



National Park Service  
U.S. Department of the Interior  
Coronado National Memorial  
Hereford, Arizona

## **Finding of No Significant Impact Flood Mitigation and Road Repair Project**

### **Background**

In compliance with the National Environmental Policy Act, the National Park Service prepared an environmental assessment to examine various alternatives and environmental impacts associated with this proposal. The National Park Service (NPS) at Coronado National Memorial in cooperation with the Federal Highways Administration (FHWA) is proposing to re-surface, restore and rehabilitate the previously paved 3.5 miles of roadway within the memorial and to provide a sustainable drainage system along the paved portion of the roadway. The purpose of the project is to address health and safety concerns related to the aging roadway infrastructure that has reached the end of its structural integrity, enhance the experience of park visitors and restore the aggraded channel within Montezuma Wash. Extreme flooding in recent years has altered the channel of Montezuma Wash and it is currently threatening the stability of the road. The Coronado Cave Trail is currently located within the channel of Montezuma Wash. Due to the extreme flooding events experienced in the past few years maintaining this portion of the trail has come at an increased expense and a repetitive maintenance issue. East Montezuma Canyon Road has been determined eligible for listing on the National Register of Historic Places by the Arizona State Historic Preservation Officer (SHPO). Informal vehicle pull offs along the road shoulder have developed without environmental planning. These pull off areas are primarily used by law enforcement agencies but occasionally they are used by park visitors. The memorial's location on the international border results in a high volume of law enforcement vehicular traffic and the parking along the road shoulder has increased in recent years.

### **Selection of the Preferred Alternative**

Two alternatives were evaluated in the environmental assessment including alternative A (No Action) and alternative B (Flood Mitigation Road Repairs at Montezuma Wash). Alternative B is the National Park Service's preferred alternative because it best meets the purpose and need for the project as well as the project objectives to 1) meet federal and state safety standards for highways on federal lands, 2) protect cultural resource values through preservation of the historic roadway and associated features as required by the National Historic Preservation Act, 3) protect natural resource values while restoring the lower reach of Montezuma Wash within the memorial to a functioning condition thus minimizing adverse impacts to historic structures, 4) minimize impacts to natural resources from inappropriate parking along road shoulder, 5) protect the roadway from future damage by developing a sustainable drainage system, and 6) develop a sustainable Coronado Cave trail and trailhead.

Alternative B will contribute to protecting the historic structure of the roadway at the memorial as well as improve the existing pavement, create a drainage system that fits the current geomorphology and will formalize roadside pull offs. Approximately three concrete low water crossings will be installed to provide transportation of water and sediment over the roadway

during larger storm events and through a smaller channel in the crossing for low flow events. The Coronado Cave Trailhead and trail will be located outside of the Montezuma Wash channel. The project proposes to accelerate the restoration process (within the project area) of Montezuma Wash permitting it to function more naturally by returning the main channel to its pre-flood condition. Staging areas for the proposed project will be located in previously disturbed areas. The main staging area will be located in the Montezuma Ranch area which has recently been used as a staging area for international border fence construction. Another staging area will be adjacent to the roadway within the project area and has historically been used as a location to store road materials.

## **Mitigation Measures**

### **General Measures**

- Best management practices (BMP) will be used for all phases of construction activity, including pre-construction, actual construction, and post-construction. BMP for storm water management and sediment control measures in desert areas that apply specifically to construction sites will be implemented, and appropriate erosion and sediment control measures will be in place at all times.
- A pre-construction meeting will be held to inform construction contractors about sensitive areas including natural and cultural resource concerns of the park.
- The contractors will maintain strict garbage control to prevent scavengers from being attracted to the staging or project areas. No food scraps will be discarded or fed to wildlife.
- To minimize the amount of ground disturbance, staging and stockpiling areas will be located in previously disturbed sites, away from visitor use areas to the extent possible. All staging and stockpiling areas will be returned to pre-construction conditions following construction.
- Construction zones will be identified and fenced with construction fence, snow fencing, or some similar material prior to any construction activity. The fencing will define the construction zone and confine activity to the minimum area required for construction. All protection measures will be clearly stated in the construction specifications and workers will be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.
- Ground disturbance and site management will be carefully controlled to prevent undue damage to vegetation and soils and to minimize air, water, soil, and noise pollution.
- A hazardous spill plan will be submitted, stating actions that will be taken in case of a spill. This plan will address the storage and handling of hazardous materials, and notification procedures for a spill.

### **Natural Resources**

- A revegetation plan will be developed to rehabilitate disturbed areas. Appropriate methods of rehabilitation and treatment of disturbed areas will be evaluated on a case-by-case basis. The proposed repair work in the Montezuma Wash will be developed in a site specific plan.
- Salvaged topsoil, as well as incidental native vegetation (as feasible); from the construction areas will be kept for reuse during rehabilitation of disturbed areas.
- Revegetation and recontouring of disturbed areas will take place following construction, and will be designed to minimize the visual intrusion of the structure and enhance native species composition. Revegetation efforts will use native species and materials. All

disturbed areas will be rehabilitated to reduce soil exposure. Weed control methods will be implemented to minimize the introduction of noxious weeds.

- Because disturbed soils are susceptible to erosion until revegetation takes place, standard erosion control measures such as silt fences and/or sand bags will be used to minimize any potential soil erosion.
- Undesirable plant species will be monitored and controlled, as necessary. To prevent the introduction of, and minimize the spread of non-native vegetation and noxious weeds limit equipment parking to within the construction limits, obtain all, rock or additional topsoil from a local weed free source.
- Fugitive dust generated by construction will be controlled by spraying water on the construction site.
- To reduce noise and emissions, construction equipment will not be permitted to idle for long periods of time.
- To minimize possible petrochemical leaks from construction equipment, the contractor will regularly monitor and check construction equipment to identify and repair any leaks.
- Construction workers and supervisors will be informed about special status species. Contract provisions will require the cessation of construction activities if a species were discovered in the project area, until Memorial staff re-evaluates the project. This will allow modification of the contract for any protection measures determined necessary to protect the discovery.
- Before and during construction, the NPS or contracted biologist will conduct additional surveys for rare and special status species before taking any action that might cause harm. If found, consultation with USFWS will occur the NPS will take measures to protect any sensitive species, whether they were identified through surveys or presumed to be present. Construction will be scheduled during the calendar year to avoid impacting special status species.
- To avoid adverse impacts to potential Mexican spotted owls at the memorial, any noise-producing construction activities above ambient noise levels will not be permitted from March 1 to August 31. Work in the designated PAC will occur as early as possible in the year and will occur outside of the prime breeding season for the owl.
- Contract provisions will require the cessation of construction activities, if a species of concern were discovered in the project area, while Memorial staff re-evaluates the project. This will allow modification of the contract for any protection measures determined necessary to protect the species and its habitat. In consultation with USFWS or AZGF the NPS will take measures to protect any sensitive species, whether they were identified through surveys or presumed to be present.

### **Cultural Resources**

- Should construction unearth previously undiscovered cultural resources, work will be stopped in the area of any discovery and the memorial will consult with the Arizona State Historic Preservation Officer and the Advisory Council on Historic Preservation, as necessary, according to §36 CFR 800.13, *Post Review Discoveries*. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.
- The National Park Service 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 will also be instructed on procedures to follow in case previously unknown paleontological or archeological resources are uncovered during construction.
- Construction workers and supervisors will be informed about the special sensitivity of memorial's values, regulations, and appropriate housekeeping.

## **Visitor Experience and Use and Park Operations**

- To the extent practical, work will be scheduled to avoid construction activity and construction related delays during peak visitation times. No holiday or evening work will be allowed. No weekend work will be allowed unless authorized by the superintendent.
- A public information program and local agency coordination effort will be implemented to warn of temporary closures, delays, and road hazards during construction. This program will help convey appropriate messages and aid in mitigating potential impacts on visitors and staff expectations and experiences.
- A Traffic Control Plan will be developed to address anticipated delays, safety considerations, estimated length of delays and estimated number of vehicles that will be stopped at any one point. Flaggers will be required for the proposed project. Immediate access will be provided to any emergency vehicles.

## **Alternatives Considered**

Two alternatives were evaluated in the environmental assessment including the no-action alternative and one action alternative. Under alternative A, No-Action, the emergency repairs made to date will allow the road to remain open but unimproved. Stream bank erosion along the roadway close to Montezuma Wash will continue to occur. The continued erosion of the stream banks could put the historic structures of the roadway in jeopardy of collapse and failure. Alternative B, will protect historic structures as well as improve the roadway through the rehabilitation of existing pavement, improve the inadequate road drainage system and will formalize roadside pull offs. The project proposes to restore Montezuma Wash to a 2006 pre-flood condition.

## **Environmentally Preferred Alternative**

Alternative B is the environmentally preferred alternative. The environmentally preferred alternative is determined by applying the six criteria suggested in §101 the National Environmental Policy Act. According to these criteria, the environmentally preferred alternative should 1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; 2) assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings; 3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences; 4) preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice; 5) achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and 6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative B is the environmentally preferred alternative because it best addresses these six evaluation factors. Alternative B, Flood Mitigation Road Repairs at Montezuma Wash, will provide an environment for visitors and staff that meet health and safety standards for highways while minimizing environmental impacts to the extent possible. A sustainable roadway will be available for use by future generations. Repairs made to the roadway and drainage structures will preserve an important cultural resource for future generations to enjoy.



## **Why the Preferred Alternative Will Not Have a Significant Effect on the Human Environment**

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

***Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.***

Implementation of the preferred (selected) alternative will result in some adverse impacts; however, the overall benefit of the project, particularly to visitor use and experience, park operations, and historic structures outweighs these negative effects. The adverse effects are summarized as follows. Minor adverse effect on visitor use and experience may occur during road construction through delays and increases in noise and dust. The adverse effect of the historic culverts on the channels ability to function naturally will continue within the wash. Because there will be no major adverse or unacceptable impacts there will be no impairment of park resources or values.

The actions as described in Alternative B will have a beneficial effect on visitor use and experience because of the improvements to the road infrastructure and human health and safety aspects of the memorial; continued to offer interpretive opportunities. This alternative will better allow rangers and other agencies to meet their missions to provide emergency response to situations including law enforcement situation, emergency medical services, fire fighting, search and rescue missions and border related incidents.

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

The preferred alternative will have an overall beneficial effect on public health and safety, particularly for the area agencies that regularly use the roadway through the memorial. Resurfacing the roadway, addressing drainage issues and formalizing parking areas will minimize many of the current unsafe conditions associated with the existing roadway structural deficiencies, thereby providing a safer environment for the memorial's visitors, staff and area agencies.

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

The preferred alternative will not impact unique characteristics of the area including park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas because these resources do not exist in the project area. The preferred alternative was determined to have no adverse effect on the historic character of the roadway as discussed previously in this document.

### ***The degree to which the effects on the quality of the human environment are likely to be highly controversial***

Throughout the environmental process, the proposal to rehabilitate the road surface and mitigate flood damage at Coronado National Memorial has not been highly controversial, nor are the effects expected to generate future controversy. Five comments were received from the public during the scoping for this project, with the majority of the comments being in favor of the project.

***The degree to which the possible effects on the quality on the human environment are highly uncertain or involve unique or unknown risks***

The effects of rehabilitating the roadway and mitigating past flood damage are fairly straightforward and do not pose uncertainties. The environmental process has not identified any effects that may involve highly unique or unknown risks.

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

The preferred alternative is not expected to set a precedent for future actions with significant effects, nor does it represent a decision in principle about a future consideration.

***Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.***

Cumulative effects were analyzed in the environmental assessment and no significant cumulative impacts were identified.

***The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.***

No adverse effects are expected to occur to the features of the roadway for which it has been determined eligible for listing on the National Register of Historic Places. A letter dated June 11, 2009 from the Arizona State Historic Preservation Officer concurs with the NPS determination of *no adverse effect* per §106 of the National Historic Preservation Act.

***The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.***

A letter was sent to U.S. Fish and Wildlife Service dated June 29, 2009 indicating that the potential effects of the project have been analyzed and determined to have no effect on threatened or endangered species in the project area, and that no further consultation under §7 of the Endangered Species Act is necessary. A letter referencing the project was sent to the Arizona Game and Fish Division dated February 18, 2009, and the park received no response. The park staff has taken into consideration state listed species within the project area and they have been addressed in the EA.

***Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment***

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

**Appropriate Use, Unacceptable Impacts, and Impairment**

Sections 1.5 and 8.12 of NPS *Management Policies* underscore the fact that not all uses are allowable or appropriate in units of the National Park System. The proposed use was screened to determine consistency with applicable laws, executive orders, regulations, and policies; consistency with existing plans for public use and resource management; actual and potential effects to park resources; total costs to the Park Service; and whether the public interest will be served. A roadway is a common and vital structure in most park units. The proposed road rehabilitation and channel restoration project is consistent with the park's general management

plan and other related park plans. With this in mind, the NPS finds that the project is an acceptable use at Coronado National Memorial.

The impact threshold at which impairment occurs is not always readily apparent. Therefore, the Service applies a standard that offers greater assurance that impairment will not occur. The Service 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 will cause unacceptable impacts; they must evaluate existing or proposed uses and determine whether the associated impacts on park resources and values are acceptable. Because the application of mitigating measures is expected to be successful in ensuring that no major adverse impacts will occur and that satisfactory reclamation of any disturbed areas is expected to be achievable, implementation of the preferred alternative will not result in any unacceptable impacts.

In analyzing impairments in the NEPA analysis for this project the NPS takes into account the fact that if impairment were likely to occur, such impacts will be considered to be major or significant under CEQ regulations. This is because the context and intensity of the impact would be sufficient to render what would normally be a minor or moderate impact to be major or significant. Taking this into consideration, NPS guidance documents note that "Not all major or significant impacts under a NEPA analysis are impairments. However, all impairments to NPS resources and values would constitute a major or significant impact under NEPA. If an impact results in impairment, the action should be modified to lessen the impact level. If the impairment cannot be avoided by modifying the proposed action, that action cannot be selected for implementation." "Interim Technical Guidance on Assessing Impacts and Impairment to Natural Resources" National Park Service, Natural Resource Program Center, July 2003.

In addition to reviewing the definition of "significantly" under the NEPA regulations, the NPS has determined that implementation of the preferred alternative would not constitute an impairment to the integrity of Coronado National Memorial's resources or values as described by NPS *Management Policies* (NPS 2006 § 1.4). This conclusion is based on the NPS's analysis of the environmental impacts of the proposed action as described in the EA, the public comments received, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in 2006 NPS *Management Policies*. The EA identified less than major adverse impacts on visitor use and experience, park operations, vegetation, geology and soils. Although the plan/project has some negative impacts, in all cases these adverse impacts are the result of actions taken to preserve and restore other park resources and values. Overall, the plan results in benefits to park resources and values, opportunities for their enjoyment, and it does not result in their impairment.

## **Public Involvement**

The environmental assessment was made available for public review and comment during a 31-day period ending July 27, 2009. To notify the public of this review period, a press release was mailed to stakeholders, affiliated Native American tribes, interested parties, and newspapers. Copies of the document were sent to certain agencies, and interested parties who requested a copy; made available in local repositories; and posted on the internet. Five comments were received during this review period. Substantive comments to the EA focused on acres of disturbance, restoration and new alternatives. These concerns are addressed in the errata sheets comment and response attached to this FONSI. The FONSI and errata sheets will be sent to all commenter's.

## Conclusion

As described above, the preferred alternative does not constitute an action meeting the criteria that normally require preparation of an environmental impact statement (EIS). The preferred alternative will not have a significant effect on the human environment. Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts that range from localized to widespread, short- to long-term, and negligible to moderate. There are no unmitigated adverse effects on public health, public safety, threatened or endangered species, 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, significant 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, the National Park Service has determined that an EIS is not required for this project and thus will not be prepared.

Approved:

for *James D. Joss*  
Michael D. Snyder  
Director, Intermountain Region, National Park Service

*8/3/09*  
Date

## ERRATA SHEET

### Flood Mitigation Road Repairs and Montezuma Wash Restoration Environmental Assessment Coronado National Memorial

Substantive comments to the Flood Mitigation Road Repairs and Montezuma Wash Restoration Environmental Assessment focused on three topics across of disturbance, restoration and additional alternatives. These topics, which are addressed below, resulted in no changes to the text of the environmental assessment or appendices but did require a more thorough explanatory response.

#### Response to Comments

##### Disturbance

*Comment 1:* Please confirm in the FONSI that the paved road width would stay the same as it was before, and that this is not a road widening project.

*Response 1:* The road width will remain the same and the road will not be widened.

*Comment 2:* For example what is the individual and total area to be disturbed for the proposed pullouts?

*Response 2:* The total area currently disturbed by pullouts is approximately 32,705 square foot. The NPS will keep and harden approximately 16,844 square feet of pullouts and obliterate 15,861 square feet of pullouts.

*Comment 3:* What will the total volume of soil moved in the wash be? Where will it be moved from, to what depth and where will it be placed to what depth?

*Response 3:* Soil will not be removed from the wash but will be redistributed within the affected area within the wash. The cut and fill for the channel is nearly balanced with a small amount available for use as riprap and bank protection.

Design Channel Construction Estimates.

Channel Length 1075 ft.

Channel Excavation approximately 3,557 CY

Floodplain & Incised Channel Fill approximately 2,075 CY

Material Available for Riprap approximately 1,482 CY

##### Restoration

*Comment 4:* The term "restoration" when applied to the proposed work in wash is inaccurate and therefore inappropriate.

*Response 4:* While we agree that the channel is being returned to a previously impacted state we maintain the use of the word restoration is appropriate for the purposes of this EA. It is our belief that restoration is an accurate term for the project and is a term that the general public

can readily understand. For the purposes of the EA we define restoration as bringing the wash back to a former condition.

## **Alternatives**

*Comment 5:* Retain the current culvert structure, just west of the Visitor's Center (VC) in its present location but modify it to remove the center section between the culvert openings. This would require reinforcement of the structure and possibly placing a load restriction on the road but would significantly increase the maximum capacity to transmit water and material through the structure without having to build an expensive bridge. While somewhat changing the appearance of the structure, the historic value would be mostly retained and the changes and their rationale could be interpreted through signs on the abutments.

*Response 5:* The NPS is required to consider what effects our undertakings will have on cultural resources. According to National Historic Preservation Act when effects on historic resources can't be avoided, the method of documentation would include a Historic American Building Survey (HABS) /Historic American Engineering Record (HAER) reports. Both the HABS and HAER programs have guidelines for levels and kinds of documentation necessary. Substantial modification of the historic culvert will be considered an adverse action and will require the aforementioned reports to be completed and consultation with the SHPO finalized before any action could be taken. The urgent need to stabilize the road and to maintain a safe and functional road surface for park purposes, international border enforcement initiatives, and general public users has not allowed sufficient time to complete the required HABS/HAER documentation. The funding necessary for these reports is being sought and this alternative will be considered in future environmental assessments addressing the wash and road.

*Comment 6:* Remove the culvert structure intact and place it on a nearby, prepared foundation for interpretation. This could include why it was built and why under later and more informed policies it was removed. Replace the culverts with an engineered low-water crossing. This alternative would move the wash as far as possible toward a natural system while retaining the road. Over time the wash would reach a new equilibrium that did not include the unwanted accumulation of rock material upstream of the current culverts that seems to be worrying staff at the Memorial.

*Response 6:* Moving the culvert will be considered an adverse action and will require consultation with the SHPO. Again the National Historic Preservation Act requires the documentation of a structure through the Historic American Building Survey (HABS) /Historic American Engineering Record (HAER) reports. The urgency to stabilize the roadway and maintain a safe and functional road has not allowed sufficient time nor is funding available to complete the HABS/HAER documentation. The required funding is being sought to complete these reports. The alternative identified in comment 6 will be considered in any future environmental assessments addressing the issues that are affecting the wash and historic preservation of the culverts.