

## **FINDING OF NO SIGNIFICANT IMPACT**

### **Replacement of the Cedar Grove Bridge**

Kings Canyon National Park, California

December 2009

This finding of no significant impact (FONSI), the environmental assessment (EA), the Wild and Scenic Rivers Section 7(a) Determination, and the Floodplains Statement of Findings constitutes the record of the environmental analysis and decision-making for the replacement of the Cedar Grove Bridge within Kings Canyon National Park. The National Park Service (NPS), in cooperation with the Federal Highway Administration/ Central Federal Lands Highway Division (FHWA) will implement alternative B, the replacement of the existing bridge with a 280-foot bridge constructed in the same location. The selected alternative will also include a river restoration component. No comments were received that required any changes to the EA.

#### **PURPOSE AND NEED FOR FEDERAL ACTION**

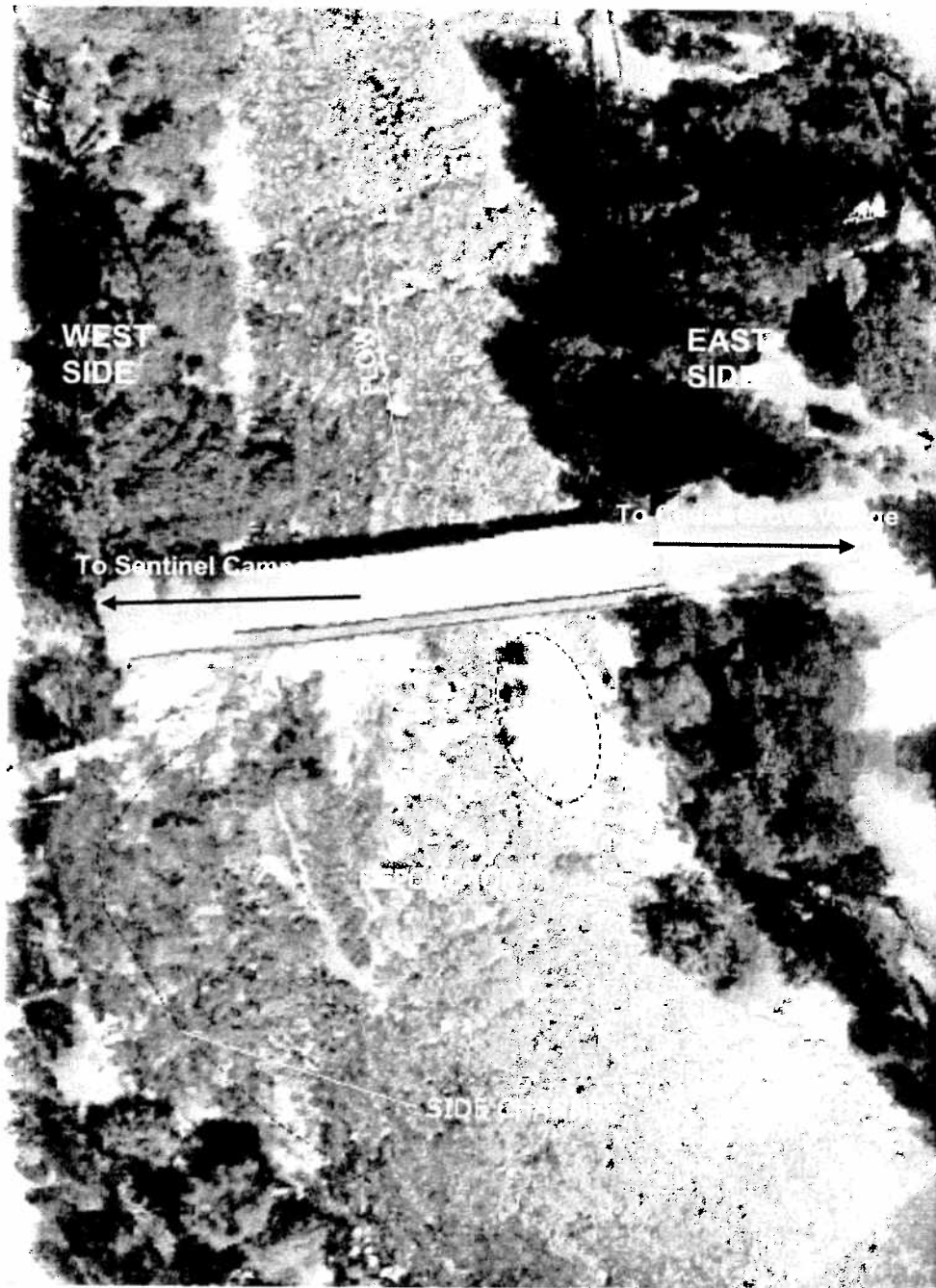
The purpose of this project is to maintain and enhance access for visitors, park employees, and concessioners in the Cedar Grove area in a safe and sustainable manner. This project will implement a component of the approved Final General Management Plan and Comprehensive River Management Plan/ Environmental Impact Statement for Sequoia and Kings Canyon National Parks (FGMP/EIS) (2007). The FGMP/EIS calls for the replacement of the Cedar Grove Bridge to reduce impacts and increase sustainability and to protect the free-flowing character of the river area.

Another purpose of this project is to meet the mandates of the Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.). The 7.6-mile segment of the South Fork of the Kings River is classified as a recreational river segment. In accordance with the Wild and Scenic Rivers Act and NPS *Management Policies 2006*, the area will be administered in such a manner as to protect and enhance the values that caused it to be included, without limiting other uses that do not substantially interfere with public use and enjoyment of these values.

In its current condition, the bridge does not provide a safe, durable, sustainable passage for vehicles at Cedar Grove. The existing bridge was constructed in 1939 and has a very low load capacity that does not comply with the American Association of State Highway and Transportation Officials (AASHTO) weight standard of 36 tons. Due to degradation of the bridge, its current capacity is 7 tons. The pedestrian access across the bridge is degrading and needs to be repaired. A longer bridge would improve the Kings River's ability to flow in a wild and natural course and better protect the river's outstandingly remarkable values (ORVs).

#### **SELECTED ACTION**

The selected alternative is Alternative B as described in the EA (with no modification), consisting of four elements: 1) preparing for demolition, construction, and restoration, 2) removing the existing bridge, 3) constructing the new bridge, and 4) protecting the bridge and restoring the river. These project elements are interrelated and will be undertaken as one project. No comments were received that required any changes to the EA.



**Figure 1. Project Area**

**Demolition, construction, and restoration preparation**

The preparation activities will include moving equipment and materials to the project area, installing erosion-control measures, surveying the project area, and other preliminary activities. Staging areas for storage of construction equipment and materials will include the closed sections of the road approaching the bridge on each side of the river, half of the day use parking area parking lot south of the road on the east side of the bridge, and the Cedar Grove Storage Yard, and a staging area located 2.5 miles east of Cedar Grove.

The Cedar Grove Bridge will be closed during demolition and construction. The North Side Road will be used as a detour for the Cedar Grove Lodge during this time. Oversized vehicles will be directed to a turnaround located 1.5 miles north of the intersection of the Kings Canyon Scenic Byway and North Side Road at the Lewis Creek trailhead parking area. Following construction, the Lewis Creek trailhead parking area will be restored to a pre-construction condition and parking configuration. The North Side Road will be rehabilitated to repair wear associated with increased construction traffic.

Fiberoptic, electrical, and telephone cables, which are currently located under the bridge will be temporarily relocated from the bridge girders and will span the river in a sling attached to suitable trees on each side of the river. Conduits will be placed in shallow trenches and the cables will run through them back to splice boxes. Sewer and water connections to the Cedar Grove Lodge will be maintained during construction to the extent practicable.

Excess excavated material from the existing bridge removal and new bridge construction, which is estimated at 200 cubic yards, will be used as part of the restoration phase of the project.

Bridge demolition will involve removing the curbs, rails, and asphalt surface from the bridge deck; the wooden bridge deck; steel beams below the bridge deck; and abutments, wing walls, and piers. Removing the piers and abutments will require the construction of a temporary access route to the stream to allow equipment access to the piers. This may involve adding fill material to the riverbank and streambed. Work on the west side abutment will include the removal of approximately 350 cubic yards of material. The demolition of the existing piers, abutments, and wing walls will include breaking up the concrete structures and removing all material. Some excavation will be required at the base of the piers and abutments.

River restoration activities will be completed during bridge removal. The depositional zone immediately upstream of the bridge along the center portion of the channel appears to have been caused by the current bridge constriction and also may be contributing to erosion along the west bank upstream of the bridge. Approximately 170 cubic yards of material will be excavated from the depositional area and used to fill in the eroded portion of the channel along the west bank upstream of the bridge. This approach will restore the channel to a configuration that more closely resembles the natural channel geometry in this reach and may reduce the deposition potential upstream of the bridge. It will also improve the hydraulic transition into the bridge section. However, given the significant velocities through this reach, additional channel training features (e.g. larger bed material coupled with uprooted trees, etc.) will be constructed and maintained to keep the material in place.

### **New Bridge Construction**

A new 280-foot long bridge will be constructed in the same location as the removed bridge. The bridge will have steel girders placed on concrete bridge abutments and two concrete piers, and steel handrails with stone masonry pillars. The bridge will have a concrete deck to accommodate two 11-foot travel lanes and a sidewalk with a curb on the south side. Both roadway approaches will also be reconstructed.

Construction of both piers will involve the use of micro-piles to minimize the amount of excavation needed for the pier footings. The construction of both piers will require the excavation of approximately 680 cubic yards of material. This excavation will be filled in by the construction of the pier cofferdams and footings. The construction of both piers, including the cofferdams, footings, columns, and backfill will result in approximately 100 square yards of in-water disturbance.

Construction of the west side abutment, wing wall, and riprap will result in approximately 30 square yards of in-water disturbance. Forms for the abutments and wing walls will be installed and concrete pumped into the form. Construction of the east side abutment, wing wall, and riprap will result in approximately 185 square yards of disturbance in the water and on the stream bank. This work will be done during low flow periods, which generally occur in August and September.

At the base of the abutments, large riprap will be laid approximately 4 feet thick and extend up the river bank to 2 feet above the 50-year flood elevation. The abutment slopes will be constructed with materials that blend with the surrounding landscape. Rock stockpiled at the U.S. Forest Service (USFS) Convict Flat quarry will be used for this project. Any additional rock needed for the project will come from a park-approved commercial source outside of the park.

The bridge profile grade will be sloped to ensure gravity flow of the sewer. A cut on the west approach will be needed. This cut will be gradual, starting just east of the entrance to the Sentinel campground to just short of the bridge. The cut bank will be stabilized by a 1 to 4 foot high native rock wall. The cut will also require the realignment of the campground multi-use trail approximately 50 feet to the west of the current alignment. Approximately 90 linear feet of new multi-use trail will be constructed. The multi-use trail alignment on the other side of the road will be moved to meet the new crosswalk. The multi-use trail realignments will be routed around trees, and the original multi-use trail will be removed and revegetated. During construction, a multi-use trail detour will be delineated. Addition of fill may be necessary within the construction limits of the bridge approaches and the realignment of the campground multi-use trail.

To improve pedestrian access to the east side of the bridge, the bridge sidewalk with curb will be extended to the parking lot access drive east of the bridge. A reinforced concrete retaining wall, approximately 8-10 feet tall, will be constructed along the sidewalk, and a stairway located midway to the parking lot access drive will provide additional access to the parking lot. To maintain a consistent appearance between the bridge and the walkway, the retaining wall and the stairway will be covered with a stone veneer.

### **Bridge protection and river restoration**

During construction, the cobble from the abovementioned depositional area will be excavated from the center of the channel and relocated to the highly-eroded area along the west bank of the river. To protect the bridge abutment, stabilize the west bank of the river, and restore the channel to a configuration that more closely resembles the natural channel geometry in this reach, a wood reinforced floodplain or engineered log jam would be utilized. A wood reinforced floodplain/engineered log jam is an interconnected log structure ballasted with large rock. Logs are

stabilized with rock ballast and fill material. Quarry spalls (rock pieces 4-8 inches in diameter) will be placed over the rock and log structures to form a filter blanket. The structure can extend up to 60 feet into the river from the bank and will be a maximum of 300 feet in length. Some excavation of the river bed will be necessary to ensure the logs are well embedded in the substrate. Salvaged hazard or windfall trees, including some with root wads, from approved sources within the park will be placed to form an interconnected stacked structure. Revegetation of the banks and log jam structures will occur following the completion of the project.

Monitoring to evaluate the structural integrity of the reinforced floodplain will be done annually and following high flow events to determine if follow-up maintenance is needed and if the structure is meeting project restoration goals. Periodic maintenance of the log structure will be needed in the future as conditions warrant based on monitoring.

The primary challenge with the construction of the wood reinforced floodplain and/or engineered log jams is acquiring the appropriate materials. Any materials imported into the park from outside sources will be evaluated to assure that they are weed free. Some trees are available from the project area, and additional trees may be available from past and ongoing hazard tree work within the canyon. Rock ballast is more challenging to acquire, and could make the costs prohibitive. Therefore, prior to finalizing final project design, available materials will be considered and the design will be modified as necessary prior to construction.

## **ALTERNATIVES CONSIDERED IN THE ENVIRONMENTAL ASSESSMENT**

The October 2009 EA analyzed two alternatives:

- Alternative A: No action
- Alternative B: Replace the existing bridge with a 280-foot bridge in the same location.

Under the No Action alternative (alternative A), the NPS would not replace the existing bridge. Periodic maintenance would continue to occur to maintain existing conditions but no major renovations would take place. The no action alternative would result in no change from current conditions. The bridge would not meet AASHTO weight standard of 36 tons and would not provide a safe, durable, sustainable passage for vehicles. The no action alternative would not improve the river's ability to flow in a wild and natural course, or better protect the river's ORVs. The no action alternative would not include protective measures for natural resources, such as floodplains, riparian areas, and wetlands. It would not better protect park facilities downstream of the bridge. Therefore, this alternative was not the selected alternative.

The management preferred alternative in the EA was alternative B, the same action described above as the selected action. In addition to the two alternatives fully evaluated in the EA, several alternatives were considered and rejected.

### **Bridge Replacement with 330-foot Bridge and River Restoration**

This alternative included the removal of the existing bridge and replacement with a 330-foot-long bridge. While this alternative met many of the project objectives, it was determined by FHWA and NPS hydrologists that the longer bridge would not provide a greater hydraulic benefit or meet project objectives better than the selected alternative (NPS Water Resources Division, Smillie and FHWA/CFLHD, Hogan, pers. comm. 2009). Thus, the impacts of constructing a 330-foot long bridge would be very similar to the 280-foot bridge alternative,

would not provide additional resource benefits, and would be more expensive. As a result, this alternative was dismissed from further analysis.

#### **Improvement of the North Side Road Including the West Intersection**

This alternative considered the improvement of the North Side Road, including the west intersection. The road would be widened to two lanes to better accommodate larger vehicles, such as RVs and vehicles with trailers. This widening would cause adverse impacts to wetlands, and additional flooding concerns. The intersection at the Kings Canyon Road would require extensive work on the rock face adjacent to the road, potentially resulting in an unstable slope, which would likely lead to more landslides and result in increased maintenance needs. The road improvements proposed in this alternative would eliminate the need for the vehicle bridge at Cedar Grove Village. However, a trail bridge would still be needed across the river to provide passage for pedestrians, bicycles, and utilities after the demolition of the existing bridge. This alternative would not meet the project objective to provide safe, durable, sustainable passage for vehicles due to the reasons listed above and would still require a constructed bridge for pedestrians across the river. It would not be consistent with the direction of the FGMP/EIS. The road improvements would also be excessively expensive and not sustainable in the long-term. Therefore, this alternative was dismissed from further analysis.

#### **Rebuild the Bridge in a New Location**

The present bridge site is less than ideal because it is located close to a bend in the river. A thorough search of the river was conducted by FHWA engineers and NPS representatives for approximately 0.5 mile above and below the current site. Several possible sites were identified, but they were all judged to be inferior to the present site. Constructing a bridge at any of the alternative locations would result in greater environmental impacts and in higher construction costs than reconstructing the bridge at the existing location. Therefore, alternative site locations were dismissed from further analysis.

#### **Relocate Cedar Grove Village**

The bridge is needed because the campgrounds and the Kings Canyon Road are on the south side of the river while most of the concession and park administrative facilities are on the north side. This alternative would include relocating the Cedar Grove Village and the adjacent park administrative facilities to the south side of the river, therefore, eliminating the need for the bridge. There are several suitable development sites that could be used for this purpose. However, the environmental impacts and the cost of relocating the facilities would be significantly greater than reconstructing the bridge and may result in unacceptable impacts. In addition, this alternative would not be consistent with the direction of the FGMP/EIS (NPS 2007). Therefore, this alternative was dismissed from further analysis.

#### **ENVIRONMENTALLY PREFERRED ALTERNATIVE**

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969, as amended (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that “[t]he environmentally preferred alternative is the alternative that will promote the national environmental policy as expressed in Section 101 of NEPA, which considers:

1. Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations.
2. Assuring for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings.
3. Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
4. Preserving important historic, cultural, and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice.
5. Achieving a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities.
6. Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources" (NEPA, section 101).

The environmentally preferred alternative is the NPS management preferred alternative. This alternative was selected because it will protect public and employee health, safety, and welfare by addressing safety concerns associated with deteriorating bridge conditions (NEPA criteria 2, 3, and 5); prevent the loss of cultural and natural resources by improving the degraded condition of a segment of the South Fork of the Kings River, a designated wild and scenic river (NEPA criteria 1, 2, 3, 4, and 5); and it would improve operations efficiency and sustainability by reducing the need for ongoing road maintenance and the consumption of depletable resources associated with such maintenance (criteria 1 and 6).

The no action alternative is not the environmentally preferred alternative because it would not address the deteriorating bridge conditions for employees and visitors (criteria 2, 3, and 5) as well as under the management preferred alternative nor fulfill the responsibilities of each generation as trustee of the environment by improving the degraded condition of the Cedar Grove segment of the South Fork of the Kings River (criterion 1).

## **PUBLIC ENGAGEMENT AND AGENCY COORDINATION**

### **Public Scoping**

Sequoia and Kings Canyon National Parks conducted public scoping from December 16, 2008 to January 19, 2009. A press release initiating public scoping was sent to area media outlets, and an invitation to comment letter was sent to 273 individuals, agencies, interest groups, and businesses on the parks' mailing list. The information was not published in any of the local newspapers and newsletters; however, it was published on the parks public website and posted on the NPS Planning, Environment, and Public Comment (PEPC) public website. Because the mailing list was so extensive, the parks believe that adequate outreach during scoping was achieved.

A total of five comments were received during the public scoping period. No substantive comments were received. Most of the comments were expressions of support for the project. One commenter made a suggestion for the alternative to remove the existing bridge and improve the North Side Road, which was considered and dismissed as part of the EA process.

### **Public Review of the EA**

The EA prepared by the NPS in cooperation with the FHWA was released for a 30-day public review on November 2, 2009. A printed EA was distributed to 66 individuals, agencies, business, and interest groups on the parks' mailing list, and 31 tribes and tribal representatives. In addition, 350 individuals, agencies, interest groups, businesses, and press outlets were notified by mail or email of the availability of the EA.

Information on the project and notification of the EA review period was published in the Fresno Bee newspaper and website on November 5, 2009. The EA was posted on the parks' public web site and also on the NPS PEPC public website. In addition, printed copies of the EA were available at several area libraries, including Tulare County libraries (Exeter Branch and Lindsay Branch), the Tulare County Law Library, and Fresno County libraries (Central, Sunnyside, Fowler, Kingsburg, Orange Cove, Parlier, Reedley, Sanger and, Selma).

One comment was received from an individual and one comment was received from the Tehipite Chapter of the Sierra Club during the public review period. The individual commenter had concerns about the necessity for the bridge replacement and the cost of the project. The necessity for the project was clearly stated in the EA under the "Purpose and Need" section.

The Sierra Club had comments related to the range of alternatives provided in the EA, and how the alternatives met the purpose and need for the project. The Sierra Club requested more information on bridge design and if the walkway would support wheelchair access. They suggested that the parks conduct a traffic analysis for the EA.

The alternatives that were fully evaluated are based on the project purpose, need, and objectives, and on the goals provided in the Sequoia and Kings Canyon Final General Management Plan (FGMP). The EA included several alternatives that were reviewed and ruled out because they did not meet the Council on Environmental Quality (CEQ) definition of "reasonable" as explained in the "Alternatives Considered" section of the EA and in this document. The EA included a preliminary design for the bridge under alternative B. The design considered the project objectives as documented in the EA, including protecting the rivers outstanding remarkable values, including scenic values, accommodating the flow of the river during high water events, and assuring the aesthetics of the bridge blends in with the surrounding natural environment. Final design for the bridge will be developed after the approval of the decision document and will adhere to the project objectives. Per the question on wheelchair access across the bridge, the sidewalk on the east side of the bridge will be ramped at the roadway as it enters the parking lot, making the bridge fully accessible.

Per the commenter's suggestion that a traffic analysis be completed, a traffic analysis and visitor use survey for the parks, including the Cedar Grove portion of Kings Canyon National Park, was conducted as part of the FGMP (2007) and was used when developing the preferred alternative for Cedar Grove.

Neither commenter provided any additional, new, or substantive information or new alternatives that would require revising the EA for additional public review or that would change the determination of effects.



### **Cultural Resources Consultations**

The parks initiated consultation with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) in November 2007 as stipulated in Section 106 of the National Historic Preservation Act, as amended. The SHPO was sent a scoping letter on December 15, 2008. In consultation with SHPO staff, the park prepared a determination of eligibility for the Cedar Grove Bridge. The park, with concurrence by the SHPO, determined that the Cedar Grove Bridge was ineligible for inclusion in the National Register of Historic Places. Section 106 consultation was concluded on March 25, 2009 with SHPO concurring with the parks' determination.

American Indian groups traditionally associated with the parks were sent scoping letters on December 15, 2008. The park contacted all associated American Indian tribes (Cold Springs Rancheria of Mono Indians, Sierra Nevada Native American Coalition, Sierra Foothill Wuksachi Tribe, North Fork Rancheria of Mono Indians, Eshom Valley Band of Wuksachi Indians, Table Mountain Rancheria, Santa Rosa Rancheria, Paiute-Shoshone of Lone Pine, Tubatulabals of Kern Valley, Native American Heritage Commission, Kern Valley Indian Community, Fort Independence Paiute Indians, Cold Springs Rancheria of Mono Indians, Big Pine Tribe of Owens Valley, Wukchumni Tribal Council, Tule River Indian Reservation, Big Sandy Rancheria of Mono Indians, Eschom Valley Band of Wuksachi Indians, Ft. Independence Indian Reservation, and Bishop Indian Tribal Council) by letter on October 10, 2007. No responses were received. Follow-up phone calls were made to each of the tribes in early March 2009. The park discussed the project with a representative from the Big Pine Paiute Tribe of Owens Valley and the Paiute-Shoshone of Lone Pine. Neither had any concerns about the project.

The EA was provided to the same tribes for their review on November 2, 2009. No comments were received from any American Indian groups on the project.

### **Other consultations**

An animal and plant sensitive species list was derived from the U.S. Fish and Wildlife Service (FWS) and California Department of Fish and Game (CDFG) websites, park files, and personal communications with park staff. The FWS and CDFG were also contacted by telephone by park wildlife biologist Harold Werner to get their initial feedback on the proposed bridge replacement project. These groups were also sent scoping materials and copies of the environmental assessment during the public review period. No comments were provided on the proposed project and no concerns were expressed on the proposed project.

The park also provided information to the U.S. Forest Service (USFS) to determine if they had any concerns related to the proposed project, specifically related to wild and scenic rivers. No comments were received from the USFS.

The park and FHWA will obtain permits under the Clean Water Act (404 Permit and 401 State Water Quality certification) prior to the start of construction.

## **WHY THE SELECTED ALTERNATIVE (PREFERRED ALTERNATIVE) WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT**

The following summary reviews impact considerations and highlights key safeguards of implementing the selected alternative. Mitigation measures as detailed in Table 2 will be employed to minimize these impacts during and after completion of the proposed project. The EA provides detailed consideration of the factors supporting the determination of non-significance.

**Water Quality.** Removing the existing bridge structure, new bridge construction, and the river restoration project will result in increased short-term erosion and sediment transport, increasing turbidity within and downstream of the project area. This will result in short-term, moderate, adverse impacts on water quality. However, overtime, the stabilization of the river bank resulting from the restoration work will decrease erosion and reconnect the river with the existing floodplain downstream of the bridge resulting in beneficial effects to water quality. During high water events, sediment will be deposited on the floodplain, reducing the potential for bridge damage. The added width of the channel opening as a result of the new bridge will also better protect the sewer and other utilities from flood impacts, lessening the potential for spills during flood events, resulting in long-term, beneficial effects on water quality within and downstream of the project area.

*Cumulative Effects on Water Quality* - Road and bridge maintenance, runoff from the road and parking lot, and emergency bridge protection measures can affect water quality. These actions lead to increased erosion and runoff, resulting in short-term, negligible to minor, adverse impacts on water quality. The selected action will result in short-term moderate adverse effects during construction, but will also result in a long-term, beneficial effect on water quality by increasing the floodplain area, protecting the bridge and utility lines from future damage, and allowing more infiltration by restoring the natural floodplain areas. Therefore, the overall cumulative impacts on water quality from past, present, and reasonably foreseeable future projects, in combination with the impacts of the selected action will be short- and long-term, minor to moderate, beneficial and adverse.

**Hydrology and Stream flow Characteristics.** The selected action will require a temporary diversion of the stream on each side of the channel below the bridge. This would result in a temporary change in the hydrology and stream flow characteristics at the project site, resulting in short-term minor to moderate adverse impacts. Once the longer bridge is constructed, the river would flow more naturally than the previous conditions. The majority of the flow constriction, except for the bridge piers would be removed to allow for a more free-flowing condition as well as passage of a 100-year flood. River restoration work will stabilize the river bank, protect the existing floodplain downstream of the bridge location, increase channel roughness to reduce flow velocities, and realign the channel to a more natural course. In the long-term, the selected alternative will result in long-term beneficial effects to the stream flow and hydrology in the vicinity of the project area as more natural conditions are restored.

*Cumulative Effects on Hydrology and Stream flow Characteristics* - Road and bridge maintenance activities, such as adding riprap and removing accumulating sediment and debris, and taking emergency action to stabilize the bridge abutments and river banks have affects

hydrology and stream flow characteristics in the past. These actions have resulted in short- and long-term, minor to moderate adverse impacts on hydrology and stream flow characteristics. The selected action will result in additive effects in the short-term from the removal and construction of the bridge, and during restoration work. In the long-term, there will be beneficial effects on the stream flow and hydrology because the longer bridge will allow for more natural flows and improve the hydrologic function, and less maintenance will be required in the future. Therefore, the overall cumulative impacts on hydrology and stream flow characteristics, in combination with the impacts of the selected action will be short-term, minor to moderate and adverse, and long-term and beneficial.

### **Wild and Scenic Rivers**

The removal of the existing bridge, construction of the new bridge, and river restoration work will require the temporary diversion of the river on each side of the channel upstream and below the bridge. These measures will temporarily restrict flow, resulting in short-term, moderate adverse impacts on the free-flowing character of the river. After construction is completed, the bridge cross section will be wider than the existing channel section, and the majority of the flow constriction, except for the bridge piers, will be removed. This will allow for a more free-flowing condition than the previous bridge as well as passage of a 100-year flood, resulting in long-term beneficial effects to this segment of Wild and Scenic River.

### **Impacts on ORVs**

*Scenic* - The removal of the existing bridge, construction of the new bridge, and river restoration project will cause local impacts on the river's scenic ORV from construction disturbance in the project area. These impacts will be local, short-term, minor to moderate, and adverse. Because these impacts would be short-term, they would not intrude on or unreasonably diminish the scenic ORV present in the area. The new bridge is larger and more complex than the existing bridge, causing a long-term, moderate, adverse impact on the scenic ORV of the river. This effect will be localized and will not have a segment-wide effect. Though the effect will be adverse, it will not intrude on or unreasonably diminish the scenic ORV present in the area because it is replacing an existing bridge, and will be offset by the improved free-flow of the river resulting from the project.

The protection of the bridge and installation of the reinforced floodplain or engineered log jam will cause local, short-term, minor to moderate, adverse impacts on the river's scenic ORV from construction disturbance. To minimize long-term adverse impacts, the abutment slopes will be covered with material that would be similar to the existing cobble of the riverbed. The reinforced floodplain/ engineered log jam will serve to stabilize the river channel, and eliminate the eroded west bank. The disturbed area and reinforced floodplain will be revegetated, and will eventually (1 to 2 growing seasons) blend in with the surrounding landscape, and will result in long-term beneficial effects on the scenic ORV.

*Geologic processes/conditions* - The removal of the existing bridge, the construction of the new bridge and bridge protection and river restoration will cause local impacts on the river's geologic ORV from construction disturbance around the project area. Given that the channel is largely gravel and cobbles, the use of heavy equipment will alter the channel bottom only slightly in the sections it traverses. The river banks will be revegetated upon completion of the construction.

These impacts will be local, short-term, negligible adverse and will not intrude on or unreasonably diminish the geologic ORV.

*Recreation* - The removal of the existing bridge, the construction of the new bridge and bridge protection and river restoration will cause local, short-term minor adverse impacts on the river's recreational ORV from bridge and instream closures related to construction at the project area. There will be other opportunities for visitors to continue to access the river outside the project limits. The replacement of the bridge will provide a long-term, safe, durable, sustainable passage for vehicles, pedestrians, and bicycles crossing the South Fork of the Kings River at Cedar Grove Village providing a localized, long-term beneficial effect on recreation ORVs.

*Cumulative Effects on Wild and Scenic Rivers* –The selected action will result in short-term minor to moderate adverse effects on the free-flowing character and ORVs as a result of construction actions, but in the long-term, will result in beneficial effects to the free-flowing character and ORVs from an increased bridge span, reduced maintenance, and by restoring the natural hydrologic function of the river. There will be no other changes to the existing conditions on the designated wild and scenic river segment. Overall, the selected action will result in short-term moderate adverse cumulative effects and long-term moderate adverse and beneficial cumulative effects to the free flowing character and ORVs.

### **Floodplains**

The removal of the existing bridge, construction of the new bridge, and river restoration work will require the temporary diversion of the stream. After construction is completed, the diversion will be removed. The selected alternative will result in a wider bridge cross section, and the majority of the flow constriction, except for the bridge piers, will be removed. This will allow for a more free-flowing condition than the previous conditions and the passage of a 100-year flood. River restoration will also restore more natural floodplain conditions, and will result in a more stable river bank and realignment of the channel to a more natural course. Overall the impacts to the floodplains from the selected action will be short-term minor and adverse, and long-term and beneficial.

*Cumulative effects on the floodplain* - The past construction and continued existence of park and concessioner facilities within the floodplain of the South Fork of the Kings River have affected the floodplain by filling in a portion of the floodplain and river channel, causing flow restrictions and increased erosion on the west bank of the river. The presence of the facilities and continued maintenance has resulted in long-term moderate adverse impacts on the floodplain in and around the project area. The construction of a longer bridge will improve the free-flowing condition of the river, allow for the passage of 100-year flood flows (reducing the need for emergency maintenance), and overall will benefit project area floodplains. The selected alternative will result in short-term adverse effects from construction activities within the floodplain, but, once project work is completed, long-term beneficial effects will occur to the floodplain. Cumulative effects to the floodplain would be short- and long-term, minor and adverse, and long-term and beneficial.

## **Wetlands**

During the project, short-term impacts to wetland hydrology and native riverine wetland species will occur from temporary dewatering and the use of heavy equipment in the riverine wetlands within the project area. Approximately 0.04 acres of sand-bar willow will be removed as a result of project work, however, the individual willows or willow cuttings will be salvaged prior to project work and replanted during restoration, reducing the adverse effects. Implementation of the selected alternative will result in short-term minor adverse impacts on riverine wetlands from bridge removal, construction and the restoration work. However, there would be long-term, beneficial effects to riverine wetlands from the restoration work, which includes revegetating the project area with native riverine wetland species.

*Cumulative effects to wetlands* - Past, present, and reasonably foreseeable future actions with the potential to affect wetlands include past bridge maintenance and the emergency stabilization of the west bank of the river. These actions have likely affected wetlands in the project area by disturbing or damaging wetland vegetation, and by compacting wetland soils during in-channel work, and have resulted in short- and long-term, minor adverse impacts on riverine wetlands. The selected alternative would contribute slightly to the overall adverse, cumulative effects on wetlands in the short-term. However, there would be long-term, beneficial effects from the restoration efforts, resulting in localized, short-term, minor, adverse, cumulative effects, and long-term beneficial cumulative effects to wetlands in the project area.

## **Vegetation and Non Native Species**

The selected alternative will result in the removal of 11 trees in the project area and an additional 15 trees may need to be removed depending on site conditions at the time of construction. Small shrubs, brush, and tree branches on the river bank will also need to be removed or pruned. Tree and shrub roots will be impacted by compaction caused by the use of heavy equipment accessing the river. As with any construction project, ground disturbance and the importation of non-native materials creates a risk for the invasion of non-native species.

Approximately 90 linear feet of new multi-use trail will be constructed, and the old path will be rehabilitated to match the surrounding vegetation. The multi-use trail will be routed around trees but still could impact the roots of the trees through compaction during construction. The temporary re-location of the fiberoptic, electrical, and telephone lines during project work will have a short-term minor impact on two large trees upon which the lines would be attached. However, the lines would be placed so as not to constrict or damage the trees.

**Table 1. Tree Removal for Cedar Grove Bridge Project**

Species	Diameter at Breast Height	Trees to be removed	Trees that may be removed
Incense Cedar	Up to 7"	1	3
	8"-14"	1	0
	15"-24"	0	2
	25"-37"	0	2
Ponderosa Pine	Up to 8"	0	3
	9"-15"	1	2

Species	Diameter at Breast Height	Trees to be removed	Trees that may be removed
	16"-24"	6	1
	25"-37"	0	0
Black Cottonwood	24"	1	0
	48"	1 (fused, double bole)	0
White Fir	12"	0	1
	27"	0	1
<b>TOTAL</b>		<b>11</b>	<b>15</b>

The selected alternative will result in localized, short-term, minor impacts from the removal or crushing of vegetation; and regional, short-term and long-term, moderate, adverse impacts on vegetation as a result in an increased potential for the introduction of non-native species. The planting of native species after the project work will result in long-term beneficial effects.

*Cumulative effects on Vegetation* - Past development, maintenance activities, and fire management activities affect vegetation primarily through the removal of vegetation and increasing the potential for the introduction of non native plant species. These actions have resulted in short- and long- term, negligible to minor, adverse and beneficial impacts on vegetation in a localized area within the development zone. The selected alternative will add slightly to the overall adverse effect by removing up to 35 trees and by damaging vegetation during project work. This impact would be offset by restoring native species to the area during and after project work. Overall, cumulative effects would be short- and long-term, minor, adverse and long-term and beneficial.

### **Wildlife and Fisheries**

The selected alternative will result in increased noise from equipment and increased human activities during construction, causing short-term, negligible to minor, adverse impacts on wildlife species. During construction, some small mammals could be temporarily displaced or killed. Larger animals, such as deer, will likely avoid the bridge area during construction. Black bear may be drawn to the area if food is not properly stored and removed. The removal of the trees for project work will likely result in only negligible to minor adverse effects to wildlife and habitat as these trees are directly adjacent to the road and are not considered high quality habitat. There will be short-term, minor, adverse impacts on fish and instream habitat as a result of increased turbidity and sedimentation during construction activities.

*Cumulative effects on Wildlife and Fisheries* - The existence of the roadway and associated maintenance activities, bridge maintenance and emergency repairs, development, and visitor use in the area have had long-term adverse minor effects on wildlife and fisheries in the developed area, but negligible effects in the region due to the amount of available and undisturbed habitat nearby. The overall cumulative impacts on wildlife and fisheries from past, present, and reasonably future projects, in combination with the selected alternative, is short-term, negligible to minor and adverse.

### **Visitor Experience, Health, and Safety**

The selected alternative will result in short-term, minor, adverse impacts on visitor experience from closures and detours related to project activities. However, there would be long-term beneficial effects to visitor experience and health and safety by increasing the load capacity of the bridge, providing an accessible sidewalk, and widening travel lanes. Overall the selected alternative will improve the visitor experience and health and safety of park employees and visitors with the reconstruction of the bridge, adding the universally accessible sidewalk, and widening the travel lanes.

*Cumulative effects on Visitor Experience, Health, and Safety* - Road and bridge maintenance, and emergency stabilization have affected visitor experience in the past through noise disturbance and bridge restrictions during project work. These actions have resulted in short-term, negligible to minor, adverse impacts on visitor experience. There will be minor adverse effects to the visitor experience from closures and detours during construction. However, in the long-term the visitor experience and health and safety of park employees and visitors will improve with the reconstruction of the bridge, adding the universally accessible sidewalk, and widening the travel lanes. Cumulative effects would be short-term negligible to minor and adverse, and long-term and beneficial.

### **BASIS FOR DECISION**

Alternative B, the preferred alternative as described in this document, is the NPS selected course of action. The selected alternative will be implemented to meet the following objectives:

- Provide safe vehicular, pedestrian, and bicycle access across the bridge in a manner that lessens resource impacts and improves sustainability;
- Provide utilities to the Cedar Grove Village in a safe and sustainable manner;
- Improve the Kings River's ability to flow in a wild and natural course and better protect the river's outstandingly remarkable values (ORVs);
- Protect other natural and cultural resources in the project area, including floodplains, riparian areas, and wetlands; and
- Protect park facilities downstream of the bridge.

Alternative B, the selected alternative, best fulfills the purpose of the project and meets the existing needs in the project area. The selected alternative fulfills the purpose of implementing the component of the approved FGMP/EIS for the parks that calls for the replacement of the Cedar Grove Bridge to reduce impacts and increase sustainability. It better meets the Wild and Scenic Rivers Act mandates by protecting and enhancing the hydrological and free-flowing character of a segment of the South Fork of the Kings River by returning the channel at the bridge site to a more natural width and removing most of the flow constriction. Improving the river's ability to flow in a wild and natural course better protects the river's ORVs, and allows the passage of a 100-year flood.

The selected alternative meets the need to provide a safe, durable, sustainable passage for vehicles entering and leaving Cedar Grove Village by increasing the load capacity from 7 tons to 36 tons. A sidewalk and curb along the south side of the bridge will meet the need to provide safe reliable pedestrian access to Cedar Grove Village. The project will result in beneficial effects to public health and safety.

The selected alternative also best meets the criteria in Section 101 of the National Environmental Policy Act for the environmentally preferred alternative; and, after consideration of effects described in the environmental assessment, there are no significant impacts on the human environment as defined by criteria in 40 CFR 1508.27.

The selected alternative will have no effect on museum collections in the park, and there will be no effect on historic structures or landscapes listed in or eligible for inclusion in the National Register of Historic Places. Cultural resource surveys of the Cedar Grove area were conducted in 1974, 1993 and 1997, and no archeological sites were identified.

The project can be implemented without any major adverse impacts to environmental, cultural, and socioeconomic resources. There will be no effect to sensitive, rare, or listed plant or animal species or their critical habitat. No highly controversial effects were identified during either the preparation of the environmental assessment or the public review period, and the impact analysis has not been debated. The nature of this project is such that it does not involve uncertain, unique, or unknown risks. The available information on which to base this decision is adequate.

The selected actions are not directly related to any larger proposal. The project does not establish a precedent or constrain any future considerations of use in the area. The NPS followed required compliance processes to ensure that this project does not violate any federal, state, or local environmental protection laws or requirements.

#### **MITIGATION MEASURES**

The FHWA project manager, NPS project manager or project specialist and park superintendent will ensure that the project remains within the construction limits and parameters established in the compliance documents and that mitigation measures are properly implemented. All protection measures will be clearly stated in the construction specifications/special construction requirements. These actions have been developed to lessen the adverse effects of the management preferred alternative and will also be applied to any necessary follow-up channel maintenance.

**Table 2. Mitigation Measures.**

Resource Area	Mitigation	Responsibility
<b>General Considerations</b>	Construction limits will be identified with construction tape or similar material prior to any construction activity. Workers will be instructed to avoid conducting activities and disturbing areas beyond the construction limits.	FHWA and NPS Project Manager
	All tools, equipment, barricades, signs, surplus materials, demolition debris and rubbish will be removed from the project work limits upon project completion. Any asphalt surfaces damaged during the project will be repaired to its original condition.	
	Contractors will be required to properly maintain construction equipment and generators (i.e., mufflers) to minimize noise from use of the equipment.	
	All equipment on the project will be maintained in a clean and well-	



Resource Area	Mitigation	Responsibility
	<p>functioning state to avoid or minimize contamination from automotive fluids. All equipment will be checked daily. Materials will be stored, used, and disposed in a proper manner. A hazardous spill plan will be approved by the park prior to construction. This plan will state what actions will be taken in the case of a spill, notification measures, and preventive measures to be implemented, such as the placement of refueling facilities, storage, and handling of hazardous materials, etc.</p> <p>To reduce the potential for cement spills, a confined area with appropriate containment and erosion control measures will be designated in one of the staging areas for washing out cement trucks. Where appropriate and available “environmentally friendly” grease, hydraulic oil, and bar and chain oil will be used. These lubricants are vegetable or mineral oil based, less toxic and biodegradable.</p> <p>Best management practices (BMPs) for drainage and sediment control will be implemented to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas. BMPs will include all or some of the following actions, depending on site-specific requirements:</p> <p>Disturbed areas will be kept as small as possible to minimize exposed soil and the potential for erosion;</p> <p>Waste, and excess excavated materials will be stored outside of drainages to avoid sedimentation. Silt fences, temporary earthen berms, temporary water bars, sediment traps, stone check dams, or other equivalent measures will be installed around the perimeter of stockpiled fill material;</p> <p>Regular site inspections will occur during construction to ensure that erosion-control measures were properly installed and are functioning effectively.</p> <p>A portable holding basin will be utilized at the concrete batch plant to contain waste from cleaning out the concrete trucks.</p>	
Water Quality, Hydrology and Stream Flow Characteristics	<p>All work in the streambed will be performed during periods of low flow, generally from late summer through early fall.</p> <p>Prior to working in the stream, the stream flow will be diverted around the work area. Temporary sediment traps, erosion check screens, coffer dams, water-inflated coffer dams (a re-useable water inflated dam – a single tube device with internal support for stability) and/or filters will be used to divert the main flow and reduce turbidity downstream from the project site. All in-stream devices will be removed between construction seasons and disturbed areas will be stabilized to prevent erosion. Diversions will be constructed in a manner that will provide a continuous flow to downstream reaches.</p> <p>Temporary work pads consisting of onsite alluvium, clean silt-free gravel, or river rock will be built for large stationary equipment working in the stream channel to provide a stable substrate.</p>	FHWA and NPS Project Manager

Resource Area	Mitigation	Responsibility
	<p>All heavy equipment operated in the stream channel will drive slowly and carefully to minimize sediment movement and resulting increased turbidity.</p> <p>At all upland cut and fill areas, erosion and sedimentation control measures will be implemented to minimize impacts on water quality. These measures will remain until final site stabilization (all soil disturbing activities at the site have been completed and that a uniform perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed).</p> <p>Water needed for construction and dust control will come from the existing developed water systems within the parks and will not be diverted from surface waters.</p> <p>The sewer lines will be encased in the appropriate grade sleeve, according to state regulations, to protect the lines and prevent any potential leakage from impacting water quality. Upon relocation, all utility lines will be monitored regularly to ensure all lines are operational.</p>	
Wild and Scenic Rivers	<p>To preserve the aesthetic qualities of the scenic river, the cut bank on the west approach to the bridge will be stabilized by a native rock wall. To maintain a consistent appearance between the bridge and the walkway and minimize the visual contrast of the bridge, the retaining wall on the east side of the bridge will be covered with a rock veneer.</p> <p>Any riprap placed on the soil surface will consist of materials that blend with the surrounding landscape.</p>	FHWA and NPS Project Manager
Floodplains/Wetlands	<p>The water quality mitigation measures and vegetation mitigation measures will reduce impacts to the riverine wetlands within the project area.</p> <p>Whenever possible, excavated material must be placed on an upland site. However, when this is not feasible, temporary stockpiling of excavated material in wetlands must be placed on filter cloth, mats, or some other semi-permeable surface, or comparable measures must be taken to ensure that underlying wetland habitat is protected. The material must be stabilized with filter cloth or other appropriate means to prevent reentry into the waterway or wetland.</p> <p>Temporary stockpiles in wetlands must be removed in their entirety as soon as practicable. Wetland areas temporarily disturbed by stockpiling or other activities during construction must be returned to their pre-existing elevations, and soil, hydrology, and native vegetation communities must be restored as soon as possible.</p> <p>Revegetation of disturbed soil areas should be facilitated by salvaging and storing existing topsoil and reusing it in restoration efforts in accordance with NPS policies and guidance. Topsoil storage must be for as short a time as possible to prevent loss of seed and root stability, loss of organic matter, and degradation of the soil microbial community.</p>	FHWA and NPS Project Manager; NPS Vegetation Specialist

Resource Area	Mitigation	Responsibility
	<p>Individual willows or willow cuttings from the project area will be salvaged prior to project work and replanted during restoration. Management techniques must be implemented to foster rapid development of target native plant communities and to eliminate invasion by exotic or other undesirable species.</p>	
Vegetation, Non-Native Species, and Soils	<p>A plant survey will be done prior to project construction to determine the presence of rare plants. If rare plants are found, they will be relocated if possible, as determined by park botanist.</p> <p>A revegetation plan will be developed for the purposes of restoring native vegetation to the project site, minimizing erosion, and stabilizing the bank and disturbed areas.</p> <p>Riparian vegetation will be planted as soon as possible to minimize sedimentation associated with bare ground. A primary revegetation technique for willows will be cutting and planting willow stakes. This will be done concurrently with the contractor's placement of riprap to allow the stakes to be placed between cracks in the rock. Other types of vegetation will also be planted, such as cottonwoods and pines, where appropriate.</p> <p>Topsoil will be removed if appropriate as determined by the park botanist, from the project area and stored for later use. After project completion, ground surface treatment may include grading to natural contours, replacing topsoil, incorporating native litter and duff layer over salvaged topsoil and, where necessary, seeding and planting.</p> <p>Restored areas will be monitored after construction to determine if the efforts are successful or if additional actions are necessary. Actions may include installation of erosion-control structures, reseeding, topsoil placement, and/or replanting the area, hand-pulling, and controlling non-native plant species with herbicide.</p> <p>In an effort to avoid introduction of non-native/noxious plant species, no hay or straw bales will be used during revegetation or for temporary erosion control.</p> <p>All construction equipment will be pressure washed/steam cleaned prior to entering the parks to ensure that all equipment and machinery are weed free. Construction equipment will be inspected by NPS staff prior to entering the parks to ensure compliance with cleanliness requirements. Inadequately cleaned equipment will be rejected.</p> <p>All haul trucks bringing fill materials (excluding asphalt) from outside the parks will be covered to prevent seed transport and dust deposition along the road corridor.</p> <p>Equipment and disturbance will be limited to within the construction limits, and to roadsides, bridge areas, and staging areas.</p> <p>All fill, rock or additional topsoil needed for project work will be obtained from NPS approved weed free sources. If weed free quarry</p>	FHWA and NPS Project Manager and Vegetation Specialist

Resource Area	Mitigation	Responsibility
	<p>sources cannot be located, the contractor will be required to scrape away topsoil at the quarry and/or acquire freshly exposed material with minimal seed deposition and washing of coarse materials (rip rap).</p> <p>Disturbed areas will be monitored for up to three years following construction to identify growth of noxious weeds or non-native vegetation. Treatment of non-native vegetation will be completed in accordance with NPS 77-7, Integrated Pest Management Manual.</p>	
Wildlife	<p>Construction activities will be limited to daylight hours with the exception of when water and sewer will be transferred, which could occur at night.</p> <p>To reduce noise disturbance and limit impacts on breeding avian and mammalian species, all tree removal work will be done in the fall or early spring, if possible. If trees with a dbh of 24 inches or greater need to be removed outside of this time frame, trees will be identified for removal and evaluated for nesting activity by a park biologist. If nesting is found, the tree will be left in place or removed outside of the breeding season.</p> <p>Feeding or approaching wildlife will be prohibited by construction personnel.</p> <p>Wildlife collisions will be reported to park personnel.</p> <p>Park biologist or ranger will be notified if bears loiter in the area and appropriate response will be provided.</p> <p>A litter control program will be implemented during construction to eliminate the accumulation of trash. All food will be stored in bear proof containers except when it is being consumed. Food stored in vehicles will be in bear proof containers. Spilled food will be cleaned up. Food related garbage will be removed from the project area daily and taken to an animal resistant dumpster within the park.</p>	FHWA and NPS Project Manager; NPS Wildlife Biologist
Air Quality	<p>Dust control will occur, as needed, on active work areas where dirt or fine particles are exposed.</p> <p>The contractor will not leave vehicles idling for more than five minutes when parked or not in use.</p> <p>Asphalt plants will be located outside the parks. Small quantities of asphalt may be stored for a short-term at designated staging areas.</p>	FHWA and NPS Project Manager
Cultural Resources	<p>The park archeologist will monitor initial ground disturbing activities outside of the river channel.</p> <p>Should any archeological resources be uncovered during construction, work will be halted in the area and the park archaeologist, Office of Archeology and Historic Preservation (OAHP), and appropriate Native American Tribes will be contacted for further consultation.</p> <p>Park cultural resources staff will be available during construction to advise or take appropriate actions should any archeological resources be uncovered during construction.</p>	FHWA and NPS Project Manager and NPS Cultural Resource Specialist

Resource Area	Mitigation	Responsibility
	<p>In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.</p> <p>The NPS will ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging archeological sites or historic properties. Contractors and subcontractors also will be instructed on procedures to follow in case previously unknown archeological resources are uncovered during construction.</p>	
Visitor Experience and Health and Safety	<p>Visitors, park and concessioner employees, and others will be notified when road closures or traffic delays will occur. Information on the project schedule will be provided to neighboring communities, on the park website, at visitor centers and entrance stations.</p> <p>The bridge will be closed during construction to protect park visitors and employees. Signs and construction fencing will be used to prevent entry and crossings by visitors. The North Side Road will be used as a detour for the Cedar Grove Lodge during this time.</p> <p>Signs will be posted at the Lewis Creek Trailhead Parking Area to warn people to use caution during the detour.</p>	FHWA and NPS Project Manager; NPS District Interpreter, District Ranger, Public Information Officer and Concessions Specialist
Park Operations	<p>As necessary, future park utilities conduit will be incorporated into the project to reduce damage and the removal of any new road surface.</p> <p>Staging areas for storage of construction equipment and materials will include the closed sections of the road approaching the bridge on each side of the river, half of the day use parking area parking lot south of the road on the east side of the bridge, and the Cedar Grove Storage Yard, and a staging area located 2.5 miles east of Cedar Grove.</p>	FHWA and NPS Project Manager

### NON-IMPAIRMENT OF PARK RESOURCES

The implementation of the selected alternative will result in no more than moderate adverse impacts to water quality, hydrology and stream flow characteristics, wild and scenic rivers (and ORVs), floodplains, wetlands, vegetation, wildlife and fisheries, and visitor experience, health, and safety in and around the project area. Mitigation measures implemented as part of the project will reduce impacts to vegetation and soils, wildlife, water quality, wild and scenic rivers, floodplains and wetlands, air quality, visitor experience, health, and safety, and cultural resources.

The NPS has determined that the selected alternative will not constitute an impairment to Sequoia and Kings Canyon National Parks' resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the EA, public comments received, relevant studies, and professional judgment of the decision-makers guided by direction in NPS *Management Policies 2006*.

## UNACCEPTABLE IMPACTS

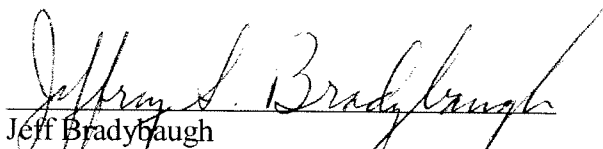
The impact threshold at which impairment occurs is not always readily apparent. Therefore, the NPS applies a standard that offers greater assurance that impairment will not occur. The NPS does this by avoiding impacts that it determines to be unacceptable. These are impacts that fall short of impairment, but are still not acceptable within a particular park's environment. The NPS has determined that the preferred alternative will not result in unacceptable impacts to Sequoia and Kings Canyon National Parks' resources. This conclusion is based on a thorough analysis of the environmental impacts described in the EA, public comments received, relevant studies, and professional judgment of the decision-makers guided by direction in NPS *Management Policies* 2006.

## CONCLUSION

The NPS has selected alternative B for implementation. The impacts that will result from the selected alternative (alternative B) will not impair any park resources or values necessary to fulfill specific purposes identified in the park's enabling legislation. Based on the conservation planning and environmental impact analysis documented in the EA, with due consideration of the nature of the public comments and consultations with other agencies, and given the capability of the mitigation measures to avoid, reduce, or eliminate impacts, the NPS has determined that selected actions do not constitute a federal action that normally requires preparation of an environmental impact statement (EIS). The selected actions will not have a significant effect on the quality of the human environment or the park's cultural resources, or natural resources, and would not jeopardize the continued existence of threatened or endangered species.

There are no unmitigated adverse impacts on public safety, sites, or districts listed in, or eligible for listing in, the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law. Based on the foregoing, it has been determined that the selected actions may be implemented as soon as practicable.

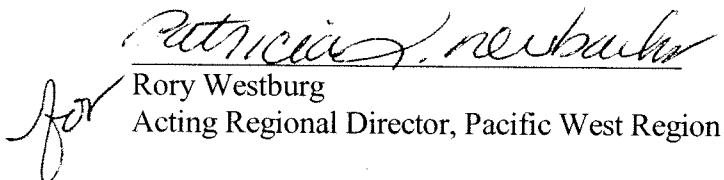
Recommended:

  
Jeff Bradybaugh

Acting Superintendent, Sequoia and Kings Canyon National Parks

12/10/09  
Date

Approved:

  
for Rory Westburg  
Acting Regional Director, Pacific West Region

1/11/10  
Date