National Park Service
U.S. Department of the Interior

Death Valley National Park
California and Nevada

FINDING OF NO SIGNIFICANT IMPACT

ABANDONED MINE LANDS SAFETY INSTALLATIONS
MULTIPLE MINE OPENINGS
DEATH VALLEY NATIONAL PARK, CALIFORNIA and NEVADA

The National Park Service plans to implement safety options at abandoned mine lands in Death Valley National Park. The National Park Service completed an environmental assessment that provides an analysis of the environmental consequences of the alternatives considered. The environmental assessment was prepared in accordance with the National Environmental Policy Act of 1969, as amended, its implementing regulations by the Council on Environmental Quality (40 CFR Parts 1500-1508), and Director's Order #12 and accompanying Handbook, Conservation Planning, Environmental Impact Analysis, and Decision-making. This document also satisfies the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of this project is to mitigate human and environmental hazards present in the Park. The need for the proposed abandoned mine safety installations is related to safety hazards created by a large number of old and deteriorated abandoned mine opening features. These types of hazards were recently documented in a report by the Office of the Inspector General (U.S. Office of the Inspector General 2008). To assure abandoned mine land sites are secured for visitor safety, each National Park Service region has been directed to identify and implement quick response measures for high-risk abandoned mine land features (National Park Service 2009).

The purpose of the proposed project is to improve visitor and staff safety at Death Valley while accommodating the use of abandoned mine land sites by wildlife (principally bats), minimize impacts on historic fabric and the visual character of the historic landscape, and minimize and offset potential adverse effects on natural resources using mitigation measures. Some of the abandoned mine safety installations will occur within designated wilderness in the Park. The National Park Service manages wilderness areas with the maximum statutory protection allowed – to preserve their wilderness character, and to gather information on their use and enjoyment as wilderness. Because of the general prohibition of mechanized or motorized equipment in wilderness, a minimum requirements decision guide analysis would be required for alternatives requiring such equipment or transport.

SELECTED ALTERNATIVE

Within the environmental assessment, the National Park Service identified Alternative B: Abandoned Mine Safety Installations, as the preferred alternative. The preferred alternative is also the selected alternative. No changes were made to this alternative based on public comment.

The selected alternative consists of installing safety features at multiple abandoned mine openings in the Park. In addition, some openings that already have safety features will continue to exist in their present state, as described in other alternatives considered.

The abandoned mine lands safety techniques can be grouped based on their similar effects. These groups of closure techniques include:

- Grates;
- Fencing;
- Bat gates, culvert gates, and cupolas;
- Cable mesh nets and screens;
- Polyurethane foam closures covered with backfill;
- Backfill alone; and
- Combination of applications of above methods to treat complex situations.

The number and types of safety techniques vary according to individual site circumstances. For a simple abandoned mine lands open feature situation, only one technique might be needed. For a complex site closure, several techniques may need to be combined. For example, a bat gate will be incorporated into a grate over an adit known to be used by bats, while a simple metal grate will be used at a similar site not frequented by bats. Selection of closure techniques for specific openings will be based on a number of factors, including physical features, conditions of the opening, types of structures present, safety hazards, presence or absence of bats, use of the mine by other wildlife such as the desert tortoise, owls, or bighorn sheep, and the presence and condition of historic features. The objective is to select a set of techniques that eliminate basic safety hazards for visitors while simultaneously protecting historical resources, special-status species, and other wildlife that use the mines.

The selected alternative provides a mechanism for securing abandoned mine openings in the Park over the long term using proven techniques. Securing abandoned mine openings will mitigate basic safety hazards at mine sites while simultaneously protecting special-status species and other forms of wildlife that utilize the mines. As many as 200 proposed mine safety installations may fall in wilderness boundaries and others may be associated with backcountry roads and surrounded by or adjacent to wilderness. Mine openings that occur in wilderness in Death Valley include, but are not limited to the following mine sites: portions of the Eureka Mine, most of the Titus Canyon/Leadfield site, and on designated wilderness lands in Greenwater Valley. Each abandoned mine land safety installation located in a wilderness area will use a minimum requirements analysis procedure. Death Valley National Park utilizes the interagency Minimum Requirements Decision Guide. The "minimum tools" necessary for efficiently safeguarding these sites in the shortest period possible include, but are not limited to, motorized vehicles (e.g., trucks, helicopters), power saws and drills, welding equipment, and generators. If any of the minimum tool determinations presented in the environmental assessment are changed, the National Park Service will provide an opportunity, in advance, for the public to comment on the proposed revised approach using the Parks' website.

OTHER ALTERNATIVES CONSIDERED

The environmental assessment prepared for this project also analyzed another alternative: Alternative A: No Action. The No Action alternative would consist of the continuation of existing management practices for abandoned mine land sites at Death Valley. Additional abandoned mine safety installations would not be implemented by the National Park Service; unsafe conditions would continue to exist at sites with unclosed mine openings.

ALTERNATIVES CONSIDERED BUT DISMISSED

The installation of bat gates at all mine openings was considered as one alternative to improve public health and safety at mine openings. However, the universal application of bat gates was determined to be unsuitable for the following reasons. In some cases, an inordinately large gate would have been required and could have been impractical and/or cost prohibitive. A bat gate may not have been suitable because of individual site conditions. Some mines do not contain bats and the use of bat gates would have been an unnecessary and excessive use of materials and funds. This alternative was dismissed because it would have resulted in inefficient use of resources.

RATIONALE FOR SELECTED ALTERNATIVE

Alternative B is the selected alternative because it offers the highest degree of resource protection for wildlife, special-status species, cultural resources, and wilderness, while improving public health and safety, which is the primary purpose of the project. Additionally, a safer environment created by alternative B will have a secondary benefit of reducing the need for emergency responses at abandoned mine lands because risks to human health and safety are reduced. If the No Action alternative had been selected, the National Park Service would have had limited capability to respond to future needs and conditions associated with abandoned mine land sites without major actions or changes in the present management course.

Environmentally Preferred Alternative

In accordance with the criteria outlined in the National Environmental Policy Act and Director's Order #12, an environmentally preferred alternative must be identified, which must meet the following criteria:

> Criterion 1: Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
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> Criterion 2: Ensure for all Americans, safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
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> Criterion 3: Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
>
> Criterion 4: Preserve important historic, cultural, and natural aspects of national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
>
> Criterion 5: Achieve a balance between population and resource use that would permit high standards of living and wide sharing of life's amenities; and
>
> Criterion 6: Enhance the quality of renewable resources and approach the maximum attainable recycling of resources.

Alternative A does not protect visitors and park staff from abandoned mine safety hazards or minimize potentially adverse effects on visitor experience, so it fails to meet criteria 2, 3, and 5. Alternative A does not protect wildlife, especially special-status species, from becoming trapped in open shafts, so it fails to fully meet criteria 1 and 4. It does partially meet criterion

4 by preserving important historic and cultural aspects of national heritage, and maintain, wherever possible, an environment that supports a variety of individual choice. Due to the degree of disturbance and general lack of vegetation around most mine openings, alternative A would not enhance the quality of renewable resources or approach the maximum attainable recycling of resources; therefore, alternative A does not meet criterion 6.

Alternative B does protect visitors and park staff from abandoned mine safety hazards and minimizes potentially adverse effects on visitor experience, so it fully meets criteria 2, 3, and 5. Alternative B does protect wildlife and special-status species from being trapped in open shafts, so it partially meets criteria 1 and 4. It does preserve important historic, cultural, and natural aspects of national heritage and maintains, wherever possible, an environment that supports diversity, but it does not allow the same variety of individual choice that alternative A does, so it only partially meets criterion 4. There will be no change to the amount of disturbance or increase of vegetation around most mine openings; therefore, alternative B will not enhance the quality of renewable resources or approach the maximum attainable recycling of resources (criterion 6) any better than alternative A. Because alternative B will ensure for all Americans safe surroundings, provide a greater opportunity for achieving a wide range of beneficial uses of the environment without risk of health or safety, achieve wilderness mitigation most expediently, and achieve a balance between population and resource use that will permit high standards of living and wide sharing of life's amenities, alternative B is considered the environmentally preferred alternative.

MITIGATION MEASURES

The National Park Service places a strong emphasis on avoiding, minimizing and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the mitigation measures identified below will be implemented as part of the selected alternative. The National Park Service will monitor throughout the construction process to help ensure that protective measures are being implemented and are evaluated to determine if they are achieving their intended results. For example, actions with the potential to affect cultural resources would be reviewed by the park archeologist. Table 1 presents the mitigation measures to be implemented in association with the proposed action and the responsible person for monitoring those measures.

Table 1. Mitigation Measures to be Implemented.

Resource / Topic	Mitigation Measures	NPS Responsibility
General Measures	• Construction limits would be delineated by the park prior to any construction activity. Workers would be instructed to avoid conducting activities and disturbing areas beyond the construction limits. • All tools, equipment, barricades, signs, surplus materials, demolition debris and rubbish would be removed from the project work limits on project completion. • Contractors will be required to properly maintain construction equipment and generators (e.g., mufflers) to minimize noise from use of the equipment. • All equipment on the project will be maintained in a clean and well-functioning state to avoid or minimize contamination from petroleum products. All equipment will be checked daily. • Materials will be stored, used, and disposed of 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 vehicles and generators.	Park Safety Officer
Soil Erosion and Vegetation Loss	• Wait until just before beginning construction to clear vegetation and to disturb the soil. • Minimize the area of bare soil within the approved work zone as much as possible. • Maintain a buffer of natural vegetation around the work area to slow runoff and trap sediments. • Consider phasing construction to minimize the extent of the disturbed soils. • Use existing roads and trails to access closure locations to maximum extent practicable. • Park vehicles and equipment and temporarily store materials on locations that are already devoid of vegetation and/or compacted from previous mine activities. • If vegetation disturbance cannot be avoided, the disturbed area will be minimized and naturalized after disturbance. Tire tracks or new foot paths will be raked out and disguised using onsite materials such as rocks, litter, or vertical mulch using locally obtained dead vegetation. Seeds, transplants or nursery outplants are not recommended due to the potential of introducing exotic species or new genotypes into native populations. The park botanist will be consulted with site photographs for site specific mitigation recommendations for areas larger than three square meters. • Ensure the final land form is stable, minimizes soil erosion, and is hydrologically compatible with the surrounding area. These actions would be reviewed by the NPS archeologist prior to implementation. • Provide slope and land form stability by reducing slope angles. These actions would be reviewed by the NPS archeologist prior to implementation.	Erosion Control (Park Hydrologist) Vegetation Disturbance (Park Botanist) Slope Stabilization (Park Geologist)
Water Quality and Aquatic Community Protection (rarely used due to arid and semi-arid conditions)	• Maintain a buffer zone between the construction activities and the edge of the water feature; a minimum separation distance of 100 feet is typically preferred. • If rain is anticipated, install temporary silt fence between the construction activity and the water feature and remove the fence after the work is completed. • In situations where a silt fence may not be adequate, create a temporary diversion or containment berm between the construction activity and the water feature to intercept and manage stormwater runoff. • Remove and reshape temporary containment berms once closure activities are completed. These actions would be reviewed by the NPS park archeologist prior to implementation. • Restore any drainage channels that may have been altered by closure activities to predisturbance shape, size, capacity, stability, and contours. These actions would be reviewed by the NPS park archeologist prior to implementation.	Park Hydrologist

Resource / Topic	Mitigation Measures	NPS Responsibility
Visitor Experience	• Provide interpretative or guided tours of safe mines (only exterior tours are being considered) to illustrate the facilities and techniques used to mine mineral resources and provide a sense of the conditions encountered by miners. • Minimize adverse visual experiences by using fences and other safety installation structures that are colored to resemble desert soils and vegetation, allow gates and installation structures to weather to resemble old mine structural features, and keep installation structures hidden from view, low profile, and inconspicuous.	Chief of Interpretation Contracting Officer's Technical Representative
Wildlife and Special-Status Species	• Time installations or construction activities to avoid or take place outside reproductive or sensitive portions of species' life cycles. • Use designs in gates, fences and other closure techniques that allow bat, owl, and desert tortoise access to mines that are occupied by these species. • Conduct bat and other wildlife surveys of openings to be closed before the installation is implemented to ensure that access is maintained and that the installation techniques produce minimal adverse effect. • For vertical shafts and open pits where cable mesh nets are the selected closure technique, one night of partial net coverage, with one corner of the cable net to be raised overnight to allow straggler bats or birds to escape before permanent closure is implemented. The following mitigation measures were recommended by the U.S. Fish and Wildlife Service: • The National Park Service will designate a field contact representative who will be responsible for overseeing compliance with protective stipulations for the desert tortoise and for coordination on compliance with the National Park Service. The field contact representative will have the authority to halt activities that are in violation of the stipulations. The field contact representative will have a copy of all stipulations when work is being conducted on the site. The field contact representative may be any NPS employee, or a contracted biologist. • The National Park Service will review and approve an employee education program prior to the initiation of work. The program may consist of a class or video presented by a qualified biologist. All employees will participate in the desert tortoise education program prior to initiation of activities. New employees will participate in the education program prior to working on-site. The program will cover the following topics at a minimum: o Distribution of the desert tortoise, o General behavior and ecology of the desert tortoise, o Sensitivity to human activities, o Legal protection, o Penalties for violations of state or federal laws, o Reporting requirements, and o Project protective measures. • The area of disturbance will be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, public health and safety, and other limiting factors. Work area boundaries will be delimited with flagging or other marking to minimize surface disturbance associated with vehicle straying. Special habitat features, such as burrows and drinking sites, identified by the qualified biologist, will be avoided to the extent possible. To the extent possible, previously disturbed areas adjacent to the site will be used.	Park Wildlife Biologist Contracting Officer's Technical Representative

Resource / Topic	Mitigation Measures	NPS Responsibility
Wildlife and Special-Status Species (continued)	• If more than one day is required to complete the closure of a vertical mine shaft, and the mine is located in desert tortoise habitat, then desert tortoise exclusion fencing will be used to ensure desert tortoises do not become entrapped. If permanent desert tortoise exclusion has already been installed as part of the permanent safety exclusion, then the fencing would not need to be installed. All desert tortoise-proof fencing will be removed after completion of the mine closure. • Except on paved roads, vehicle speed will not exceed 15 miles per hour through desert tortoise habitat. • If a desert tortoise is discovered on the road, traffic will be stopped until the desert tortoise moves off the roadway of its own volition. • In desert tortoise habitat, workers will inspect for desert tortoises under the vehicle prior to moving the vehicle. If a desert tortoise is under the vehicle, the vehicle must not be moved until the animal leaves of its own volition. The worker will not handle the desert tortoise. • No pets are allowed within the project site. • All trash and food items will be promptly contained within closed, raven-proof containers. These containers will be removed at the end of the work day from the project site to reduce the attractiveness of the area to common ravens (*Corvus corax*) and other desert tortoise predators. • Adits within desert tortoise habitat that do not pose a hazard to tortoises (do not contain internal shafts) and are structurally sound will have a tortoise port constructed at the bottom of the safety installation. Construction of safety features in adits will use a system that vents exhaust and fumes to the outside. Adits that will be permanently closed will be checked for desert tortoise prior to being closed. If the adit is unsafe to enter, then the area immediately outside and adjacent to the adit will be surveyed for tortoise sign, i.e., tracks and scat. If recent sign is present, then the adit will not be closed until the tortoise has left. If a tortoise is present in an adit, installation of the safety treatment will not occur until the tortoise leaves of its own volition. • If a desert tortoise is found (alive or dead) in a vertical mine shaft, a NPS employee (or other individual under guidance of the National Park Service) may remove the animal (50 CFR 17.31(a)).	Park Wildlife Biologist Contracting Officer's Technical Representative
Wilderness	• Use the installation techniques identified as most appropriate by the minimum requirements decision guide to install safety features at mine openings. • Keep construction equipment and crews' vehicles on existing roads and trails to the maximum extent possible to limit vegetation and soil disturbance. • Minimize wilderness access and vehicle trips into and out of the site to the maximum extent possible. • Restrict activities to a defined area around an abandoned mine opening site. • Reduce the visibility of permanent fences using measures that would include, but not be limited to, keeping the fenced area as small as possible; keeping the fence height as low as practicable to effectively discourage visitor access; and using colored or weathered fence materials to reduce fence visibility. • Perform site restoration activities following safety installations to remove evidence of human activities and restore the natural conditions at the site to the extent possible. • Use mitigation measures provided above under "Soil Erosion and Vegetation Loss."	Park Wilderness Coordinator Contracting Officer's Technical Representative

WHY THE SELECTED 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.

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

The impacts may differ depending on the closure technique implemented. Actions taken under the selected alternative will result in the following effects.

Public Health and Safety – The selected alternative will have long-term beneficial impacts for all closure techniques. Under the selected alternative, the safety installations will result in a benefit to public health and safety because risks posed at mine openings will be decreased. The additional improvements to public health and safety associated with the selected alternative will add to overall safety in the Park and will grow over time as more mine openings are closed. Overall, the effects of the selected alternative, combined with the effects of other plans and actions, will have a beneficial cumulative effect because all of the actions will either directly or indirectly enhance public health and safety.

Visitor Experience – Closing abandoned mine openings using the safety installation techniques described in the alternatives section would have a variety of effects on prospective future visitor use and experience, depending on the preferences and interests of the specific visitors. The selected alternative would restrict visitors from entering dangerous mine openings, but would provide most visitors with a continued opportunity to enjoy other existing types of park activities. Because most of the existing historical features at mine sites and camps would remain unchanged, the impact of mine safety installation activities would result in a long-term, minor, adverse impact on visitor experience. Potential adverse effects would be mitigated by the National Park Service by implementation of interpretive programs at sites that are safe and that have a wide variety of historical mine features and different types of mine safety installation techniques. The public would, therefore, have an opportunity to learn more about the history of these sites as well as the benefits provided by the safety installation treatments to special-status species and other forms of wildlife. In addition, some mine safety installations would also be designed to minimize the visual effects of safety installation structures by using techniques such as sunken bat gates or grates. Some beneficial effects would occur as a result of increased interpretive exhibits at closed mine sites.

The minor adverse to beneficial range of impacts on visitor experience under alternative B would incrementally contribute to the effects of other plans and projects so that the cumulative impact would be long-term and beneficial because of increased visitor safety and interpretation opportunities.

Special-status Species – (negligible impacts are equivalent to an Endangered Species Act Section 7 "may affect, but not likely to adversely affect" determination) – Fencing will have negligible adverse to beneficial long-term impacts. Polyurethane foam with backfill will only be used where bat, owl, or other wildlife use of mine opening does not occur and, therefore, will have negligible effects on special-status species. Bat gates, screens, nets, grates, or cupolas will have long-term negligible to minor adverse, as well as long-term beneficial, effects. Shallow backfill will have short-term negligible adverse effects. The impacts of combined methods will be associated with the greatest adverse impact of the techniques employed. Tortoise barriers will be included at those features where tortoises could be trapped, such as shafts and inclines/declines.

The effects to special-status species from using the proposed safety installation techniques can vary depending on the opening characteristics, the species using the opening, and the method(s) selected to close or restrict visitor access to the opening. The effects of additional mine safety installations on desert tortoises and bats would range from long-term, negligible to minor and adverse to long-term and beneficial. In Endangered Species Act Section 7 terms, the project may affect, but is not likely to adversely affect, the desert tortoise. A high priority would be given to determining the appropriate installation method in respect to special-status species, along with the primary goal of protecting public health and safety. The mitigation measures incorporated in the mine safety installations for the desert tortoise and bats would ensure that these species would continue to have access to those mines.

While other plans and projects may affect the desert tortoise and bats to various degrees, the mine safety installations would contribute negligible adverse cumulative effects on desert tortoises and bats. Regardless of the potential impacts to desert tortoises from other plans and projects, the cumulative impacts on the desert tortoise and state species of special concern bat species would not be greater than negligible and adverse, and there is a likely potential that the cumulative impact would be beneficial because in the long-term, mine habitats used by wildlife would no longer be subject to human intrusion.

Wildlife – Fencing will have negligible to minor, long-term adverse impacts. Polyurethane foam with backfill will only be employed where wildlife use is absent or rare, and the impacts will be negligible, long-term, and adverse. Bat gates, screens, nets, grates, or cupolas will have short- and long-term, negligible to minor adverse impacts, as well as beneficial impacts. Shallow backfill will have a negligible, short-term adverse impact. Combined methods will be associated with the technique with the greatest adverse impact.

The effects of the safety installations on wildlife can be either beneficial or adverse depending on the opening characteristics, wildlife species using the opening, and the method(s) selected to close or restrict visitor access to the opening. Considerations for accommodating existing and potential wildlife uses of an opening is one of the highest priorities in deciding the most appropriate closure technique. The potential effects on wildlife will be long-term, negligible to minor, and adverse, with the greatest effect associated with permanently closing an opening and causing wildlife to seek another mine opening or natural feature for shelter. Short-term, minor, adverse effects on wildlife will result from temporary disturbance caused by construction activities during safety installations. Beneficial effects for wildlife will also occur in those cases where wildlife access is accommodated, but human access is restricted, thus eliminating potential disturbance. The overall cumulative effect of the selected alternative on wildlife will range from short-term, negligible to minor and adverse, to predominantly long-term and beneficial.

Wilderness – Under the selected alternative, mine openings would be closed in the park. As many as 200 proposed mine safety installations may fall in wilderness boundaries and others may be associated with backcountry roads and surrounded by or adjacent to wilderness. Mine openings that occur in wilderness in Death Valley include, but are not limited to the following mine sites: portions of the Eureka Mine, most of the Titus Canyon/Leadfield site, and on designated wilderness lands in Greenwater Valley. The potential adverse impacts on wilderness would be managed according to the minimum tool analysis procedure employed by Death Valley National Park. Numerous techniques would be used in wilderness to reduce or avoid evidence of human activity. Short-term adverse effects on wilderness would be minor because disturbance caused by vehicles (including helicopters) and construction equipment would be strictly managed. The cumulative effects of alternative B combined with the impacts of the Wilderness and Backcountry Management Plan would be beneficial because the incremental short-term minor effect of alternative B would be negligible compared to the long-term benefits on wilderness from the Wilderness and Backcountry Management Plan. The long-term cumulative effects of alternative B and other plans and actions would be beneficial.

The degree to which the proposed action affects public health and safety.

The selected alternative will have a long-term, beneficial effect on public health and safety by reducing overall risks to human health and safety caused by the continued existence of open abandoned mine openings. Temporary fencing could be employed at mine openings scheduled to be closed by one of the other various available closure techniques. Temporary fencing will protect visitors from entering dangerous openings such as shafts or adits. The fences will be removed once the final closure technique is applied. Fencing may also be used as a safety installation to improve public safety without adversely impacting historic features. Other closure techniques will include bat gates, nets, screens, grates, and cupolas, polyurethane foam closures covered with backfill, backfill alone, and combination applications of the above methods to treat complex situations. All these measures will have similar beneficial effects on public health and safety in that they will result in permanent closure of mine openings and will reduce risks to human health and safety.

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.

As described in the environmental assessment, ecologically critical areas, wild and scenic rivers, and prime and unique farmlands will not be affected. Effects to historic and cultural resources will be negligible to minor as a result of mitigation measures employed to minimize adverse impacts to these resources.

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

No highly uncertain, unique, or unknown risks were identified during either preparation of the environmental assessment or the public comment period.

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 selected alternative neither establishes a National Park Service precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

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

As described in the environmental assessment, cumulative impacts were determined by combining the impacts of the selected alternative (preferred alternative) with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Death Valley National Park and, if applicable, the surrounding region.

Projects Contributing to Cumulative Impacts

Other plans and projects with potential to contribute to cumulative impacts of abandoned mine opening safety installations are described below.

Other Abandoned Mine Lands Safety Installations

Safety installations have already been installed or are in the process of being installed at several mine openings in Death Valley National Park, including mine openings in the following areas: Skidoo Mine District, Eureka Mine, Titus Canyon and Leadfield, Gower Gulch/20 Mule Team, the Gem Mine, Greenwater Valley, and the Keane Wonder Mine complex. Those installations include bat gates, cupolas, mesh nets, and fencing exclosures.

The environmental assessment evaluated cumulative impacts for each of the resources affected by the preferred alternative. As described in the environmental assessment, the cumulative impacts on public health and safety, visitor experience, and wilderness will be long-term and beneficial. Cumulative effects on special-status species will be negligible and adverse as well as beneficial, while wildlife cumulative impacts will range from short-term, negligible to minor, and adverse to predominantly long-term and beneficial.

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

The "Programmatic Agreement between the National Park Service (U.S. Department of the Interior) and the California State Historic Preservation Officer Regarding Mitigation of Physical Safety Hazards at Historic Abandoned Mineral Lands within the National Parks in California" was developed in anticipation of funding under the American Recovery and Reinvestment Act of 2009. It was signed by both parties on August 18, 2009. The purpose of this programmatic agreement is to establish a program for compliance with Section 106 of the National Historic Preservation Act and set forth a streamlined consultation process when agreed upon criteria are met and procedures are followed in the installation of physical safety mitigation treatments at abandoned mine lands sites. As part of the development of the programmatic agreement, the National Park Service has established guidelines, standards, and technical information applicable to the treatment of these physical hazards in ways that will, to the extent possible, minimize the impacts of such treatments on the historic fabric and historic character of abandoned mine lands features at these sites.

The park would adhere to the programmatic agreement during implementation of this project and would treat all the mine structures as potentially eligible for listing on the National Register of Historic Places. The National Park Service would install only reversible safety installation treatments unless the unsafe condition of the feature is of such severity that a reversible option is not viable. The standard treatments described in attachment A to the programmatic agreement, because of their non-permanent and reversible nature, are deemed to produce "No Adverse Effect" for purposes of the programmatic agreement. As soon as park staff determines that a required alternative safety treatment would have an unavoidable and irreversible adverse effect on one or more historic properties, that portion of the project would be suspended and the park would immediately enter into consultation with the State Historic Preservation Officer to identify other installation types that avoid, minimize, or mitigate the adverse effect. As a result of following the programmatic agreement and the mine safety installation types it proposes, the impact to cultural resources in Death Valley National Park would be negligible to minor.

The degree to which the action may adversely affect an endangered or threatened species or its critical habitat.

The effects of additional abandoned mine safety installations on desert tortoises and state species of concern bats will range from long-term, negligible, and adverse to long-term and beneficial. In Endangered Species Act Section 7 terms, the project may affect, but is not likely to adversely affect, the desert tortoise. A high priority will be given to determining the appropriate closure method in respect to special-status species, along with the primary goal of protecting public health and safety. The mitigation measures incorporated in the abandoned mine safety installations for the desert tortoise and state species of concern bats will ensure that these species will continue to have access to those mines. While other plans and projects may affect special-status species to various degrees, the abandoned mine safety installations will contribute negligible adverse cumulative effects on desert tortoises. Regardless of the potential impacts to desert tortoises from other plans and projects, the cumulative impacts on the desert tortoise and state species of concern bats will not be greater than negligible and adverse, and there is a

likely potential that the cumulative impact will be beneficial because in the long-term, mine habitats used by wildlife will no longer be subject to human intrusion.

Whether the action threatens a violation of federal, state or local law imposed for the protection of the environment.

The selected alternative violates no federal, state, or local environmental protection laws.

PUBLIC INVOLVEMENT AND AGENCY CONSULTATION

Staff of the park and resource professionals of the National Park Service Denver Service Center team initiated internal scoping in a project review meeting in September 2009. On October 6-7, 2009, park and Denver Service Center team staff conducted an onsite survey and discussed issues and options.

A scoping notice was sent in late October 2009 in which the National Park Service proposed to complete an environmental assessment to analyze the effects of implementing mine safety installation methods to mitigate visitor and staff safety hazards in Death Valley National Park. The notice was sent to approximately 30 tribal, federal, and state departments and districts including the agencies and organization listed above. The notice also was posted to the park's Planning, Environment, and Public Comment project management database website for public review and comment. The park received one public comment through this database. The commenter requested that the park not close any more roads because they allow visitors to experience the park in an enjoyable and uninhibited manner.

A programmatic agreement between the National Park Service and the California State Historic Preservation Office regarding mitigation of physical safety hazards at historic abandoned mineral lands within the national parks in California was developed in anticipation of funding under the American Recovery and Reinvestment Act. It was signed by both parties on August 18, 2009, and is included as appendix B to the environmental assessment.

The National Park Service prepared and submitted a biological assessment to the U.S. Fish and Wildlife Service on January 12, 2010. The U.S. Fish and Wildlife Service recommended additional mitigation measures to protect the desert tortoise, which are included in the Mitigation Matrix. The U.S. Fish and Wildlife Service concurred with the NPS determination of "may affect, not likely to adversely affect" for the desert tortoise and concluded Section 7 consultation on March 18, 2010.

The environmental assessment was made available for public review and comment during a 30-day period ending March 19, 2010. An electronic copy of the environmental assessment was placed on the Preserve's Planning, Environment, and Public Comment website. Copies of the environmental assessment were made available at 5 local public libraries and at the Park's visitor centers. The public was invited to direct comments or concerns related to this project on the website and directly to Superintendent Craighead by postal mail. A total of 64 printed copies of the environmental assessment were distributed to the public. An additional 89 entities on the mailing list received a press release announcing the availability of the environmental assessment for review. Due to the relatively low level of controversy relative to this project, no public meetings were held.

Recipients also included regulatory and affected agencies, including the U. S. Fish and Wildlife Service and the California Department of Fish and Game, the California State Historic Preservation Office and the tribes affiliated with Death Valley National Park.

During the 30-day public comment period, the National Park Service received four letters with comments on the environmental assessment. The California Department of Fish and Game submitted a letter containing three substantive comments: these are presented, with responses, in the errata. Xanterra Parks and Resorts submitted a letter that expressed support for the proposed action and offered no substantive

comment regarding the multi-mine environmental assessment. Two letters were received from concerned members of the public. The mitigation measures in the environmental assessment were amended to incorporate measures resulting from consultation with the U.S. Fish and Wildlife Service and to add a National Park Service revision. Additionally, the comments generated changes to the environmental assessment

IMPAIRMENT OF PRESERVE RESOURCES OR VALUES

The National Park Service has determined that the implementation of the selected alternative will not constitute impairment to the resources or values of Death Valley National Park. This conclusion is based on a thorough analysis of the environmental impacts described in the Abandoned Mine Lands Safety Installations environmental assessment, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in NPS Management Policies (2006). As described in the environmental assessment, implementation of the selected alternative will not result in major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Death Valley National Park; (2) key to the natural or cultural integrity of the Park; or (3) identified as a goal in the Park's General Management Plan or other relevant National Park Service planning documents.

CONCLUSION

The National Park Service has selected the above described Alternative B: Abandoned Mine Lands Safety Installations, for implementation. The selected alternative does not constitute an action that would normally require preparation of an environmental impact statement. The selected alternative will not have a significant impact on the human environment. Negative environmental impacts that could occur are no greater than minor in intensity. There are no significant impacts on public health, 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 selected alternative will not violate any federal, state, or local environmental law.

Based on the foregoing, it has been determined that an environmental impact statement is not required for this action and the projects will be implemented as soon as practicable

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Recommended: Sarah Craig 4/5/10

Superintendent Date
Death Valley National Park

Approved: Craig A. McDaff 12 APRIL 2010

Regional Director, Acting Date
Pacific West Region

ERRATA

ABANDONED MINE LANDS SAFETY INSTALLATIONS
MULTIPLE MINE OPENINGS
DEATH VALLEY NATIONAL PARK, CALIFORNIA and NEVADA

These errata document changes to the text of the Death Valley National Park Abandoned Mine Lands Safety Installations at Multiple Mine Openings environmental assessment as a result of comments received since the document was released on February 19, 2010. These errata must be attached to the original environmental assessment to comprise a full and complete record of the environmental implementation process. An interdisciplinary team reviewed these responses to identify any substantive comments. Substantive comments were considered to be comments that:

- Question, with reasonable basis, the accuracy of information in the environmental assessment.
- Question, with reasonable basis, the adequacy of the environmental analyses.
- Present reasonable alternatives other than those presented in the environmental assessment.
- Cause changes or revisions in the proposal.

Substantive comments and National Park Service responses are included following the text changes.

Environmental assessment text changes:

The National Park Service revised a vegetation disturbance mitigation measure to present new information. The U.S. Fish and Wildlife Service recommended additional mitigation measures to protect the desert tortoise, and California Department of Fish and Game suggested a mitigation measure to maximize bat departures from mine openings. These additional mitigation measures, including the party responsible for their implementation, are included above in table 1 of this document. These new measures are also documented in the errata to the environmental assessment. Changes in the environmental assessment generated by substantive comments and consultation are presented below. These changes should be incorporated into the environmental assessment.

Add the following to the mitigation measures section of the environmental assessment on pages 18-20.

Soil Erosion and Vegetation Loss

- If vegetation disturbance cannot be avoided, the disturbed area will be minimized and naturalized after disturbance. Tire tracks or new foot paths will be raked out and disguised using onsite materials such as rocks, litter, or vertical mulch using locally obtained dead vegetation. Seeds, transplants or nursery outplants are not recommended due to the potential of introducing exotic species or new genotypes into native populations. The park botanist will be consulted with site photographs for site specific mitigation recommendations for areas larger than three square meters.

- For vertical shafts and open pits where cable mesh nets are the selected closure technique, one night of partial net coverage, with one corner of the cable net will be raised overnight to allow straggler bats or birds to escape before permanent closure is implemented.

U.S. Fish and Wildlife Service recommendations to enhance protection for the desert tortoise include the following:

- The National Park Service will designate a field contact representative who will be responsible for overseeing compliance with protective stipulations for the desert tortoise and for coordination on compliance with the National Park Service. The field contact representative will have the authority to halt activities that are in violation of the stipulations. The field contact representative will have a copy of all stipulations when work is being conducted on the site. The field contact representative may be any NPS employee, or a contracted biologist.
- The National Park Service will review and approve an employee education program prior to the initiation of work. The program may consist of a class or video presented by a qualified biologist. All employees will participate in the desert tortoise education program prior to initiation of activities. New employees will participate in the education program prior to working on-site. The program will cover the following topics at a minimum:
    - Distribution of the desert tortoise,
    - General behavior and ecology of the desert tortoise,
    - Sensitivity to human activities,
    - Legal protection,
    - Penalties for violations of state or federal laws,
    - Reporting requirements, and
    - Project protective measures.
- The area of disturbance will be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, public health and safety, and other limiting factors. Work area boundaries will be delimited with flagging or other marking to minimize surface disturbance associated with vehicle straying. Special habitat features, such as burrows and drinking sites, identified by the qualified biologist, will be avoided to the extent possible. To the extent possible, previously disturbed areas adjacent to the site will be used.
- If more than one day is required to complete the closure of a vertical mine shaft, and the mine is located in desert tortoise habitat, then desert tortoise exclusion fencing will be used to ensure desert tortoises do not become entrapped. If permanent desert tortoise exclusion has already been installed as part of the permanent safety exclusion, then the fencing would not need to be installed. All desert tortoise-proof fencing will be removed after completion of the mine closure.
- Except on paved roads, vehicle speed will not exceed 15 miles per hour through desert tortoise habitat.
- If a desert tortoise is discovered on the road, traffic will be stopped until the desert tortoise moves off the roadway of its own volition.

- In desert tortoise habitat, workers will inspect for desert tortoises under the vehicle prior to moving the vehicle. If a desert tortoise is under the vehicle, the vehicle must not be moved until the animal leaves of its own volition. The worker will not handle the desert tortoise.
- No pets are allowed within the project site.
- All trash and food items will be promptly contained within closed, raven-proof containers. These containers will be removed at the end of the work day from the project site to reduce the attractiveness of the area to common ravens (*Corvus corax*) and other desert tortoise predators.
- Adits within desert tortoise habitat that do not pose a hazard to tortoises (do not contain internal shafts) and are structurally sound will have a tortoise port constructed at the bottom of the safety installation. Construction of safety features in adits will use a system that vents exhaust and fumes to the outside. Adits that will be permanently closed will be checked for desert tortoise prior to being closed. If the adit is unsafe to enter, then the area immediately outside and adjacent to the adit will be surveyed for tortoise sign, i.e., tracks and scat. If recent sign is present, then the adit will not be closed until the tortoise has left. If a tortoise is present in an adit, installation of the safety treatment will not occur until the tortoise leaves of its own volition.
- If a desert tortoise is found (alive or dead) in a vertical mine shaft, a NPS employee (or other individual under guidance of the National Park Service) may remove the animal (50 CFR 17.31(a)).

Change "state-listed bat species" on page 42 to:

"…bat species with Species of Special Concern status"

Add the following text as paragraph two under the heading "Federal Agency Coordination" on page 64 of the environmental assessment.

The U.S. Fish and Wildlife Service concurred with the NPS determination that the proposed action may affect, but would not likely adversely affect the desert tortoise in a letter received by the National Park Service on March 18, 2010. The U.S. Fish and Wildlife Service concurrence letter is included in appendix B of the environmental assessment.

Response to comments:

Comment: Table 6 in the environmental assessment does not accurately reflect the protected status of bat species as determined by the California Department of Fish and Game.

Response: The protected status of bat species shown on the California Department of Fish and Game Special Animals List, July 2009, at http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/spanimals.pdf, is correctly presented in table 6 of the environmental assessment. The current list indicated that only 3 of the 12 species of bat with potential to occur in the park have Species of Special Concern status. Table 6 should remain unchanged except for a revision to correct a typographical error (the scientific name *Myotis yumanensis* was incorrectly spelled in the environmental assessment).

Comment: A public commenter noted there are no state-listed bat species.

Response: The comment likely is referring to the word "listed" and its typical association with species designated as threatened or endangered, rather than referring to all categories of protected status. Thus, the term "state-listed, " should not be used to describe the bat species that are categorized as Species of Special Concern by the California Department of Fish and Game. The first paragraph on page 42 of the environmental assessment should be revised to read:

"To avoid repetition between the Special-Status Species and Wildlife sections of this document, the discussion of bats is included in this section and includes those species with state Species of Special Concern status (three species) and species with no special status (nine species) (table 6). No federally listed species of bats occur in the park. All bats with mine habitats in the park utilize similar habitats and would be affected similarly by any proposed mine safety installations. A recent survey indicates that seven of these bat species are present at sites throughout the park. The remaining five species may potentially occur in abandoned underground mines, although there are currently no known occurrences."

Comment: A commenter expressed concern regarding the description of some types of closures as bat compatible. The compatibility of particular designs with flight patterns of different bat species was questioned. The differing needs of individual or small numbers of bats versus large colonies and the impact of not excluding wildlife species prior to closing or gating a mine opening were also noted.

Response: The environmental assessment, on page 16, stated that the National Park Service would assess each mine safety installation individually and take site-specific conditions, including the presence of bats and other wildlife, into account when designing and installing safety features. The specific recommendations regarding design specifications and configurations provided by the commenter will be taken under advisement by the National Park Service when designing the closures. The following excerpts from the environmental assessment describe the NPS commitment to install safety devices in a manner and using a design that minimizes adverse effects on bats and other wildlife species associated with mine features.

As noted on page 16:
"Selection of safety installation techniques for specific openings would be based on a number of factors, including physical features and conditions of the opening, types of structures present, safety hazards, presence or absence of bats, use of the mine by other wildlife such as the desert tortoise, owls, or bighorn sheep, and the presence and condition of historic features."

Mitigation measures presented on page 19 include:

- Use designs in gates, fences and other installation techniques that allow bat, owl, and desert tortoise access to mines that are occupied by these groups.
- Conduct bat and other wildlife surveys of openings to be closed before the installation is implemented to ensure that access is maintained and that the installation techniques produce minimal adverse effect.
- Exclude wildlife prior to installation of closure that would prevent passage by wildlife.

The environmental assessment also states on page 46:
"The decision to install a grate or screen is based on numerous factors, including use of the mine by bats. Before these types of structures were installed, the National Park Service would do a bat survey to determine if they use a particular mine. Grates and screens could be

combined with other safety installation techniques (for example, a grate atop a cupola) that allow bat access in mines where bat use is substantial. This would minimize the possibility that the structures would adversely affect bats. Each mine opening to be closed would be evaluated using the bat inventory data collected by the National Park Service, and the most appropriate safety installation method would be selected to ensure this use is sustained with minimal adverse effects."

Comment: A member of the public suggested that the impacts of closing mine openings for safety reasons could have impacts on bat colonies greater than the negligible to minor adverse impacts stated in the environmental assessment.

Response: The basis for the magnitude or intensity of each impact category used in the environmental assessment is defined in the methods discussion of each resource analysis. The expected impacts are characterized using these definitions. The definition of a minor adverse special-status species impact can be found on page 42 and states:

"Minor: The action would result in detectable effects to an individual (or individuals) of a state or federally listed species or its critical habitat, but the effects would not result in population level changes with measurable long-term effects on species, habitats, or natural processes sustaining them."

The analysis concluded the potential effects to bat species at the population level would be negligible to minor and adverse. While the potential impact to an individual or colony may differ, the population would likely experience minor adverse effects at most.

Comment: The California Department of Fish and Game commented that fencing may not be an efficient method for mine opening closures and discouraged their use because of vandalism. If fences are used, they should be monitored for efficacy and integrity.

Response: The National Park Service agrees and although fencing is listed as a potential closure method, this method is not preferred. Table 2, on page 22, acknowledges this and includes the statement "Generally, fencing would be employed only in specific circumstances, such as adaptations for barn owls or where other techniques are unsuitable."

Comment: .The California Department of Fish and Game commented on the use of cable mesh nets to close mine openings and the potential effect on bats. They suggested leaving a corner of the net open to allow bats and birds to escape overnight to avoid trapping wildlife inside a mine opening.

Response: The National Park Service agrees and has added the following mitigation measure to the environmental assessment in the errata.

- For vertical shafts and open pits where cable mesh nets are the selected closure technique, one night of partial net coverage, with one corner of the cable net to be raised overnight to allow straggler bats or birds to escape before permanent closure is implemented.

Comment: The California Department of Fish and Game suggested additional mitigation measures to protect the desert tortoise.

Response: The National Park Service concurs with the suggested mitigation measures. These measures are addressed within those recommended by the U.S. Fish and Wildlife Service,

and incorporated into the environmental assessment in the errata, thus no additional measures need be added.