



United States Department of the Interior



NATIONAL PARK SERVICE  
PACIFIC WEST REGION  
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San Francisco, CA 94104-2828

IN REPLY REFER TO:

L7617 (PWRO-P)

**AUG 19 2019**

Memorandum

To: Superintendent, Mojave National Preserve

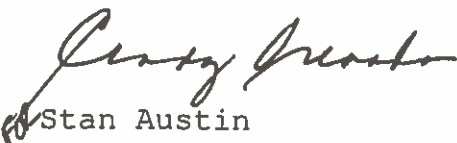
From: Regional Director, Pacific West

Subject: Environmental Compliance for Management of Developed  
Water Sources (PEPC 32532)

The *Finding of No Significant Impact* (FONSI) for management of developed wildlife water sources in the Preserve, and improving regional habitat connectivity, is approved.

To complete this particular conservation planning and environmental impact analysis effort, at the time when the decision is announced, the park should ensure the FONSI (and Errata) is made available to all individuals and organizations that received or commented on the supporting environmental assessment.

The preserve staff's efforts to submit a Weekly Report project announcement on July 19, 2019 (and July 26, 2019 update) are much appreciated.

  
Stan Austin

Attachment

**FINDING OF NO SIGNIFICANT IMPACT**  
**Management Plan for Developed Water Sources**  
**National Park Service, Department of the Interior**  
**Mojave National Preserve**

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## **INTRODUCTION**

This Finding of No Significant Impact (FONSI) has been prepared, in accordance with the National Environmental Protection Act (NEPA), for the Management Plan for Developed Water Sources in Mojave National Preserve and Environmental Assessment (Plan EA), San Bernardino County, California. The FONSI, along with the Plan EA and Errata Sheet, comprise the complete record of environmental impact analysis for the project.

This document describes the Selected Alternative and provides a brief explanation of why it will have no significant effects on the human environment (CFR Title 41 § 1500-1508). The Selected Alternative of the Plan EA provides strategic intervention to stabilize native wildlife populations, reduce the number of wildlife developments in wilderness, and improve regional habitat connectivity that extends beyond the boundaries of Mojave National Preserve (Preserve).

## **PURPOSE AND NEED FOR ACTION**

The purpose of the Plan EA is to develop a comprehensive strategy and identify techniques for managing developed water sources in the Preserve in a changing environment, and to ensure wildlife conservation, historic preservation, wilderness character, and recreation values in a diverse desert ecosystem.

The Mojave Desert is a water-scarce environment where most native plants and animals are adapted to survive with limited access to free-standing water and extended periods of drought. A variety of natural and developed water features exist on the landscape, including natural springs, developed springs, wildlife guzzlers, and wells. While many developed water features (i.e., water developments) are important for wildlife conservation, have historical value, or are important for the Preserve's operations, others may not be necessary or may be detrimental to other Preserve resources.

There is uncertainty about the importance of these water resources to the desert ecosystem in the face of regional habitat loss, fragmentation, and climate change; and there is no comprehensive strategy to manage water resources in the Preserve. Considering the Preserve's legislative mandate to "perpetuate in their natural state significant and diverse ecosystems of the California desert," a developed water sources resource management plan is needed to:

- identify a proactive, consistent, and Preserve-wide management approach for developed water features;

- identify the type and level of management intervention that is appropriate and necessary to sustain habitat for native wildlife given human influences on climate and habitat fragmentation;
- reconcile competing policy guidance on resource management and wilderness stewardship;
- provide guidance as the Preserve responds to external development threats; and
- improve coordination between the Preserve, California Department of Fish and Wildlife (CDFW), Bureau of Land Management (BLM), other desert national park system units, and stakeholders.

## **ALTERNATIVES**

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

The NPS selects Alternative 3 for implementation. The Selected Alternative emphasizes supporting native wildlife habitat conservation and population stability while reducing the number of water developments in wilderness. Relocating some water developments from wilderness, subject to monitoring and adaptive management, combined with implementation of new water developments and more efficient use of existing water developments outside of wilderness will support wildlife conservation in accordance with Executive Order 13443 and Secretarial Orders 3347, 3356 and 3362 while promoting habitat connectivity on a landscape scale, and preserve wilderness qualities. Relocation of water developments to sites outside of wilderness will result in no net loss of dry season habitat value. The overall result will be an increase in habitat supported by developed water sources compared to the status quo.

Before any decisions regarding existing big game wildlife water developments (WWDs or guzzlers) are made or WWDs are modified or decommissioned, the NPS will consult with CDFW, authorized agents of CDFW and stakeholders. Through a collaborative process the NPS will coordinate with CDFW, authorized agents of CDFW and stakeholders to ensure all decisions regarding WWDs, including location of WWDs, are consistent with and will advance the goals and objectives of the CDFW Bighorn Sheep Management Plan to the extent possible under applicable NPS authorities. The NPS will seek to work collaboratively with CDFW, authorized agents of CDFW and stakeholders to ensure that needed permits are prepared and approved in a timely manner and the WWDs are regularly maintained and continue to provide needed water.

Selected small game guzzlers designed for birds and other small game, and which are located outside of wilderness, will be evaluated and maintained according to their ecological importance. Based on ecological importance and potential maintenance, five to ten small game guzzlers will be selected for continued maintenance.

### **Modifications to the Selected Alternative**

With this NEPA decision, the NPS is selecting the Preferred Alternative for implementation. No changes were made to the Preferred Alternative following the draft Plan EA.

## **Other Alternatives Considered**

Alternative 1, known as the No Action, proposed to maintain the status quo. The current number and distribution of water developments would continue with minimal maintenance. On a case-by-case basis, management actions addressing developed water sources would be based on land designations (i.e., wilderness, critical habitat) without overarching guidance.

Alternative 2 prioritized minimal water developments in wilderness. It proposed fewer developments in wilderness and throughout the Preserve compared with Alternative 1, focusing on conservation and maintenance of self-sustaining native wildlife populations.

Alternative 4 prioritized an augmentation of native wildlife habitat in the Preserve and between the Preserve and adjacent/nearby habitat through the use water developments. It promoted the most water developments in wilderness, with the same number of big game guzzlers as the Selected Alternative.

The NPS considered but dismissed the removal of all big game guzzlers from wilderness due to significant detrimental effects this would have on the Preserve's bighorn sheep population.

## **Decision Rationale**

The Selected Alternative meets the purpose and need of the project while preserving existing Preserve resources. It also optimizes the use of developed water sources outside of wilderness for native wildlife habitat value and connectivity, while benefiting the Preserve's wilderness qualities.

Compared to the No Action alternative, the Selected Alternative will allow for proactive management of developed water sources across the Preserve and increase the value of habitat for desert bighorn sheep in the Preserve. Compared with Alternative 2, it will result in an increase in habitat value for bighorn sheep while providing similar benefits to the Preserve's wilderness qualities. Compared with Alternative 4, it will result in essentially the same increase to bighorn sheep habitat value, but will also benefit the Preserve's wilderness qualities by reducing the number of big game guzzlers located within wilderness. Guzzlers located in more accessible locations and outside of wilderness will be more readily replenished when water levels are depleted.

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

NEPA regulations define significance as requiring the consideration of both the context and intensity of an action (40 CFR 1508.27):

- (a) Context includes geography, baseline conditions, affected interests, agency mandate, and duration and timing.
- (b) Intensity refers to the severity of impact.

The following 10 criteria are included in the Council on Environmental Quality's NEPA regulations definition of the term "significantly" (40 CFR 1508.27) and were used to determine if the Selected Alternative will result in significant effects.

***Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect may be beneficial.***  
The Selected Alternative will result in both adverse and beneficial impacts on resources in the project area. Most of these impacts are short-term and minor, while some of the beneficial impacts are long term, including the increase to the Preserve's desert bighorn sheep habitat value, and the support for migration corridors and potential new and expanded populations in the region. Short-term adverse impacts on individual sheep might occur. Implementation sequencing, site-specific planning, and monitoring will guard against long-term adverse impacts. Other species in the Preserve, including federally listed species, may experience long-term beneficial impacts. No major adverse or beneficial impacts were identified under the Selected Alternative that will require analysis in an environmental impact statement. None of the impacts rise to the level of significance.

***The degree to which the Selected Alternative affects public health and safety.***  
Under the Selected Alternative, the NPS would continue to identify and mitigate hazardous materials as lands are acquired. This is not only a legal requirement, but it is also important to retaining the quality and value of scarce water resources in the Preserve. Site-specific management action would include identifying and managing water developments so to prevent hazardous conditions for visitors, and would be primarily focused on features that have resource or interpretive value or are close to visitor areas. This will minimize the safety risks to life and property. The Selected Alternative includes proactive management of hazardous conditions at water developments. Overall, the effect of the Selected Alternative on public health and safety will be beneficial.

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

The Selected Alternative would not result in impacts within, or in proximity to wetlands, wild and scenic rivers, prime farmlands, or park lands. As documented in the Plan EA, water management in the Mojave region takes place in the context of Native American and Euro-American settlements that required systems to capture, store, and transport water. In a desert environment where water is critical, those systems have become pervasive and significant elements of the landscape and the historical record. Documented cultural resources are present in the Preserve. Big game guzzlers are not considered historic. Most of the managed springs are located in designated historic ranching districts or cultural landscapes in the Preserve, including the Rock Springs Land and Cattle Company Cultural Landscape (NPS 2007a), and those springs documented under an ethnographic report prepared for the BLM (Bengston Consulting 2010). The NPS understands that all managed springs and some of the small game

guzzlers meet the age criterion. Impacts on cultural and historic resources under the Selected Alternative are discussed below under criterion 8.

Desert bighorn sheep (*Ovis canadensis nelsoni*) are found in most of the Preserve's mountainous terrain, including populations occurring in the Old Dad Mountain, Kelso Peak, and Clark Mountain areas. Seven desert bighorn sheep habitat patches have been identified within, or partially within, the Preserve. Herds are known to exist in the Old Dad/Kelso/Indian, Soda Mountain, Clark, Granite, Providence, Woods/Hackberry, and Piute/Castle habitat patches. Potential habitat also occurs in the Mescal/Ivanpah Range, which is currently unoccupied by bighorn sheep. The current population of desert bighorn sheep in the Preserve is estimated to be between 680 and 1,075 individuals (Epps et al. 2005; Longshore et al. 2009; Creech et al. 2014). Throughout the region, bighorn populations have become increasingly isolated and vulnerable to loss of habitat and genetic diversity, due primarily to a combination of habitat fragmentation and climate change (Epps et al. 2005; Longshore et al. 2009; Creech et al. 2014). Desert bighorn sheep are classified by the State of California as a *Fully Protected species*.

As described in the Plan EA, artificial water sources, such as guzzlers, have been used for decades to enhance and restore habitat for desert bighorn sheep, and support bighorn sheep populations and habitat connectivity in the Preserve; and access to a reliable water source during the dry season is an important component of bighorn habitat and survival. Management of big game guzzlers under the Selected Alternative would increase bighorn sheep habitat value and connectivity within the Preserve through strategic placement and maintenance of guzzlers.

Two areas of designated critical habitat for the federally listed Mojave Desert tortoise (*Gopherus agassizii*) are present in the Preserve. The first area of critical habitat includes 769 square miles in the Ivanpah Valley south of Nipton Road, including areas north, west, and south of Cima Dome in the Eastern Mojave Recovery Unit. The second area of critical habitat in the Preserve includes 438 square miles in the Fenner/Clipper Valley in the Colorado Desert Recovery Unit. Combined, the two critical habitat areas cover about 772,463 acres or 48 percent of the Preserve. Additional critical habitat occurs adjacent to the Preserve to the north on BLM land and to the south and east of the Fenner/Clipper Valley area in California and Nevada. Annual desert tortoise monitoring in 2011 estimated that about 11,000 tortoises occur in the Ivanpah Valley and about 12,000 are in the Fenner Valley (USFWS 2012).

A small population of genetically pure Mohave tui chub, a federally-listed (endangered) fish species, persist in the isolated MC Spring, located at Soda Springs on the west bank of dry Soda Lake in the Preserve. Since its rediscovery, the Mohave tui chub has been reintroduced to constructed ponds at several additional locations. Currently, five genetically pure Mohave tui chub populations exist at Soda Springs, Morning Star Mine, China Lake Naval Air Weapons Station, Camp Cady, and Lewis Center for Educational Research, Academy for Academic Excellence campus in Apple Valley, California

(USFWS 2011b). All five of these sites are isolated populations in human-made habitats in the Mojave Desert.

***Wilderness and Wilderness Character***

The 1994 CDDA, which established the Preserve, also designated nearly half of the land area in the Preserve (804,949 acres) as wilderness. The NPS manages the "Mojave Wilderness" in accordance with the 1964 Wilderness Act, the CDDA, NPS *Management Policies 2006*, and DO-41: *Wilderness Stewardship*. The Mojave Wilderness is bordered by the BLM's Kelso Dunes Wilderness Area and Bristol Mountains Wilderness Area to the west.

Most of the water resources that are to be managed under the Selected Alternative are located in wilderness, including 75 percent of the documented springs, nearly half of the small game guzzlers, and all six of the big game guzzlers. Although the wilderness boundaries were drawn to allow access to some known water sources for ranching ("cherry-stemmed"), many are in designated wilderness. This presents a dilemma for both water resources management and policy compliance, as most of these water sources provide some element of habitat for wildlife, and many require routine maintenance to ensure their effectiveness and safety. However, the existence of developed water features and the mechanized access and tools used for their maintenance are only permitted if they are necessary to meet minimum requirements for the administration of the area for wilderness characteristics. While conservation and recreation are purposes of wilderness, and some guzzlers may help preserve some qualities of wilderness character (e.g., the "natural" quality associated with wildlife), the presence of structures and the use of motorized vehicles or equipment to maintain water structures may adversely affect other qualities of wilderness character (e.g., "undeveloped" and "untrammelled" qualities). Management of water resources under the Selected Alternative is designed to reduce intrusion into wilderness while improving overall habitat value for wildlife, including desert bighorn sheep.

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

No highly controversial effects were identified during preparation of the Plan EA or during the public scoping and Plan EA review periods.

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

No highly uncertain, unique, or unknown risks were identified during preparation of the Plan EA or during the public scoping and review periods.

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

The Selected Alternative does not establish a NPS precedent for future actions with significant effects or represent a decision in principle about a future consideration. No further actions are planned that will result from implementation of the Selected

Alternative; therefore, the Selected Alternative will not result in significant effects from a future action.

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

The impacts of the Selected Alternative on each impact topic were identified in the Plan EA. Cumulative impacts on each impact topic were also identified and none will have cumulatively significant effects.

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

This analysis assumes that, before implementation of activities that have the potential to affect historic properties, all affected potential historic properties will be documented, evaluated for NRHP significance, and assessed for effects in consultation between the NPS and SHPO.

Under the Selected Alternative, any activity that results in the alteration or deterioration of potentially eligible water features is considered an adverse effect. This includes the ongoing neglect and deterioration of water features. Activities that maintain, improve, or stabilize potentially eligible water features are considered beneficial effects, provided that those activities are undertaken in a manner that preserves or replaces in kind elements of the water features (e.g., design and materials) that contribute to the significance of those features and does not diminish character-defining elements. Consultation with the SHPO would result in stipulations for continued Section 106 compliance under the Selected Alternative. The SHPO would stipulate procedures for the documentation and significance evaluation of water features currently unevaluated for listing on the NRHP and the identification, documentation, and evaluation of other potential historic properties, including known and unknown prehistoric archeological sites that have been preliminarily identified at natural springs. Consultation with the SHPO is further documented below under **Agency Consultation**.

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

As discussed above, about half of the Preserve's area is designated as wilderness and half is designated as critical habitat for the federally threatened Mojave Desert tortoise (*Gopherus agassizii*). The federally endangered Mojave tui chub (*Siphateles bicolor* spp. *mohavensis*) is found within the Preserve at water features associated with Soda Springs, including MC Springs, Lake Tuendae, and Morning Star Mine pit lake. In addition, potential migratory habitat for the yellow-billed cuckoo (*Coccyzus americanus*), southwestern willow flycatcher (*Empidonas traillii extimus*), and least Bell's vireo (*Vireo*



*bellii pusillus*) is present at Piute Springs, although none of these species have been observed within the Preserve.

The Mohave tui chub would be managed at several sites in the Preserve, including MC Spring and Lake Tuendae at Soda Springs and the Morning Star Mine Pit Lake. Under all alternatives, management would be a continuation of current practices and is expected to result in long-term benefits to the species by supporting its conservation.

Small game guzzlers have been considered in the past to be a threat to desert tortoises, which have potential to become trapped and drown in them (Hoover 1995). While some research disputes the threat guzzlers may pose to tortoises (see Rosenstock et al. 2004), it has become common practice to install escape ramps in small game guzzlers to minimize the potential for entrapment. The Selected Alternative includes the installation of escape ramps in all retained small game guzzlers that occur in designated desert tortoise habitat to reduce this potential threat.

Areas where yellow-billed cuckoo, southwestern willow flycatcher, and Bell's vireo have potential to occur would not be subject to proposed management actions without protocol surveys completed in advance. Piute Springs has marginal migratory passerine habitat, and it is not likely that breeding by any of these three species would occur due to lack of adequate vegetation structure.

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

The Selected Alternative violates no federal, state, or local environmental protection laws.

## **PUBLIC INVOLVEMENT AND AGENCY CONSULTATION**

### **Scoping**

An internal scoping meeting was held November 3 and 4, 2010. The purpose of the meeting was for NPS project staff to identify the purpose, need, and objectives for the action; identify issues related to the action; determine the proper NEPA path; discuss a range of preliminary alternatives; and identify data needs. Representatives from the Preserve, the NPS Environmental Quality Division (EQD), the NPS Biological Resources Division (BRD), the NPS Water Resources Division (WRD), and ERO Resources Corporation (ERO; contractor) were in attendance. The results of the meetings were recorded in detailed notes now on file as part of the administrative record.

The public scoping process began on May 11, 2011, with the publication of a Notice of Intent in the Federal Register (FR) (FR, Volume 76, Issue 27344). A 60-day public scoping comment period was announced and began on May 11, 2011; this date was extended an additional 30 days. Public scoping ended on August 12, 2011.

A newsletter was mailed in early May 2011 to the project's preliminary mailing list of government agencies, organizations, businesses, and individuals. The newsletter announced the public scoping meetings and provided background on the project. It also summarized the plan's objectives, purpose and need. The newsletter included information about the project and alternatives and invited the public to comment and attend the public scoping meetings. Public service announcements were provided to local television and radio news agencies and local newspapers, and an announcement was posted on the NPS Planning, Environment and Public Comment (PEPC) site to notify the public of these meetings.

The NPS hosted four public scoping meetings in the vicinity of the Preserve to present the preliminary alternative concepts and potential management tools and solicit feedback on a range of questions developed specifically on these topics. Public scoping meetings were held in 2011 on June 27 (Henderson, Nevada), June 28 (Needles, California), June 29 (San Bernardino, California), and June 30 (Barstow, California). The public was offered a variety of opportunities to provide feedback or submit questions, including flip charts, comment forms (and drop box), and preaddressed comment forms for postal delivery. Participants were given information regarding accessing PEPC and were encouraged to submit their comments electronically using this system. The addresses for submitting comments were printed on all news releases and the project newsletter for the benefit of people who could not attend the open houses but still wanted to provide comments. During the scoping period, 67 pieces of correspondence were received and 518 unique comments were analyzed.

### **Review of the Environmental Assessment**

On March 19, 2018, the NPS posted the Plan EA on the PEPC for public review and comment.

<https://parkplanning.nps.gov/projectHome.cfm?projectID=32532>

Copies of the Plan EA document were distributed to libraries, made available at the Preserve's three visitor centers, and provided upon request to members of the public. Comments were accepted by the NPS from March 19, 2018 through July 19, 2018. The NPS received 498 correspondences, with 2,172 individual comments.

### **Administrative Draft Plan and NEPA Pathway Change**

This project was initially scoped as an Environmental Impact Statement (EIS) due to uncertainty regarding the significance of impacts to desert bighorn sheep. In February 2017, an Administrative Draft Plan and EIS was submitted to NPS and CDFW reviewers. Comments on the Administrative Draft Plan/EIS resulted in a revised and updated analytical model of bighorn habitat and changes to the action alternatives. Based on updates to the habitat model and action alternatives, as well as the application of an adaptive implementation sequence, the uncertainty regarding impacts to desert bighorn sheep is resolved.

The potential for significant adverse impacts was effectively minimized; therefore, the NPS adjusted the appropriate NEPA pathway from an Environmental Impact Statement (EIS) to an Environmental Assessment (EA) in late 2017. This allowed for a timely and efficient approach to the NEPA process, and provided a streamlined path to a NEPA decision and project implementation. This pathway change is consistent with agency efforts to streamline the NEPA process by employing the most efficient approach to NEPA review that is possible under current policy.

**MITIGATION THROUGH ADAPTIVE MANAGEMENT**

The Plan EA utilized adaptive management in its approach to implementation of the Selected Alternative. Full implementation of the Selected Alternative will hinge on measurable increases in dry season habitat value in the Preserve and connectivity between the Preserve and mountain ranges outside the preserve for maximal benefit to desert bighorn populations. Relocation of existing guzzlers can be expected to have short-term adverse effects; such actions will be planned and implemented to avoid or minimize the risk of long-term and/or severe impacts to desert bighorn populations. Tools for mitigation include site-specific design, implementation, and monitoring, all of which will be subject to separate NEPA compliance processes.

**Table of Adaptive Management & Mitigation Measures**

Resource Area	Mitigation via Adaptive Management Techniques	Responsible Party
Desert bighorn sheep population	Relocation of some water developments from wilderness (subject to monitoring and adaptive management), combined with implementation of new water developments and more efficient use of existing water developments outside of wilderness, will support wildlife conservation and habitat connectivity.	Chief, Science & Resource Stewardship
Desert bighorn sheep	Support and improve dry season habitat for desert bighorn sheep, regional habitat connectivity, and the need to maintain a natural desert ecosystem.	Chief, Science & Resource Stewardship
Desert bighorn sheep	Supplemental water features are important tools for mitigating the effects of regional habitat fragmentation and for preserving overall biodiversity. Measures of effectiveness are listed found in Table 3 of the Plan EA.	Chief, Science & Resource Stewardship
Desert bighorn sheep	Manage developed water sources to maximize their value for native wildlife populations and reduce impacts on natural ecosystem functions within wilderness – i.e., relocate some water developments outside wilderness <i>and</i> establish new water sources outside of wilderness to support desert bighorn sheep conservation.	Chief, Science & Resource Stewardship

Resource Area	Mitigation via Adaptive Management Techniques	Responsible Party
Desert bighorn sheep	The NPS will not allow severe long-term consequences to the Old Dad/Kelso population of desert bighorn. If monitoring efforts and data analysis of relocated guzzlers indicate long-term adverse conditions and population trends, existing guzzlers would be reinstated to reverse such effects.	Superintendent
Wilderness	Perform Minimum Requirements Analysis to determine the minimum tool necessary to preserve wilderness character. An MRA will be needed for actions proposed in wilderness.	Chief, Science & Resource Stewardship
Wilderness	Relocation of some water developments from wilderness (subject to monitoring and adaptive management), combined with implementation of new water developments and more efficient use of existing water developments outside of wilderness, will preserve wilderness qualities and support conservation and habitat connectivity of desert bighorn sheep. NOTE: Desert bighorn sheep are a contributing feature to the natural characteristic of Mojave Wilderness.	Chief, Science & Resource Stewardship
Wilderness	Take a balanced and strategic approach that reduces wilderness intrusion, supports <i>and</i> potentially enhances native wildlife habitat.	Chief, Science & Resource Stewardship
Wilderness	Manage developed water sources to maximize their value for native wildlife populations and reduce impacts on natural ecosystem functions within wilderness – i.e., relocate some water developments outside wilderness <i>and</i> establish new water sources outside of wilderness to support desert bighorn sheep conservation.	Chief, Science & Resource Stewardship
Wildlife	Take a balanced and strategic approach that reduces wilderness intrusion, <i>and</i> supports and potentially enhances native wildlife habitat.	Chief, Science & Resource Stewardship
Wildlife	Manage developed water sources to maximize their value for native wildlife populations and reduce impacts on natural ecosystem functions – i.e., relocate some water developments outside wilderness <i>and</i> establish new water sources outside of wilderness to support desert bighorn sheep conservation.	Chief, Science & Resource Stewardship

Resource Area	Mitigation via Adaptive Management Techniques	Responsible Party
Small game populations	Evaluate ecological importance of small game guzzlers and maintain those identified as necessary for supporting native wildlife populations. Evaluate ecological importance of developed springs and maintain those identified as necessary for supporting native wildlife populations.	Chief, Science & Resource Stewardship
Desert tortoise	Identify and retrofit small game guzzlers that could potentially trap tortoise through installation of escape ramps or textured surface.	Chief, Science & Resource Stewardship

## Agency Consultation

### *SHPO and Tribal Consultation*

#### **California State Historic Preservation Officer**

A cultural resources survey in the Area of Potential Effect was conducted in February and March 2017. Consultation with the SHPO was initiated on March 29, 2017. A copy of the Plan EA was distributed to the SHPO at the start of the public comment period, March 19, 2018. The NPS will continue to consult with the SHPO as the Selected Alternative is implemented, action by action.

The NPS initiated tribal consultation with the following tribes: Colorado River Indian Reservation, Fort Mojave Indian Tribe, Chemehuevi Indian Tribe, and Twentynine Palms Band of Mission Indians. Copies of the Plan EA were distributed to the tribes for review or comment at the start of the public comment period, March 19, 2018. The NPS will continue to consult with the tribes as the Selected Alternative is implemented, action by action.

#### **California Department of Fish and Wildlife**

Consultation with the CDFW, a cooperating agency, has been ongoing throughout this planning process. In 2017, CDFW provided detailed comments and feedback on an internal review version of the Plan EA and NEPA analysis, resulting in substantial changes and improvements to the alternatives and analysis. CDFW also provided comments on the Plan EA. The NPS will continue to consult with CDFW as the Selected Alternative is implemented, action by action.

## **U.S. Fish and Wildlife Service**

On September 7, 2018, the Preserve initiated informal consultation with the US Fish & Wildlife Service (USFWS) under Section 7 of the Endangered Species Act. The desert tortoise and Mohave tui chub are federally threatened or endangered species that occur within the Mojave National Preserve. Since then, the NPS determined that the proposed action would have no effect on the Mohave tui chub. Also, USFWS and the NPS collaborated on a programmatic biological opinion (PBO) for routine actions in the Preserve. On August 7, 2019, USFWS issued the PBO, the NPS will follow consultation protocols for individual actions in the Plan. USFWS considers all actions in the Plan to meet conservation criteria outlined in the PBO.

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## CONCLUSION

Based on the information, analysis, and mitigation measures contained in this FONSI; the Plan EA; and the full consideration of scoping and Plan EA review comments received from affected agencies and the public, the NPS has determined that the Selected Alternative does not constitute a major federal action that will significantly affect the quality of the human environment. Therefore, the preparation of an environmental impact statement is not required and the requirements of NEPA have been satisfied. The Mojave National Preserve will implement the Selected Alternative as soon as practical.

## RECOMMENDED



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Todd J. Suess, Superintendent  
Mojave National Preserve  
National Park Service

8-14-19

\_\_\_\_\_  
Date

## APPROVED



\_\_\_\_\_  
Stan Austin  
Director, Pacific West Region  
National Park Service

8.19.19

\_\_\_\_\_  
Date

# Management Plan for Developed Water Sources

## Mojave National Preserve

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### ERRATA SHEET

An errata sheet is necessary when factual corrections need to be made to the Environmental Assessment (EA). The EA, together with the FONSI and this errata sheet comprise the full and complete record of the environmental impact analysis/conservation planning for this project. The corrections in this errata sheet do not change the project activities or the degree of impact described in the EA.

This section itemizes clarifications, corrections, and changes made to the Mojave National Preserve Management Plan for Developed Water Resources EA (plan/EA) following publication in April 2018, and public review ending in July 2018. These errata should be maintained with all copies of the plan/EA for a complete record of the completed environmental impact analysis. The changes and corrections incorporate responses to public, agency, and internal review comments received on the plan and additional National Park Service (NPS) staff analysis. Revised or new language is underlined. Deleted text is marked by ~~strikethrough~~.

### EDITS TO THE EA

Executive Summary, page iii: under Groundwater and Surface Water Resources heading, the following changes to the text have been made to reflect the correct number of water features:

Within the broad valleys of the Preserve are deep alluvial groundwater basins that contain centuries-old aquifers. Some of these deep aquifers are associated with perennial springs such as Piute Springs and Soda Springs, which support small riparian ecosystems. The more common types of springs or seeps are those located along the slopes and edges of mountain ranges and fed by small, localized perched aquifers. These small aquifers have limited groundwater storage, resulting in highly variable spring discharge that is correlated with annual precipitation rates. About 317 ~~344~~ springs, lakes, ponds, seeps, and wells and 137 guzzlers (big and small) are known to exist in the Preserve.

Chapter 1: Purpose and Need for Action, page 2: Under Project Location heading, the following text has been added:

Located in Southern California, the Preserve is a 1.6-million-acre unit of the national park system, established by Congress on October 31, 1994, by the California Desert Protection Act (CDPA). The Preserve is located in San Bernardino County, about halfway between Barstow, California, and Las Vegas, Nevada. The Preserve is bounded to the north and south by major interstate highways, I-15 and I-40, while the Nevada–California state line makes up most of the eastern boundary (Figure 1). The Preserve also includes a detached unit, Clark Mountain, which lies west and north of I-15. The Preserve headquarters are located in Barstow.



Chapter 1: Purpose and Need for Action, page 6: under Groundwater and Surface Water Resources heading, the following changes to the text have been made to reflect the correct number of water features:

An estimated ~~344~~ 317 springs, ~~seeps, lakes, ponds,~~ and wells and 137 guzzlers (big and small) are known to exist in the Preserve.

Chapter 1: Purpose and Need for Action, page 7: under Wildlife Conservation and Management heading, the following changes to the text have been made to reflect the correct scientific name for desert tortoise:

- The desert tortoise, Mojave population (*Gopherus agassizii mohavensis*), is a federally and state-listed threatened species with habitat found at lower elevations in the Preserve. Critical habitat was designated in 1994 before the passage for the California Desert Preservation Act (CDPA).

Chapter 2: Water Resource Management Alternatives, page 27; Under Big Gabe Guzzlers heading, the following changes to the text have been made:

Big game guzzlers (also known as “guzzlers”) are large water developments that are specifically intended to support desert bighorn sheep populations. Six big game guzzlers are located in the Preserve: Kerr, Old Dad, Vermin, Clark, Piute, and Kelso. The Clark guzzler is also referred to as the Bicket-Landells guzzler in the sportsman community. All of these guzzlers are in wilderness. None of the alternatives include the removal of all big game guzzlers in the Preserve, and none involve the construction of new guzzlers in wilderness (**Error! Reference source not found.**).

Chapter 2: Water Resource Management Alternatives, page 49: Under Springs, Wells, Lakes and Ponds heading, the following changes to the text have been made to reflect the correct number of water features:

The Preserve contains a wide variety of springs, wells, and other water developments. The condition, water reliability, and wildlife use of these features varies from site to site. A total of ~~244~~ 317 springs, ponds, lakes, and wells, ~~seeps, and water development features~~ have been identified in the Preserve (Table 8). These include a broad range of surface water expressions, ranging from intermittent seeps, resulting in moist soil, to highly modified human developments and perennially flowing natural springs. These water features also include a few hand-dug wells and two ponds in abandoned open pit mines (see “Water Features” in Chapter 3: Affected Environment).

Chapter 2: Water Resource Management Alternatives, page 49: In the heading for Table 8, the following changes to the text have been made to reflect the correct number of water features:

Table 1. Characteristics of Known Springs, Ponds, Lakes, and Wells ~~and Water Developments~~

Chapter 3: Affected Environment, page 66: Under Military Land and Expansion heading, the following text has been changed to reflect the correct common name for desert tortoise:

Since 2000, the U.S. Army has been working to expand Fort Irwin by about 110,000 acres. The 2008 EA and Finding of No Significant Impact authorized the translocation of Mojave

~~Desert tortoise~~ desert tortoises from Fort Irwin to adjacent BLM lands (BLM 2008). As of 2016, translocation of tortoises is complete.

Chapter 3: Affected Environment, page 88: Under Bighorn Habitat in the Preserve heading, the following text has been deleted:

~~Desert bighorn sheep show preference for rugged topography with sparse vegetation and seasonal access to water. Key factors in determining favorable habitat include proximity to a perennial water source, rugged topography with steep slopes (more than 25 percent and sometimes greater than 60 percent), and accessible escape terrain (with slopes greater than 80 percent) (Darby 2015; Bristow et al. 1996; Turner et al. 2004). Areas with dense or tall shrub and forest vegetation communities (such as pinyon juniper, Joshua tree, chaparral, and creosote) are less preferred by bighorn. The importance of water is seasonal, as it is most important during the months of June, July, and August (dry season) or during droughts (Darby 2015).~~

Chapter 3: Affected Environment, page 106: In Table 16, in the Scientific Name column, Mohave tui chub row, the following text has been changed to reflect the correct scientific name for Mohave tui chub:

*Gila Siphoteles bicolor mohavensis*

Chapter 4: Environmental Consequences, page 124: In Table 17, in the Wilderness Character column, Preserve and Project Plans row, the following text has been changed to reflect the correct common name for desert tortoise:

Restoration of native species habitat and populations (Mohave tui chub and ~~Mojave Desert~~ desert tortoise)

## REFERENCES

The following edits to reference have been made:

Bureau of Land Management (BLM). ~~2015~~ 2012b. Western Solar Plan. Available at: <http://blmsolar.anl.gov/>. Last accessed: January 2017.

~~Darby, N. 2015. Bighorn Sheep Guzzler Ranking Model. Internal GIS analysis performed by Neil Darby, Wildlife Biologist, Mojave National Preserve.~~

Department of Defense (DOD). ~~2012~~ 2016. Supplemental Environmental Impact Statement (SEIS) for Land Acquisition and Airspace Establishment to Support Large-Scale Marine Air Ground Task Force Live-Fire and Maneuver Training at Marine Corps Air Ground Combat Center (MCAGCC) Twentynine Palms, California (Combat Center). Available at: <http://www.29palms.marines.mil/Staff/G5-Government-and-External-Affairs/SEISforLAA/>. Last accessed: January 2017.

## **Attachment 1**

### **DETERMINATION OF NON -IMPAIRMENT**

#### **MANAGEMENT PLAN FOR DEVELOPED WATER SOURCES, MOJAVE NATIONAL PRESERVE**

While Congress has given the National Park Service (NPS) management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the NPS must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This cornerstone of the Organic Act establishes the primary responsibility of the NPS, to ensure that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

The impairment of park resources and values may not be allowed by the NPS unless directly and specifically provided for by legislation or by the proclamation establishing the park. The relevant legislation or proclamation must provide explicitly (not by implication or inference) for the activity, in terms that keep the Service from having the authority to manage the activity so as to avoid the impairment.

The impairment that is prohibited by the Organic Act and the General Authorities Act is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts.

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

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated. An impact that might, but would not necessarily, lead to impairment may result from visitor activities; NPS administrative activities; or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park.

National Park Service's *Management Policies 2006* requires analysis of potential effects to determine whether or not actions would impair park resources. The park resources and values that are subject to the no-impairment standard include:

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

Based on the Preserve's enabling legislation, the California Desert Protection Act of 1994, the purposes of Mojave National Preserve are to:

- protect and interpret areas, sites, structures, and various artifacts associated with occupations by prehistoric, historic, and contemporary Native American groups, historic miners, and subsistence cattle ranchers;
- protect and interpret the biologically diverse examples of the Mojave and Colorado desert ecosystems;
- serve as a natural laboratory for understanding and managing the Mojave and Colorado desert ecosystems; and
- provide visitors with opportunities to experience and enjoy natural and cultural resources through compatible recreational activities.

Based on the 1916 Organic Act, and General Management Plan for Mojave National Preserve, topics from the EA that were evaluated for potential impairment due to implementing the Selected Alternative include: wildlife and cultural resources. Impact topics considered but dismissed from analysis included: water resources; vegetation communities; recreation and hunting; Preserve operations; geology, geohazards and soils; air quality; land use; ethnographic resources; Indian Trust resources and sacred sites; socioeconomics; and environmental justice. These topics are not subject to impairment determinations.

## **Wildlife**

Under the Selected Alternative, dry season habitat value for desert bighorn sheep could increase by as much as 19 percent compared with the status quo. Dry season habitat value for Clark and Piute will decrease by 23 percent but will be countered with 47 percent increase by the addition of Piute North, Ginn, and Vontrigger big game guzzlers. The net effect could benefit desert bighorn and avoid impairment to the bighorn population in the Preserve.

### **Cultural Resources**

Selected small game guzzlers will be actively maintained to support native wildlife populations; up to two may be rebuilt. Other SGGs will not be actively maintained but may continue to provide water to small wildlife until their usefulness has passed. SGGs with potential historic properties located outside of wilderness may be rebuilt, preserving potentially eligible features.

Springs and water developments would be managed similarly to SGGs. Up to 10 water development features at managed springs would be considered for maintenance and stabilization to help support native wildlife populations. Stabilized or maintained water development features would result in beneficial effects on historic properties from long-term preservation. Stabilization or maintenance activities would be undertaken in a manner that preserves or replaces in kind those characteristics or elements that contribute to significance, including design and materials. The remaining water development features would continue to deteriorate over time, resulting in long-term adverse effects on historic properties from the ultimate loss of those potentially eligible features.

The impacts of the Selected Alternative on cultural resources would alter the level of long-term adverse cumulative effects, but not to a significantly level (see "Cumulative Impacts Common to All Alternatives" above).

### **SUMMARY**

As described above, adverse effects and environmental impacts anticipated as a result of implementing the Selected Alternative on a resource or value whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or identified as significant in the park's general management plan or other relevant NPS planning documents, would not rise to levels that would constitute impairment of park values and resources.