

Appendix B

Wilderness Minimum Requirements Analysis for the 2004 Fire Management Plan for Mojave National Preserve

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1.0 Designated Wilderness in Mojave National Preserve

The California Desert Protection Act of 1994 (PL 103-433) designated 695,200 acres of Mojave National Preserve as wilderness. These lands are managed in compliance with The Wilderness Act of 1964, which defines wilderness as "...an area of undeveloped Federal land retaining its primeval character and influence, which permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions..." (Shelton and Fox 1994). It is important to note that in this discussion, the term *wilderness* applies specifically to those lands designated as such in the California Desert Protection Act and does not apply to the more generic "backcountry" lands that also exist in the Preserve.

Management of wilderness in areas administered by the National Park Service is guided by Director's Order #41, Wilderness Preservation and Management (NPS 1999). The order directs that fire management activities conducted in wilderness areas will conform to the basic purposes of wilderness. Actions taken to suppress wildfires must use the minimum requirements concept, and will be conducted in such a way as to protect natural and cultural features and to minimize the lasting impacts of the suppression actions and the fires themselves. In the Mojave Desert, additional guidance is found in the Desert Managers Group's "Principles for Wilderness Management in the California Desert" (Desert Managers Group 1995) and its annexes, including "Annex 5 – Principles for Fire Management within Wilderness Areas of the California Desert" (Desert Managers Group 1999). These policies and principles apply to all fire management activities in wilderness under both the proposed action and the no action alternative.

2.0 Minimum Requirements Concept

Minimum requirements analysis is a documented process used to determine the appropriateness of all actions affecting wilderness (NPS 1999). It is a two step process that documents 1) a determination as to whether or not a proposed management action is appropriate or necessary for the administration of the areas as wilderness, and does not pose a significant impact to the wilderness resources and character; and, 2) if the project is appropriate or necessary in wilderness, the selection of the management method that causes the least amount of impact to the physical resources and wilderness character. This document is the minimum requirements analysis for the Fire Management Plan.

Director's Order/Reference Manual #41 directs that when determining the minimum requirements for a proposed action, the manager will strive to minimize the extent of adverse impact associated with accomplishing the necessary wilderness objective. The determination as to whether or not an action has an adverse impact on wilderness must consider both the physical resources within wilderness and wilderness characteristics and values. These characteristics and values include: the wilderness's primeval character and influence; the preservation of natural conditions (including the lack of man-made noises); cultural resource values, the assurance of outstanding opportunities for solitude; the assurance that the public will be provided with a primitive and unconfined type of recreational experience; and the assurance that wilderness will be preserved and used in an unimpaired (NPS 1999).

3.0 Minimum Requirements Analysis

3.1 Alternatives Considered

Two alternatives were fully analyzed in the environmental assessment prepared for the Fire Management Plan: 1) Proposed Action and 2) No Action.

Proposed Action: Implement the 2004 Fire Management Plan as written, including, Suppression, mechanical fuel management, and wildland fire use for resource benefit.

The proposed action is to implement a range of fire management practices including suppression, wildland fire use and mechanical fuel management. This alternative does not include the use of management-ignited prescribed fire. The full details of this proposed action are presented in the Fire Management Plan and Appendices developed in conformance with the National Fire Plan and applicable federal laws and agency standards. It is summarized here:

- All human-caused ignitions will be suppressed.
- Approximately 1,246,400 acres are zoned for suppression of naturally-ignited fires.
- Approved suppression tactics consist of fire engines operating on pre-existing roads, hand crews, and helicopters for crew transport and water drops.
- The following fire fighting tactics are not approved for use in Mojave National Preserve: heavy equipment (dozers, backhoes, loaders, graders), chemical fire retardant (except for Class A foam), and use of engines or other vehicles off-road.
- Approximately 342,900 acres of designated wilderness are zoned for wildland fire use, where lightning-caused fires may be allowed to burn under prescribed conditions to achieve resource management objectives and allow fire to play its natural role in the ecosystem.
- Mechanical hazard fuel reduction will be undertaken to reduce risk to life and property by removing fuels immediately adjacent to park owned structures throughout the Preserve and in the campsites in the Mid-Hills Campground.

No Action: Continue to suppress all fires.

There is no specific written plan for the implementation of this alternative. Rather it is the continuation of the “default” fire management program in absence of a written Fire Management Plan. National and regional policies and directives still apply, but there are no specific plans written to provide detailed directions for the implementation of those policies or directives as they apply specifically to fire management. This alternative is more fully described and analyzed in the Environmental Assessment. It is summarized here:

- All fires, regardless of location or ignition source, would be suppressed.
- Minimum impact suppression tactics would be used to the extent that they can meet fire suppression objectives and protect values at risk.
- Fire fighting equipment and tactics used on each fire would be considered on a case-by-case basis and there would be no specific prohibitions against use of engines off-road, dozers for fireline construction, or retardant.

- Protection of endangered species habitat and wilderness values would be addressed on a case-by-case basis consistent with general park procedures and policies, but there would be no specific fire-related considerations and the policies and procedures.
- Mechanical removal of hazard fuels would continue as needed to provide defensible space immediately adjacent to park owned structures. However, there would be no specific implementation schedule for treatments and there would be specific environmental protection measures except as cover general park operations.

3.2 Wilderness Considerations in the Development of the Proposed Action

An alternative to refrain from any suppression action within wilderness was rejected because of the high potential for adverse impacts to human life and property, cultural resources, and the threatened desert tortoise as well as its critical habitat. In the planning process, all wilderness lands were originally zoned for wildland fire use. Then a geographic information system (GIS) was used to identify areas where fire use would have unacceptable impacts on other values at risk. Based on literature review and discussion with the U.S. Fish and Wildlife Service, all desert tortoise critical habitat was re-zoned for suppression (Duck et al 1997, Esque et al 2002, Esque et al 2003, Fish and Wildlife Service 1994). Next, all documented structures within the fire use area were buffered by 0.5 mile adjusted for topographic influence on fuels and fire behavior. These buffered structures were then rezoned for suppression. Then, documented cultural resources within the fire use area were considered for their flammability and were buffered by 0.5 mile adjusted for topographic influence on fuels and fire behavior (B. Bryson, Mojave National Preserve Archaeologist, personal communication). These buffered cultural resource areas were then re-zoned for suppression. Based on discussion with the Mojave Desert Air Quality Management District, the areas immediately adjacent to Interstate Highways (I-15 and I-40) were rezoned for suppression up to the ridgeline to reduce the potential for smoke impacts to visibility along these busy travel corridors. Finally, the remaining fire use areas were considered for feasibility of being managed for fire use. Where the fire use zone was reduced to a small area that would not be feasible to manage for fire use, it was rezoned for suppression. What remained was zoned for wildland fire use as described in the proposed action.

3.3 Comparison of Alternatives

Naturally-ignited fires are a natural process, thus fire effects are not considered an impact on wilderness. In fact, the perpetuation of fire as a natural process consistent with the values and purpose of wilderness (Arthur Carhart National Wilderness Training Center 1995) was the primary purpose for zoning 342,900 acres of wilderness for fire use in the proposed action where naturally ignited fires are allowed to burn under prescribed conditions.

There are many aspects of fire suppression and fire management that can have an impact on the physical resources of wilderness or on wilderness character. Certain fire management activities must be carefully evaluated before implementation within designated wilderness. Generally, these activities include the use of motorized equipment or mechanized transport and their

planned use must be considered in a minimum requirements analysis as was prepared for the Fire Management Plan.

Under the proposed action, about 342,900 of Preserve's wilderness lands will be managed for fire use where natural ignitions are allowed to burn under prescribed conditions. About 352,300 acres of wilderness will be treated as full suppression for the protection of other values at risk, most notably habitat for the threatened desert tortoise and cultural resources. All human caused ignitions will be suppressed including ignitions in wilderness and in the fire use zone. There are no hazard fuel treatments proposed in wilderness under this alternative.

Under the no action alternative, all fires are suppressed without regard to location or ignition source. As a result, impacts to wilderness under the no action alternative include impacts to wilderness character by excluding fire as a natural process and impacts to physical resources of wilderness due to the suppression activities that are likely to occur in wilderness, including: line construction, use of mechanized equipment (saws, pumps, etc), use and/or improvement of helispots. Furthermore, there is no written plan for this alternative so the provisions listed above for the proposed action are not required under the no action alternative. While the general policies of wilderness management still apply there is a stronger potential that impacts could occur in wilderness and there is no requirement to use a resource advisor to specifically advise the incident commander about wilderness concerns. While unlikely, there is also no specific prohibition against placing fire camps and incident command centers in wilderness. Without the use of a resource advisor, there is also the potential that there could be unintentional impacts to wilderness because boundaries are poorly defined on the ground in some areas and without the GIS support a resource advisor provides to the incident commander some activities could unknowingly be located in wilderness. There are no hazard fuel treatments anticipated in wilderness, but there is no written hazard fuel implementation plan for any treatments and no specific prohibitions against hazard fuel treatments in wilderness in the future.

3.4 Proposed Action and Mitigation Measures

The proposed action would be to implement the Fire Management Plan as written, including the appendices to that document. These documents include specific guidelines to minimize impacts of fire management activities on wilderness, including the following specific provisions:

- A Resource Advisor will be assigned to all extended attack fires, including those occurring in or near wilderness.
- Fire camps and incident command centers will be located outside of wilderness.
- Throughout the Preserve, motor vehicle use is restricted to existing roads.
- Throughout the Preserve, handlines will be located to make full advantage of natural barriers such as rock outcroppings, trails, and dry washes. Handlines will be no wider than necessary to stop the spread of fire.
- Within wilderness, chain saws, helicopters, or pumps will only be used when essential to meet suppression objectives, but with due consideration to impacts on wilderness character and subject to minimum tool determination.
- Heliports and helipads are not allowed in wilderness.

- For fire management purposes, it is generally possible to use unimproved helispots in wilderness and walk into the work site if such an unimproved helispot is available within a 15 minute walking distance.
- To the extent possible, non-emergency use of helispots in wilderness will be avoided. If it cannot be avoided, the decision to use a helispot in wilderness will be detailed in a Wilderness Minimum requirements analysis as well as an environmental compliance document (ie. the Environmental Assessment or Categorical Exclusion).

3.5 Proposed Use of Mechanical or Motorized Equipment or Transport

Under Section 4(c) of the Wilderness Act, the following activities are generally prohibited in wilderness: commercial enterprises, permanent roads, temporary roads, use of motor vehicles, use of motorized equipment, use of motorboats, landing of aircraft, other form of mechanical transport, structures or installations. However, Section 4 (d) of the Wilderness Act makes the following special provision: "...such measures may be taken as may be necessary in the control of fire..." The purpose of this section of the Wilderness Analysis for the Mojave National Preserve Fire Management Plan is to clarify the types of use and constraints under which those generally prohibited activities will be allowed for fire management in Mojave National Preserve. This section identifies four types of motorized or mechanized equipment or transport that are proposed for use under the proposed action.

Valves and hoses: There would be no ground vehicle use in wilderness. However, fire engines could access roads immediately adjacent to the wilderness boundary and be used to support hoselays within the wilderness. While the engines and pumps would be outside of the wilderness boundary, fire hose and mechanical valves would be used in wilderness. It would also be likely that noise generated by the engines and pumps would carry into the wilderness.

Chainsaws: Subject to minimum tool considerations, chainsaws might be used to remove woody fuels in the wilderness. The determination to use chainsaws in wilderness for fireline construction or helispot improvement would be made by the incident commander commensurate with fire behavior, fire management objectives, and other values at risk. Chainsaws are significantly more efficient in cutting through woody fuels and this speed makes them valuable resource for quickly putting a line in front of a fire. Where chainsaws are determined to be the minimum tool for the task at hand, the noise generated by the chainsaws would be expected to cause a local and short-term disruption in wilderness experience. Due to the sparse nature of woody fuels and short duration of most fires in Mojave National Preserve, it is expected that total chainsaw use per incident would likely be less than 2 hours and in many cases would be limited to a single tree.

Aircraft: Helicopters would be used in the wilderness for crew transport, equipment transport, and water drops subject to the mitigation measures identified in Section 3.4 above. Such uses are detailed in an Aviation Plan that is an appendix to the Fire Management Plan. Use of helicopters, particularly for water drops, is common for fighting remote fires in Mojave National Preserve due to the scarcity of natural water sources and the difficulty in accessing many areas with ground-based fire equipment. Helicopter landings are minimal and generally occur on

unimproved helispots. Fixed-wing aircraft are rarely used, but they could be a valuable tool for aerial reconnaissance when helicopters are unavailable. There would be no landing of fixed wing aircraft in Wilderness.

Handheld digital devices: Routine technical instruments would be used by individual firefighters in the wilderness. Such items include as GPS units, handheld digital weather recorders, digital cameras, cell phones, satellite phones, and handheld radios. Such instruments are fundamental to meeting national standards for firefighter safety and documentation of wildland fire behavior. The use of such instruments has no impact on the physical resources of wilderness and is not detectable beyond the immediate vicinity so would not have any impact on wilderness experience.

4.0 Minimum Requirements Determination

4.1 Findings

The analysis above results in the following findings:

- A. The proposed activities are consistent with existing statutes, regulations, policies, and plans.
- B. The proposed activities would involve prohibited uses listed in Section 4c of the Wilderness Act.
- C. The proposed activities involving prohibited uses could not be reasonably accomplished outside of the wilderness area.
- D. The proposed activity could not be reasonably accomplished without use of the actions prohibited by the Wilderness Act.

4.2 Determinations

Is the proposed management action is appropriate or necessary for the administration of the areas as wilderness, and does not pose a significant impact to the wilderness resources and character?

Yes. The zoning of 341,900 acres of wilderness for fire use is appropriate to the management of wilderness resources and character because it fully accommodates fire as a natural process. The remaining 352,300 acres of wilderness are zoned for fire suppression for the protection of other values at risk, primarily cultural resources and the threatened desert tortoise. There are no actions proposed in wilderness that would pose a significant impact to the wilderness resources and character.

If the project is appropriate or necessary in wilderness, has the management method been selected that causes the least amount o impact to the physical resources and wilderness character?

Yes. The preservation of wilderness values has been considered in every aspect of fire management. The use of motorized equipment has been minimized to the extent possible while still achieving fire management objectives.

5.0 Decision

5.1 Selection of Alternative

The following alternative is hereby selected for implementation: “Alternative A: Implement the 2004 Fire Management Plan as written, including, Suppression, mechanical fuel management, and wildland fire use for resource benefit.”

5.2 Justification

Since the park’s establishment in 1994, the fire management strategy for Mojave National Preserve has been to suppress all fires – human-caused and natural ignitions – using minimum impact suppression techniques. The Preserve was treated as a full suppression area and there was no formal Fire Management Plan. The purpose of this Fire Management Plan is to implement a broader range of fire management strategies to better achieve the goals of the Mojave National Preserve General Management Plan. Additionally, this plan fulfills responsibilities under several directives including: the *2001 Federal Wildland Fire Management Policy*; *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-year Comprehensive Strategy Implementation Plan*; the *Interagency Fire Management Plan Template*; and, the *National Park Service Director's Order #18: Wildland Fire Management and the Reference Manual #18*. The 2004 Fire Management Plan achieves a reasonable balance between resource protection and management of emergency wildland fire incidents with a substantial level of protection of wilderness resources and character.

5.3 Approval

Mary G. Martin, Superintendent, Mojave National Preserve

Date

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