

## **Appendix A**

### **Mine Closure Techniques**

Photographs of typical abandoned mine openings and types of closures at Mojave National Preserve.



Photo 1. Bat cupola over a vertical shaft.



Photo 2. Barn owl opening and perch on bat cupola.



Photo 3. Bat grate.

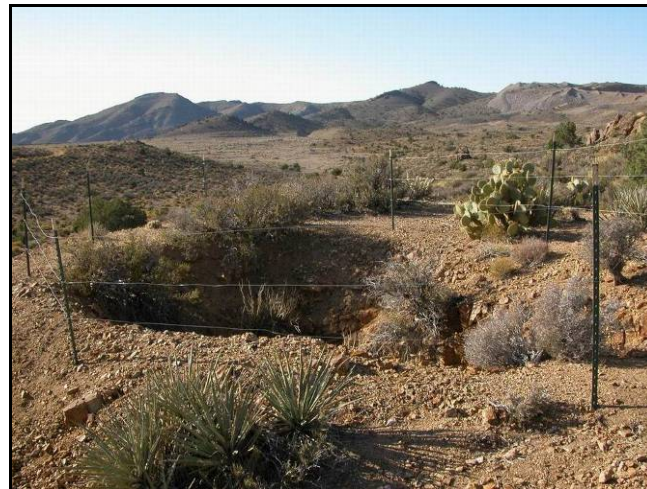


Photo 4. Temporary fencing at vertical shaft.



Photo 5. Example of a bat gate with passageway for desert tortoise.



Photo 6. Cable mesh.



Photo 7. Trench mine with shafts and adits, with permanent fencing.



Photo 8. Fenced mine shaft closure incorporating wooden owl perches on top of the fence (left) and at the edge of the shaft (right)..



Photo 9. Bat gate over vertical shaft.



Photo 10. Grate over vertical shaft



Photo 11. Completed polyurethane foam plug.



Photo 12. Grate.

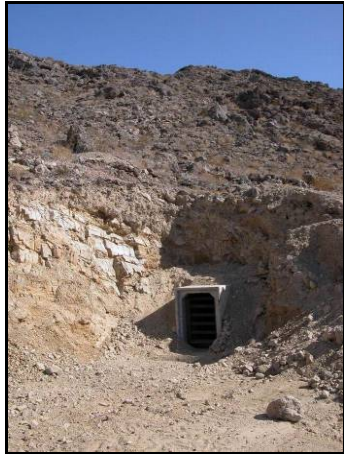


Photo 13. Adit closed with a bat gate, concrete culvert and foam protection outside the culvert. Note minimal disturbance to surrounding area.



Photo 14. Recessed bat gate in a decline. Note minimal disturbance in area surrounding the opening, and preservation of features.



Photo 15. Shaft closed with combination grate, bat cupola and concrete footing. The footing acts as a deterrent for desert tortoises.



Photo 16. Shaft closed with a recessed bat gate. Note undisturbed area surrounding opening.



Photo 17. Net closure recessed in mine shaft.



Photo 18. Cable net mine closure on a mine shaft.



Photo 19. Adit closed with a bate gate.



Photo 20. Unclosed adit.



Photo 21. Unclosed vertical shaft conditions.



Photo 22. Closed vertical shaft with bat gate.



Photo 23. Unclosed vertical shaft.



Photo 24. Grate over a vertical shaft.



Photo 25. Combination bat gate and grate over a vertical shaft.



Photo 26. Unclosed vertical shaft with head frame.



Photo 27. Trench mines with shafts closed with a permanent fence.



Photo 28. Stope with chain covering.



## **Appendix B**

### **Consultation and Coordination**



National Park Service  
U.S. Department of the Interior

Mojave National Preserve  
2701 Barstow Road  
Barstow, California 92307  
760 252-6100

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## Mojave National Preserve News Release

FOR IMMEDIATE RELEASE – OCTOBER 28, 2009

CONTACT – DANETTE WOO, 760 252-6107

### **Scoping Notice – Mitigation of Safety Hazards at Abandoned Mine Lands Environmental Assessment, Mojave National Preserve**

The National Park Service (NPS) will be preparing an environmental assessment (EA) to analyze the environmental effects of implementing mine closure methods to mitigate visitor and staff safety hazards at Abandoned Mine Land (AML) sites in Mojave National Preserve. AMLs are typically defined as any physical feature previously used for the extraction of minerals for which no responsible party can presently be identified. The NPS has completed a partial inventory of AML sites; of the known sites, mine closure methods are being proposed for those which present the greatest risks to human safety. The National Park Service is seeking comments on its plans to install safety closures at AML sites and features in Mojave National Preserve.

The NPS's primary goal is ensure visitor safety in Mojave National Preserve. Closing mine features from human access can be accomplished with non-reversible methods such as constructing rock and mortar walls into mine features and site restoration through re-contouring the landscape and planting vegetation. Because of wildlife and/or historic preservation considerations, the NPS often secures openings with "bat gate" installations, polyurethane foam plugs under a surface layer of earthen backfill, or exclosures (e.g., three-strand barbed wire fence). These closures will deteriorate over time, and require periodic to frequent monitoring and maintenance to ensure their efficacy. Monitoring is also essential to ensure safety installations remain secure and effective. These types of safety installations are subject to vandalism and do not always prevent deliberate intrusion.

AML sites often pose severe human safety hazards and/or environmental contamination, and usually have disturbances to land, vegetation, and related ecosystems. Nonetheless, AMLs in the West represent a remnant of this region's rich history and, in consequence, have long been popular destinations for tourists. Due to their relative age, the physical condition of most historic mining structures has significantly deteriorated. Open mines and associated historic structures provide unusual attractions for increasing numbers of park visitors, despite the varying levels of physical safety hazards, ranging from minimal to life-threatening, presented by these features. AML sites often also provide habitat for protected and/or sensitive wildlife species, such as bats and desert tortoise. Presence/absences surveys of wildlife have been completed for each mine site. The information gathered from these surveys will contribute to the NEPA process that will determine the appropriate safety treatments with consideration for resources protection.

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EXPERIENCE YOUR AMERICA™

The National Park Service cares for special places saved by the American people so that all may experience our heritage.

Information with regard to both the environmental assessment process and human safety at abandoned mine lands is sought. For more information, please contact Ms. Danette Woo at tel: 760 252-6107 or email: [danette\\_woo@nps.gov](mailto:danette_woo@nps.gov).

Comments must be received no later than November 28, 2009. They can be directed to:

Superintendent  
ATTENTION: AML EA  
Mojave National Preserve  
2701 Barstow Road  
Barstow, CA 92311

--NPS--

**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**

**WHEREAS**, the National Park Service (NPS) proposes to complete 85 mine safety mitigation projects (the Undertaking) at park units within the State of California (including Mojave National Preserve, Death Valley National Park, Joshua Tree National Park, Point Reyes National Seashore, and Whiskeytown National Recreation Area) that may be funded under the American Recovery and Revitalization Act of 2009 with the intent of creating jobs for the American people; and

**WHEREAS**, the NPS has consulted with the California State Historic Preservation Officer (SHPO) pursuant to the 2008 Programmatic Agreement among the National Park Service (U.S. Department of the Interior), the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act; and,

**WHEREAS**, the operation, management, and administration of the National Park System entails undertakings that may affect historic properties (as defined in 36 CFR Part 800), which are therefore subject to review under Sections 106, 110(f), and 111(a) of the National Historic Preservation Act as amended (NHPA; 16 USC 470 *et seq.*) and the regulations of the Advisory Council on Historic Preservation (36 CFR Part 800); and,

**WHEREAS**, the signature and implementation of the 2008 Programmatic Agreement (PA) does not preclude park-, Region-, or project-specific memoranda of agreement (MOA) or programmatic agreements negotiated for Section 106 purposes between the NPS and the California State Historic Preservation Officer (SHPO); and

**WHEREAS**, the Department of the Interior's Office of Inspector General issued a Final Audit Report: Abandoned Mine Lands in the Department of the Interior dated July 24, 2008 that identified numerous physical safety hazards at Abandoned Mineral Land (AML) sites in National Park Service units that pose a threat to the public and Park staff; and,

**WHEREAS**, the NPS has a qualified staff of cultural resource specialists who meet, or are under the direct supervision of a person or persons who meet, at a minimum, the appropriate qualifications set forth in the Secretary of the Interior's *Professional Qualifications Standards* (48 FR 44738-39) to carry out programs for cultural resource management; and

**WHEREAS**, the purpose of this Programmatic Agreement (PA) is to establish a program for compliance with Section 106 of the NHPA and set forth a streamlined process when agreed upon criteria are met and procedures are followed in the installation of physical safety mitigation treatments at AML sites; and

**WHEREAS**, 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 non-archaeological historic properties at these sites (see Attachment A); and,

**WHEREAS**, each of the National Park units listed above contain historic properties of religious or cultural significance to a specific set of federally designated American Indian tribes; and

**WHEREAS**, each of the National Park units listed above may contain historic properties of religious or cultural significance to a specific set of non-designated American Indian tribes or organizations; and

**WHEREAS**, each of the National Park units listed above and those others interested in following the procedures defined in this agreement therefore have consulted with the specific sets of federally designated tribes and non-designated tribes and organizations affiliated with those parks regarding this agreement in accordance with 36 C.F.R. subsection 800.14(f) and have invited them to concur in this agreement; and

**WHEREAS**, the NPS has consulted with the SHPO on ways to ensure that individual actions of the Undertaking provide for management of California National Parks' historic properties according to the intent of The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716), NPS Policies and Guidelines, and Section 106 of the NHPA;

**NOW, THEREFORE**, the National Park Service and the California State Historic Preservation Officer agree that should the NPS proceed with the Undertaking, the NPS will ensure that the following stipulations are implemented to satisfy the NPS's Section 106 responsibilities for all individual actions related to the Undertaking:

## **STIPULATIONS**

The NPS shall ensure that the following measures are carried out:

### **1. Phasing of the Undertaking**

The NPS expects to pursue the Undertaking in phases, wherein safety treatments may be installed at one to several mines at the same or multiple park units. The NPS will have met its obligations under this agreement if it fulfills the requirements listed herein for

each individual phase, independently of future phases. Prior to the initiation of each phase of the undertaking, the NPS shall determine the area of potential effects (APE) for that phase. The APE shall include all areas directly affected by construction, including but not limited to staging and borrow areas and access roads for each. Unless otherwise stated, references to the APE mean the specific APE for a given phase of the Undertaking. The APE for each phase of the Undertaking will be confined to previously disturbed areas to the fullest extent possible.

## **2. Public Involvement**

Upon advance planning and development of a new phase of the Undertaking, the NPS shall seek input from the public pursuant to 36 CFR § 800.2(d)(3) through use of the NPS Planning, Environment, and Public Comment (PEPC) system. Both the public and each park's affiliated tribes have access to this system. The PEPC record for each phase of the undertaking will identify the nature and extent of the proposed project, its location, and the results of inventory survey, if any. Any sensitive information provided by affiliated tribes to NPS units regarding the Undertaking will be held in strict confidence.

## **3. Identification and Evaluation of Historic Properties**

### **a. Historic Properties (non-archaeological)**

Although many of the non-archaeological historic properties that are found at AML sites at NPS units in California have not been evaluated for their National Register of Historic Places (NRHP) eligibility, for purposes of this agreement, the NPS will not undertake full NRHP evaluations of these sites but shall treat all such properties as potentially eligible.

### **b. Archaeological Sites**

Prior to initiation of each phase of the Undertaking, the NPS shall review its Archaeological Site Management Inventory System records for the presence of archaeological sites within the APE for that phase. Previously recorded sites within the APE will be protected in situ during construction through the use of exclusionary fencing or other measures. It is expected that few, if any, intact archaeological sites will be found within the APE of each phase of the Undertaking. If, however, the qualified cultural resources staff of any park determine that prior survey was inadequate to identify archaeological sites that may be present within the APE, the park will undertake that survey prior to initiation of construction and will protect any newly discovered sites in situ through exclusionary fencing or other suitable means.

### **c. Inadvertent Discoveries**

If during construction an archaeological site is inadvertently discovered, construction shall be halted until a qualified NPS archaeologist has visited the site and determined how to best protect the cultural resources in situ. Where avoidance is not feasible,

treatment will be carried out in accordance with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.

#### **4. Assessment of Effects**

- a. The NPS shall at all times seek to avoid adverse effects on historic properties through project designs that minimize impacts on historic fabric and on the visual character of the cultural landscape to the extent possible while mitigating physical hazards to the public.
- b. The standard mitigation treatments described in Attachment A to this agreement, due to their non-permanent and reversible nature, will be deemed to produce "No Adverse Effect" for purposes of this agreement.

#### **5. Treatment of Adverse Effects**

- a. As soon as the NPS determines that a required alternative safety treatment will have an unavoidable and irreversible adverse effect on one or more historic properties that phase of the Undertaking shall be suspended and the NPS shall immediately notify the SHPO of the precise nature of the adverse effect and why it could not be avoided. The SHPO shall be afforded a period of 15 days to respond to the park point of contact and enter into consultation on the issue. If the SHPO does not respond within that time period, the project will resume on the assumption that the SHPO has no interest in further consultation.
- b. Should any Native American burial sites, human remains, funerary objects, sacred objects, and/or objects of cultural patrimony be encountered, the NPS shall ensure they are treated with appropriate respect and according to federal law, including but not limited to the Native American Graves Protection and Repatriation Act (PL 101-601; hereinafter NAGPRA).

#### **6. Installation and Documentation of Safety Mitigation Treatments**

- a. **Installation of Safety Mitigation Treatments to Minimize Impacts**

It is the expressed intent of this PA that the NPS will manage both evaluated and unevaluated historic mining structures as potentially eligible for listing on the National Register of Historic Places (except in cases where the mines are unquestionably less than 50 years of age). As such, the NPS will make every effort to minimize impacts to historic fabric and visual intrusions into historic mining landscapes when safety mitigation measures are undertaken. The methodology of choice for providing for the safety of visitors and staff at abandoned mines over 50 years of age is the installation of reversible safety features that will produce the least noticeable change or modification to the site. Whenever mine closure devices are installed at mine openings, steps will be taken to minimize impacts to any historic fabric that may still be in place, including the

mine workings. Safety devices will ideally be worked into and around historic structures such that their visual presence is minimized to the extent possible.

b. Documentation of Safety Mitigation Treatments

Any mine opening or other area that will receive AML safety work will be thoroughly photo-documented before and after the work is completed. The photographs will illustrate the historic construction/engineering features and techniques of the treated portions of each site as well as provide an overview depicting the setting of each feature within the mine site. Any identified biological issues that should be addressed would also be recorded as part of the survey data. The site location will be digitally recorded in the park's AML database. Such recording will, at a minimum provide the site location on a digital 7.5 minute USGS topographic map.

**7. Reporting Requirements**

Each National Park Service unit with AML sites will submit an annual report to the California Historic Preservation Officer (SHPO) at the end of each calendar year regarding AML historic preservation treatments undertaken during that year. The report will at a minimum include overview and before and after photographs, a thorough discussion of the nature and extent of the work completed, a discussion of any archaeological sites found during survey of the APE and how they were protected, and a map showing the location of the site and the project APE. If no activity occurs, the NPS will submit a negative response letter report to the SHPO. No other consultation on the installation of the mine safety treatment between the SHPO and the park unit will be required given the understanding that, to the extent possible considering the need to provide for visitor and staff safety, impacts to historic fabric and the visual character of the sites will be kept to a minimum.

**8. Resolving Objections**

a. Should the SHPO, the Council, or the NPS object at any time, to the manner in which the terms of this PA are implemented, the NPS will immediately notify the SHPO and the Council, and request that SHPO and the Council submit comments on the objection within 30 days, and then proceed to consult with the SHPO and the Council for no more than 30 days to resolve the objection. The NPS will take any comments provided by the SHPO into account.

If the NPS determines that the objection can be resolved within the consultation period, the NPS may authorize the disputed action to proceed in accordance with the terms of such resolution.

b. If at the end of the 30 day consultation period, the NPS determines that the objection cannot be resolved through such consultation, the NPS will forward all documentation relevant to the objection to the Council per 36 CFR §800.2(b)(2). Any



comments provided by the Council within 30 days after its receipt of all relevant documentation will be taken into account by the NPS in reaching a final decision regarding the objection. The NPS will notify the SHPO, and the Council in writing of its final decision within 14 days after it is rendered. The NPS shall have the authority to make the final decision resolving the objection.

c. The NPS's responsibility to carry out all other actions under this PA that are not the subject of the objection will remain unchanged. The NPS may implement that portion of the Undertaking subject to objection under this stipulation after complying with subsection b. of this stipulation.

d. At any time during implementation of the terms of this PA, should an objection pertaining to the PA be raised by a member of the public, the NPS shall immediately notify the SHPO about the objection and take the objection into account. The SHPO and the Council may comment on the objection to the NPS. The NPS shall consult with the objecting party for no more than 30 days. Within 14 days following closure of consultation, the NPS will render a decision regarding the objection and notify all parties of its decision in writing. In reaching its final decision, the NPS will take into account all comments from the parties regarding the objection. The NPS shall have the authority to make the final decision resolving the objection. Any dispute pertaining to the NRHP eligibility of historic properties or cultural resources covered by this PA will be addressed by the NPS per 36 CFR §800.4(c)(2).

## **9. Scope of Agreement**

This Programmatic Agreement is limited in scope to those activities associated with the Undertaking and is entered into solely for that purpose. Nothing in this agreement shall limit an individual park from carrying out additional consultation with its affiliated tribes if the park or those tribes consider it necessary and choose to do so.

## **10. Amendments**

Any party to this agreement may request that it be amended. The process of amending the agreement shall be the same as that exercised in creating the original agreement.

## **11. Failure to Carry Out the Agreement**

In the event the NPS does not carry out the terms of this agreement, the NPS will comply with 36 CFR § 800.4 through 800.6 with regard to individual Undertakings covered by this agreement.

## **12. Review of the Agreement**

a. On or before December 31 of each year until the NPS has completed its responsibilities under this programmatic agreement, the each NPS unit will prepare and provide to the SHPO an annual report describing how it is carrying out its

responsibilities. The park shall ensure that its annual report is made available for public and tribal inspection, that potentially interested members of the public and the park's affiliated tribes are made aware of its availability, and that interested members of the public are invited to provide comments to the SHPO as well as to the NPS. The SHPO may review the annual report and may provide comments to the individual parks and/or to Pacific West Regional Cultural Resources staff.

b. At the request of any party to this agreement, a meeting or meetings will be held to facilitate review and comment or to resolve questions.

c. The SHPO may monitor activities carried out pursuant to this agreement, and the ACHP will review such activities if so requested. The NPS shall cooperate with the SHPO in carrying out their monitoring and review responsibilities.

### **13. Termination**

Any party to this agreement may terminate it by providing a 30 calendar day notice, excluding state and federal holidays, to the other parties provided that the parties will consult during the period prior to the termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the NPS will comply with 36 CFR § 800.4 through 800.6 for individual undertakings covered by this programmatic agreement.

### **14. Expiration**

This Programmatic Agreement will be null and void on September 30, 2015, unless extended by the written agreement of the parties hereto.

**SIGNATORY PARTIES**

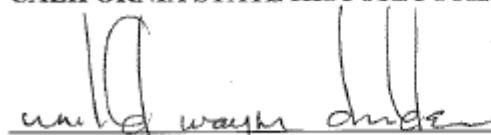
Execution and implementation of this Programmatic Agreement evidences that the NPS has satisfied its Section 106 responsibilities for all individual Undertakings covered by this agreement.

**NATIONAL PARK SERVICE:**

  
\_\_\_\_\_  
Jonathan B. Jarvis  
Regional Director, Pacific West Region  
National Park Service  
Department of the Interior

Date: 8/11/09

**CALIFORNIA STATE HISTORIC PRESERVATION OFFICER:**

  
\_\_\_\_\_  
M. Wayne Donaldson, FAIA  
California State Historic Preservation Officer

Date: 18 AUG 2009



## United States Department of the Interior

NATIONAL PARK SERVICE

Mojave National Preserve  
2701 Barstow Road  
Barstow, California 92311

IN REPLY REFER TO:  
H30 (MOJA)

May 20, 2009

Charles Wood, Chairman  
Chemehuevi Indian Tribe  
P.O. Box 1976  
Chemehuevi Valley, CA 92363

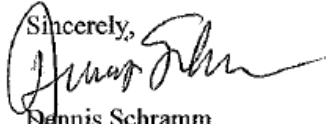
Dear Mr. Wood,

The purpose of this letter is to initiate consultation with your Tribe in accordance with the National Historic Preservation Act of 1966, as amended (NHPA), regarding the enclosed draft "Programmatic Agreement between the National Park Service (US 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." and the proposed undertaking to install safety treatments at 35 abandoned mine sites within Mojave National Preserve. The purpose of the Programmatic Agreement (PA) is to establish a streamlined process for the National Park Service (NPS) to meet its NHPA Section 106 requirements for abandoned mine land (AML) safety projects funded through the American Recovery and Reinvestment Act.

The PA has been developed in consultation with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP). The undertaking includes installation of gates, cable mesh, and other devices to reduce safety hazards to the public that exist at historic abandoned mines. The attached document, "A Plan to Minimize the Impacts of Physical Safety Hazard Mitigation Treatments at Abandoned Historic Mines" (Work Plan), provides descriptions of the types of mine hazards that need to be treated and the types of closures that may be installed to improve public safety. The work plan also discusses how mine closures can be designed to provide for continued use of the openings by wildlife (principally bats) and minimize impacts to these historic sites and the cultural resources that may be found near them. A list of the specific mines that are included in the project and brief descriptions of what we plan to do to improve public safety at the dangerous features found at each site are also provided for your review and comment.

We at Mojave National Preserve would greatly appreciate your Tribe's review and comment on the draft PA and the Work Plan. Each National Park within California with proposed mine safety treatment projects is consulting with American Indian tribes culturally affiliated with their park lands concerning the PA and the Work Plan, simultaneous with this consultation. Tribal comments received by each park will be compiled and submitted for consideration and integrated into the final PA and Work Plan as appropriate. In the event of conflicting comments, consultation will continue to reach resolution. A final copy of the executed PA along with a copy of the Work Plan will be sent to your Tribe for your information and use.

To keep the project on schedule, we respectfully request your Tribe's review and comment on the PA and the proposed Work Plan within 30 days of receipt. We are available to meet with the Tribe to discuss the PA and proposed undertaking at a time and location convenient to your Tribe. Should you have questions or comments concerning the PA or the proposed undertakings described in the Work Plan, or would like to schedule a meeting, please contact Mr. Robert Bryson, Chief of Resource Management, at (760) 252-6145. We look forward to working with you on this important health and life safety project.

Sincerely,  


Dennis Schramm  
Superintendent

attachments



IN REPLY REFER TO:  
H30 (MOJA)

## United States Department of the Interior

NATIONAL PARK SERVICE

Mojave National Preserve  
2701 Barstow Road  
Barstow, California 92311

May 20, 2009

Timothy Williams, Chairman  
Fort Mohave Indian Tribe  
500 Merriman Avenue  
Needles, CA 92363

Dear Mr. Williams,

The purpose of this letter is to initiate consultation with your Tribe in accordance with the National Historic Preservation Act of 1966, as amended (NHPA), regarding the enclosed draft "Programmatic Agreement between the National Park Service (US 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." and the proposed undertaking to install safety treatments at 35 abandoned mine sites within Mojave National Preserve. The purpose of the Programmatic Agreement (PA) is to establish a streamlined process for the National Park Service (NPS) to meet its NHPA Section 106 requirements for abandoned mine land (AML) safety projects funded through the American Recovery and Reinvestment Act.

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Sincerely,

A handwritten signature in black ink, appearing to read "Dennis Schramm", written over a horizontal line.

Dennis Schramm  
Superintendent

attachments



IN REPLY REFER TO:  
H30 (MOJA)

## United States Department of the Interior

NATIONAL PARK SERVICE

Mojave National Preserve  
2701 Barstow Road  
Barstow, California 92311

May 20, 2009

Robert Martin, Chairman  
The Morongo Band of Mission Indians  
12700 Pumarra Road  
Banning, CA 92220

Dear Mr. Martin,

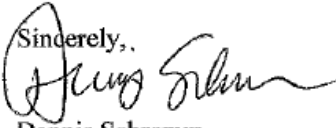
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Sincerely,  


Dennis Schramm  
Superintendent

attachments



## United States Department of the Interior

NATIONAL PARK SERVICE

Mojave National Preserve  
2701 Barstow Road  
Barstow, California 92311

IN REPLY REFER TO:  
H30 (MOJA)

May 20, 2009

James Ramos, Chairman  
San Manuel Band of Mission Indians  
26569 Community Center Drive  
Highland, CA 92346

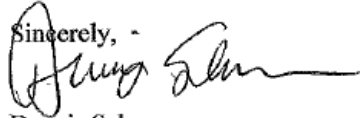
Dear Mr. Ramos,

The purpose of this letter is to initiate consultation with your Tribe in accordance with the National Historic Preservation Act of 1966, as amended (NHPA), regarding the enclosed draft "Programmatic Agreement between the National Park Service (US 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." and the proposed undertaking to install safety treatments at 35 abandoned mine sites within Mojave National Preserve. The purpose of the Programmatic Agreement (PA) is to establish a streamlined process for the National Park Service (NPS) to meet its NHPA Section 106 requirements for abandoned mine land (AML) safety projects funded through the American Recovery and Reinvestment Act.

The PA has been developed in consultation with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP). The undertaking includes installation of gates, cable mesh, and other devices to reduce safety hazards to the public that exist at historic abandoned mines. The attached document, "A Plan to Minimize the Impacts of Physical Safety Hazard Mitigation Treatments at Abandoned Historic Mines" (Work Plan), provides descriptions of the types of mine hazards that need to be treated and the types of closures that may be installed to improve public safety. The work plan also discusses how mine closures can be designed to provide for continued use of the openings by wildlife (principally bats) and minimize impacts to these historic sites and the cultural resources that may be found near them. A list of the specific mines that are included in the project and brief descriptions of what we plan to do to improve public safety at the dangerous features found at each site are also provided for your review and comment.

We at Mojave National Preserve would greatly appreciate your Tribe's review and comment on the draft PA and the Work Plan. Each National Park within California with proposed mine safety treatment projects is consulting with American Indian tribes culturally affiliated with their park lands concerning the PA and the Work Plan, simultaneous with this consultation. Tribal comments received by each park will be compiled and submitted for consideration and integrated into the final PA and Work Plan as appropriate. In the event of conflicting comments, consultation will continue to reach resolution. A final copy of the executed PA along with a copy of the Work Plan will be sent to your Tribe for your information and use.

To keep the project on schedule, we respectfully request your Tribe's review and comment on the PA and the proposed Work Plan within 30 days of receipt. We are available to meet with the Tribe to discuss the PA and proposed undertaking at a time and location convenient to your Tribe. Should you have questions or comments concerning the PA or the proposed undertakings described in the Work Plan, or would like to schedule a meeting, please contact Mr. Robert Bryson, Chief of Resource Management, at (760) 252-6145. We look forward to working with you on this important health and life safety project.

Sincerely, -  


Dennis Schramm  
Superintendent

attachments



# United States Department of the Interior

ORIGINAL

## FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office  
2493 Portola Road, Suite B  
Ventura, California 93003

June 29, 1998

### Memorandum

To: Superintendent, Mojave National Preserve, National Park Service, Barstow, California

From: *Diane K. Wade*  
Field Supervisor, Ventura Fish and Wildlife Office, Ventura, California

Subject: Biological Opinion for Small Projects Affecting Desert Tortoise Habitat in the Mojave National Preserve, San Bernardino County, California (1-8-98-F-17)

This biological opinion responds to the National Park Service's (NPS) request for formal consultation with the U.S. Fish and Wildlife Service (Service) pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). Your request was dated December 9, 1997 and was received by us on December 15, 1997. At issue are the impacts that various projects and activities, located on NPS-administered lands in the Mojave National Preserve (Preserve) in San Bernardino County, California, may have on the desert tortoise (*Gopherus agassizii*), a federally threatened species and its critical habitat. The following actions are specifically excluded from this consultation: mining activities, including exploration; construction and maintenance of livestock grazing facilities; construction of new wildlife guzzlers in desert tortoise habitat; major rehabilitation; and fire suppression activities.

This biological opinion was prepared using information from your December 9, 1997 request for consultation, the Service's files, the biological evaluation for the subject action (NPS 1997), and consultation between staffs of the Service and NPS.

### Biological Opinion

It is the opinion of the Service that the proposed action is not likely to jeopardize the continued existence of the desert tortoise or result in destruction or adverse modification of its critical habitat.

Description of the Proposed Action

The focus of this consultation is a class of actions, described as "small actions" which the NPS expects to either carry out or authorize within the range of the desert tortoise throughout the Preserve. Small actions are defined as individual actions that disturb less than two acres of desert tortoise habitat. The NPS seeks to have small actions addressed in a single formal consultation to limit the number of formal consultations on small actions with similar effects, use a coordinated approach in complying with the Act, and simplify the NPS's permitting process. The small actions covered by this biological opinion could include a variety of activities such as constructing communications facilities, locating temporary helicopter staging sites, maintaining existing guzzlers or spring developments for wildlife, routine maintenance of other existing facilities such as roads and water lines, removing feral burros on previously disturbed trapping sites, permitting special events such as movie making or allowing scientific research other than that related to the desert tortoise or other listed or proposed species.

The NPS has further explained that the feral burros would be removed only by water trapping and that special events would be limited to 25 or fewer participants (personal communication with Tony Gross, Doug Scovill and Kelly Mee, NPS, Mojave National Preserve). Use of any other removal method or permitting of larger events would be subject to additional consultation.

During the course of this consultation, the NPS stated that it would like activities related to small scale habitat restoration to be included among the activities covered by the biological opinion. Restoration actions could include soil decompaction or preparation, revegetation, or mulching. The NPS would notify the Service of any proposed restoration activities prior to their onset, as described later in this biological opinion.

Additionally, the NPS initially requested consultation only for actions located in designated critical habitat for the desert tortoise. However, the NPS subsequently modified its proposal to encompass actions that may affect desert tortoises in areas throughout the Preserve (personal communication with Tony Gross, Doug Scovill and Kelly Mee, NPS, Mojave National Preserve).

The NPS proposed several measures designed to minimize or avoid adverse effects to desert tortoises. These measures are described in the biological evaluation under "Planned Mitigation" (NPS 1997) and have been modified during this consultation as a result of discussions between NPS and Service staff. These modified measures are included in this biological opinion as terms and conditions. The NPS has also proposed to require project proponents to compensate for habitat that is disturbed or lost as a result of actions covered by this biological opinion through acquisition of private lands within the Preserve. To ensure that undue amounts of desert tortoise habitat are not disturbed, the NPS proposes to track the cumulative amount of habitat disturbed by the small actions and reinitiate formal consultation should habitat loss within the Preserve reach 10 acres per year in desert tortoise habitat or, over time, 80 acres.

Effects of the Proposed Action on the Listed Species**Species Account**

The desert tortoise is a large, herbivorous reptile found in portions of the California, Arizona, Nevada, and Utah deserts. It also occurs in Sonora and Sinaloa, Mexico. In California, the desert tortoise occurs primarily within the creosote, shadscale, and Joshua tree series of Mojave desertscrub, and the lower Colorado River Valley subdivision of Sonoran desertscrub. Optimal habitat has been characterized as creosote bush scrub in which precipitation ranges from two to eight inches, diversity of perennial plants is relatively high, and production of ephemerals is high (Luckenbach 1982, Turner and Brown 1982, Turner 1982, and Schamberger and Turner 1986). Soils must be friable enough for digging of burrows, but firm enough so that burrows do not collapse. In California, desert tortoises are typically associated with gravelly flats or sandy soils with some clay, but are occasionally found in windblown sand or in rocky terrain (Luckenbach 1982). Desert tortoises occur in the California desert from below sea level to an elevation of 7,300 feet, but the most favorable habitat occurs at elevations of approximately 1,000 to 3,000 feet (Luckenbach 1982, Schamberger and Turner 1986).

Desert tortoises are most active in California during the spring and early summer when annual plants are most common. Additional activity occurs during warmer fall months and occasionally after summer rain storms. Desert tortoises spend the remainder of the year in burrows, escaping the extreme conditions of the desert. Further information on the range, biology, and ecology of the desert tortoise can be found in Burge (1978), Burge and Bradley (1976), Hovik and Hardenbrook (1989), Luckenbach (1982), Weinstein et al. (1987), and Service (1994).

The Mojave population of the desert tortoise includes those animals living north and west of the Colorado River in the Mojave Desert of California, Nevada, Arizona, southwestern Utah, and in the Colorado Desert in California. On August 4, 1989, the Service published an emergency rule listing the Mojave population of the desert tortoise as endangered. In its final rule, dated April 2, 1990, the Service determined the Mojave population of the desert tortoise to be threatened. The Service designated critical habitat for the desert tortoise in portions of California, Nevada, Arizona, and Utah in a final rule, published February 8, 1994.

Critical habitat is designated by the Service to identify the key biological and physical needs of the species and key areas for recovery, and focuses conservation actions on those areas. Critical habitat is composed of specific geographic areas that contain the biological and physical attributes that are essential to the species' conservation within those areas, such as space, food, water, nutrition, cover, shelter, reproductive sites, and special habitats. These features are called the constituent elements of critical habitat. The specific constituent elements of desert tortoise critical habitat are: sufficient space to support viable populations within each of the six recovery units and to provide for movement, dispersal, and gene flow; sufficient quality and quantity of forage species and the proper soil conditions to provide for the growth of these species; suitable substrates for burrowing, nesting, and overwintering; burrows, caliche caves, and other shelter

sites; sufficient vegetation for shelter from temperature extremes and predators; and habitat protected from disturbance and human-caused mortality (59 FR 5820).

The recovery plan for the desert tortoise is the basis and key strategy for recovery and delisting of the desert tortoise (Service 1994). The plan divides the range of the desert tortoise into six distinct population segments or recovery units and recommends establishment of 14 Desert Wildlife Management Areas throughout the recovery units. Within each Desert Wildlife Management Area, the recovery plan recommends implementation of reserve level protection of desert tortoise populations and habitat, while maintaining and protecting other sensitive species and ecosystem functions. The design of Desert Wildlife Management Areas should follow accepted concepts of reserve design. As part of the actions needed to accomplish recovery, land management within all Desert Wildlife Management Areas should restrict human activities that negatively affect desert tortoises (Service 1994).

### **Status of the Species in the Project Area**

Plant communities in the Preserve include Mojave creosote bush scrub, Mojave mixed woody scrub, Mojave mixed woody and succulent scrub, Mojave mixed steppe, blackbush scrub, Mojavean pinon and juniper woodlands, juniper-sagebrush scrub, desert sink scrub, desert saltbush scrub, Mojave wash scrub, Joshua tree woodland and desert native grassland. Some dominant components, common to many upland areas, are blackbrush (*Coleogyne ramosissima*), creosote (*Larrea tridentata*), Joshua tree (*Yucca brevifolia*), burro bush (*Ambrosia dumosa*), Mojave saltbush and allscale (*Atriplex spinifera* and *A. polycarpa*) and spiny hopsage (*Grayia spinosa*). Species more typical of washes, arroyos and canyons are cheesebush (*Hymenoclea salsola*) and rabbitbrush (*Chrysothamnus paniculatus*).

The Preserve includes portions of the Eastern and Northeastern Mojave Desert Recovery Units for the desert tortoise. Most of the Preserve is included within two designated critical habitat units. The Ivanpah and Piute-El Dorado Critical Habitat Units also extend to areas outside the Preserve.

Given the large geographic area throughout which the subject actions would occur and the uncertainty of their timing and location, the NPS did not provide site-specific surveys for desert tortoises in the request for consultation. Much of the native habitat potentially affected by the small actions is likely to be occupied by desert tortoises, particularly in areas that support suitable soils and vegetation.

The NPS's biological evaluation notes a variety of activities and developments that continue within the Preserve, most of which involve vehicle access along the many paved and dirt roads which bisect desert tortoise habitat. Direct and indirect impacts to desert tortoises from a wide variety of recreational and other human uses can include crushing by vehicles or animals, vandalism or the collection of individual desert tortoises, increased numbers of common ravens (*Corvus corax*) which can seriously decimate numbers of juvenile desert tortoises, transmission of upper respiratory tract disease (URTD), or altered desert tortoise habitat. These and other

impacts may cause local reductions in the densities of desert tortoises in areas where the subject small actions may occur.

### **Analysis of Effects**

Potential impacts to desert tortoises would vary with the type of small action. Desert tortoises within project areas may be subject to injury or death due to crushing by vehicles or equipment during construction, maintenance, or site rehabilitation work. Loss of individual animals or eggs from the collapse or excavation of burrows is possible. A project site may become inaccessible to desert tortoises by placement of a facility or by a fence excluding entry by desert tortoises.

Desert tortoises might be taken by predators, such as common ravens, attracted to the workplace by human activities and potential perching and nest sites. Uninformed workers or special event participants might collect or vandalize desert tortoises encountered at or near project areas. Desert tortoises moved as a result of the proposed activities could be at risk if their burrows were altered by project activities or if they voided their bladders while being handled and were subsequently unable to extract sufficient moisture from food or drinking sources. Improper handling of desert tortoises by humans could spread organisms that cause URTD.

Desert tortoises of any age might attempt to dig burrows in soil that has been stockpiled as a result of project work and become vulnerable to continued work. Desert tortoises may be disturbed or injured by explosives used in site preparation.

Some vegetation may be crushed or removed or areas may be denuded by grading or soil compaction. An indirect result of soil disturbance may be local increases of exotic vegetation on areas now occupied by native forage that provides superior nutrition to desert tortoises.

Actions such as removal of feral burros or site restoration would be expected to improve overall conditions for desert tortoises. The typical burro roundup addressed in this biological opinion is very localized and involves water trapping, where the action would be limited to installation of a corral and loading chute. A low likelihood exists that concentrated burros might trample desert tortoises or their burrows. Certain maintenance actions, such as dumpsite removal, fencing areas of hazardous materials, or erecting informational kiosks could promote recovery of the desert tortoise by eliminating materials that are dangerous to individuals of the species or by educating the public.

This biological opinion addresses actions that could be carried out by permittees authorized by the NPS or by NPS staff and which would generally be temporary or intermittent actions (personal communication with Tony Gross, NPS, Mojave National Preserve). The nature of the small actions and the stipulations proposed by the NPS should reduce the potential for mortality or injury of desert tortoises during project activities. Formal consultation for the subject proposal has resulted in, with minor modification, the incorporation as terms and conditions of the previously mentioned measures, proposed by the NPS, that are expected to address the potential adverse effects of this action.



Regulations found at 50 CFR § 402.02 define destruction or adverse modification of critical habitat as a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features (referred to as the primary constituent elements [50 CFR § 424.12]) that were the basis for determining the habitat to be critical to the survival and recovery of the species. The level of habitat loss throughout the Preserve at which the NPS proposes to reinitiate formal consultation, 10 acres per year or total habitat loss of 80 acres, reflects a low note of activity. NPS has also indicated that the small actions addressed in this biological opinion currently occur on an infrequent basis; this trend is expected to continue.

The NPS's request for formal consultation notes that the proponents of small actions would be required to compensate, through the acquisition of private lands and their subsequent transfer to the NPS, for habitat that would be destroyed by the proposed action. Such acquisitions have the potential to improve the overall management of the species as desert tortoise habitat is brought under NPS administration and becomes subject to Federal regulations. Acquired lands also are eligible for inclusion in habitat enhancement and management plans which could further improve their wildlife values. Therefore, implementation of the proposed action would include the acquisition and management of compensation lands which support desert tortoises and would result in some beneficial impact to this species.

The Service believes the impacts described above are not likely to jeopardize the continued existence of the desert tortoise or adversely modify its critical habitat because:

1. The project description includes mitigation measures which would reduce the take of individual desert tortoises and loss of their habitat.
2. Habitat disturbance associated with activities would be very limited in size as compared to the recovery areas deemed necessary for the desert tortoise and is not expected to appreciably diminish the value of critical habitat for this species. Many areas likely to be affected are already disturbed or fragmented by past construction and maintenance actions.
3. The proposed action would not increase fragmentation of desert tortoise populations.
4. Project proponents would compensate for the habitat that would be lost through acquisition of private lands that are important for the recovery of the desert tortoise.

### Cumulative Effects

Cumulative effects are those impacts of future State and private actions that are reasonably certain to occur in the project area. Any actions reasonably expected to occur on lands administered by the NPS within the Preserve and by the Bureau of Land Management (Bureau)

in the vicinity of the Preserve would be subject to formal consultation as mandated by section 7 of the Act and therefore are not considered cumulative to the proposed action.

In California, the Service has contacted the counties of San Bernardino, Kern, Riverside, Imperial, Inyo, and Los Angeles (and the incorporated areas within the desert) regarding the listing of the desert tortoise and its implications for city- and county-permitted activities. Activities such as grazing or recreational use that occur on private lands may not be subject to section 7 requirements and can contribute to continued habitat degradation. The Service is unaware of any State or private actions in the vicinity of the Preserve that, when considered with this action, would jeopardize the continued existence of the desert tortoise or adversely modify its critical habitat.

The Northern and Eastern Mojave Planning effort, which includes the areas where the actions considered in this biological opinion would occur, is focused on issues related only to Federal lands within an area encompassing the expanded Death Valley National Park, the Preserve, and adjacent areas managed by the Bureau. A goal of this planning effort is to define actions which would implement the recovery plan for the desert tortoise.

#### Incidental Take

Section 9 of the Endangered Species Act prohibits the take of listed species without special exemption. Taking is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Under the terms of section 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this incidental take statement. The measures described below are non-discretionary, and must be undertaken by the agency or made a binding condition of any grant or permit, as appropriate.

The Service anticipates the following forms of take that may result from implementation of the proposed small actions throughout the Preserve:

1. Two (2) desert tortoises per year in the form of direct mortality or injury resulting from activities covered by this biological opinion.
2. Ten (10) desert tortoises per year in the form of harassment through moving desert tortoises from harm's way during the subject small actions.

This biological opinion does not authorize any form of take that is not incidental to the implementation of the small actions program. If the incidental take authorized by this biological opinion is met, the NPS shall immediately notify the Service in writing. If the incidental take authorized by this biological opinion is exceeded, the NPS is encouraged to immediately cease

the activities resulting in take and to reinitiate formal consultation with the Service. The exemption to the prohibition against take, contained in section 9 of the Act, may lapse if the amount of incidental take is exceeded.

### **Reasonable and Prudent Measures**

The Service believes that the following reasonable and prudent measures are necessary and appropriate to minimize incidental take:

1. Worker education programs and well-defined operational procedures shall be implemented to avoid the take of desert tortoises and their habitat during construction activities.
2. Take of desert tortoises, through injury or death due to the straying of equipment or vehicles beyond project areas, shall be reduced through establishment of clearly defined work areas.
3. Take of desert tortoises, through injury or death, shall be avoided through the removal of these animals to undisturbed areas out of harm's way when they are not otherwise avoidable.
4. Attraction of common ravens and other potential desert tortoise predators to project areas shall be reduced to the maximum extent possible.

### **Terms and Conditions**

To be exempt from the prohibitions of section 9 of the Act, the NPS must comply or ensure compliance with, as appropriate, the following terms and conditions, which implement the reasonable and prudent measures described above. Terms and conditions are based on the mitigation measures proposed by the NPS in the request for formal consultation; some have been modified during discussions with the NPS during this consultation or herein by the Service.

1. The project proponent shall designate a field contact representative (FCR) who will be responsible for overseeing compliance with protective stipulations for the desert tortoise and for coordination on compliance with the NPS. The FCR must be on-site during all project activities. The FCR shall have the authority to halt all project activities that are in violation of the stipulations. The FCR shall have a copy of all stipulations when work is being conducted on the site. The FCR may be a crew chief or field supervisor, a project manager, any other employee of the project proponent, or a contracted biologist.
2. All employees of the project proponent, including NPS personnel, who work on-site shall participate in a education program about desert tortoises prior to commencement of field activities. The project proponent is responsible for ensuring that the education program is developed and presented. New employees shall receive formal, approved

training prior to working on-site. The employee education program must be received, reviewed, and approved by the NPS at least 15 days prior to the presentation of the program. The program may consist of a class presented by a qualified biologist (NPS or contracted). Wallet-sized cards or a one-page handout with important information for workers to carry are recommended.

At a minimum, the program shall include discussion of the following topics: distribution of the desert tortoise; general behavior and ecology of the desert tortoise; sensitivity to human activities and disease; legal protection of the desert tortoise; penalties for violations of State or Federal laws; reporting requirements; and the specific measures that are required to protect desert tortoises during implementation of the project in which they are involved.

3. Only biologists authorized by the Service under the auspices of this biological opinion shall handle desert tortoises. The NPS shall submit the name(s) of its or the proponent's proposed authorized biologist(s) to the Service for review and approval at least 15 days prior to the onset of activities. No activities shall begin until an authorized biologist is approved.
4. The area of disturbance shall 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 shall be delineated with flagging or other marking to minimize surface disturbance associated with vehicle straying. Special habitat features, such as burrows, identified by the qualified biologist shall be avoided. Whenever possible, previously disturbed areas within the project site shall be used for the stockpiling of excavated materials, storage of equipment, location of office trailers, and parking of vehicles.
5. No access road shall be bladed to project sites. For development activities, a short driveway (no more than 0.25 mile) from the nearest access road may be constructed only if absolutely necessary. To the extent possible, access to the project site shall be restricted to designated "open" routes of travel. Otherwise, the authorized biologist shall select and flag the access route to avoid burrows and to minimize disturbance of vegetation. After abandonment of the site or completion of the project, the route shall be rehabilitated using ripping, raking, or other accepted techniques. Except when absolutely required by the project and as explicitly stated in the project permit, cross-country vehicle use by employees is prohibited during work and non-work hours.
6. If the project site is within habitat of the desert tortoise, enclosure of the project site within a fence may be required for the duration of the project to exclude individuals of this species. The fence shall be constructed under the direction of the authorized biologist. The fence shall be located to avoid all desert tortoise burrows. To the extent possible, fencing shall be placed in such a manner that the burrow is outside enclosure. The fence shall be constructed of 1/2-inch mesh hardware cloth and shall extend 18 inches above ground and 12 inches below ground. Where burial of the fence is not

possible, the lower 12 inches shall be folded outward against the ground and fastened to the ground so as to prevent entry by desert tortoises. The fence shall be supported sufficiently to maintain its integrity. Gate(s) shall be designed to prevent entry by desert tortoises. Gates shall remain closed except for the immediate passage of vehicles. The fence shall be checked at least monthly and maintained when necessary by the project proponent to ensure its integrity. With the written concurrence of the Service, the design of fences may be altered as additional information becomes available on the most efficient type of fencing.

For temporary activities, which for the purposes of this biological opinion are defined as actions requiring 90 days or less, a temporary fence shall be erected around the area of activity. The fencing shall consist of 1/2-inch mesh material supported by steel t-posts. The fencing shall be at least 18 inches high but need not be buried. Provisions shall be made for closing off the fence at the point of vehicle entry. Placement and erection of the fencing shall be approved and inspected by a qualified biologist. All fencing to exclude desert tortoises shall be removed after site rehabilitation.

7. After fence installation, the authorized biologist shall conduct a thorough survey for desert tortoises within the project area. All desert tortoises found shall be given a temporary mark and removed from the exclusion and placed outside the nearest fence. If the removal is during the season of above-ground activity, the desert tortoises shall be placed beside a nearby burrow of appropriate size. If the removal is not in the season of above-ground activity, the desert tortoise shall be moved (dug out of burrow if necessary) and placed at the mouth of or in a nearby burrow of appropriate size. If the desert tortoise does not enter the burrow, an artificial burrow may be needed. The authorized biologist shall be allowed some judgment and discretion to ensure that survival of the tortoise is likely.
8. Desert tortoises moved from within a fenced site shall be marked for future identification. An identification number using the acrylic paint/epoxy covering technique shall be placed on the fourth left costal scute as described in Desert Tortoise Council (1996). A 35-mm slide photograph of the carapace, plastron, and the fourth costal scute shall be taken. No notching is authorized.
9. Desert tortoises may be handled only by the authorized biologist and only when necessary. In handling desert tortoises, the authorized biologist shall follow the handling protocols described in Desert Tortoise Council (1996). New latex gloves shall be used when handling each desert tortoise to avoid the transfer of infectious diseases between animals. Replacement of lost fluids with a syringe is not authorized. Aside from the initial site clearance, any desert tortoise moved shall be placed in the shade of a shrub in the direction in which it was facing when found or at the entrance to or in a burrow if hibernating. In general, desert tortoises should be moved the minimum distance possible to ensure their safety. If a desert tortoise needs to be moved at a time of the day when ambient temperatures are extremely low (i.e., less than 40 degrees Fahrenheit) or extremely high (i.e., greater than 90 degrees Fahrenheit) and could result in its harm, it shall be held

overnight in a clean cardboard box. The desert tortoise shall be kept in the care of the authorized biologist under appropriate controlled temperatures and released the next day when temperatures are favorable. All cardboard boxes shall be properly discarded after one use.

10. The authorized biologist shall maintain a record of all desert tortoises handled. This information shall include for each tortoise: the locations (narrative and maps) and dates of observations; general condition and health, including injuries and state of healing and whether animals voided their bladders; the locations at which the animal was collected and location released (compass bearing and locations mapped, use of global positioning system (GPS) is acceptable); diagnostic markings (i.e., identification numbers or marked lateral scutes); and slide photographs, or preferably digital photographs, of each handled desert tortoise.
11. Except on county-maintained roads, vehicle speeds shall not exceed 20 miles per hour through desert tortoise habitat.
12. If it is necessary for a worker to park temporarily outside of a cleared enclosure, the worker shall inspect for desert tortoises under the vehicle prior to moving it. If a desert tortoise is present, the worker shall move the vehicle only after the animal has moved from under the vehicle. Alternatively, the authorized biologist may be contacted to move the desert tortoise as described previously in this biological opinion.
13. Dogs or other pets shall not be allowed on project sites within the Preserve.
14. All trash and food items shall be promptly contained within closed, common raven-proof containers. These containers shall be removed from the Preserve daily, or as soon as possible to reduce the attractiveness of the area to common ravens and other predators of the desert tortoise.
15. If deemed necessary after discussions with the Service, seasonal restrictions may be imposed on the use of explosives. If necessary, desert tortoises shall be temporarily removed from areas at risk during the detonation from either the blast or from thrown material. All handling of desert tortoises shall be conducted as described in previous measures. Alternatively, desert tortoise burrows may be covered to prevent damage from thrown materials. This determination shall be made by the authorized biologist in consultation with the NPS.

### **Reporting Requirements**

For each project the NPS wishes to include under this biological opinion, a project reporting form shall be submitted to the Ventura Fish and Wildlife Office [2493 Portola Road, Suite B, Ventura, California 93003] and the Barstow Sub-Office. The project reporting form shall include the items on the example in the biological evaluation and pertinent information about any

restoration planned for the specific project. The Service shall have 30 days following receipt of the report to respond to the notice. Should the Service not respond within 30 days, the NPS can conclude that the action falls within the definition of actions covered by this biological opinion.

Annually, the NPS shall provide a report to the Ventura Fish and Wildlife Office which documents the number and types of actions that occurred in the previous year, the actual acreage disturbed by project activities, the locations of the actions, and the number of desert tortoises removed from project areas and killed or injured during work activities, and the specific information for each tortoise as described in term and condition 10. The report shall contain a brief discussion of any problems encountered in implementing mitigation measures and terms and conditions; results of biological surveys and sighting records; and any other pertinent information. Information on the project type, habitat disturbance, and take of desert tortoises may be required to be provided in a format acceptable to the Ventura Fish and Wildlife Office for use in a geographic information system. The NPS is encouraged to discuss the effectiveness and practicality of the terms and conditions and submit recommendations regarding their modification or use of additional measures that would improve or maintain protections for desert tortoises while simplifying compliance with the Endangered Species Act.

The NPS may also consider combining these reporting requirements with those needed for other biological opinions into one annual report. This method of reporting may facilitate the preparation of the annual reports and could provide a more useful assessment of the cumulative effects of all actions on the desert tortoise.

### **Disposition of Dead or Injured Desert Tortoises**

Upon locating dead or injured desert tortoises, initial notification within three working days of its finding must be made in writing to the Service's Division of Law Enforcement (370 Amapola Avenue, Suite 114, Torrance, California 90501) and by telephone and writing to the Ventura Fish and Wildlife Office (805 644-1766). The report shall include the date, time, location of the carcass, a photograph, cause of death, if known, and any other pertinent information.

Care must be taken in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. Injured animals shall be transported to the authorized veterinarian. Should any treated desert tortoises survive, the Service should be contacted regarding the final disposition of the animals.

The NPS shall place the remains of intact desert tortoises with educational or research institutions holding the appropriate State and Federal permits per their instructions. If such institutions are not available or the shell has been damaged, the information noted above shall be obtained and the carcass left in place. Arrangements regarding proper disposition of potential museum specimens shall be made with the institution by the NPS before implementation of the action.

### Conservation Recommendations

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service recommends the following actions:

1. Should any species that are recognized as rare occur in the project area, the NPS should require the protection of those species during activities relating to small actions.
2. The NPS should monitor the presence and fluctuations in numbers of common ravens in the vicinity of the small actions and provide the Service with corresponding management recommendations.
3. The NPS should actively monitor areas throughout and adjacent to the Preserve to determine where desert tortoises are most vulnerable to vehicle strikes and provide the Service with corresponding management recommendations.

The Service requests notification of implementation of the conservation recommendations so we may be kept informed of actions that either minimize or avoid adverse effects, or that benefit candidate species or species of concern.

### Conclusion

This concludes formal consultation on the implementation of small actions within the Mojave National Preserve in San Bernardino County, California. Reinitiation of formal consultation is required if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may adversely affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by this action (50 *CFR* 402.16). Any questions or comments should be directed to Carol Crosby of my staff at (760) 255-8845.



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*Biological Evaluation  
for Programmatic Consultation  
on Activities Resulting  
in Small Disturbances  
of Desert Tortoise Habitat  
in the  
Mojave National Preserve*

*by  
Tony Gross*

*for  
National Park Service  
Mojave National Preserve*

*November 1997*

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## 1.0 Introduction and Background

The scope of activities to be addressed in this biological evaluation are those which disturb less than 2 acres of habitat. Project activities and impacts will vary. This biological evaluation specifies the types of projects and activities anticipated, the limits on the impacts under the consultation, and the planned mitigation measures. A limit on incidental take is suggested. A method for reporting actual habitat disturbance and incidental take is also given.

Activities purposefully excluded from this evaluation are construction and maintenance of livestock grazing facilities, construction of wildlife guzzlers in desert tortoise habitat, and mining activities, including exploration.

### 1.1 Endangered Species Act Requirements

In 1989, the desert tortoise (*Gopherus agassizii*) was designated by the State Fish and Game Commission as a threatened species in the State of California (*Calif. Code of Regulations*, Title 14, Sec. 670.5(b)(4)). Later in that same year the U.S. Fish and Wildlife Service (USFWS) published an emergency rule designating the desert tortoise populations north and west of the Colorado River (Mojave Population) as endangered on a temporary, emergency basis (54 *Fed. Register* 32326-32331). In April 1990, the desert tortoise was listed as threatened (55 *Fed. Register* 12178-12191). Reasons given for the listing included habitat loss and degradation due to road construction, housing developments, energy developments, agriculture, off-highway vehicle use, and livestock grazing as well as unlawful collecting, disease, excessive predation by common ravens, and other factors. In 1994, the USFWS designated critical habitat for the Mojave Population of the desert tortoise (59 *Fed. Register* 5820-5866).

Section 9 of the Endangered Species Act (ESA) of 1973, as amended, prohibits the take (i.e., harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage any such conduct) of a listed species without special authorization. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Section 7(a) of the ESA requires that Federal agencies, such as the National Park Service (NPS), that authorize projects which may negatively affect a listed species or adversely modify critical habitat designated for a threatened or endangered species must consult formally with the USFWS. The USFWS is to evaluate the proposed project and issue a biological opinion on whether the project will jeopardize the continued existence of the species or whether the project will destroy or adversely modify critical habitat. With this biological opinion, the USFWS is to specify terms and conditions under which the species may be taken and determine an appropriate level of take. The latter is defined in terms of individual animals killed, injured, or moved as well as the amount of habitat that may be temporarily or permanently disturbed.

## 1.2 Purpose

The purpose of this biological evaluation is to provide the necessary information to the USFWS for the issuance of a biological opinion to the NPS on a programmatic basis for the class of activities described in the next section. Within the biological opinion, the USFWS will provide an authorization for incidental take and provide the terms and conditions of that authorization.

## 2.0 Proposed Action

The scope of this biological evaluation includes activities that result in a small amount of surface disturbance to desert tortoise habitat. For these purposes, small is defined as “2 acres or less”. The following actions are excluded from this consultation:

1. Mining activities, including exploration, are excluded from this evaluation.
2. Construction and maintenance of livestock grazing facilities.
3. Activities or projects that have only an indirect negative effect on desert tortoise habitat beyond the project site are not included.
4. Activities or projects within the range of Mojave desert tortoise that may effect other federally listed species.

The project or activity may include but is not limited to the following elements (not intended to be an exhaustive list):

1. Landing of a helicopter;
2. Grading of the project area;
3. Compacting of the soils in the project area;
4. Permanent fencing of the project site;
5. Placement of a permanent structure;
6. Use of explosives to create a working area;
7. Feral burro removal on previously disturbed trapping sites;
8. Normal cyclic existing facility maintenance programs, i.e., road maintenance and repair, water line repair, etc.; and,
9. Special events with no more than 25 participants.
10. Scientific research other than those related to desert tortoise.

Examples of typical types of projects:

1. Construction of a communication site. This type of project may involve the following elements: grading and/or compacting of the project site, driving of delivery and service trucks and other vehicles, erection of a chain-link or other type of human exclusion, placement of machinery or equipment, construction of a short spur road, and periodic vehicle use for inspection and maintenance. The site would normally be a partially or wholly denuded site beside a dirt access road.

2. Staging of helicopter. This type of activity may involve the following elements: Landing of a helicopter, delivery of cargo on a truck and loading onto a helicopter sling, use of a fuel truck, and camping by one to several vehicles of people. The site would normally be a partially or wholly denuded site beside a dirt access road. No on-going use/continued would be authorized.
3. Maintenance of a guzzler or wildlife spring development. This type of project may involve the following elements: Delivery of materials off-road in a light truck or pick-up, clearing of a small area using hand tools, installation of the facility (perhaps including an underground tank and concrete or asphalt apron). The site would normally be near or immediately beside a dirt road. Periodic inspection and maintenance on-foot would be required.
4. The issuance of a special use permit for an activity, such as movie making, that clearly demonstrates there will be no impact to desert tortoise habitat or possibility of take.

The loss of habitat under this consultation will be limited as described below. Disturbance beyond these limits will require reinitiation of consultation.

1. Total cumulative critical desert tortoise habitat loss would be limited to:  

**no more than 80 acres** (0.005% of the total Preserve acreage) within the Mojave National Preserve; and
2. No more than 10 acres per year in critical desert tortoise habitat.

### 3.0 Anticipated Effects of the Proposed Action

#### 3.1 Species Account

A description of the natural history, habitat requirements, and population status of the desert tortoise may be found in the *Desert Tortoise (Mojave Population) Recovery Plan* (USFWS 1994).

#### 3.2 Anticipated Effects

Effects will vary based on the nature of the project or activity. Following are the most severe impacts foreseeable for each project:

1. The project site may be disturbed. That is, some vegetation may be crushed or removed or the site may be denuded by grading and/or compacting of soils.
2. The site may be removed from tortoise occupation by placement of a facility or by a fence excluding tortoise entry.

3. A tortoise could be killed or injured by crushing by a vehicle or other equipment operating at the site or accessing the site on a public road or a spur road.
4. A tortoise may be trapped or crushed in a burrow which is inadvertently collapsed.
5. A tortoise may be disturbed by removal from a burrow and/or transported from the project site by hand.
6. A tortoise may be disturbed or injured by an explosive used in preparing a site.

The loss of habitat within the Mojave National Preserve under this consultation will be limited as follows:

1. Total cumulative critical desert tortoise habitat loss would be limited to **80 acres** within the Mojave National Preserve; and
2. No more than **10 acres** per year in critical desert tortoise habitat.

#### 4.0 Planned Mitigation

Where applicable, the NPS will ensure and document that the following measures shall be incorporated into the project mitigation measures. The purpose of these measures is to minimize or eliminate anticipated impacts on the desert tortoise or desert tortoise habitat.

In the following measures a “qualified biologist” is defined as a trained biologist who is knowledgeable about desert tortoise biology, tortoise mitigation techniques, tortoise habitat requirements, identification of tortoise sign, and procedures for surveying for tortoises. Evidence of such knowledge may include one or more of the following: employment as a field biologist working on desert tortoise, or successful completion of a contract dealing with desert tortoise fieldwork. Attendance at a training course sponsored by the Desert Tortoise Council is considered supporting qualification.

An “authorized biologist” is defined as a biologist who has been authorized to handle desert tortoises, and authorization can only be approved by the USFWS.

- a. The project proponent shall designate a field contact representative (FCR) who will be responsible for overseeing compliance with protective stipulations for the desert tortoise and for coordination on compliance with the NPS. The FCR must be on-site during all project activities. The FCR shall have the authority to halt all project activities that are in violation of the stipulations. The FCR shall have a copy of all stipulations when work is being conducted on the site. The FCR may be a crew chief or field supervisor, a project manager, any other employee of the project proponent, or a contracted biologist (ideally the FCR will be a biologist).



- b. All employees of the project proponent, including NPS personnel, who work on-site shall participate in a tortoise education program prior to commencement of field activities. The project proponent is responsible for ensuring that the education program is developed and presented. New employees shall receive formal, approved training prior to working on-site. The employee education program must be received, reviewed, and approved by the NPS at least 15 days prior to the presentation of the program. The program may consist of a class presented by a qualified biologist (NPS or contracted). Wallet-sized cards or a one-page handout with important information for workers to carry are recommended.

At a minimum, the program shall include the following topics:

- ✿ distribution of the desert tortoise,
  - ✿ general behavior and ecology of the tortoise,
  - ✿ sensitivity to human activities and disease,
  - ✿ legal protection of the tortoise,
  - ✿ penalties for violations of State or Federal laws,
  - ✿ reporting requirements, and
  - ✿ project protective mitigation measures.
- c. Only biologists authorized by the USFWS shall handle desert tortoises. The NPS shall submit the name(s) of the proponents proposed authorized biologist(s) to the USFWS for review and approval at least 15 days prior to the onset of activities. No activities shall begin until an authorized biologist is approved. Authorization for handling shall be granted under the auspices of the Section 7 consultation.
- d. The area of disturbance shall 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 shall be delineated with flagging or other marking to minimize surface disturbance associated with vehicle straying. Special habitat features, such as burrows, identified by the qualified biologist shall be avoided. Whenever possible, previously disturbed areas within the project site shall be utilized for the stockpiling of excavated materials, storage of equipment, location of office trailers, and parking of vehicles. The qualified biologist, in consultation with the project proponent, shall ensure compliance.
- e. No access road shall be bladed to the project site. For development activities, a short driveway (no more than 0.25 miles) from the nearest access road may be constructed only if absolutely necessary. To the extent possible, access to the project site shall be restricted to designated "open" routes of travel. Otherwise, a qualified biologist shall select and flag the access route to avoid burrows and to minimize disturbance of vegetation. All constructed access roads are to be considered temporary; after project abandonment or completion, the route shall be rehabilitated using ripping, raking, or other accepted techniques. Except when

absolutely required by the project and as explicitly stated in the project permit, cross-country vehicle use by employees is prohibited during work and non-work hours.

- f. If the project site is in tortoise habitat, the duration of the project may require the site be enclosed within a tortoise proof fence. The fence shall be constructed under the direction of a qualified biologist. The fence shall be located to avoid all tortoise burrows. To the extent possible, fencing shall be placed in such a manner that the burrow is outside the enclosure. The fence shall be constructed of ½ - inch mesh hardware cloth. It shall extend 18 inches above ground and 12 inches below ground. Where burial of the fence is not possible, the lower 12 inches shall be folded outward against the ground and fastened to the ground so as to prevent tortoise entry. The fence shall be supported sufficiently to maintain its integrity. Gate(s) shall be tortoise-proof. This gate shall remain closed except for the immediate passage of vehicles. The fence shall be checked at least monthly and maintained when necessary by the project proponent to ensure its integrity.

For temporary activities, a temporary fence shall be erected around the area of activity. The fencing shall be ½ - inch mesh hardware cloth supported by steel t-posts. The fencing shall be at least 18 inches high but need not be buried. Provisions shall be made for closing off the fence at the point of vehicle entry. Placement and erection of the fencing shall be approved and inspected by a qualified biologist. All tortoise-proof fencing shall be removed with site rehabilitation.

- g. After fence installation, the authorized biologist shall conduct a thorough survey for tortoises within the project area. All tortoises found shall be given a temporary mark (see measure h) and removed from the exclusion and placed outside the nearest fence. If the removal is during the season of above-ground activity, the tortoises shall be placed beside a nearby burrow of appropriate size. If the removal is not in the season of above-ground activity, the tortoise shall be moved (dug out of burrow if necessary) on a seasonably warm day and placed at the mouth of a nearby burrow of appropriate size. If the tortoise does not enter the burrow, an artificial burrow may be needed. The authorized biologist shall be allowed some judgment and discretion to ensure that survival of the tortoise is likely.
- h. Desert tortoises moved from within a fenced site shall be marked for future identification in the event that a dead tortoise is found later in the project area. An identification number using the acrylic paint/epoxy covering technique shall be placed on the fourth left costal scute as described in Handling protocol sections of the Protocols for Handling Live Tortoises” prepared by the Arizona Game and Fish Department and others in 1990. A 35-mm slide photograph of the carapace, plastron, and the fourth costal scute shall be taken. No notching is authorized.
- i. Desert tortoises may be handled only by the authorized biologist and only when necessary. In handling desert tortoises, the authorized biologist shall follow the

General Handling Protocol sections of the “Protocols for Handling Live Tortoises” prepared by the Arizona Game and Fish Department and others in 1990. New latex gloves shall be used when handling each tortoise to avoid the transfer of infectious diseases between animals. Replacement of lost fluids with a syringe is not authorized. Aside from the initial site clearance, any tortoise moved shall be placed in the shade of a shrub in the direction in which it was facing when found or at the entrance to a burrow if hibernating. In general, desert tortoises should be moved the minimum distance possible to ensure their safety. If a desert tortoise needs to be moved at a time of the day when ambient temperatures are extremely low (i.e., less than 40 degrees Fahrenheit) or extremely high (i.e., greater than 90 degrees Fahrenheit) and could result in harm to the tortoise, it shall be held overnight in a clean cardboard box. The tortoise shall be kept in the care of the authorized biologist under appropriate controlled temperatures and released the next day when temperatures are favorable. All cardboard boxes shall be properly discarded after one use.

- j. The authorized biologist shall maintain a record of all desert tortoises handled. This information shall include for each tortoise:
  1. the locations (narrative and maps) and dates of observations;
  2. general condition and health, including injuries and state of healing and whether animals voided their bladders;
  3. location moved from and location moved to (compass bearing and locations mapped, use of global positioning system (GPS) is acceptable);
  4. diagnostic markings (i.e., identification numbers or marked lateral scutes); and,
  5. slide photographs, or preferably digital photographs, of each handled desert tortoise as described in a previous measure.
  
- k. No later than 90 days after completion of construction or termination of activities, the field contact representative and the authorized biologist shall submit a report to the NPS. The report shall document the effectiveness and practicality of the mitigation measures, the number of tortoises encountered, killed or injured, and the specific information for each tortoise as described previously. The report may make recommendations for modifying the stipulations to enhance tortoise protection in future projects. The report shall provide an estimate of the actual acreage disturbed by various aspects of project activities.
  
- l. Upon locating a dead or injured tortoise, the project proponent or agent is to notify the Chief of Resource Management, NPS-Mojave National Preserve. The NPS will notify the appropriate field office (Carlsbad or Ventura) of the USFWS by telephone within three days of the finding. Written notification must be made within five days of the finding, both to the appropriate USFWS field office and to the USFWS Division of Law Enforcement in Torrance, California. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, cause of death, if known, and other pertinent information. An injured animal shall be transported to a qualified veterinarian for treatment at the expense of the project proponent. If an injured animal recovers, the

appropriate field office of USFWS should be contacted for final disposition of the animal. The NPS shall endeavor to place the remains of intact tortoise carcasses with educational or research institutions holding the appropriate State and Federal permits per their instructions. If such institutions are not available or the animal's remains are in poor condition, the information noted above shall be obtained and the carcass left in place. If left in place and sufficient pieces are available, the NPS shall attempt to mark the carcass to ensure that it is not reported again. Arrangements for disposition to a museum shall be made prior to removal of the carcass from the field.

- m. Except on county-maintained roads, vehicle speeds shall not exceed 20 miles per hour through desert tortoise habitat.
- n. If it is necessary for a worker to park temporarily outside of a cleared enclosure, the worker shall inspect for tortoises under the vehicle prior to moving it. If a tortoise is present, the worker shall carefully move the vehicle only when the tortoise would not be injured, that is, the worker shall wait until the tortoise has moved out of harm's way.
- o. Dogs or other pets shall not be allowed on project sites within the Preserve.
- p. All trash and food items shall be promptly contained within closed, raven-proof containers. These containers shall be removed from the Preserve daily, or as soon as possible to reduce the attractiveness of the area to ravens and other tortoise predators.
- q. At the end of the project, disturbed areas, including new access roads, shall be rehabilitated according to NPS specifications. All tortoise-proof fences shall be removed as part of site rehabilitation.
- r. Compensation for loss of habitat shall be required according to NPS formulation. Current requirements may be based on a formula presented in the *California Statewide Desert Tortoise Management Policy* (BLM 1992). For the purposes of this consultation, changes to the compensation formula must be reviewed and approved by the USFWS. The project proponent shall either
  - 1) acquire the compensation lands and deliver the deed to the NPS;
  - 2) provide adequate funds, to be determined by the NPS, to the NPS for the acquisition of desert tortoise habitat or for other activities approved by the USFWS; or
  - 3) make permanent improvements to tortoise habitat upon agreement of the USFWS and the NPS. Lands to be acquired must be Category I or II within the Mojave National Preserve. If acquiring lands (option 1 above), the project proponent must work closely with the NPS in selecting the lands most benefiting conservation and desert tortoise recovery efforts. Compensation requirements must be resolved prior to any project field activities.
- s. If necessary, determined from discussions with the USFWS, seasonal restrictions may be imposed on the use of explosives. In addition, it may be necessary to

temporarily remove desert tortoises from areas at risk during detonation from either the blast or from thrown material. All handling of desert tortoises shall be conducted as described in previous measures. Alternatively, it may be adequate to cover desert tortoise burrows to reduce impacts from flying materials. Other Measures might be developed by the NPS or the USFWS.

## 5.0 Anticipated Take

The ESA prohibits any taking (i.e., harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage any such conduct) of a listed species without special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Under the terms of Sections 7(b)(4) and 7(o)(2) of the ESA, taking that is incidental to and not a purpose of the agency action is not considered taking within the bounds of the Act, provided that such taking is in compliance with this incidental take statement.

It is anticipated that the incidental take of desert tortoises would not exceed the following:

1. Two (2) tortoises per year in the form of direct mortality or injury resulting from project activities.
2. Ten (10) desert tortoises per year in the form of harassment through moving desert tortoises from harm's way during project activities.
3. Total tortoise habitat loss due to fencing or surface disturbance within the Mojave National Preserve shall not exceed 80.0 acres.
4. For temporary activities, a temporary fence shall be erected around the area of activity. The fencing shall be ½ - inch mesh hardware cloth supported by steel t-posts. The fencing shall be at least 18 inches high but need not be buried. Provisions shall be made for closing off the fence at the point of vehicle entry. Placement and erection of the fencing shall be approved and inspected by a qualified biologist. **All tortoise-proof fencing shall be removed with site rehabilitation.**

## 6.0 Cumulative Effects

Utility lines are numerous throughout the Mojave National Preserve; most have been located in designated corridors, this has limited the cumulative effect. Several major pipelines traverse large expanses of desert tortoise habitat. Transmission lines and fiber-optic cables have disturbed much less habitat, but roadways used for maintenance provide access to other park visitors. The need for additional utility lines through the preserve can be expected.

In addition, numerous paved roads within the Preserve cross large expanses of tortoise habitat. Of the million visitors-days to the Mojave National Preserve each year, many are used for recreation. Recreation takes the form of touring, flower viewing, bird watching, and nature photography and hunting. Most forms of recreation involve vehicle use, at least for access. The number of people using the desert to recreate has increased markedly through the last three decades. Some forms of recreation, such as vehicle use on dirt roads, can result in direct tortoise mortality.

Raven predation on juvenile tortoises is a serious threat to continued tortoise recruitment; consequently, mitigation measures will be a major component of all construction projects.

The existing dirt road network is maintained primarily by vehicle usage. NPS has established strict policies on unauthorized route use, and has increased its ranger force to reduce proliferation of unauthorized routes. Nevertheless, some tortoises are run over by vehicles being driven on dirt roads.

Sheep and cattle grazing have occurred for more than 100 years in the desert. Highest grazing use was in the late 1800's and early 1900's. During that time, alien plant species were introduced, especially grasses, and became widespread. Some argue that because livestock has been detrimental to the range, it has had a similar detriment on desert tortoise (Berry 1978). However, the effects of grazing on desert tortoise have not been scientifically studied in a quantitative or scientifically rigorous manner (Oldemeyer 1994).

During the last 10 years, disease has been identified as a major mortality factor in desert tortoise. Upper respiratory tract disease (URTD) has been found throughout much of the Mojave Desert, this disease has been most significant in population declines in the West Mojave (Berry 1989).

Mining operations have had limited impact upon tortoise habitat. Populations are effected on a local basis as habitat is lost to surface disturbing activities. Even though historic mining and prospecting efforts were extensive, for the most part, current mining activity is at a "relatively" low level within the Mojave National Preserve.

There have been several beneficial impacts to tortoise habitat. Some of these include the restriction of cross-country vehicle use and land acquisitions and exchanges to consolidate tortoise habitat. There are additional planned actions by the NPS to restore high quality habitat.

## 7.0 Project Reporting

For each project to which this consultation applies, the NPS will send a reporting form (Appendix A) to the appropriate USFWS field office at least 15 days prior to authorizing the activity. No response is required.

The NPS will submit a report detailing the actual acres disturbed, the number of tortoises moved, and the number of tortoises killed within 30 days of the completion of each project covered under this consultation.

The NPS will submit a report annually on these projects to the Ventura and Carlsbad field Offices of USFWS.

The NPS will maintain a tabular and GIS record of all compensation acquisitions.

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**REPORT ON PROPOSED ACTION TO BE COVERED BY  
THE PROGRAMMATIC CONSULTATION ON ACTIVITIES RESULTING IN  
SMALL DISTURBANCES OF DESERT TORTOISE HABITAT IN  
THE MOJAVE NATIONAL PRESERVE**

Name of Project: \_\_\_\_\_

Type Activity: \_\_\_\_\_

Location of Activity:

Base Meridian \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_

GPS data/coordinates \_\_\_\_\_

General Location or District within the Preserve: \_\_\_\_\_

Map attached (circle):      Yes      No

Brief description of project:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stipulation and Conditions to be applied (list letters that apply from the Biological Opinion):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Report prepared by: \_\_\_\_\_ Date: \_\_\_\_\_



## **Appendix C**

### **Draft Minimum Requirements Decision Guide**



ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

# MINIMUM REQUIREMENTS DECISION GUIDE

## WORKSHEETS

*"... except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."*

– the Wilderness Act, 1964

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### Step 1: Determine if any administrative action is necessary.

**Description:** Briefly describe the situation that may prompt action.

Pursuant to the needs of public safety the National Park Service (Mojave National Preserve) proposes to install safety closures on 205 mining features (shafts, declines, stopes, adits and trenches) in Mojave National Preserve. These mine features pre-date the establishment of the Preserve and are scattered throughout as a legacy of the area's mining history. Four sites with 21 mine features are located within designated wilderness.

Installing safe closures on deep and dangerous mine features will eliminate a substantial safety hazard. The threat of significant injury or death to the public and staff is high from these unmonitored abandoned mine features. These features are up to 140 years old and were not constructed to last for this length of time. Once abandoned, they were no longer maintained. If not closed according to public safety standards, these features will continue to deteriorate and present even greater risks to human health and safety. Some features are open to groundwater in Mojave National Preserve and are susceptible to contamination from a variety of sources including vandalism, illegal dumping of hazardous waste and acts of terrorism. In particular, once the groundwater is contaminated, it has been compromised and can never be completely decontaminated. In addition to ground water quality, abandoned mine features pose a particularly serious threat to the safety of park visitors, especially children, and to wildlife. Such features are frequently forgotten; once out of mind, there is little chance of preventing them from deteriorating and developing into substantial physical safety hazards.

This project involves the movement of supplies, power tools, and mechanized equipment to various abandoned mine features that are in wilderness to place concrete footings and then install steel safety closures (see attachment A). Movement of equipment such as exhaust fans, concrete mixers, welding and cutting equipment and power tools, and supplies such as steel and concrete to the features will be by vehicle or helicopter. Movement of workers (4 to 6) will be by vehicle as necessary. One or more trailers will be needed to carry heavy steel beams, concrete for footings, wood forms, power tools to work the steel, and mesh as well as tow-behind concrete mixers. Two to three vehicles will be needed. Other mechanized equipment includes a generator. The generator will be kept on an absorbent pad to prevent soil contamination from any potential spills of petroleum products.

### A. Describe Options Outside of Wilderness

Is action necessary within wilderness?

Yes:  No:  Not Applicable:

**Explain:** There are four sites to be worked on in wilderness (the Big Horn, Teutonia, Oro Y Platta, and Gold Standard mines) which require action to eliminate significant safety hazards. The estimated cumulative work area is less than two acres. The features are in wilderness and cannot be mitigated outside of wilderness. Safety closures are site specific in their design and installation (see attachment A).

### B. Describe Valid Existing Rights or Special Provisions of Wilderness Legislation

Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that allows consideration of the Section 4(c) prohibited uses? Cite law and section.

Yes:  No:  Not Applicable:

**Explain:** All abandoned mine sites covered by this project pre-date the establishment of Mojave National Preserve and the designation of wilderness through approximately half of the Preserve's 1.6 million acres.

As provided for in the Wilderness Act of 1964, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use (PL 88-577 § 4(b)). Public use of the Mojave Wilderness is currently compromised by the dangers presented by abandoned mines in Mojave National Preserve. These hazards were created by human action, but may be mitigated by the installation of safety closures that still allow the public to access and enjoy these wilderness areas.

### C. Describe Requirements of Other Legislation

Is action necessary to meet the requirements of other laws?

Yes:  No:  Not Applicable:

**Explain:**

While recognizing that competing concerns often restrict the Service's ability to eliminate hazards, the Service will strive to protect human life and provide for an injury-free visit within the constraints of the 1916 Organic Act and available resources. The Act requires the National Park Service to provide for the public enjoyment of the parks while conserving the scenery and natural and historic objects and wildlife therein "in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (16 U.S.C. 1). Unimpaired in this case translates to stabilization of the historic structures. For the "enjoyment" of the public, the features need to be safe.

The Department of Interior Office of Inspector General report entitled, *Audit Report: Abandoned Mine Lands in the Department of the Interior* (2008) and the National Park Service's Directive on AMLs (2008) gives Mojave National Preserve and other units of the national park system a mandate to identify high-risk AML features and to mitigate or safeguard those features with quick response measures and longer-term solutions, as available funding and personnel allow. Funding under the American Recovery and Reinvestment Act of 2009 (ARRA) has allowed Mojave National Preserve to safeguard multiple high-risk AML features in 2009 and 2010, as required under these directives.

#### D. Describe Other Guidance

Is action necessary to conform to direction contained in agency policy, unit and wilderness management plans, species recovery plans, or agreements with tribal, state and local governments or other federal agencies?

Yes:  No:  Not Applicable:

**Explain:** National Park Service, Management Policies Section 8.2.5.1 provides policies and principles to guide the National Park Service's public risk management program. According to those policies, the saving of human life takes precedence over all other management actions. Mojave National Preserve's General Management Plan states in its overview that the plan envisions the protection of historic resources and native species as a long-term goal. The California Desert Protection Act requires the plan to place emphasis on the protection and preservation of historical and cultural sites. Protection of bat habitat through the careful design and use of bat-compatible closures meets the GMP's goal to protect native wildlife and the wildlife surveys conducted in advance of the closures meet the GMP's goal to identify, inventory, and monitor sensitive species that are native to and present in the Preserve. A park-specific program goal for abandoned mine lands includes eliminating physical safety hazards and hazardous materials; mitigation of adverse environmental impacts to park resources, including restoration of landscapes, soils and vegetation; protection of important wildlife habitat such as bat habitat; and preservation of historic and cultural resources which may include stabilization of structures.

#### E. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: untrammeled, undeveloped, natural, outstanding opportunities for solitude or a primitive and unconfined type of recreation, or unique components that reflect the character of this wilderness area?

**Untrammeled:** Yes:  No:  Not Applicable:

**Explain:** This action does not contribute to the untrammeled quality of wilderness character.

**Undeveloped:** Yes:  No:  Not Applicable:

**Explain:** This action does not contribute to the undeveloped quality of wilderness character.

**Natural:** Yes:  No:  Not Applicable:

**Explain:** This action will not contribute to the natural character of wilderness in Mojave National Preserve.

#### Outstanding opportunities for solitude or a primitive and unconfined type of recreation:

Yes:  No:  Not Applicable:

**Explain:** This action will not contribute to the wilderness character of solitude and/or primitive, unconfined recreation in Mojave National Preserve.

#### Other unique components that reflect the character of this wilderness:

Yes:  No:  Not Applicable:

**Explain:** No other components have been identified.

## F. Describe Effects to the Public Purposes of Wilderness

Is action necessary to support one or more of the public purposes for wilderness (as stated in Section 4(b) of the Wilderness Act) of recreation, scenic, scientific, education, conservation, and historical use?

**Recreation:** Yes:  No:  Not Applicable:

**Explain:** Improvements to human safety support recreational experiences. While these experiences may be temporarily impacted with the use of a road in wilderness, the sounds of motorized and mechanized equipment, many park visitors come to Mojave National Preserve with abandoned mine sites as their primary destination. Alternative A will secure dangerous mine features in a manner that prevents people from falling down deep, man-made holes or being caught in horizontal openings that may collapse.

**Scenic:** Yes:  No:  Not Applicable:

**Explain:** Safety installations will neither reduce nor increase the visual intrusions presented by abandoned mine features.

**Scientific:** Yes:  No:  Not Applicable:

**Explain:** Scientific values will be improved as bat sites will be closed to human interference.

**Education:** Yes:  No:  Not Applicable:

**Explain:** Educational uses will neither benefit nor be adversely impacted by safety installations.

**Conservation:** Yes:  No:  Not Applicable:

**Explain:** Conservation of wilderness will neither benefit nor be adversely impacted by safety installations.

**Historical use:** Yes:  No:  Not Applicable:

**Explain:** Improved public safety may or may not increase visitation to abandoned mine sites. Contributions to historical uses of these sites are inconclusive.

### Step 1 Decision: Is any administrative action necessary in wilderness?

Yes:  No:  More information needed:

**Explain:** Administrative action is necessary to protect the park visitor and natural and historic resources. It is not necessary to take action in wilderness to comply with law, preserve wilderness character, support the public purposes of wilderness, or comply with existing valid rights. However, in this situation, taking no action would ignore a significant threat which could possibly affect human life and regional resources such as bat populations and species distributions both inside and outside of wilderness.

In addition, the activities are limited to a very small area within wilderness (2 acres or approximately .0001% of Mojave National Preserve's Wilderness). Wilderness character is partially compromised immediately adjacent to the proposed work sites, due to the vehicle and equipment use, and the change in all wilderness character elements associated with prior landscape manipulation.

If action is necessary, proceed to Step 2 to determine the minimum activity.

## Step 2: Determine the minimum activity.

### Description of Alternatives

For each alternative, describe what methods and techniques will be used, when the activity will take place, where the activity will take place, what mitigation measures are necessary, and the general effects to the wilderness resource and character.

Alternative # <u>  A  </u>
----------------------------

**Description:** *Allow motorized and mechanized equipment to facilitate the closure of abandoned mine features.* Issue authorization for vehicles (including helicopters) and construction equipment to access and address dangerous open features at abandoned mine sites in wilderness. Helicopter use would allow a contractor to get equipment and supplies to a site while limiting the need for transporting heavy loads by vehicles. The limiting of heavy loads helps to minimize road impacts, and also allows power equipment/tools such as generators, torches, concrete mixers, cutters, grinders, exhaust fans, etc. on site. Joshua Tree National Park has used helicopters for many years to complete safety installations at mines in wilderness.

### Effects:

**Wilderness Character** – Negative impacts from the operation of motorized and mechanized equipment. No beneficial impacts to wilderness character.

**Untrammeled** – not applicable.

**Undeveloped** – not applicable.

**Natural** – not applicable.

**Outstanding opportunities for solitude or a primitive and unconfined type of recreation** – not applicable.

**Heritage and Cultural Resources** – No negative effects identified. Historic resources will be stabilized.

**Maintaining Traditional Skills** – Negative effects, as This alternative would have negative effects because it does not include use of primitive or traditional skills, non-motorized tools or non-mechanical travel methods.

**Special Provisions** - Motor vehicles and motorized equipment (Helicopters power tools and construction equipment) are allowed only if they are the minimum necessary for administration of the area as wilderness (The Wilderness Act Section 4(c)) and if they meet the test of *practical necessity and reasonableness*. Securing human safety at abandoned mine sites is an administrative action necessary for both park staff and visitors to Mojave National Preserve.

**Safety of Visitors, Personnel, and Contractors** – The use of motor vehicles (including helicopters) and construction equipment in rugged terrain has an inherent risk to the operators. Alternative A will have long-term benefits to the safety of visitors and park personnel alike.

**Economic and Time Constraints** – The use of motor vehicles including helicopters, power tools, and construction equipment may be more efficient for operators who are not skilled in the use of alternate means. Their use increases workers safety over other means of supply transport or construction and significantly cuts the time that activity would occur.

**Additional Wilderness-Specific Comparison Criteria** – None identified.

Alternative #  B

**Description:** Do not allow use of mechanized or motorized equipment to complete safety installations at abandoned mine features in wilderness. Rather, pack animals, hand tools, and other manual means would be used to complete the projects. For example, all drill holes would be made using hand drills and sledge hammers. Steel would be drilled with a brace and bit or be pre-drilled outside of wilderness. Supplies would be transported by people and pack animals. Under this alternative, the time needed to complete safety installation will be increased by an order of magnitude. Risks to human safety will, therefore, continue by the same order of magnitude, and workers will be at risk for a longer time period. Workers will need to complete training in the use of manual tools prior to the start of construction; moreover, hand tools likely would increase the risk of fatigue on the job site.

**Effects:**

**Wilderness Character** – will be maintained by not allowing use of mechanized or motorized equipment in wilderness.

**Untrammeled** – maintained by the avoidance of motorized vehicles to access abandoned mine sites.

**Undeveloped** – maintained by the avoidance of mechanized and motorized equipment. Installation of safety features will not contribute to or detract from the undeveloped character of the Mojave wilderness.

**Natural** – not applicable.

**Outstanding opportunities for solitude or a primitive and unconfined type of recreation** – no impacts, as all work will be carried out by hand.

**Heritage and Cultural Resources** – No negative effects identified. Historic resources will be stabilized.

**Maintaining Traditional Skills** – Positive impacts from this alternative. The work to install safety features can only be carried out using traditional, manual skills. It avoids mechanized and motorized tools and methods altogether.

**Special Provisions** – none specified.

**Safety of Visitors, Personnel, and Contractors** – The use of non-mechanized equipment in wilderness has an increase risk to workers as most workers are not familiar with using non-mechanized tools which will significantly increase the time required to complete the work. For example, skills associated with two-man drilling teams using sledge hammers and drill bits in confined spaces are not readily available today. Contractors will need to be trained in manual skills required to complete the work. Another consideration is that mixing bags of concrete by hand causes cold joints which, in turn, limit the strength of the concrete.

**Economic and Time Constraints** – The use of pack animals or non-mechanized equipment will be less efficient for operators, and would significantly contribute to an increase in contractor time on-site and cost to the National Park Service to facilitate this project. This alternative is cost prohibitive; therefore, safety hazards and resource protection issues remain unaddressed.

**Additional Wilderness-specific Comparison Criteria** – None identified.

Alternative #   C  

**Description:** Allow the use of mechanized equipment to complete safety installations at abandoned mine features in wilderness. Do not allow use of motorized vehicles to access abandoned mine sites. Mechanical tools and equipment will be transported by non-motorized means to abandoned mine sites. This might be carried out by use of pack animals or the contractors carrying equipment in by hand. Mechanical tools include power tools, exhaust fans, concrete mixers, welding and cutting equipment and power tools, and supplies such as steel and concrete to the features will be by vehicle or helicopter. Workers will access each site by foot. Large or heavy equipment includes heavy steel beams, concrete for footings, wood forms, power tools to work the steel, and mesh as well as tow-behind concrete mixers. Pack animals would likely be the most effective way to transport these items. A generator could also be transported by pack animal. The generator will be kept on an absorbent pad to prevent soil contamination from any potential spills of petroleum products.

**Effects:**

**Wilderness Character** – negative impacts from the operation of mechanized equipment. Lack of motorized vehicles will avoid disturbances to old roads, crushing and compaction of vegetation, and disturbances to solitude. Operation of mechanized equipment will offset some of these avoidances.

**Untrammeled** – maintained by the avoidance of motorized vehicles to access abandoned mine sites.

**Undeveloped** – revegetation of abandoned roads will continue without significant negative impacts.

Installation of safety features will not contribute to or detract from the undeveloped character of the Mojave wilderness.

**Natural** – not applicable.

**Outstanding opportunities for solitude or a primitive and unconfined type of recreation** – use of mechanized equipment will have negative impacts to the solitude and primitive character of wilderness.

**Heritage and Cultural Resources** – No negative effects identified. Historic resources will be stabilized.

**Maintaining Traditional Skills** – This alternative would have negative effects because it does not include use of primitive or traditional skills, or non-motorized tools. Some positive effects from non-mechanical travel methods offset the negative impacts of mechanized tools.

**Special Provisions** – Mechanized equipment is allowed only if it is the minimum necessary for administration of the area as wilderness (The Wilderness Act Section 4(c)) and if they meet the test of *practical necessity and reasonableness*. Securing human safety at abandoned mine sites is an administrative action necessary for both park staff and visitors to Mojave National Preserve. Use of mechanized tools is the most practical, reasonable, and cost-effective approach for installing safety features at abandoned mines.

**Safety of Visitors, Personnel, and Contractors** – Mechanized equipment will need to be delivered to and adjacent to abandoned mine sites in wilderness. The use of mechanized equipment has an inherent risk to operators. Alternative C will have long-term benefits to the safety of visitors and park personnel alike.

**Economic and Time Constraints** – This alternative may have greater economic constraints than Alternative B, due to the monetary and temporal expense of delivering mechanical equipment to abandoned mine sites without the use of motorized vehicles.

**Additional Wilderness-specific Comparison Criteria** – None identified.



## Alternative No Action

**Description:** *Do not install safety installations at abandoned mine sites and features in Mojave National Preserve.* Leave abandoned mine sites in their present condition, with mine openings unsecured and hazardous to human safety. Four sites identified for safety installations in 2010 have 20 individual features (including 12 vertical shafts) that will continue to threaten human health and safety under the No Action.

### Effects:

**Wilderness Character (untrammled, undeveloped, natural, outstanding opportunities for solitude or a primitive and unconfined type of recreation)** – Wilderness character will remain unaffected by the No Action. Recreational opportunities continue to risk being compromised by the dangers to human safety presented by abandoned mine lands.

**Heritage and Cultural Resources** – Historic resources will not be stabilized as planned under Alternatives A, B, and C.

**Maintaining Traditional Skills** – not applicable. Under No Action, no safety installations will be carried out at abandoned mine sites in wilderness.

**Special Provisions** – none specified.

**Safety of Visitors, Personnel, and Contractors** – Open features at abandoned mine sites will continue to pose risks to human health and safety, as described in the Department of Interior Office of Inspector General report entitled, *Audit Report: Abandoned Mine Lands in the Department of the Interior* (2008) and the National Park Service's Directive on AMLs (2008).

**Economic and Time Constraints** – not applicable

**Additional Wilderness-specific Comparison Criteria** – None identified.

## Comparison of Alternatives

It may be useful to compare each alternative's positive and negative effects to each of the criteria in tabular form, keeping in mind the law's mandate to "preserve wilderness character."

	Alternative A (mechanized and motorized equipment)	Alternative B (no mechanized or motorized equipment)	Alternative C (no motorized equipment)	No Action
Untrammled	-	+	n/a	n/a
Undeveloped	-	n/a	n/a	n/a
Natural	-	n/a	n/a	n/a
Solitude or Primitive Recreation	-	+	-	n/a
Unique components	n/a	n/a	n/a	n/a
<b>WILDERNESS CHARACTER</b>	-	+	-	-

	Alternative A (mechanized and motorized equipment)	Alternative B (no mechanized or motorized equipment)	Alternative C (no motorized equipment)	No Action
Heritage & Cultural Resources	+	+	+	n/a

Maintaining Traditional Skills	-	+	+/-	n/a
Special Provisions	-	+	-	+
Safety of Visitors, Personnel and Contractors	+	+	+	-
Economics & Time	+	-	+	n/a
Additional Wilderness Criteria	n/a	n/a	n/a	n/a
<b>OTHER CRITERIA SUMMARY</b>	+	+	+	+/-

	Alternative A (mechanized and motorized equipment)	Alternative B (no mechanized or motorized equipment)	Alternative C (no motorized equipment)	No Action
<b>SAFETY</b>	+	+	+	-

#### Safety Criterion

If safety issues override impacts to wilderness character or other criteria, provide documentation that the use of motorized equipment or other prohibited uses is necessary because to do otherwise would cause increased risks to workers or visitors that cannot be satisfactorily mitigated through training, use of personal protective equipment (PPE), or other requirements to alleviate the safety risk. (This documentation can take the form of agency accident-rate data tracking occurrences and severity; a project-specific job hazard analysis; research literature; or other specific agency guidelines.)

#### Documentation:

Multiple sources of data are available that show the dangerous situations associated with mine openings at abandoned mine sites. The Department of Interior Office of Inspector General report entitled, *Audit Report: Abandoned Mine Lands in the Department of the Interior (2008)* describes safety hazards at abandoned mine sites on lands in California, Arizona, and Nevada. The dangers presented by AMLs are consistent across lands managed by the National Park Service, the Bureau of Land Management, or any other public agency.

"Many abandoned mine sites present an immediate danger of physical injury or death due to open vertical shafts and horizontal adits (entrances to a mine) and mill sites with deteriorating buildings and equipment. Dangers include deadly gases and asphyxiation, collapsing mine walls, explosive and toxic chemicals, and rotting structures... Some sites also present long-term dangers to people from exposure to piles of waste rock or mine tailings (mine waste) containing hazardous materials such as arsenic, lead, and mercury." (2008 Audit Report, p. 7)

<b>Step 2 Decision: What is the <u>Minimum</u> Activity?</b>
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The Wilderness Act, Section 4c, allows for the administrative use of motorized equipment only "as necessary to meet minimum requirements for the administration of the area for the purpose of this Act...". In this case, the use of motorized equipment (welders, cutting tools, trucks, trailers and helicopters) is the minimum requirement since the project cannot be accomplished without the equipment.

Alternative A best meets the policy, objectives, and agency needs to administer safety installations at abandoned mine sites in wilderness in a timely, reasonable and cost-effective manner. Wilderness character will be disturbed by the work required to implement safety installations at AML features. The use of mechanized and motorized equipment will allow this work to be done in an expeditious manner, keeping impacts to solitude and primitive/unconfined recreational activities to the shortest time possible. It will also keep contract costs down, allow for the use of modern technologies by skilled workers, and secure human safety in a short period of time. Other alternatives will require longer periods of time to complete the installations, leaving AML hazards open to physical injury or death during these periods.

An NPS monitor will be present at each site, to protect wilderness values and oversee safety installations at AMLs in wilderness. The monitor will ensure project guidelines are followed and that mitigation efforts minimize disturbance to the area. All safety installations will be recorded in the service-wide AML database.

**Check any Wilderness Act Section 4(c) uses approved in this alternative:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> mechanical transport | <input type="checkbox"/> landing of aircraft                  |
| <input checked="" type="checkbox"/> motorized equipment  | <input checked="" type="checkbox"/> temporary road            |
| <input checked="" type="checkbox"/> motor vehicles       | <input checked="" type="checkbox"/> structure or installation |
| <input type="checkbox"/> motorboats                      |   |

Record and report any authorizations of Wilderness Act Section 4(c) uses according to agency procedures.

- NPS 2006 Management Policies, Chapter 6.4.9. Mineral Development
- NPS Reference Manual 12, Chapter 3-4, C(18)

<b>Approvals</b>	<b>Signature</b>	<b>Name</b>	<b>Position</b>	<b>Date</b>
Prepared by:		Ted R Weasma	Park Geologist	
Prepared by:		Danette Woo	Environmental Compliance Specialist	
Recommended:		David M Ashe	Chief Ranger/ Wilderness Coordinator	
Recommended:		Steve Carlson	Chief of Maintenance	
Approved:		Larry Whalon	<i>Acting</i> Superintendent	

## Attachment A

MINE and FEATURE ID	UTM NORTH	UTM EAST	FEATURE TYPE	SIZE (LxWxD) and NOTES	BAT USE	TORTOISE HABITAT	CLOSURE RECOMMENDATION	WILDERNESS?
Big Horn Mine Decline 3	3856577	633436	Decline	4x6x7 Deep. Timbered	Yes	No	Stabilize/Repair timbers & install Bat culvert and gate.	Yes
Teutonia Mine Shaft 1	3908109	630428	Shaft	10x15x8	No	Yes	Grate Close by any means.	Yes
Teutonia Mine Shaft 2	3908141	630369	Shaft	18x20x31	No	Yes	Grate Close by any means.	Yes
Teutonia Mine Shaft 3	3908282	630293	Shaft	3x6x32	No	Yes	Grate Close by any means. Exclusion	Yes
Teutonia Mine Shaft 4	3908253	630144	Shaft	Shaft 10ft	No	Yes	Grate Close by any means.	Yes
Teutonia Mine Shaft 5	3907956	630710	Shaft	12x15x20 ft.	No?	Yes	Grate Close by any means.	Yes
Teutonia Mine Shaft 6	3907948	630759	Shaft	Collapsed shaft	No	Yes	Fence	Yes
Teutonia Mine Shaft 7	3907938	630796	Shaft	Shaft 20 ft. deep	Unknown	Yes	Grate Close by any means.	Yes

MINE and FEATURE ID	UTM NORTH	UTM EAST	FEATURE TYPE	SIZE (LxWxD) and NOTES	BAT USE	TORTOISE HABITAT	CLOSURE RECOMMENDATION	WILDERNESS?
Teutonia Mine Shaft 8	3908091	630477	Shaft	Collapsed shaft	No	Yes	No action or fence	Yes
Teutonia Mine Decline	3907948	630742	Decline	Decline	No	Yes	Grate Close by any means.	Yes
Oro Y Platta Mine Adit 1	3891288	622682	Adit	4x6x15+ ft. qmp shear	Yes	Yes	Bat gate and 15 ft. culvert.	Yes
Oro Y Platta Mine Water Development/Adit 2	3891240	622704	Water Development	Collapsed 1 inch pipewater----	No	Yes	Close by any means. Exclusion	Yes
Oro Y Platta Mine Shaft 1	3891399	622637	Shaft	5x6x15 Timbered shaft	Unknown	Yes	Repair & Grate	Yes
Oro Y Platta Mine Shaft 2	3891267	622689	Shaft	6x8x50 timbered qmp	Yes	Yes	Repair & Grate	Yes
Oro Y Platta Mine Shaft 3	3891252	622698	Shaft	7x6x30 Wood collared shaft, Qmp	No	Yes	Repair & Grate	Yes
Gold Standard Mine Decline 1	3889095	618478	Decline	6x8x20 ft. 50 degrees photo 12	Unknown	Yes	Grate Close by any means.	Yes

<b>MINE and FEATURE ID</b>	<b>UTM NORTH</b>	<b>UTM EAST</b>	<b>FEATURE TYPE</b>	<b>SIZE (LxWxD) and NOTES</b>	<b>BAT USE</b>	<b>TORTOISE HABITAT</b>	<b>CLOSURE RECOMMENDATION</b>	<b>WILDERNESS?</b>
Gold Standard Mine Decline 2	3889062	618526	Decline	Collapsed photo 16	Unknown	Yes	<b>Grate</b> Close by any means.	Yes
Gold Standard Mine Decline 3	3889269	618415	Decline	8x6x15 ft. dike quartz	Unknown	Yes	<b>Grate</b> Close by any means.	Yes
Gold Standard Mine Decline 4	3889214	618433	Decline	Decline 4, along 40 degrees east quartz	Yes	Yes	<b>Bat culvert and gate.</b>	Yes
Gold Standard Mine Shaft	3889010	618575	Shaft	Fenced filled 7x7x15 ft deep 18 photo, Well?	No	Yes	<b>Grate</b> Close by any means.	Yes

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

NPS 170/100735 January 2010

United States Department of the Interior ✧ National Park Service