# Death Valley National Park Wilderness Minimum Requirements Analysis

A Minimum Requirement Analysis (MRA) is required for **all** proposed actions, projects, proposed special uses, scientific activities, equipment use, etc. in Congressionally Designated Wilderness or Potential Wilderness in Death Valley National Park that either 1) propose a Wilderness Act of 1964 Section 4(c) prohibited use (Appendix 1) or 2) have an effect on wilderness character (Appendix 2) per NPS Management Policy 6.3.5 and Director’s Order 41 (Appendix 1).

Can the **entirety** of the proposal be performed through actions **outside** of Wilderness?

If the answer is YES, **STOP**. Conduct the actions outside of Wilderness and do not complete this form.

## A. PROPOSAL INFORMATION

Proposal Title: Click to enter title. Add PEPC number, if applicable.

Name and Affiliation of Proponent: Click or tap here to enter text.

NPS Proponent Contact Information: Click to enter text. Include phone or email.

Submission Date: Click or tap here to enter text.

Location of Proposed Action(s): Click to enter text. Attach map or photos.

[Purpose and Underlying Need](#PurposeandNeed" \o "The purpose answers the question of what the NPS intends to accomplish through taking action, while need answers the question of why the NPS is proposing to take an action at this time. Not a link; information only.) *[(](#PurposeandNeed" \o "The purpose answers the question of what the NPS intends to accomplish through taking action, while need answers the question of why the NPS is proposing to take an action at this time. Not a link; information only.)*[hover mouse for definition](#PurposeandNeed" \o "The purpose answers the question of what the NPS intends to accomplish through taking action, while need answers the question of why the NPS is proposing to take an action at this time. Not a link; information only.)*[)](#PurposeandNeed" \o "The purpose answers the question of what the NPS intends to accomplish through taking action, while need answers the question of why the NPS is proposing to take an action at this time. Not a link; information only.)*: Click to enter text. Include why the project is necessary/what situation is prompting action.

[Description of Proposed Action(s](#DescriptionofActions" \o "Click to enter text. Include the problem the project addresses or the outcome goal, what specific actions or prohibited uses are needed, which steps are needed to complete the proposed actions, and why these actions must be performed in Wilderness.))**:**

Click to enter text. Include the problem the project addresses or the outcome goal, what specific actions or prohibited uses are needed, which steps are needed to complete the proposed actions, and why these actions must be performed in Wilderness.

No Action Outcome/Current Management Strategy:

Click to enter text. Describe what could happen if these proposed actions are not taken.

## B. Determine need for Analysis

Answer the following questions to determine if the proposed action(s) require a Minimum Requirements Analysis per NPS Management Policy 6.3.5 and Director’s Order 41.

1. **Does the proposed action(s) include a Section 4(c) prohibited activity?** [Section 4(c) prohibited activities include: the use of mechanical transport and/or motorized equipment and vehicles, the landing of aircraft, and the installation of materials, equipment and/or structures (hover over for more information).](#ProhibitedUse" \o "Installations include items used to support activities such as communications, water development, scientific observation, or wildlife management. Installations beyond one season are not considered temporary. Not a link; information only.)

YES [ ]  NO [ ]

1. **Does the proposed action(s) include any of the following?**

* 1. [Human actions that intentionally or unintentionally control or manipulate the components or processes of ecological systems inside the wilderness (hover over for more information)?](#InvolveTrammel" \o "Does it involve a trammel (e.g., pitfall traps, herbicides/pesticides, redirecting wildlife)? This question does not include collecting abiotic samples or handling, removing or killing organisms for scientific actions. Not a link; information only.)

YES [ ]  NO [ ]  NOT SURE [ ]

* 1. Removing or killing rare or sensitive species/subspecies, ii) Handling of federally threatened or endangered species/subspecies, iii) Having more than negligible effects on the health or survival of a population of a species/subspecies, or iv) Manipulating an organism but not removing it from wilderness?

YES [ ]  NO [ ]  NOT SURE [ ]

* 1. [Occur in a sensitive area or at a sensitive time for a particular species (hover for more information](#SensitiveSpecies" \o "Consider Desert Tortoise, Golden Eagles, nesting season for migratory birds (typically May-September), hibernaulum for bats (typically winter), etc. Not a link; information only.)*[)](#SensitiveSpecies" \o "Consider Desert Tortoise, Golden Eagles, nesting season for migratory birds (typically May-September), hibernaulum for bats (typically winter), etc. Not a link; information only.)*[?](#SensitiveSpecies" \o "Consider Desert Tortoise, Golden Eagles, nesting season for migratory birds (typically May-September), hibernaulum for bats (typically winter), etc. Not a link; information only.)

YES [ ]  NO [ ]  NOT SURE [ ]

* 1. Restrict (even temporarily) visitor access to or movement in a particular area or involve surveys of visitors?

YES [ ]  NO [ ]  NOT SURE [ ]

* 1. Result in a noticeable effect (beyond that expected if the crew were members of a typical/legal recreational group) on opportunities for solitude?

YES [ ]  NO [ ]  NOT SURE [ ]

* 1. Include aerial surveys over wilderness?

YES [ ]  NO [ ]  NOT SURE [ ]

If you answered YES or NOT SURE to any of the questions in this section, complete Section C.

If you answered NO to all of the questions in this section, contact the Environmental Compliance Office before completing the rest of this form.

## C. DETERMINE IF THE ACTIONS ARE NECESSARY AND APPROPRIATE

Answer the following questions to determine if the proposed actions should be performed.

1. Is this proposed action(s) a response to an emergency as determined by the superintendent in accordance with law and policy?

YES [ ]  NO [ ]

If the answer is YES and the approved emergency SOPs and management plans have gone through a Minimum Requirements Analysis, skip to Section F and follow the approved plans. If the approved plans have not gone through a Minimum Requirements Analysis, continue completing this form.

1. Is the proposed action(s) necessary to meet the requirements of other federal law(s) (i.e., any special provisions of the Wilderness Act of 1964 or subsequent wilderness laws) or does a federal law(s) support the proposed actions (e.g., Organic Act, Omnibus Management Act, Endangered Species Act, or any other federal laws)?

YES [ ]  NO [ ]

If the answer is YES, cite the law(s) and section*:* Click or tap here to enter text.

Is the proposed action(s) outlined in this project necessary to preserve one or more of the 5 qualities of wilderness character?(See Appendix 2)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Untrammeled** | **Undeveloped** | **Natural** | **Solitude/Primitive/Unconfined** | **Other Features** |
| Yes [ ]  No [ ]  | Yes [ ]  No [ ]  | Yes [ ]  No [ ]  | Yes [ ]  No [ ]  | Yes [ ]  No [ ]  |

If the answer is YES, describe how the wilderness character(s) specified will be affected if the proposed actions are not taken:Click or tap here to enter text.

Is the proposed action(s) necessary to achieve one or more of the public purposes for wilderness as stated in Section 4(b) of the Wilderness Act: “recreational, scenic, scientific, educational, conservation, or historical use”?

YES [ ]  NO [ ]

If the answer is YES, explain:Click or tap here to enter text.

If you answered YES to any question 2-4 above, continue to the next section.

If you answered NO to all questions 2-4 above, contact the Environmental Compliance Office or your Park contact before completing the rest of this form.

## D. State Proposal Alternatives

This section is for stating any reasonable alternatives for executing the proposed action(s). Simple proposals (e.g., no prohibited uses) may only need one alternative. Other proposals may need additional alternatives to help determine the minimum tool to execute the proposed action(s). Depending on the complexity of the proposal, you may want to include the No Action or Current Management Strategy to develop a baseline for your proposed action(s). Note that there is no limit to the number of reasonable alternatives considered, but the level of analysis provided should be commensurate with the anticipated level of impact to wilderness resources.

For Table 1, identify the core steps which must take place in wilderness in order to complete the project (column 1). Next, determine different ways (alternatives) in which those steps can be accomplished. Different alternatives must satisfy the same steps in different ways. For example, steps could be “Transport supplies to the work site” and “Erect wire fencing” and different alternatives to accomplish those steps could be “Use human labor” or “Use machinery”. If needed, contact appropriate park staff to determine the current management strategy (if any) related to the proposed actions. See Appendix 3 for an example of a completed table. If additional space is needed, use the extra tables provided in Appendix 4.

Table 1: Project Core Steps and Alternatives

|  |  |  |  |
| --- | --- | --- | --- |
| **Core Steps** | **No Action – Current Management Strategy** | **Alternative 1**Click to provide a title. | **Alternative 2**Click to provide a title. |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
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For each alternative, provide a narrative that describes the actions for the core steps.

Click to enter text. Provide a description of each alternative, including any prohibited uses or activities that may impact wilderness character.

## E. EVALUATE PROposal ALTERNATIVES

Use the tables in this section to evaluate the alternatives from Section D. Reference Appendix 2 for definitions of each wilderness character and actions that can degrade those characters, including prohibited uses. Extra tables provided in Appendix 4.

### Analyzing Impacts to Wilderness Character

Note if the project alternatives have any impacts on wilderness character in Tables 2 and 3. Distinguish between short-term (S) and long-term (L) impacts. You may select more than one box. If there are no impacts, do not select a box. Use Table 4 to provide a narrative of impacts.

Table 2: Negative Impacts to Wilderness Character

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Untrammeled** | **Undeveloped** | **Natural** | **Solitude/Primitive/Unconfined** | **Other Features** |
| **No Action** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 1** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 2** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |

Table 3: Positive Impacts to Wilderness Character

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Untrammeled** | **Undeveloped** | **Natural** | **Solitude/Primitive/Unconfined** | **Other Features** |
| **No Action** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 1** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 2** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |

Table 4: For each alternative, provide a narrative that describes the impacts noted above.

|  |  |
| --- | --- |
| **Alternative** | **Narrative of Impact(s) to Wilderness Character** |
| **No Action** | Click or tap here to enter text. |
| **Alternative 1** | Click or tap here to enter text. |
| **Alternative 2** | Click or tap here to enter text. |

### Analyzing Other Considerations

Use Table 5 to explain how other things may be affected (both directly and indirectly) by the proposed alternatives. Consider effects on natural or cultural resources; social, recreational, economic, timing, or experiential effects; societal or political impacts.

Table 5: Other Considerations

|  |  |
| --- | --- |
| **Alternative** | **Additional Impact(s) of Project Alternatives**  |
| **No Action** | Click or tap here to enter text. |
| **Alternative 1** | Click or tap here to enter text. |
| **Alternative 2** | Click or tap here to enter text. |

## F. Selecting the minimum requirement alternative

Taking into account all potential impacts and factors from Tables 2-4, select the alternative that will most effectively resolve the issue/study the proposal seeks to address while having the least overall adverse impact on park resources, values and visitor experience, and on wilderness resources and character. Note: any actions declared an emergency (see Section B) do not require filling out Tables 2-4 or sections C through E.

When selecting the preferred alternative for actions in wilderness, the potential disruption of wilderness character and resources will be considered before, and given significantly more weight than, economic efficiency and convenience. If a compromise of wilderness resources or character is unavoidable, only those actions that preserve wilderness character and/or have localized, short-term adverse impacts will be acceptable. Provide detailed justification for the selected alternative. Include the tools or methods which will be utilized to complete the project and the steps which will be taken to minimize impacts:

Click or tap here to enter text.

## G. PROJECT APPROVAL

This project has been reviewed and approved by the following individuals. Project Alternative *Click to enter title of selected alternative.* has been selected and will be carried out following the methods described on this form.

Preparer (Project Leader or Park Point of Contact):

Click to enter name and title.

Sign Here:

Subject Matter Expert:

Click to enter name and title.

Sign Here:

NEPA Specialist:

Click to enter name and title.

Sign Here:

Park Superintendent:

Click to enter name or acting name.

Sign Here:

## APPENDIX 1 – Guidance for minimum requirements

Wilderness Act of 1964 - Prohibition Of Certain Uses Section 4(c) Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.

National Park Service Management Policy 6.3.5 – Minimum Requirements All management decisions affecting wilderness must be consistent with the minimum requirement concept. This concept is a documented process used to determine if administrative actions, projects, or programs undertaken by the Service or its agents and affecting wilderness character, resources, or the visitor experience are necessary, and if so how to minimize impacts. The minimum requirement concept will be applied as a two-step process that determines

* whether the proposed management action is appropriate or necessary for administration of the area as wilderness and does not cause a significant impact to wilderness resources and character, in accordance with the [Wilderness Act](http://www4.law.cornell.edu/uscode/html/uscode16/usc_sup_01_16_10_23.html); and
* the techniques and types of equipment needed to ensure that impacts on wilderness resources and character are minimized.

In accordance with this policy, superintendents will apply the minimum requirement concept in the context of wilderness stewardship planning, as well as to all other administrative practices, proposed special uses, scientific activities, and equipment use in wilderness. The only exception to the minimum requirement policy is for eligible areas that the Service has not proposed for wilderness designation.  However, those lands will still be managed to preserve their eligibility.

When determining minimum requirements, the potential disruption of wilderness character and resources will be considered before, and given significantly more weight than, economic efficiency and convenience. If a compromise of wilderness resources or character is unavoidable, only those actions that preserve wilderness character and/or have localized, short-term adverse impacts will be acceptable.

Although park managers have flexibility in identifying the method used to determine minimum requirement, the method used must clearly weigh the benefits and impacts of the proposal, document the decision-making process, and be supported by an appropriate environmental compliance document. Parks must develop a process to determine minimum requirement until the plan is finally approved. Parks will complete a minimum requirement analysis on those administrative practices and equipment uses that have the potential to impact wilderness resources or values. The minimum requirement concept cannot be used to rationalize permanent roads or inappropriate or unlawful uses in wilderness.

Administrative use of motorized equipment or mechanical transport will be authorized only

* if determined by the superintendent to be the minimum requirement needed by management to achieve the purposes of the area, including the preservation of wilderness character and values, in accordance with the [Wilderness Act](http://www4.law.cornell.edu/uscode/html/uscode16/usc_sup_01_16_10_23.html); or
* in emergency situations (for example, search and rescue, homeland security, law enforcement) involving the health or safety of persons actually within the area.

Such management activities will also be conducted in accordance with all applicable regulations, policies, and guidelines and, where practicable, will be scheduled to avoid creating adverse resource impacts or conflicts with visitor use.

While actions taken to address search and rescue, homeland security and law enforcement issues are subject to the minimum requirement concept, preplanning or programmatic planning should be undertaken whenever possible to facilitate a fast and effective response and reduce paperwork.

For more detailed guidance, see [Director’s Order #41](http://www.nps.gov/policy/DOrders/DOrder41.doc) and the National Wilderness Steering Committee Guidance Paper #3: “What Constitutes the Minimum Requirements in Wilderness?”

Director’s Order #41 – Wilderness Stewardship Section 6.4 Minimum Requirements Parks must complete a “minimum requirements analysis” (MRA) in order to document the determination of whether a proposed action (project), which involves a prohibited use, is necessary to meet minimum requirements for the administration of the area for the purpose of wilderness. The Wilderness Act in Section 4 (c) identifies the prohibitions (codified at 16 U.S.C. 1133(c)) and Section 2 describes the purpose of wilderness (codified at 16 U.S.C. 1131).

Parks must first determine if the action (project) is necessary for the administration of the wilderness area, to realize the purpose of wilderness. Once the action (project) is determined necessary, parks must next determine the activity (method or tool) to accomplish the action (project) with the least negative impact to wilderness. This MRA should be undertaken using an interdisciplinary approach that includes the project lead, wilderness manager, resource specialists, and superintendent.

NPS Management Policies provide that a MRA must also be applied to all other administrative actions (projects) within wilderness that could potentially affect wilderness character. Also, whenever an environmental assessment or environmental impact statement is prepared for work projects within wilderness, a MRA should be included as part of the document.

Under no circumstances may a MRA be used to allow permanent roads or commercial enterprise within wilderness. The use of motorized equipment and the establishment of management facilities are specifically prohibited when other reasonable alternatives are available.

For newly designated wilderness, parks will prepare a MRA, along with an NHPA Section 106 Determination, to evaluate the retention or removal of administrative facilities, structures, and installations.

The Associate Director will ensure that additional information, guidance, and detail on applying the MRA are included in RM 41.

## APPENDIX 2 – wilderness character and values

Below is Appendix E of the Death Valley Wilderness Backcountry Stewardship Plan which defines each wilderness character within Death Valley National Park and includes the Park’s wilderness values.

### APPENDIX E: WILDERNESS CHARACTER NARRATIVE

### OVERVIEW

Wilderness character at Death Valley includes these universal and intrinsic qualities of wilderness character: naturalness, solitude or primitive and unconfined recreation, undeveloped, and untrammeled. In addition, it includes discrete features of the landscape that represent these wilderness values: ecological, geological, scientific, educational, scenic, and historical. Plus, it includes the intangible aspects of wilderness character, most notably the historic and continuing relationship of the Timbisha Shoshone people to their ancestral homeland.

### NATURAL QUALITY OF WILDERNESS CHARACTER

Death Valley National Park is a vast landscape of extremes. Badwater Basin in the Death Valley trough is 282 feet below sea level making it the lowest point in North America and one of the hottest places on earth. From the floor of the salt pan the land slopes steeply and dramatically to the often snow covered Panamint Mountains, punctuated by Telescope Peak which rises to 11,049 feet above sea level. Diverse sand dunes, salty creeks, alluvial fans, ancient shorelines, playas, water fluted canyons, craters, and varied mountain ranges provide an extensive variety of habitats.

This harsh and varied desert environment provides habitat for an amazing array of plants and animals, some of which occur nowhere else in the world. The steep gradients of the landscape coupled with the ecotone influences of both the Mojave and Great Basin Deserts creates rapid transitions of life zones and immense biological diversity, a surprising aspect of a landscape that largely appears barren. This interface between two different deserts gives rise to a remarkable diversity of plant communities and intact wildlife habitats that continue to exist and evolve without recent extirpations or extinctions though several species in the park are listed as threatened or endangered. Desert tortoise, the icon of the Mojave, continues to exist at the extreme northern edge of its range in the gently sloped Greenwater Valley area of the park, while the more common desert bighorn sheep occupy the steep and rugged terrain of the park’s many canyons and mountain ranges. Several species of desert pupfish survive in a handful of salty springs and pools, and along with their extinct cousins found elsewhere in the region, serve as a laboratory to study speciation and extinction in response to both past climate change and future climate change. The park’s water resources are precious but few, especially the parks oasis-like perennial springs that support and attract virtually all life in the park (including humans) while also serving as the incubators for the evolution of rare and unique species of invertebrates that only exist in specific springs. These critical water resources are characterized by the periodic flooding events that, ironically, continue to be the primary geomorphic process that gives rise to the visible landscape that is mostly devoid of surface water. The rumbling of rocks in the form of colluvium and alluvium and the frequent whistle or roar of wind provide a striking contrast to the silence that often encompasses much of the park’s backcountry. Such natural soundscapes, as well as relatively dark night skies and clear visibility, persist as the natural conditions under which the community of life lives.

The natural quality of the park’s wilderness character is degraded by the pervasive evidence of past mining activities and pre-existing roads, while the manipulation of springs by past human actions and modern park visitors, presence of artificial water sources (e.g. guzzlers), and presence of exotic plants and animals have localized effects on this quality. There are also past grazing impacts as well as currently permitted livestock grazing in some areas of the wilderness which degrade the natural quality. In a broader context, the naturalness is also degraded by air pollution and light pollution mostly originating from distant urban centers particularly on the south end of the park. Of special concern for air quality is the observed increase in acid deposition and the implications it has for increasing soil nitrogen. This increase in soil nitrogen benefits the non-native red brome grass which then increases the fire frequency and fire size, potentially converting native desert shrublands to alien grasslands. Even more broadly, climate change is likely acting upon the park’s biophysical resources and most experts expect that the Mojave Desert will get hotter and maybe even dryer in the future. Such predictions have significant consequences for the biological resources of one of the hottest and driest places on earth.

### UNDEVELOPED QUALITY OF WILDERNESS CHARACTER

Modern facilities in Death Valley National Park are few and modern facilities within the wilderness are even less common. There are a few communication installations present at Mormon Peak, Grapevine Peak and Dry Mountain, a handful of signs in wilderness, and some mine closure installations for public safety, but otherwise the millions of acres of desert wilderness are free from modern development. There are many view

points within the park where the entire landscape lies within the park and the only visible sign of human development, if any, is a thin ribbon of road fading into the horizon.

In contrast, historic facilities and artifacts are common throughout the park and are frequently encountered in the wilderness. The mineral wealth and geographic location as an entry point into California during the gold rush and homesteading period has left behind ample evidence of past human developments, particularly related to 150 years of mining activities. The arid environment which slows natural decay coupled with the relative inaccessibility of many historic sites has resulted in the standing remains of numerous structures and artifacts from the last half of the 19th century and the first half of the 20th century. The arid landscape also marks the passage of people in the form of historic roads, travel routes, and utility corridors, particularly those connecting historic settlements or mining sites to the few reliable water sources yielded by such a dry place. Most of the expansive network of backcountry roads was originally constructed as historic routes of travel, then “cherry-stemmed” out of the wilderness to continue to provide vehicular access to points of interest to history buffs and mining enthusiasts. In some cases roads were closed by wilderness designation and the former road prism is still visible. Today, several thousand acres of patented mining claims remain in the form of inholdings (along with approximately 60 state land sections), but the era of industrial mining is over within the park. The visible evidence of more recent and still operational industrial mines outside of park boundaries serve as a reminder of the mineral wealth of the desert and the efforts humans will go through to extract it. Associated with the historical use period of the park, there are also the remains of cattle grazing operations in the form of fences, corrals, line shacks, and manipulated water sources. Most of the grazing has been terminated, but the Hunter Mountain Allotment remains an active allotment, grazed by the same family since the late 1800s.

Native people have long been a part of this rugged landscape as evidenced by extensive archaeological sites (and probably many more unknown sites) and the continuing relationship between this land and the modern day Timbisha Shoshone people. The Timbisha desire to continue their traditional cultural practices, such as mesquite cultivation, pinyon harvest, and spring maintenance within the Timbisha Shoshone Natural and Cultural Preservation Area, a 2.4 million acre overlay that includes both wilderness and non-wilderness lands. There are also legally designated traditional cultural properties, such as those associated with the origin of the people at Ubehebe Crater and their ancestral homelands.

The undeveloped quality is degraded by the presence of installations such as communication equipment, grazing infrastructure, fences, utility corridors, artificial water sources for wildlife and research installations. In addition, there are numerous debris piles that degrade the undeveloped quality of wilderness character in the park such as modern trash dumps, crashed aircraft, and abandoned vehicles. There are also off-road vehicle trespass incidents, some of which remain visible for years after the incident. This quality is also degraded by those rare occasions of authorized motorized equipment usage (e.g. chainsaws, helicopter landings, etc) that are either used during emergency incidents or are authorized as the minimum tool to implement a planned activity as determined in a minimum requirements decision analysis. The loss of statutorily protected cultural resources also degrades this quality.

### UNTRAMMELED QUALITY OF WILDERNESS CHARACTER

Since the designation of wilderness in 1994, the Death Valley National Park Wilderness remains largely untrammeled, with few intentional manipulations of the park’s biophysical resources. Where such trammels do occur, they are generally very localized and small in scale. Thus in many ways the wilderness serves as a natural laboratory for the study of landscape-scale ecosystem processes. This lack of intentional manipulation is both by design and by default. It is also an unplanned consequence of a park with a large land base that is perpetually underfunded and understaffed, where most of the park’s attention is necessarily focused on managing the developed areas where most visitation occurs, thus leaving few resources to expend in remote wilderness areas of the park.

This quality is degraded by actions that deliberately control or manipulate the earth and its community of life. The most frequent form of trammeling that has occurred is the control of exotic plants in desert springs and removal of burros to protect bighorn sheep. Exotic plant removal has occurred almost annually in recent years, while burro removal was a common occurrence in the past and is anticipated to be a regular occurrence in the future. The most pervasive form of trammel within the park is the indirect influence of numerous paved and unpaved roads which alter water flows and alluvial processes through their alignment, ditches, culverts, and other engineered features. The other forms of trammeling that occur are very isolated incidents. There is only one natural ignition that has been suppressed in the park in the history of fire record keeping, the Bullfrog Fire of 2006 which burned in non-wilderness lands, and that suppression action was in the form of mop-up after the fire had made its initial run and thus likely didn’t alter the fire perimeter or intensity of the burn. There have been several human caused ignitions in the wilderness that have been suppressed, most notably the Happy Fire of 2000. There are a few artificial wildlife watering locations primarily on the northwest side of the park that were inherited when the lands were added in 1994 and the presence of artificial water serves to manipulate the distribution and abundance of wildlife species, though it is not known to what extent any of the guzzlers are still functional. Over time, many of the park’s natural water sources have been manipulated by humans to provide more reliable or usable water for human uses, livestock, or wildlife. With the exception of Timbisha cultural practices at a few spring sites, such manipulations are not condoned by Park Managers but may still go on in some places. Also as part of the park’s ongoing efforts to mitigate public safety threats posed by abandoned mine sites, some soils have been re-contoured or backfilled and bat gates/cupolas have been installed which may alter use by wildlife. Plants, animals, or physical resources are sometimes authorized for scientific collection through a research permit process, but there may also be instances where collections exceed permit limits or plants and animals are taken (poached) illegally.

### SOLITUDE OR PRIMITIVE AND UNCONFINED RECREATION QUALITY OF WILDERNESS

### CHARACTER

The vastness of the landscape, the lack of trails or facilities, and the harshness of the environment give rise to an abundance of solitude. In many areas of the park, a backpacker can go for days without encountering another person and this is especially true in the Cottonwood Mountains, Grapevine Mountains, and Tucki Mountain. The rugged topography and lack of water provides for the ultimate desert backcountry experience with abundant opportunities for challenge and self-reliance, including a chance for wintertime trips without winter conditions, equipment, or skills as well as summertime trips to the high elevation lands. The sheer size of the park coupled with the varied topography and complex geology means that there are a wide variety of backcountry experiences available, most of which can be accessed without traversing a developed area. With open terrain, few nocturnal predators, clear night skies, and no canopy overhead, the park provides a unique opportunity for night hiking. Most visitor destinations focus on springs, historic sites, canyons, summits, and geologic wonders, but with almost no trails visitors traverse the landscape in whatever way and direction their physical ability and sense of adventure lead with few or no encounters with other visitors. This vastness and relatively low visitation provides ample opportunity for solitude, a chance to contemplate the mysteries of universes while observing the dark night sky, and the sounds of nature where it can be so quiet you can hear the rumble of rock against rock or even the saltation of soil particles as they continue the erosive processes that shape the land.

Given the vastness of the landscape, there are very few signs, trails, or designated campsites and those that do exist are usually in close proximity to roads. As of 2011, there are about 15 miles of designated hiking trail/routes and over a 100 miles of hiking routes that connect points of interest and water sources but are not maintained as formal trails by the NPS. There are relatively few regulations that confine the visitor’s opportunity for primitive and unconfined recreation, though there are a few no camping zones as well as restrictions about fire use, length of stay, and party size. Such lack of regulations are typical of immediately surrounding BLM and Forest Service wilderness areas though a little more restrictive than adjacent BLM lands, but are vastly less restrictive than the experiences offered in the nearby Sierra Nevada park and wilderness areas. There are very limited opportunities for stock use and such use is infrequent. Most recreational experiences require advance knowledge and backcountry skills as there are few opportunities for help and the harsh environment is unforgiving of mistakes.

The opportunity for solitude or primitive and unconfined recreation is generally greatest in the northern end of the park and less available in the southern end of the park due to the influence of surrounding military operations (debris and overflights) and the influence of air pollution and light pollution originating from distant population centers in Las Vegas, NV and Los Angeles, CA. However, many of these impacts are not easily detected by a short-term visit to the park and so from the perspective of a wilderness visitor solitude is still easily found anywhere off the paved roads in this vast park.

This opportunity for solitude is degraded by the presence of frequent military overflights at some locations and an abundant network of backcountry roads which both provide access but also are visible and audible for long distances. It is also diminished by reduced visibility caused by poor air quality and light pollution, both originating from regional population centers hundreds of miles beyond park boundaries. New recreational pursuits, such as sand kiting have the potential to diminish opportunities for solitude due to the equipment used. These uses tend to concentrate at specific sites and it is likely in the future new forms of extreme sports will further exacerbate this condition. The primitive and unconfined quality is degraded by visitor use restrictions, particularly no camping in the Valley floor and along high use corridors such as Mosaic and Natural Bridge canyons.

### INTANGIBLE ASPECTS OF WILDERNESS CHARACTER

The Timbisha Shoshone Tribe has occupied the area encompassed by Death Valley National Park for thousands of years. Their elders occupied and used the vast lands now defined as Wilderness, and their descendants still visit and utilize those areas today. While the Timbisha do not necessarily recognize the concept of Wilderness as defined by Congress (since one is never truly alone), they do identify Wilderness as a tool to protect land from development, encroachment, and incompatible uses, and understand the Park's duty to protect these areas. Passage of the Timbisha Shoshone Homeland Act of 2000 (P.L. 106-423) established a land base for the Tribe and a large Natural and Cultural Preservation Area and special use areas (+1.5 million acres), much of which is in Wilderness. However, since the NPS-Timbisha Cooperative Management Agreement has not been finalized, this means that there are many aspects of this relationship as yet to be defined and clarified. Access to places of importance, and management of resources, including gathering and management of plant resources have at times been complicated by NPS rules and regulations. Communication between the Park and the Tribe has not always been effective in the past, but is expected to improve over time.

The Timbisha recognize existing impacts to wilderness that they would like to see reduced. Overflights by military and private aircraft disturb their experiences in Wilderness. The presence of high numbers of people hiking off trail is not desired by the Timbisha, and protection of cultural and natural resources is of the utmost importance. The Tribe would like to continue to work with the park to identify sensitive areas for resource protection (such as campsites, birthing areas, and cache areas), and receive information on resources and management from the Park as well. The Tribe would also like to continue to pass along its traditional cultural knowledge to younger tribal members through site visits and ceremonies. While the Tribe does not favor mechanized intrusions into Wilderness, they acknowledge that some motorized travel may be necessary to transport elderly cultural practitioners into now relatively inaccessible areas.

### WILDERNESS VALUES

Wilderness values are things that add value to wilderness *where they occur* but are not universally intrinsic to all wilderness lands within the park. These are features of the landscape to be valued and preserved by park management as they contribute to wilderness character and they are also of value for reasons not related to wilderness as specifically identified in the enabling legislation and/or General Management Plan. The Wilderness Act in Section 2(c)(4) lists the categories in which these wilderness values might exist: ecological, geological, scientific, educational, scenic, or historical value.

Of particular importance at Death Valley are the cultural resources. The California Desert Protection Act of 1994 added significant acreage to Death Valley National Park, established most of the park as wilderness, and directed the park to "... protect and preserve historical and cultural values of the California desert associated with ancient Indian cultures, patterns of western exploration and settlement, and sites exemplifying the mining, ranching and railroading history of the Old West..." Passage of the act added many thousands of prehistoric sites, as well as hundreds of very visible historic structures, including cabins and mining infrastructure, such as tramways, headframes, and mills - many of which are located in wilderness. For this reason, much of the discussion of wilderness values at Death Valley will be focused on cultural resources.

Table 1. Wilderness Values at Death Valley National Park (modified from original document for 508 compliance)

**Ecological Values**:

* extreme conditions and isolation provide habitat for an unusually high number of plant and animal species that are highly adapted to these conditions 1 (e.g. endemic species)
* provides habitat for a number of threatened, endangered, and sensitive species

**Geological Values:**

* World renowned for its exposed, complex and diverse geology and tectonics, and for its unusual geologic features, providing a natural geologic museum that represents a substantial portion of the earth’s history 1
* includes a continuous section of the Pleistocene shoreline of Lake Manly providing an excellent opportunity for quaternary studies

**Scientific Values**:

* contains one of the nation’s most diverse and significant fossil records and most continuous volcanic histories 1
* contains five major sand dune systems representing all types of dune structures, making it one of the only places on earth where this variety of dune types occurs in such close proximity 1
* provides for the study of extreme environments because it contains the lowest point in North America, the driest spot in the US, and is one of the hottest places on earth1

**Educational Values**:

* one of the largest expanses of protected warm desert in the world 1
* provides outstanding opportunities for solitude, challenge, and self-reliance including the opportunity to practice primitive skills and use primitive tools

**Scenic Values**:

* the extremely colorful, complex, and highly visible geology and steep rugged mountains and canyons provide some of the most dramatic visual landscapes in the US 1
* includes some of the darkest night skies in the region, especially on the north end of the park

**Historical Values**:

* continuous home of Native Americans, from prehistoric cultures to the present day Timbisha Shoshone Tribe 1
* contains an unusually high number of well preserved archeological sites, including rock art and alignments 1
* includes an extensive and well preserved mining history representing over 150 years of mining technology1[[1]](#footnote-2)

## APPENDIX 3 – Example of table 1

Example of a completed Table 1 from Section C for a project to install fencing and monitor feral burro activity around springs.

**Table 1: Project Core Components and Options (EXAMPLE)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Core Component | Option 1- Current Management Strategy | Option 2- Human Labor | Option 3- Machine Labor | Option 4- Combination of Human and Machine Labor |
| Transport materials and personnel to work site(s) | Transportation of materials and personnel would not occur | Materials and personnel would arrive to site via foot travel | Materials and personnel would be transported using a vehicle | Materials and personnel would arrive via helicopter |
| Prepare spring locations for fence installation | Preparations for fence installations would not occur | Preparation for fence installation would be done by hand | Preparation for fence installation would be done using power tools | Preparation for fence installation would be done using motorized equipment, hand labor, and power tools |
| Install fence at site | Fence installation would not occur | Fence would be installed with hand tools | Fence installation would be installed using power tools | Fence installation would be installed with a combo of hand tools and power tools |
| Monitor effects of burros at springs | Monitoring would occur via foot travel | Monitoring would occur via foot travel | Monitoring would occur using a vehicle | Monitoring effects would occur using a helicopter |
| Annual inspection of fences | Annual inspection would not occur | Annual inspection would occur via foot travel | Annual inspection would occur using a vehicle | Annual inspection would occur using a helicopter |
| Routine maintenance & repair | Routine maintenance and repair would not occur | Routine maintenance & repair would occur using hand tools | Routine maintenance & repair would occur using motorized equipment | Routine maintenance and repair would occur using helicopter, motorized equipment and hand tools |

## Appendix 4 – Additional Tables for Project Alternatives Analysis (Only if Needed)

**Table 1 (cont): Project Core Components and Alternatives**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Core Component** | **Alternative 3**Click to provide a title | **Alternative 4**Click to provide a title | **Alternative 5**Click to provide a title | **Alternative 6**Click to provide a title |
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Table 2 (cont): Negative Impacts to Wilderness Character

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Untrammeled** | **Undeveloped** | **Natural** | **Solitude/Primitive/Unconfined** | **Other Features** |
| **Alternative 3** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 4** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 5** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 6** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |

Table 3 (cont): Positive Impacts to Wilderness Character

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Untrammeled** | **Undeveloped** | **Natural** | **Solitude/Primitive/Unconfined** | **Other Features** |
| **Alternative 3** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 4** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 5** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |
| **Alternative 5** | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  | S [ ]  L [ ]  |

Table 4 (cont): For each alternative, provide a narrative that describes the impacts noted above.

|  |  |
| --- | --- |
| **Alternative** | **Narrative of Impact(s) to Wilderness Character** |
| **Alternative 3** | Click or tap here to enter text. |
| **Alternative 4** | Click or tap here to enter text. |
| **Alternative 5** | Click or tap here to enter text. |
| **Alternative 6** | Click or tap here to enter text. |

Table 5 (cont): Other Considerations

|  |  |
| --- | --- |
| **Alternative** | **Additional Impact(s) of Project Alternatives**  |
| **Alternative 3** | Click or tap here to enter text. |
| **Alternative 4** | Click or tap here to enter text. |
| **Alternative 5** | Click or tap here to enter text. |
| **Alternative 6** | Click or tap here to enter text. |

1. taken from 2002 Death Valley General Management Plan [↑](#footnote-ref-2)