



National Park Service
U.S. Department of the Interior
Organ Pipe Cactus National Monument

Finding of No Significant Impact Ecological Restoration Plan

Background

In compliance with the National Environmental Policy Act, the National Park Service (NPS) prepared an Environmental Assessment (EA) to examine alternatives and environmental impacts associated with the proposal to implement a programmatic Ecological Restoration Plan (ERP) that will restore disturbed lands on Organ Pipe Cactus National Monument (OPCNM), Cabeza Prieta National Wildlife Refuge (CPNWR), and Bureau of Land Management (BLM) Ajo Block. An ERP will support the mission of the National Park Service (NPS), US Fish and Wildlife Service (USFWS), and BLM and will help manage public lands for sustainable use. This Finding of No Significant Impact (FONSI) documents the decision to adopt the ERP, and outlines the determination that no significant impacts on the human environment are associated with this decision. Mitigation measures designed to avoid or minimize impacts to park resources and a summary of agency coordination and public comment are also provided.

Purpose and Need

The NPS, USFWS, and BLM share a common goal of conserving resources for future generations. Environmental impacts to these lands have increased due to border-related activities, including illegal cross-border activities and the corresponding law enforcement response. Some of the disturbances are temporary, while others, such as invasive species and undesignated vehicle routes (UVRs), can have long term consequences. Hundreds of miles of repeatedly used UVRs and thousands of miles of single use vehicle tracks have been documented. Additionally, 81 species of invasive plants have been recorded in the CPNWR and OPCNM. Restoration actions are needed to counteract the adverse impacts of UVRs and invasive plants that are widespread in the project area. This plan will serve as a decision-making tool that will enable the agencies to more efficiently and effectively apply management techniques to:

1. Restore degraded natural areas to conditions that approximate their pre-disturbance states or alternate stable states;
2. Preserve and protect natural conditions, ecological processes, and wilderness character;
3. Preserve and protect archeological and historical sites and cultural landscapes; and
4. Implement environmentally sound, cost effective restoration strategies and treatments.

Selection of the Preferred Alternative

The EA examined two alternatives; the No Action Alternative and the Ecological Restoration Plan (ERP) Alternative. The ERP is the Preferred Alternative and the Environmentally Preferable Alternative, and will be implemented because it meets the restoration needs and objectives. Because no new issues, additional reasonable alternatives, or feasible mitigation measures were suggested during the public review process, none of the comments necessitate changes to the ERPA. The Preferred Alternative will enable the agencies to meet the objectives outlined in the purpose and need.

Restoration Strategies

Overall restoration strategies (i.e., passive, facilitated or active) and the specific techniques used to restore damaged lands depend on a variety of factors including the location, type and extent of damage, type and health of site and nearby native plant communities, hydrology, rainfall, soil characteristics, and the presence of sensitive resources or importance of cultural resources affiliated with the site. Decisions are based on professional experience, input from desert restoration experts, and published literature. Each site is unique, and restoration strategies vary greatly in their resource requirements and intensity. The steps for selecting the most effective and appropriate strategy for a given site are outlined below.

- *Passive* restoration is recommended when disturbance is minimal, and/or for sites that are expected to recover naturally. The goal of a passive strategy is to prevent or discontinue further disturbance, and will rely on behavioral treatments with some minor manual treatments. Education and compliance with area closures are the cornerstones of a passive strategy. No chemical or mechanical treatments will be prescribed. If results from passive restoration are poor, the strategy will be reconsidered and transitioned to facilitated or active restoration. On some disturbed sites a passive strategy may be the only strategy applied (no facilitated or active restoration).
- *Facilitated* restoration is recommended when disturbance at a site is moderate, and native vegetation response is expected to require intervention. Sites are monitored for native plant recovery, soil erosion, the presence of invasive plants, and treatment effectiveness. Facilitated restoration uses Behavioral, manual, and chemical treatments, but not mechanical treatments to restore disturbed areas. Compared with passive, facilitated restoration involves more active intervention, with activities such as manually removing invasive plants, treating invasive plants with chemicals, seeding, planting nursery grown plants, using hand tools to decompact soils in small areas, and others. As with passive restoration, if monitoring indicates that the native plant response is poor, a more active restoration strategy may be employed.
- *Active* restoration is recommended when disturbance at a site is high, there are few or no remaining living plants, and the native vegetation response is expected to be moderate to slow, or it may not recover at all without intervention. Active strategies are a more aggressive approach to restoration, and include any or all treatments covered in the ERP. This strategy will use a combination of behavioral, manual, chemical and mechanical treatments. Use of mechanized equipment to decompact soils, recontour surfaces, and manage invasive plants in wilderness areas will be used only if a Minimum Requirements Analysis (MRA) determines the techniques and type of equipment necessary will minimize impacts on wilderness resources. Mechanized tools may include heavy equipment (e.g. backhoes, road graders). Restoration activities will also include planting and seeding of native plants at most sites. As with the other treatment strategies, sites are monitored for native plant recovery, soil erosion, the presence of invasive non-native plants, and treatment effectiveness.

Restoration Treatment and Activities

Behavioral

Behavioral treatments will consist of actions that promote native plant growth and prevent or discourage further site disturbance. Behavioral treatments can be cost effective and useful on large areas. Examples include: sign placement, fencing, road delineation, placing slash/debris, and implementation of Best Management Practices. Behavioral treatments for invasive plants might include

public education and rigorous restrictions on introducing equipment or material that might contain invasive seeds into the project area.

Manual

Manual treatments will include the use of non-motorized equipment on disturbed areas to decompact soil in small areas, recontour disturbed surfaces, scarify the soil before seeding, and dig holes to install nursery grown plants. To check surface flow, wattles, rocks or other natural materials will be placed in areas undergoing accelerated erosion or deposition due to the original disturbance. Invasive species control often involves digging or pulling plants (including roots) out of the ground or topkilling to exhaust root reserves. Examples of manual treatments include: seeding, planting, hand pulling, raking, digging, picking, shoveling, and sawing.

Chemical

Chemical treatments will include the use of herbicides to kill or injure invasive plants and may be applied as pre- and postemergent. Compared with manual treatments, herbicides will help increase the amount of area that can be treated annually and will reduce soil disturbance. Herbicides are more effective than manual control for invasive plants growing on bedrock or rocky substrates where root removal is difficult, and on species where manual and mechanical methods are not effective.

Mechanical

Mechanical treatments will include the use of mechanized equipment throughout the project area, including wilderness. This treatment is often essential for decompacting soils or site leveling in order to prepare disturbed soils for seeding and planting, particularly at large sites. Site preparation is critical to restoration success, especially the establishment and growth of plants. Examples of mechanical treatments and tools including brush cutters and yard trimmers, chain saws, augers, backhoes, road graders, and other motorized equipment.

Mitigation Measures

To minimize the potential impacts from personnel and equipment, the following mitigation measures will be implemented under the ERP, as needed to minimize the degree and severity of adverse effects.

General

- To reduce noise and emissions, vehicles will not be permitted to idle for long periods of time.
- To avoid further damage, mechanical treatment with heavy equipment will not occur when soils are wet.
- Vehicles will not exceed 25 mph, less when conditions dictate slower speeds especially on UVRs
- Each restoration action will have these mitigation measures incorporated into the contract stipulations and the engineering plans, as necessary.
- Erosion and sedimentation control measures such as dust suppression practices, wattles, mulches, and jute matting will be deployed as necessary and where mechanical equipment is used to decompact soils and recontour disturbed sites.
- If sites greater than 1 acre are disturbed, a National Pollution Discharge Elimination System (NPDES) permit under the Clean Water Act will be acquired.

Cultural Resources

- A project-specific Programmatic Agreement between the NPS, USFWS, BLM, CBP, SHPO, and associated tribes will be developed to address proposed actions within or adjacent to archeological sites, historic properties, isolated artifacts, and inadvertent discoveries. These measures will include but are not limited to requiring professional cultural resource monitors during restoration activities, avoiding archeological sites, or limiting the types of restoration treatments.
- Actions at known and documented cultural sites will be accomplished with oversight by a qualified archeologist meeting the Secretary of the Interior's Standards for Archeology.

- If previously unidentified cultural resources are encountered during construction activities, the contractor or agency staff will immediately stop work at that location. All reasonable steps to secure the preservation of the resources will be taken and appropriate agency staff will be notified immediately in order to make arrangements for the proper treatment of those resources.
- In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 will be followed. If human remains are found, work will immediately cease and agency law enforcement officers and cultural resources management will be immediately contacted according to NAGPRA guidelines.

Wildlife

- Care will be taken not to disturb wildlife found nesting, hibernating, or otherwise living in or immediately nearby the work sites.
- Restoration sites will be visually surveyed for desert tortoise or their shelters prior to the start of any work. Digging or excavation will be avoided near any shelters.
- If desert tortoises or shelters are encountered during restoration, workers will handle these individuals in accordance with the attached AGFD Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects (Appendix TORT).

Threatened and Endangered Species

- If Sonoran pronghorn are detected, no mechanical treatments will begin until Sonoran pronghorn move on their own volition to a distance greater than two miles from the activities. If manual, behavioral, or chemical treatments are proposed, a one mile radius distance from pronghorn will suffice. The Sonoran pronghorn monitoring protocols will include procedures to be followed.
- No saguaros or organ pipe cacti will be killed or disturbed by restoration activities, to protect forage resources for the endangered lesser long-nosed bat.

Chemical Treatments

- Herbicides will be applied or their application overseen by an Arizona certified pesticide applicator.
- All restrictions outlined on herbicide labels will be followed.
- Ground based equipment, including backpack sprayers and spray units on trucks will be used in low wind conditions, and only applied using coarse sprays to minimize the potential for drift.
- Pesticide applicators will receive training on identification of threatened, endangered, or candidate plants.
- Herbicides that are of low toxicity to wildlife and/or that will degrade before wildlife are likely to encounter them will be used, to the extent practicable, and applied in a manner that uses the least amount, but still remains effective.
- Only those herbicides labeled for use to the edge of water bodies of water or with aquatic labeling will be used within buffer zones and aquatic areas. Highly water-soluble herbicides will not be used near water resources.
- NPS policy requires that only herbicides that are expected to be used in a one year period can be purchased at one time. Herbicide efficacy is lost over time. Therefore, herbicides will not be stored for periods greater than one year.

Wilderness

- A Minimum Requirements Decision Guide (MRDG) will be prepared for all proposed actions in wilderness. When determining minimum requirement, potential disruptions of wilderness character will be considered along with other alternatives. Additional site specific mitigation measures may be required as determined by the MRDG analysis.

Alternatives Considered

Two alternatives were evaluated in the EA; the No Action alternative and Ecological Restoration Plan alternative. Under No Action, restoration activities would be limited to small areas and many areas would continue to be degraded. Under the Ecological Restoration Plan alternative, a full range of restoration techniques and types of treatments could be implemented which would be effective at limiting further disturbance, establishing restored areas. The Ecological Restoration Plan alternative is the Preferred Alternative.

Environmentally Preferable Alternative

According to the CEQ regulations implementing NEPA (43 CFR 46.30), the environmentally preferable alternative is the alternative "that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative."

The ERP Alternative is the environmentally preferable alternative for several reasons because it: 1) seeks to restore degraded natural areas to conditions that approximate their pre-disturbance states or alternate stable states; 2) improves habitat conditions for endangered species and other animals; 3) reduces or removes adverse impacts from invasive plants; 4) helps restore the characteristics of untrammeled, undeveloped, and a natural setting in the wilderness; and 5.) provides for the best options for stabilizing compromised cultural sites. For these reasons, the Proposed Action causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources, thereby making it the environmentally preferable alternative.

By contrast, the No Action alternative is not the environmentally preferable alternative because 1) our ability to preserve and protect desired conditions across the entire project area will be very limited due to the lack of ability to implement a comprehensive restoration plan; 2) implementation will be limited to small low to moderate disturbed areas; 3) the increase in invasive plant populations will outpace our ability to manage them.

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 context (including duration) of an impact, and its intensity, including a consideration of the criteria that follow. Based on the analysis in the EA, which is summarized in the following sections, the NPS has determined that the Preferred Alternative can be implemented without significant adverse effects. All impact threshold definitions (negligible, minor, moderate, major) referred to in this FONSI are defined in the EA.

• Impacts 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 Alternative will not result in significant impacts. The Preferred Alternative may result in some short-term, local, adverse impacts; however, the overall benefit of the project outweighs the adverse effects. Adverse impacts will be primarily to wilderness and archeological resources. The potential adverse effects from the Preferred Alternative are short term and would impact wilderness due to the presence of ground crews with motorized transport and in some cases mechanized equipment. The greatest potential for adverse impacts to archeological resources is in restoration areas with undiscovered archeological features. Mitigation measures will be implemented to

offset potential adverse impacts. The overall benefit of the Preferred Alternative outweighs the adverse impacts and includes restoring native plants and ecosystem function, reducing or removing impacts from invasive plants, improving wildlife habitat, especially for Sonoran pronghorn and lesser long-nosed bat, improving wilderness character, and providing cultural site stabilization.

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

The Preferred Alternative including use of hand tools, mechanized equipment, and chemicals have an inherent element of concern for public health and safety. Most of these risks are to the field crew implementing restoration and not to general public. Adherence to mitigation measures designed to minimize safety risks and adverse impacts to field crews during restoration treatments. Visitors and public safety impacts will be primarily from small amounts of particulate matter or chemicals in the air. These impacts will be mitigated by adherence to mitigation measures in place to minimize exposure to field crew and visiting public.

• ***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 project area includes two wilderness areas; Cabeza Prieta Wilderness and Organ Pipe Cactus Wilderness. Location-specific work plans will be prepared and projects will occur within Organ Pipe Wilderness and Cabeza Prieta Wilderness. Restoration and the activities described in the Preferred Alternative were determined to be the minimum requirement for administration of the area as wilderness using a minimum requirement analysis. The Preferred Alternative will protect and restore the natural, undeveloped, and solitude or primitive and unconfined recreation qualities of wilderness character while minimizing impacts to the untrammeled wilderness quality. Native vegetation and surface water sheet flow will be restored; therefore, the ecological habitat for native species will be improved. The Preferred Alternative will not impact prime or unique farmlands, wetlands, or wild and scenic rivers. The Preferred Alternative will benefit cultural landscapes and restore ecologically critical areas. Mitigation measures will be implemented to minimize adverse impacts to unique characteristics of the project area.

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

There were no controversial impacts or aspects of the Preferred Alternative that surfaced during the environmental analysis process. Although some controversy was anticipated due to the subject of the EA and use of mechanical treatments in wilderness, no controversy ensued during the public scoping or review processes. A total of 15 correspondences were received; 11 support the Preferred Alternative, and zero support the No Action Alternative.

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

There were no highly uncertain, unique, or unknown risks identified during preparation or public review of the EA because none exist.

• ***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 neither establishes an NPS precedent for future actions with significant effects, nor represents a decision in principle about a future consideration. Any future action for ecological restoration, such as those identified in the Preferred Alternative, would be determined by the needs of that future action and guided through a NEPA process.

- ***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 EA 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.***

The Preferred Alternative may have impacts to National Register eligible historic properties. Because the area of potential effect is so large, and cultural resource inventories have yet to be finalized for areas that will be restored under this project, the involved agencies including NPS, BLM, and USFWS are in the process of preparing a project-specific Programmatic Agreement in consultation with the Arizona State Historic Preservation Office (SHPO). The Programmatic Agreement will formulate a method for considering the impacts of this undertaking on historic properties and will stipulate how to minimize, reduce, or avoid adverse impacts to these historic properties. Until this Programmatic Agreement is finalized, these federal agencies will follow their own agency policies for completing Section 106 of the National Historic Preservation Act for each individual undertaking. These agencies have consulted with SHPO, who concurred with this approach in a letter dated November 21, 2014.

- ***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.***

The Preferred Alternative has the potential to affect the Sonoran pronghorn and Lesser long-nosed bat. NPS initiated consultation on the EA and provided the U.S. Fish and Wildlife Service a Biological Assessment for the Preferred Alternative on August 15, 2014. On October 2, 2014, the USFWS provided a biological opinion that the Preferred Alternative is "not likely to jeopardize the continued existence of the Sonoran pronghorn" and no critical habitat has been identified and therefore none will be affected. In addition, USFWS agrees that the mitigation measures that will be implemented will result in no effect to the Lesser long-nosed bat. The net effect on the Sonoran pronghorn will be beneficial; however adverse effects may include visual and auditory disturbance from human and vehicular presence, and use of herbicides. Mitigation measures will be implemented to minimize potential impacts to Sonoran pronghorn and lesser long-nosed bat. The Arizona Game and Fish Department was consulted for state listed species, including the Sonoran desert tortoise and no concerns were identified. In their letter dated March 21, 2014, the Arizona Game and Fish Department indicated support of the implementation of the Preferred Alternative.

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

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

Public Involvement and Native American Consultation

The EA was made available for public review and comment during a 30-day period ending March 30, 2014. To notify the public of this review period, letters were sent to stakeholders, interested parties, and Native American communities. A hard copy of the EA was made available at OPCNM and Cabeza Prieta's visitor's centers and at the Ajo Library. An ad was placed in the Ajo newspaper with notifications about where to go to view and how to comment. A copy of the document was posted on the NPS PEPC website at <http://parkplanning.nps.gov/>. In response to early correspondences and other

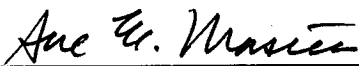
communications from the public, the review and comment period was extended to 60 days and the comment period ended on April 30, 2014.

Fifteen correspondences were received on the EA during this review period. Commenters included representatives from six different conservation organizations, one state agency, four non-governmental local organization, one Native American tribe, and three individuals. Eleven commenters expressed support for the Preferred Alternative, zero commenters expressed support for the No Action Alternative, and four commenters had unrelated comments or did not state a preference. Overall, substantive comments centered on 1) wilderness character and wilderness values; and 2) continued use of lands for the purpose of border protection. Concerns, comments and text changes are addressed in the Errata Sheet and Response to Comments attached to this FONSI. The FONSI and Errata Sheets will be sent to all commenters.

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 are short term and negligible to minor. A majority of impacts are anticipated to be beneficial in the long term. 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, NPS has determined that an EIS is not required for this Ecological Restoration Plan and thus will not be prepared.

Approved:



Sue E. Masica
Regional Director, Intermountain Region, National Park Service

12/11/14

Date

Errata Sheets

Ecological Restoration Plan

Organ Pipe Cactus National Monument

Overall, comments centered on three topics: 1) support for the Preferred Alternative and restoring resources within the project area; commending multi-agency cooperation among NPS, USFWS, and BLM; 2) wilderness character and wilderness values; and 3) continued use of lands for the purpose of border protection. Below are concerns and comments received that either require a response or resulted in changes to the EA text.

Responses to Concerns and Comments

CONCERNS

Concern about motorized transport and mechanized equipment use in wilderness and that it should not be allowed because it impacts wilderness values (Concern #552570).

There have been several impacts to wilderness within the project area. NPS, USFWS, and BLM, as land management agencies are responsible for adhering to the Wilderness Act of 1964, and are required to administer the land accordingly. Through a Minimum Requirement Analysis process, motorized transport and mechanized equipment in some cases may be the minimum tool necessary to provide meaningful and successful restoration. There will be many instances where UVRs can be restored with hand tools and mechanized equipment will not be used. Most UVRs are in wilderness and many are miles long. UVRs with heavy use and more severe disturbance can be yards to tens of yards wide. Damage within the road bed is often severe with rutting in excess of two feet in depth in places and will require equipment use to reestablish natural grades, sheet flow and natural hydrology. Some roads are beginning to capture stream flow and use of machinery and mechanized equipment will be required to repair these sections. Additionally, some restoration actions will require materials that are not possible to haul by non-mechanical means.

Several commenters, even those from wilderness advocacy groups, support the use of motorized transport and mechanized equipment in wilderness because they acknowledged the benefits of doing so; citing that it would result in a larger degree of wilderness being restored. Further, the absence of mechanized equipment and motorized transport would severely limit how many miles of roads could be restored, which would not meet the needs of the biological opinions; restoration to benefit the endangered Sonoran Pronghorn and lesser long-nosed bat.

COMMENTS

Comment 1: Implement a monitoring program to collect data on the effectiveness, progress, and efficacy of the restoration projects. Related to this, also suggested aerial surveys of UVRs and rate of UVR accumulation citing that if UVRs continue to expand, that restoration will not be helpful.

Response 1: We have implemented a monitoring program associated with this project. Efficacy is being assessed, photo points have been established, and effectiveness of closing the roads to use is being evaluated. Long term monitoring will be the design and responsibility of each DOI agency as desired. Aerial surveys will be conducted as each agency determines a need and seeks their own funding to support such efforts. Satellite data is updated on a fairly regular basis and can be used to document

roads, keep track of new incursions being established, and assess overall impacts. Restoration efforts will help offset impacts from disturbances such as UVRs and each area restored will improve surface water runoff, vegetation communities, and wildlife habitat.

DOI agencies have been working with local DHS personnel to implement the 2006 MOU which provides methodology for all agencies to perform their duty and accomplish their mission. The MOU allows agents to proceed off authorized roads under exigency and emergency situations and if there is a high degree of anticipated success interdicting cross-border violators. Outside of these scenarios, the creation of new incursions will no longer be an accepted practice by law enforcement agents and has recently become policy within the Ajo Station.

Comment 2: Interest in subjecting work plans to a public review process citing stakeholder engagement by the agencies is a great way to increase public support.

Response 2: Work plans will not be subjected to additional public review. The EA covers a broad range of strategies and treatments used to restore disturbed and damaged lands within the project area. The EA identified specific tools, equipment, and methods that will be needed to accomplish this effort. Location-specific work plans will be developed with input from all affected agencies and stakeholders and will include site specific restoration actions described in the strategies and treatments section of the EA. Feedback from the public review process of the EA identified broad support of the proposed alternative which identifies those strategies and treatments. Location-specific work plans will not be subjected to a public review process; however, they will be made available by request to those individuals who express interest.

Comment 3: Requested clarification on if the Preferred Alternative includes restoration efforts on administrative roads because of ongoing deterioration associated with their use. Related to this, cited visitor confusion about which roads can be used permissibly.

Response 3: If administrative roads are damaged to the extent that it affects wildlife habitat or ecological processes, restoration will occur. Each agency has well established authorized roads for general visitor use and the visiting public should check with each agency to clarify which roads may be used. One purpose for restoration is to provide habitat for endangered Sonoran pronghorn and lesser long-nosed bat and administrative roads do not generally provide for such uses by wildlife. However, good integrity of administrative roads for their use by visitors and resource managers will be required. To reduce confusion to visitors about which routes can be used permissibly, roads that are restored will be clearly marked with wattles and a "Restoration Area" sign. In most areas, brown carsonite signs with "CLOSED" will be used to mark routes that visitors may not use. These routes most often enter wilderness and the Wilderness Act and restrictions on motorized transport applies.

Comment 4: Chemical treatments and the use of herbicides on invasive plants because of the negative effects on native vegetation, soil toxicity, and development of resistance to herbicide in invasive species. Related to this, requested clarification about the relationship between invasive species treatments and UVR restoration treatments asking if they will be done together or separately.

Response 4: Adverse effects to non-target species will be avoided by implementing best management practices while using chemicals. Examples include limiting or prohibiting use during high wind days, using the proper equipment for the need such as backpack sprayers with nozzles which limit atomization of herbicides, or, as the integrated pest management (IPM) process dictates, using non-chemical means

to achieve the same goals if using such means is feasible for the species and population. Efficacy of method application is well established for most species within the IPM process and this information will be used while planning treatment options.

While desert plants are slow to respond to some environmental factors, their response to herbicide is evident much faster (and often specified on the herbicide label). The NPS acknowledges in the EA that herbicide use may adversely affect some native plants within and next to treatment areas. For this reason, vegetation will be monitored after treatments and subsequent management decisions will be adapted to minimize negative impacts on native vegetation. This project will use only Environmental Protection Agency-approved products in accordance with the herbicide label and implementation of the IPM process will be employed. All chemicals will be approved and reported through the NPS Pesticide Use and Proposal System.

Invasive plant treatments and UVR restoration will be completed concurrently, but there may be locations where UVRs occur in areas where no invasive plants are located. Conversely, there may be areas where invasive species exist where no UVRs are located.

Comment 5: Managing outside agencies actions within the project area. Requests to ban Border Patrol (BP) from operating on these lands unless for human life or imminent danger; restricting BP to use only administrative roads or roads open to the public and that BP should otherwise stay within the Roosevelt Reservation.

Response 5: DOI does not have the authority to ban, restrict, or otherwise impede CBP-BP from performing their mission. The 2006 MOU provides the mechanism for CBP-BP and DOI land management agencies to achieve their respective missions including use of lands designated as wilderness. Recent negotiations have resulted in a number of advances that will reduce the amount of UVR creation, evaluate and consider requests for proposed temporary tactical infrastructure and restore areas after their use.

Though the Biological Opinion for the *SBI*net had hoped to achieve interdiction at the border and mostly use authorized roads, the stated goals have not yet been achieved. Therefore, interdiction must occur at this time on a landscape scale and the DOI will work with CBP-BP to help them be successful while managing public lands, wilderness values, and other important resources. The CBP-BP continues to evaluate resources, new tactical infrastructure and install new technologies within DOI-managed lands and these advances will help realize goals set forth in the *SBI*net BO.

Text Changes

Page 74 – Change statement: “Cultural landscapes do not exist on CPNWR or the BLM Ajo block.” to **“Cultural landscapes have not been recognized on CPNWR or the BLM Ajo block.”**

Page 81 – Many reference and citations corrected and/or added.

Page 17 – Delete statement: “There is no evidence that UVRs are created by visitors on OPCNM or CPNWR.”

Page 27 – Added statement: Under the Typical Activities & Tools row for active strategy, “recontouring road beds to reestablish natural drainage patterns”

Page 80 - Added: Gila River Indian Community was added to the list of Native American tribes that were consulted. Also changed “Seven Native American tribes...” to **“Eight Native American tribes...”**

Appendix A – Non-Impairment Finding

The National Park Service's *Management Policies, 2006* require analysis of potential effects to determine whether or not actions will impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

An impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

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

An impact would be less likely to constitute impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

The park resources and values that are subject to the no-impairment standard include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The NPS's threshold for considering whether there could be impairment is based on whether an action will have significant effects.

Impairment findings are not necessary for visitor use and experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, because impairment findings relates back to park resources and values, and these impact areas are not generally considered park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values. Impairment analysis for the remaining impact topics, which are key to the natural or cultural integrity of the park are below.

Soils and Surface Hydrology

The purpose of restoration effort is to stabilize soils and reduce erosion by re-establishing natural soil conditions and contours, and vegetation cover. Thus, restoration activities inherently benefit soils and surface hydrology. The Preferred Alternative could result in short-term, negligible to minor adverse impacts to soils and surface hydrology, mostly from trampling by ground crews, but also from herbicide contamination. Such adverse impacts are an unavoidable result of actions necessary to restore the integrity of resources, and will be mitigated by Best Management Practices. Adverse impacts do not rise to the level of significance, and therefore there is no impairment. The Preferred Alternative will not result in impairment because proposed restoration actions will result in short- and long-term benefits to soils and surface hydrology.

Vegetation

NPS Management Policies state that parks will maintain all plants native to park ecosystems, and that invasive species will not be allowed to displace native species if that can be prevented. The purpose restoration is to stabilize soils and reduce erosion by establishing natural soil conditions and contours, and native vegetation cover. Thus, restoration activities inherently benefit vegetation. The Preferred Alternative could result in short-term, negligible to minor adverse impacts to native vegetation from trampling by ground crews and to a lesser degree by herbicides. Such adverse impacts are an unavoidable result of actions necessary to restore the integrity of resources, and will be mitigated by Best Management Practices. Adverse impacts do not rise to the level of significance, and therefore there is no impairment. The Preferred Alternative will not result in impairment because proposed restoration actions will result in long-term benefits to vegetation.

Wilderness

Wilderness is identified within the boundaries of OPCNM and CPNWR, but not on BLM Ajo Block. It is managed and administered using the provisions of the Wilderness Act of 1964. Work plans will identify sites requiring restoration, many of which will occur within or adjacent to wilderness. Restoration treatments and supplies could result in short-term, minor adverse impacts to the untrammeled, undeveloped, and opportunities for solitude or unconfined recreation wilderness values of wilderness. Such adverse impacts are an unavoidable result of actions necessary to restore the integrity of resources, and which cannot be further mitigated. Adverse impacts do not rise to the level of significance, and therefore there is no impairment. The Preferred Alternative will not result in impairment because proposed restoration actions will result in long-term benefits to wilderness values.

Special Status Species

NPS Management Policies state that parks will "survey for, protect, and strive to recover federally listed native species," as well as "manage state and other locally listed species in a manner similar to its treatment of federally listed species to the greatest extent possible." The purpose of restoration is to establish native vegetation and wildlife habitat. Thus, restoration activities inherently benefit federally listed and other special status species. The Preferred Alternative could result in short-term, negligible to minor adverse impacts to native wildlife, mostly from disturbance from ground crews. Potential adverse

impacts are an unavoidable result of actions necessary to restore the integrity of resources, and will be mitigated by Best Management Practices and specific conservation measures. Adverse impacts do not rise to the level of significance, and therefore there is no impairment. The Preferred Alternative will not result in impairment because proposed restoration actions will result in long-term benefits to federally listed and special status species.

Wildlife

NPS Management Policies state that parks will maintain all animals native to park ecosystems, and that invasive non-native species will not be allowed to displace native species if that can be prevented. The purpose of restoration is to establish native vegetation and wildlife habitat. Thus, restoration activities inherently benefit wildlife. The Preferred Alternative could result in short-term, negligible to minor adverse impacts to native wildlife, mostly from disturbance from ground crews. Potential adverse impacts are an unavoidable result of actions necessary to restore the integrity of resources, and will be mitigated by Best Management Practices. Adverse impacts do not rise to the level of significance, and therefore there is no impairment. The Preferred Alternative will not result in impairment because proposed restoration actions will result in long-term benefits to wildlife.

Archeological Resources, Historic Structures, and Cultural Landscapes

Federal laws and NPS management policies mandate the preservation and protection of cultural resources. The biggest threats to cultural resources, including archeological sites, historic structures, and cultural landscapes, are from erosion and the creation of undesignated vehicle routes. The purpose of restoration is to stabilize soils and reduce erosion by establishing natural soil conditions and contour, and native vegetation. Thus, restoration activities inherently benefit cultural resources. The Preferred Alternative could result in short-term, negligible to minor adverse impacts to cultural resources from inadvertent disturbance from ground crews; however such impacts would be rare since restoration sites are surveyed for cultural resources before treatments, and avoided and/or potential impacts mitigated by Best Management Practices. Adverse impacts do not rise to the level of significance, and therefore there is no impairment. The Preferred Alternative will result in long-term benefits to archeological resources, historic structures, and cultural landscapes.

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the Preferred Alternative.