects would be slight.	Changes in visitor experience and recreational resources would be readily apparent. The visitor would be aware of the effects associated with the action and would likely express an opinion about the changes.	Changes in visitor experience and recreational resources would be readily apparent and severely adverse or exceptionally beneficial. The visitor would be aware of the effects associated with the action and would likely express a strong opinion about the changes.

Short-term: Impact occurs only during project construction
Long-term: Impact continues after project construction

Impacts of Alternative A (No-Action Alternative)

Effects on the visitor and recreation experience under the no-action alternative would be long-term, minor to moderate, and adverse. The road would remain open and visitors would continue to have access to park resources, but as roadway conditions continued to deteriorate, periodic maintenance projects would require traffic delays at random times and locations, inconveniencing visitors. Roadway conditions would deteriorate to the point that the quality of the visitor experience is diminished from a visibly damaged road, eroded low water crossings, or deterioration of other structural features.

Driving and recreational experiences such as bike riding would decline due to the poor condition of the road surface. Road noise and associated activities during maintenance and repair would likely cause wildlife to avoid the construction areas, reducing visitors' opportunities for wildlife viewing near the road. Those effects would be noticed by visitors, but the effects would be slight. Effects on the visitor and recreation experience would be long-term, minor, and adverse.

As more of the road surface continued to deteriorate, there would be a long-term, moderate, adverse effect on visitor use and experience. Visitors would need to focus more on driving, thus limiting their ability to experience the park's scenery and wildlife. The continued deterioration and increased frequency of maintenance and repairs would convey the impression that the park is poorly maintained, thus diminishing the overall park experience. Visitors would be aware of the effects associated with the deteriorating roadway and would be likely to express an opinion about the conditions. The effects on the visitor and recreation experience would be long-term, moderate, and adverse.

Cumulative Effects: For the erosion control/bank stabilization measures along State Route 24, impacts to visitor use and experience were minor and adverse in the short-term, and beneficial in the long-term. The development of the Sleeping Rainbow Ranch as a research facility had minor, adverse, long and short-term impacts to visitor use and experience. Replacing the administration and resources trailers with permanent structures will have a long-term beneficial

impact on visitor use and experience. Constructing drainage structures on Utah SR-24 to return the Fremont River into its natural channel will have moderate adverse impacts in the short-term, and beneficial impacts in the long-term. The impacts of the past, present, and future actions, in combination with the long-term, minor to moderate, adverse impacts of alternative A, would have long-term and short-term, moderate, adverse impacts on visitor use and experience.

Conclusion: Alternative A would have long-term, minor to moderate, adverse impacts, on visitor use and experience. Cumulative impacts would be long-term and short-term, moderate, adverse.

Impacts of Alternative B (Preferred Alternative)

Alternative B would have short-term minor adverse impacts on visitor use and experience during road repair and rehabilitation activities, and it would have long-term minor adverse impacts associated with maintenance activities. However, rehabilitation and resurfacing of the Scenic Drive would also have long-term beneficial impacts on visitor use and experience.

Most of the adverse impacts to visitor use would occur during rehabilitation and resurfacing operations, and would be limited to the construction period. Construction along the roadway would result in minor adverse impacts on visitor use by causing increased levels of noise and dust, diminished visual quality, and delays in traveling the length of the road. Noise and other associated activities would likely cause wildlife to avoid the construction areas, reducing visitors' opportunities for wildlife viewing near the road. Construction would also adversely impact noise levels and the visual experience in the surrounding countryside. Those short- term adverse impacts would be noticeable to visitors, but their effect would be slight.

Construction would likely require that the Scenic Drive would be closed between Grand Wash and the Capitol Gorge parking area for as long as a month, creating a short-term moderate adverse impact on visitor use and experience. Visitors would be very aware of the impact, and would likely express an opinion about it.

Road maintenance would continue to impact visitor use and experience with noise, delays, and diminished visual quality, but maintenance needs and frequencies would be reduced. Use of stone retaining walls to prevent erosion near the roadway would create a long-term adverse impact to visual quality, by introducing a new and unnatural visual element. The combination of intermittent road maintenance activities, combined with the addition of some new retaining walls would create a minor long-term adverse impact to visitor use and experience.

Following construction, the visitor experience would be improved and would benefit from alternative B. Access throughout the length of the Scenic Drive would be improved, because it would be fully paved with asphalt pavement or chip-seal. With subgrade improvements, those segments of the road that are affected by subsidence or slumping would no longer require frequent repairs. Visitors would be able to drive comfortably on the newly surfaced roadway, with increased opportunities to view scenery and wildlife, with less need to focus on road conditions. Paving the parking area at Capitol Gorge would eliminate rutting and the uneven surface there. Access to the comfort station at that parking area would also be improved.

Cumulative Effects: The effects of other past, present, and future actions (as discussed above in alternative A) would have short-term minor to moderate, adverse impacts, long-term, minor, adverse impacts on visitor use and experience, but they have long-term beneficial impacts. Alternative B would add a slight increment to the short-term, moderate, adverse impacts, and long-term beneficial cumulative impacts on visitor use and experience.

Conclusion:

Alternative B would have short-term minor to moderate adverse impacts, long-term minor adverse impacts, and long-term beneficial impacts on visitor use and experience. Cumulative impacts would be short-term, moderate, adverse, and long-term beneficial.

Park Operations and Management

Intensity Level Definitions

Implementation of a project can affect the operations of a park such as the number of employees needed; the type of duties that need to be conducted; when/who would conduct these duties; how activities should be conducted; and administrative procedures. 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 and management are defined as follows:

Negligible	Minor	Moderate	Major
The effects would be at low levels of detection and would not have an appreciable effect on park operations and management.	The effects would be detectable and would be of a magnitude that would not have an appreciable effect on park operations and management. If mitigation was needed to offset adverse effects, it would be simple and likely successful.	The effects would be readily apparent and would result in a substantial adverse or beneficial change in park operations and management in a manner noticeable to staff and the public. Mitigation measures would probably be necessary to offset adverse effects and would likely be successful	The effects would be readily apparent, would have a substantial effect on park operations and management in a manner noticeable to staff and the pubic, and would be markedly different from existing operations. Mitigation measures to offset adverse effects would be needed, extensive, and success could not be guaranteed.

Short-term: Impact occurs only during project construction
Long-term: Impact continues after project construction

Impacts of Alternative A (No-Action Alternative)

Alternative A would have a long-term moderate adverse impact on park operations and management. The effects of the continuing and increasing operational and maintenance demands would be readily apparent and would have a substantial effect on park operations and management in a manner noticeable to staff and the public. The alternative would maintain the existing circumstances in which park staff would continue to clear culverts, stabilize slopes,

patch potholes, repair low water crossings, and complete other isolated repairs as the need arises. Subsurface flows would continue to adversely affect the road subgrade in some locations. Seasonal surface flows across the road would continue to cause intermittent damage to the pavement.

The road would continue to deteriorate, and repair costs would continue to escalate. The repair efforts needed to offset those adverse effects would likely be successful, but the frequency of those efforts would increase. Temporary road closures for repairs would become more frequent. Staff time required for roadway maintenance of culverts, shoulders, and other road features would increase.

Cumulative Effects: Development of the Sleeping Rainbow Ranch as a research facility has resulted in a long-term, moderate, adverse impact upon park operations. Replacing the administration and resources trailers with permanent structures would have a long-term beneficial impact on park operations. Constructing drainage structures on Utah SR-24 to return the Fremont River into its natural channel would have no impact on park operations. The effects of those past, present, and future actions, in combination with the long-term, moderate, adverse impacts of the no-action alternative, would have a long-term, moderate, adverse cumulative impact on park operations and management.

Conclusion: Alternative A would have long-term, moderate, adverse impacts on park operations and management. Cumulative impacts would be long-term, moderate, and adverse.

Impacts of Alternative B (Preferred Alternative)

Alternative B would have a short-term, minor, adverse impact and a long-term, minor, adverse impact, as well as a long-term beneficial impact on park operations and management. The process of planning for and assisting in the completion of the repair and rehabilitation of the Scenic Drive would require time and attention from park staff, which would add to their workloads. Travel on the Scenic Drive would be impeded during road rehabilitation and resurfacing activities. Those impacts would end when construction was finished. Those minor short-term impacts would be detectable, but would not have an appreciable effect on park operations and management.

If the rehabilitation and resurfacing of the Scenic Drive proposed in alternative B were completed, maintenance workloads and costs would decrease, creating a long-term beneficial impact. A newly paved roadway would require fewer periodic repairs; there would be no unpaved segments of roadway to maintain. Damage caused by subsurface seepage in the roadway subgrade and seasonal flows across the road pavement would be eliminated.

Cumulative Effects The effects of other past, present, and future actions (as discussed above in alternative A) would have long-term, moderate, adverse and long-term beneficial impacts on park operations and management. The long-term beneficial impacts and short-term and long-term, minor, adverse impacts of alternative B would add a small increment to the long-term, moderate, adverse cumulative impacts on visitor use and experience.

Conclusion: Alternative B would have short- term and long-term, minor, adverse impacts, as well as a long-term beneficial impact on park operations and management. Cumulative impacts would be long-term, moderate, and adverse.

Unacceptable Impacts and Impairment

Unacceptable impacts are those that fall short of impairment, but are still not acceptable within a particular park's environment. Neither alternative creates unacceptable impacts. Both alternatives are consistent with the park's purposes and values. The park was established for

resource protection and visitor enjoyment and both alternatives protect resources to the maximum extent possible and provide opportunities for visitor enjoyment. Neither alternative impedes the attainment of the parks' desired future conditions as this project is consistent with previous planning efforts.

Under either alternative, visitors and employees would continue to have opportunities to enjoy, learn about, or be inspired by park resources and values in a safe and healthful environment. Both alternatives provide for the resurfacing and repair of the Scenic Drive in ways that do not unreasonably interfere with park programs, an appropriate use, the natural atmosphere, or concessioner activities.

As described at the beginning of this discussion of Environmental Consequences, the NPS' threshold for considering whether there could be an impairment is based on major (or significant) effects. The analysis of effects on cultural landscapes, soundscape, geology and soils, health and safety, visitor use and experience, and park operations and management determined that there would be no major adverse effects under either alternative; adverse effects were analyzed as negligible to moderate. Guided by this analysis and the superintendent's professional judgment, there would be no impairment of park resources and values from implementation of either alternative.

CONSULTATION AND COORDINATION

Internal Scoping

Internal scoping was conducted by an interdisciplinary team of professionals from Capitol Reef National Park, Intermountain Region Office, the DSC, and CFLHD. Interdisciplinary team members met at the park on February 10 and 11, 2009, to discuss the purpose and need for the project; existing conditions, and potential alternatives. An environmental screening form was completed by park staff in May 2009 to consider potential effects on park resources and to identify the appropriate NEPA document for analyzing those potential effects. The appropriate NEPA document was identified as an EA. On October 20, 2009 staff from the park, DSC, and CFLHD reviewed conditions along the Scenic Drive again, to consider repair and rehabilitation procedures, potential environmental impacts, and possible mitigation measures. The team also considered past, present, and reasonably foreseeable projects that may have cumulative effects, gathered background information, and discussed public outreach for the project.

Agency Consultation

In accordance with the Endangered Species Act, the National Park Service contacted the U.S. Fish and Wildlife Service (USFWS) with regards to federally listed special status species. The USFWS concurred with the NPS opinion that the proposed project is not likely to adversely affect any protected species, and is not likely to adversely modify critical habitat of the Mexican spotted owl. The NPS consultation letter and the USFWS concurrence are included in Appendix A of this EA.

In accordance with Section 106 of the National Historic Preservation Act, the NPS provided the Utah SHPO an opportunity to comment on the effects of this project through submittal of separate documentation. A consultation letter was sent to the SHPO by the park on January 22, 2010. On January 28, the SHPO concurred that sites that are eligible for listing in the National Register of Historic Places would not be adversely affected by the proposed project. The consultation letter with signed concurrence by the SHPO is included as Appendix B of this EA.

Native American Consultation

Copies of the EA will be sent to Native American tribes during the public review period, inlcuding:

- Hopi Indian Tribe
- Kaibab Paiute Indian Tribe of Arizona
- Navajo Nation
- Paiute Indian Tribes of Utah
- San Juan Southern Paiute Tribe
- Southern Ute Indian Tribe
- Uintah and Ouray Ute Tribe
- Ute Mountain Ute Tribe
- White Mesa Ute

Environmental Assessment Review and List of Recipients

The environmental assessment will be released for public review in February 2010. 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 local media outlets. 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 park's visitor center and on the internet at http://parkplanning.nps.gov/care.

The environmental assessment is subject to a 30-day public comment period. 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.

List of Preparers

From the National Park Service, Capitol Reef National Park, Torrey, Utah:

- Al Hendricks, Superintendent
- Riley Mitchell, Chief of Interpretation
- Scott Brown, Chief Ranger
- Linda Richards, Facility Manager
- Dave Worthington, Chief, Resource Management and Science
- Sandy Borthwick, Biologist
- Cameron Cox, Archeological Technician

From the National Park Service, Denver Service Center:

- Cam Hugie, Project Manager
- Lee Terzis, Cultural Resource Specialist
- Jesse Van Horne, Project Specialist, Landscape Architect
- Steven Hoffman, Natural Resource Specialist

From the Federal Highway Administration, Central Federal Lands Highway Division:

- Christopher Longley, Project Manager

From Parsons Brinckerhoff

- Steven Morgan, Project Manager
- Larry Nechanicky, Project Engineer
- Colin Haggerty, Drainage Engineer

References

USFWS 1979 *Classification of Wetlands and Deepwater Habitats of the United States Cowardin et al.*

NPS 1985 *General Management Plan and Development Concept Plan, Capitol Reef National Park, 1985.*

NPS 2001 *Record of Decision, Final General Management Plan and Environmental Impact Statement, Capitol Reef National Park, 2001*

NPS 2006 *Management Policies*, National Park Service, U.S. Department of the Interior.

NPS 2008 *Capitol Reef National Park Visitor Study. Capitol Reef National Park, Utah*.

NPS 2008 *National Park Service Procedural Manual #77-1: Wetland Protection*

NPS 2008 *National Park Service Procedural Manual #77-2: Floodplain Management*

FHWA 2009 Preliminary Design Study Report, Draft, Capitol Reef National Park, Wayne County.

Bonnifield, J. 2009 *Archeological Inventory of the Scenic Drive Road Project in Capitol Reef National Park, Utah.*

APPENDIX A

U.S. Fish and Wildlife Service Consultation and Concurrence Documentation

Copy

United States Department of the Interior

NATIONAL PARK SERVICE
Capitol Reef National Park
HC 70 Box 15
Torrey, Utah 84775

IN REPLY REFER TO:
L7617

Memorandum

December 3, 2009

To: Larry Crist, Field Supervisor, Ecological Services, Utah, USFWS

From: Albert J. Hendricks, Superintendent, Capitol Reef National Park, NPS

Subject: Informal Section 7 Consultation for a Proposal to Rehabilitate and Resurface the 8-Mile Scenic Drive Road in Capitol Reef National Park, Wayne County, Utah

Capitol Reef National Park (Park) requests an informal consultation under Section 7 of the U.S. Endangered Species Act (Act) for a proposal to rehabilitate and resurface the eight-mile chip-sealed Scenic Drive road in Capitol Reef National Park. The proposed action would occur entirely on Park lands, from the intersection with Utah State Route 24 (SR-24) south to the Capitol Gorge parking area (Figure 1).

The proposed action is needed because the Scenic Drive road surface is worn and damaged with numerous ruts, cracks, and potholes resulting in unsafe conditions for visitors and park staff. The proposed action is to repave the road and the Capitol Gorge parking area with chip seal. Existing concrete low water crossings would be repaired or replaced as needed. Damaged and deteriorating culverts would be repaired and/or reconstructed. In some areas new culverts would be installed. Edges of the roadway would be rehabilitated where slope erosion and slumping has occurred. Existing pullouts would be removed or reconstructed and formalized. Most of the construction activities would be confined to the existing roadway, but some excavation would be required to widen the roadway to improve sight distance. Staging areas for materials and equipment would be restricted to previously disturbed areas. Areas disturbed by construction activities would be revegetated using native plants and seeds.

Our data indicate that the following species occur in the Park and could potentially occur in the project area:

Plants

Barneby reed-mustard	(*Schoencrombe barnebyi*)	Endangered
Jones cycladenia	(*Cycladenia humilis* var. *jonesii*)	Threatened
Last Chance townsendia	(*Townsendia aprica*)	Threatened

Maguire's daisy	(*Erigerion maguirei*)	Threatened
Western nodding ladies-tresses	(*Spiranthes diluvialis*)	Threatened
Winkler cactus	(*Pediocactus winkleri*)	Threatened
San Raphael cactus	(*Pediocactus despainii*)	Endangered
Wright fishhook cactus	(*Sclerocactus wrightiae*)	Endangered
Animals		
Mexican spotted owl	(*Strix occidentalis lucida)*	Threatened
Southwestern willow flycatcher	(*Empidonax traillii extirmus*)	Endangered
Yellow-billed cuckoo	(*Coccyzus americanus*)	Candidate

The Park Service has no records of threatened, endangered or candidate species within the project area and field examinations by Park staff confirm that none of the species listed above are present within the project area.

A portion of the proposed project area lies within designated critical habitat for the Mexican spotted owl and is within 0.6 miles of the Grand Wash Protected Activity Center (PAC). This PAC has historically been occupied by owls with two young observed in 1978 and a pair observed in 1981 and in 1989. A nest site has never been found within the PAC. The most recent detection of a Mexican spotted owl in the area was in 1996 when a single male was observed. Since then, surveys have been conducted in 1997, 2001, 2008 and 2009; no owls have been detected. Based upon these survey data, construction activities associated with this project are not expected to affect nesting or roosting Mexican spotted owls. Construction activities are not expected to adversely affect any of the primary constituent elements of the critical habitat or to adversely modify critical habitat.

The Park believes that the proposed project is not likely to adversely affect any protected species, nor is it likely to adversely modify critical habitat of the Mexican spotted owl. The Park requests the concurrence of the U. S. Fish and Wildlife Service that the proposed action is not likely to impact federally listed species, proposed species, candidate species, or designated or proposed critical habitat. With your concurrence, the Park believes that our obligations under the requirements of Section 7 of the Act will be satisfied.

We appreciate your assistance in examining the proposed project. If you have any questions, please contact Sandy Borthwick, Park Biologist, at 435-425-3791 x 144.

Linda A. Richards 12/03/09
for Albert J. Hendricks

☐ Concur No Effect

☒ Concur Not Likely to Adverse Affect

☐ No Comment

U.S.F.W.S. – Utah Field Supervisor

Date 12/15/09

APPENDIX B

Utah State Historic Preservation Office
Consultation and Concurrence Documentation

10-0147

United States Department of the Interior

NATIONAL PARK SERVICE

CAPITOL REEF NATIONAL PARK
TORREY, UTAH 84775

IN REPLY REFER TO:
H4217

January 22, 2010

Wilson G. Martin
State Historic Preservation Officer
Utah State Historical Society
300 S. Rio Grande Street
Salt Lake City, Utah 84101

Reference: Scenic Drive Rehabilitation and Resurfacing, Capitol Reef National Park

Dear Mr. Martin:

In cooperation with the Federal Highway Administration (FHWA), the National Park Service (NPS) proposes to rehabilitate and resurface eight miles of the Scenic Drive in Capitol Reef National Park. The project consists of repairing eight miles of the roadway from the intersection with Utah State Route 24 to the parking lot for Capitol Gorge. The road repair project would provide a safe driving surface for park visitors and employees and protect adjacent natural and cultural resources from damage that is resulting from drainage failure and pavement deterioration. The NPS considers the Scenic Drive potentially eligible for listing in the National Register of Historic Places.

In accordance with § 106 of the National Historic Preservation Act of 1966, as amended, and 36 CFR Part 800, we wish to initiate consultation with the State Historic Preservation Office and seek your review and comment regarding this proposed undertaking. We include the following documents for your review:

- **Design Study Report**
  This indexed document was completed after the 30% field review by the FWHA and NPS. It consists of a detailed description of the proposed rehabilitation of the Scenic Drive, including maps, drawings and photographs. Conclusions and recommendations are found on pages 23–25.

- **Historic Site Form**
  This form was completed at the request of Chris Hansen, of your office, and includes an historical narrative about the Scenic Drive.

- **Archeological Survey Report**
  An archeological inventory of Scenic Drive was completed in the summer of 2009. A total of eight sites were identified. One site was previously recorded and was revisited. Two sites—42WN2870 and 42WN1825—are considered eligible for listing in the National Register. In the vicinity of these sites, a professional archeologist would monitor construction activities, which would be limited to areas within and adjacent to the road prism.

It is our opinion based upon the Archeological Survey Report, the Scenic Drive Historic Site Form, and information in our files, that the eligible sites in the vicinity of the proposed undertaking will not be adversely affected. We seek your concurrence with this determination. For your convenience we have provided I *Concur* and *Date* blocks below.

If you should have any questions or require additional information please do not hesitate to contact Dave Worthington of my staff at (435) 425-3791 extension 145.

Sincerely,

Albert J. Hendricks
Superintendent

Enclosures

I Concur: _____ Date: 1-28-09
Preservation Planner, UT SHPO

I Do Not Concur: _____ Date: _____

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

NPS D158/100327 February 2010

United States Department of the Interior ✧ National Park Service