

**APPENDIX A: ENABLING LEGISLATION  
CALIFORNIA DESERT PROTECTION ACT  
(SECTIONS RELEVANT TO DEATH VALLEY NATIONAL PARK)**

**Public Law 103-433  
108 STAT. 4471  
103d Congress  
October 31, 1994**

**An Act**

To designate certain lands in the California Desert as wilderness, to establish the Death Valley and Joshua Tree National Parks, to establish the Mojave National Preserve, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**1.1.1 SECTION 1. SHORT TITLE.**

Sections 1 and 2, and titles I through IX of this Act may be cited as the 'California Desert Protection Act of 1994'.

**1.1.2 SEC. 2. FINDINGS AND POLICY.**

(a) The Congress finds and declares that--

- (1) the federally owned desert lands of southern California constitute a public wildland resource of extraordinary and inestimable value for this and future generations;
- (2) these desert wildlands display unique scenic, historical, archeological, environmental, ecological, wildlife, cultural, scientific, educational, and recreational values used and enjoyed by millions of Americans for hiking and camping, scientific study and scenic appreciation;
- (3) the public land resources of the California desert now face and are increasingly threatened by adverse pressures which would impair, dilute, and destroy their public and natural values;
- (4) the California desert, embracing wilderness lands, units of the National Park System, other Federal lands, State parks and other State lands, and private lands, constitutes a cohesive unit posing unique and difficult resource protection and management challenges;
- (5) through designation of national monuments by Presidential proclamation, through enactment of general public land statutes (including section 601 of the Federal Land Policy and Management Act of 1976, 90 Stat. 2743, 43 U.S.C. 1701 et seq.) and through interim administrative actions, the Federal Government has begun the process of appropriately providing for protection of the significant resources of the public lands in the California desert; and
- (6) statutory land unit designations are needed to afford the full protection which the resources and public land values of the California desert merit.

(b) In order to secure for the American people of this and future generations an enduring heritage of wilderness, national parks, and public land values in the California desert, it is hereby declared to be the policy of the Congress that--

- (1) appropriate public lands in the California desert shall be included within the National Park System and the National Wilderness Preservation System, in order to--
  - (A) preserve unrivaled scenic, geologic, and wildlife values associated with these unique natural landscapes;

- (B) perpetuate in their natural state significant and diverse ecosystems of the California desert;
- (C) 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;
- (D) provide opportunities for compatible outdoor public recreation, protect and interpret ecological and geological features and historic, paleontological, and archeological sites, maintain wilderness resource values, and promote public understanding and appreciation of the California desert; and
- (E) retain and enhance opportunities for scientific research in undisturbed ecosystems.

### **1.1.2.1 TITLE III--DEATH VALLEY NATIONAL PARK**

#### **1.1.3 SEC. 301. FINDINGS.**

The Congress hereby finds that--

- (1) proclamations by Presidents Herbert Hoover in 1933 and Franklin Roosevelt in 1937 established and expanded the Death Valley National Monument for the preservation of the unusual features of scenic, scientific, and educational interest therein contained;
- (2) Death Valley National Monument is today recognized as a major unit of the National Park System, having extraordinary values enjoyed by millions of visitors;
- (3) the monument boundaries established in the 1930's exclude and thereby expose to incompatible development and inconsistent management, contiguous Federal lands of essential and superlative natural, ecological, geological, archeological, paleontological, cultural, historical and wilderness values;
- (4) Death Valley National Monument should be substantially enlarged by the addition of all contiguous Federal lands of national park caliber and afforded full recognition and statutory protection as a National Park; and
- (5) the wilderness within Death Valley should receive maximum statutory protection by designation pursuant to the Wilderness Act.

#### **1.1.4 SEC. 302. ESTABLISHMENT OF DEATH VALLEY NATIONAL PARK.**

There is hereby established the Death Valley National Park (hereinafter in this title referred to as the 'park') as generally depicted on twenty-three maps entitled 'Death Valley National Park Boundary and Wilderness--Proposed', numbered in the title one through twenty-three, and dated July 1993 or prior, which shall be on file and available for public inspection in the offices of the Superintendent of the park and the Director of the National Park Service, Department of the Interior. The Death Valley National Monument is hereby abolished as such, the lands and interests therein are hereby incorporated within and made part of the new Death Valley National Park, and any funds available for purposes of the monument shall be available for purposes of the park.

#### **1.1.5 SEC. 303. TRANSFER AND ADMINISTRATION OF LANDS.**

Upon enactment of this title, the Secretary shall transfer the lands under the jurisdiction of the Bureau of Land Management depicted in the maps described in section 302 of this title, without consideration, to the administrative jurisdiction of the National Park Service for administration as part of the National Park System, and the boundary of the park shall be adjusted accordingly. The Secretary shall administer the areas added to the park by this title in accordance with the provisions of law generally applicable to units of the National Park System, including the Act entitled 'An Act to establish a National Park Service, and for other purposes', approved August 25, 1916 (39 Stat. 535; 16 U.S.C. 1, 2-4).

**1.1.6 SEC. 304. MAPS AND LEGAL DESCRIPTION.**

Within six months after the enactment of this title, the Secretary shall file maps and a legal description of the park designated under this title with the Committee on Energy and Natural Resources of the United States Senate and the Committee on Natural Resources of the United States House of Representatives. Such maps and legal description shall have the same force and effect as if included in this title, except that the Secretary may correct clerical and typographical errors in such legal description and in the maps referred to in section 302. The maps and legal description shall be on file and available for public inspection in the offices of the Superintendent of the park and the Director of the National Park Service, Department of the Interior.

**1.1.7 SEC. 305. WITHDRAWAL.**

Subject to valid existing rights, all Federal lands within the park are hereby withdrawn from all forms of entry, appropriation, or disposal under the public land laws; from location, entry, and patent under the United States mining laws; and from disposition under all laws pertaining to mineral and geothermal leasing, and mineral materials, and all amendments thereto.

**1.1.8 SEC. 306. GRAZING.**

- (a) IN GENERAL- The privilege of grazing domestic livestock on lands within the park shall continue to be exercised at no more than the current level, subject to applicable laws and National Park Service regulations.
- (b) SALE OF PROPERTY- If a person holding a grazing permit referred to in subsection (a) informs the Secretary that such permittee is willing to convey to the United States any base property with respect to which such permit was issued and to which such permittee holds title, the Secretary shall make the acquisition of such base property a priority as compared with the acquisition of other lands within the park, provided agreement can be reached concerning the terms and conditions of such acquisition. Any such base property which is located outside the park and acquired as a priority pursuant to this section shall be managed by the Federal agency responsible for the majority of the adjacent lands in accordance with the laws applicable to such adjacent lands.

**1.1.9 SEC. 307. DEATH VALLEY NATIONAL PARK ADVISORY COMMISSION.**

- (a) The Secretary shall establish an Advisory Commission of no more than fifteen members, to advise the Secretary concerning the development and implementation of a new or revised comprehensive management plan for Death Valley National Park.
- (b)(1) The advisory commission shall include an elected official for each County within which any part of the park is located, a representative of the owners of private properties located within or immediately adjacent to the park, and other members representing persons actively engaged in grazing and range management, mineral exploration and development, and persons with expertise in relevant fields, including geology, biology, ecology, law enforcement, and the protection and management of National Park resources and values.
- (2) Vacancies in the advisory commission shall be filled by the Secretary so as to maintain the full diversity of views required to be represented on the advisory commission.
- (c) The Federal Advisory Committee Act shall apply to the procedures and activities of the advisory commission.
- (d) The advisory commission shall cease to exist ten years after the date of its establishment.

**1.1.10 SEC. 308. BOUNDARY ADJUSTMENT.**

In preparing the maps and legal descriptions required by sections 304 and 602 of this Act, the Secretary shall adjust the boundaries of the Death Valley National Park and Death Valley National Park Wilderness so as to exclude from such National Park and Wilderness the lands generally depicted on the map entitled 'Porter Mine (Panamint Range) Exclusion Area' dated June 1994.

### **1.1.10.1 TITLE VI--NATIONAL PARK SYSTEM WILDERNESS**

#### **1.1.11 SEC. 601. DESIGNATION OF WILDERNESS.**

(a) In furtherance of the purposes of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1311 et seq.), the following lands within the units of the National Park System designated by this Act are hereby designated as wilderness, and therefore, as components of the National Wilderness Preservation System:

- (1) Death Valley National Park Wilderness, comprising approximately three million one hundred fifty-eight thousand thirty-eight acres, as generally depicted on twenty-three maps entitled 'Death Valley National Park Boundary and Wilderness', numbered in the title one through twenty-three, and dated October 1993 or prior, and three maps entitled 'Death Valley National Park Wilderness', numbered in the title one through three, and dated July 1993 or prior, and which shall be known as the Death Valley Wilderness.
- (2) Joshua Tree National Park Wilderness Additions, comprising approximately one hundred thirty-one thousand seven hundred and eighty acres, as generally depicted on four maps entitled 'Joshua Tree National Park Boundary and Wilderness--Proposed', numbered in the title one through four, and dated October 1991 or prior, and which are hereby incorporated in, and which shall be deemed to be a part of the Joshua Tree Wilderness as designated by Public Law 94-567.
- (3) Mojave National Preserve Wilderness, comprising approximately six hundred ninety-five thousand two hundred acres, as generally depicted on ten maps entitled 'Mojave National Park Boundary and Wilderness--Proposed', and numbered in the title one through ten, and dated March 1994 or prior, and seven maps entitled 'Mojave National Park Wilderness--Proposed', numbered in the title one through seven, and dated March 1994 or prior, and which shall be known as the Mojave Wilderness.

(b) POTENTIAL WILDERNESS- Upon cessation of all uses prohibited by the Wilderness Act and publication by the Secretary in the Federal Register of notice of such cessation, potential wilderness, comprising approximately six thousand eight hundred and forty acres, as described in '1988 Death Valley National Monument Draft General Management Plan Draft Environmental Impact Statement' (hereafter in this title referred to as 'Draft Plan') and as generally depicted on map in the Draft Plan entitled 'Wilderness Plan Death Valley National Monument', dated January 1988, and which shall be deemed to be a part of the Death Valley Wilderness as designated in paragraph (a)(1). Lands identified in the Draft Plan as potential wilderness shall be managed by the Secretary insofar as practicable as wilderness until such time as said lands are designated as wilderness.

#### **1.1.12 SEC. 602. FILING OF MAPS AND DESCRIPTIONS.**

Maps and a legal description of the boundaries of the areas designated in section 601 of this title shall be on file and available for public inspection in the appropriate offices of the National Park Service, Department of the Interior. As soon as practicable after the date of enactment of this title, maps and legal descriptions of the wilderness areas shall be filed with the Committee on Energy and Natural Resources of the United States Senate and the Committee on Natural Resources of the United States House of Representatives, and such maps and legal descriptions shall have the same force and effect as if included in this title, except that the Secretary may correct clerical and typographical errors in such maps and legal descriptions.

#### **1.1.13 SEC. 603. ADMINISTRATION OF WILDERNESS AREAS.**

The areas designated by section 601 of this title as wilderness shall be administered by the Secretary in accordance with the applicable provisions of the Wilderness Act governing areas designated by that title as wilderness, except that any reference in such provision to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this title, and where appropriate, and reference to the Secretary of Agriculture shall be deemed to be a reference to the Secretary of the Interior.

### **1.1.13.1 TITLE VII--MISCELLANEOUS PROVISIONS**

#### **1.1.14 SEC. 701. TRANSFER OF LANDS TO RED ROCK CANYON STATE PARK.**

Upon enactment of this title, the Secretary shall transfer to the State of California certain lands within the California Desert Conservation Area, California, of the Bureau of Land Management, comprising approximately twenty thousand five hundred acres, as generally depicted on two maps entitled 'Red Rock Canyon State Park Additions 1' and 'Red Rock Canyon State Park Additions 2', dated May 1991, for inclusion in the State of California Park System. Should the State of California cease to manage these lands as part of the State Park System, ownership of the lands shall revert to the Department of the Interior to be managed as part of California Desert Conservation Area to provide maximum protection for the area's scenic and scientific values.

#### **1.1.15 SEC. 702. LAND TENURE ADJUSTMENTS.**

In preparing land tenure adjustment decisions with the California Desert Conservation Area, of the Bureau of Land Management, the Secretary shall give priority to consolidating Federal ownership within the national park units and wilderness areas designated by this Act.

#### **1.1.16 SEC. 703. LAND DISPOSAL.**

Except as provided in section 406 of this Act, none of the lands within the boundaries of the wilderness or park areas designated under this Act shall be granted to or otherwise made available for use by the Metropolitan Water District or any other agencies or persons pursuant to the Boulder Canyon Project Act (43 U.S.C. 617-619b) or any similar Acts.

#### **1.1.17 SEC. 704. MANAGEMENT OF NEWLY ACQUIRED LANDS.**

Any lands within the boundaries of a wilderness area designated under this Act which are acquired by the Federal Government, shall become part of the wilderness area within which they are located and shall be managed in accordance with all the provisions of this Act and other laws applicable to such wilderness area.

#### **1.1.18 SEC. 705. NATIVE AMERICAN USES AND INTERESTS.**

(a) ACCESS- In recognition of the past use of the National Park System units and wilderness areas designed under this Act by Indian people for traditional cultural and religious purposes, the Secretary shall ensure access to such park system units and wilderness areas by Indian people for such traditional cultural and religious purposes. In implementing this section, the Secretary, upon the request of an Indian tribe or Indian religious community, shall temporarily close to the general public use of one or more specific portions of the park system unit or wilderness area in order to protect the privacy of traditional cultural and religious activities in such areas by Indian people. Any such closure shall be made to affect the smallest practicable area for the minimum period necessary for such purposes. Such access shall be consistent with the purpose and intent of Public Law 95-341 (42 U.S.C. 1996) commonly referred to as the 'American Indian Religious Freedom Act', and with respect to areas designated as wilderness, the Wilderness Act (78 Stat. 890; 16 U.S.C. 1131).

(b) STUDY- (1) The Secretary, in consultation with the Timbisha Shoshone Tribe and relevant Federal agencies, shall conduct a study, subject to the availability of appropriations, to identify lands suitable for a reservation for the Timbisha Shoshone Tribe that are located within the Tribe's aboriginal homeland area within and outside the boundaries of the Death Valley National Monument and the Death Valley National Park, as described in title III of this Act.

(2) Not later than 1 year after the date of enactment of this title, the Secretary shall submit a report to the Committee on Energy and Natural Resources and the Committee on Indian Affairs of the United States Senate, and the Committee on Natural Resources of the United States House of Representatives on the results of the study conducted under paragraph (1).

**1.1.19 SEC. 706. FEDERAL RESERVED WATER RIGHTS.**

- (a) Except as otherwise provided in section 204 of this Act, with respect to each wilderness area designated by this Act, Congress hereby reserves a quantity of water sufficient to fulfill the purposes of this Act. The priority date of such reserved water rights shall be the date of enactment of this Act.
- (b) The Secretary and all other officers of the United States shall take all steps necessary to protect the rights reserved by this section, including the filing by the Secretary of a claim for the quantification of such rights in any present or future appropriate stream adjudication in the courts of the State of California in which the United States is or may be joined in accordance with section 208 of the Act of July 10, 1952 (66 Stat. 560, 43 U.S.C. 666), commonly referred to as the McCarran Amendment.
- (c) Nothing in this Act shall be construed as a relinquishment or reduction of any water rights reserved or appropriated by the United States in the State of California on or before the date of enactment of this Act.
- (d) The Federal water rights reserved by this Act are specific to the wilderness area located in the State of California designated under this Act. Nothing in this Act related to the reserved Federal water rights shall be construed as establishing a precedent with regard to any future designations, nor shall it constitute an interpretation of any other Act or any designation made thereto.

**1.1.20 SEC. 707. CALIFORNIA STATE SCHOOL LANDS.**

- (a) NEGOTIATIONS TO EXCHANGE- Upon request of the California State Lands Commission (hereinafter in this section referred to as the `Commission'), the Secretary shall enter into negotiations for an agreement to exchange Federal lands or interests therein on the list referred to in subsection (b)(2) for California State School lands or interests therein which are located within the boundaries of one or more of the wilderness areas or park system units designated by this Act (hereinafter in this section referred to as `State School lands.'). The Secretary shall negotiate in good faith to reach a land exchange agreement consistent with the requirements of section 206 of the Federal Land Policy and Management Act of 1976.
- (b) PREPARATION OF LIST- Within six months after the date of enactment of this Act, the Secretary shall send to the Commission and to the Committee on Energy and Natural Resources of the United States Senate and the Committee on Natural Resources of the United States House of Representatives a list of the following:
  - (1) State School lands or interests therein (including mineral interests) which are located within the boundaries of the wilderness areas or park system units designated by this Act.
  - (2) Lands within the State of California under the jurisdiction of the Secretary that the Secretary determines to be suitable for disposal for exchange, identified in the following priority--
    - (A) lands with mineral interests, including geothermal, which have the potential for commercial development but which are not currently under mineral lease or producing Federal mineral revenues;
    - (B) Federal claims in California managed by the Bureau of Reclamation that the Secretary determines are not needed for any Bureau of Reclamation project; and
    - (C) any public lands in California that the Secretary, pursuant to the Federal Land Policy and Management Act of 1976, has determined to be suitable for disposal through exchange.
  - (3) Any other Federal land, or interest therein, within the State of California, which is or becomes surplus to the needs of the Federal Government. The Secretary may exclude, in the Secretary's discretion, lands located within, or contiguous to, the exterior boundaries of lands held in trust for a federally recognized Indian tribe located in the State of California.
  - (4) The Secretary shall maintain such list and shall annually transmit such list to the Committee on Energy and Natural Resources of the United States Senate and the

Committee on Natural Resources of the United States House of Representatives until all of the State School lands identified in paragraph (1) have been acquired.

(c) DISPOSAL OF SURPLUS FEDERAL PROPERTY- (1) Effective upon the date of enactment of this title and until all State School lands identified in paragraph (b)(1) of this section are acquired, no Federal lands or interests therein within the State of California may be disposed of from Federal ownership unless--

(A) the Secretary is notified of the availability of such lands or interest therein;

(B) the Secretary has notified the Commission of the availability of such lands or interests therein for exchange; and

(C) the Commission has not notified the Secretary within six months that it wishes to consider entering into an exchange for such lands or interests therein.

(2) If the Commission notifies the Secretary that it wishes to consider an exchange for such lands or interests therein, the Secretary shall attempt to conclude such exchange in accordance with the provisions of this section as quickly as possible.

(3) If an agreement is reached and executed with the Commission, then upon notice to the head of the agency having administrative jurisdiction over such lands or interests therein, the Secretary shall be vested with administrative jurisdiction over such land or interests therein for the purpose of concluding such exchange.

(4) Upon the acquisition of all State School lands or upon notice by the Commission to the Secretary that it no longer has an interest in such lands or interests therein, such lands or interests shall be released to the agency that originally had jurisdiction over such lands or interests for disposal in accordance with the laws otherwise applicable to such lands or interests.

(d) NO EFFECT ON MILITARY BASE CLOSURES- The provisions of this section shall not apply to the disposal of property under title II of the Defense Authorization Amendments and Base Closure and Realignment Act (Public Law 100-526; 102 Stat. 2627; 10 U.S.C. 2687 note) or the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510; 104 Stat. 1808; 10 U.S.C. 2687 note).

#### **1.1.21 SEC. 708. ACCESS TO PRIVATE PROPERTY.**

The Secretary shall provide adequate access to nonfederally owned land or interests in land within the boundaries of the conservation units and wilderness areas designated by this Act which will provide the owner of such land or interest the reasonable use and enjoyment thereof.

#### **1.1.22 SEC. 709. FEDERAL FACILITIES FEE EQUITY.**

(a) POLICY STATEMENT- It is the intent of Congress that entrance, tourism or recreational use fees for use of Federal lands and facilities not discriminate against any State or any region of the country.

(b) FEE STUDY- The Secretary, in cooperation with other affected agencies, shall prepare and submit a report by May 1, 1996 to the Committee on Energy and Natural Resources of the United States Senate, the Committee on Natural Resources of the United States House of Representatives, and any other relevant committees, which shall--

(1) identify all Federal lands and facilities that provide recreational or tourism use; and

(2) analyze by State and region any fees charged for entrance, recreational or tourism use, if any, on Federal lands or facilities in a State or region, individually and collectively.

(c) RECOMMENDATIONS- Following completion of the report in subsection (b), the Secretary, in cooperation with other affected agencies, shall prepare and submit a report by May 1, 1997 to the Committee on Energy and Natural Resources of the United States Senate, the Committee on Natural Resources of the United States House of Representatives, and any other relevant committees, which shall contain recommendations which the Secretary deems appropriate for implementing the congressional intent outlined in subsection (a).

**1.1.23 SEC. 710. LAND APPRAISAL.**

Lands and interests in lands acquired pursuant to this Act shall be appraised without regard to the presence of a species listed as threatened or endangered pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.).

**1.1.24 SEC. 711. DEFINITION.**

Any reference to the term 'this Act' in titles I through IX shall be deemed to be solely a reference to sections 1 and 2, and titles I through IX.

**1.1.24.1 TITLE VIII--MILITARY LANDS AND OVERFLIGHTS**

**1.1.25 SEC. 801. SHORT TITLE AND FINDINGS.**

(a) SHORT TITLE- This title may be cited as the 'California Military Lands Withdrawal and Overflights Act of 1994'.

(b) FINDINGS- The Congress finds that--

- (1) military aircraft testing and training activities as well as demilitarization activities in California are an important part of the national defense system of the United States, and are essential in order to secure for the American people of this and future generations an enduring and viable national defense system;
- (2) the National Park System units and wilderness areas designated by this Act lie within a region critical to providing training, research, and development for the Armed Forces of the United States and its allies;
- (3) there is a lack of alternative sites available for these military training, testing, and research activities;
- (4) continued use of the lands and airspace in the California desert region is essential for military purposes; and
- (5) continuation of these military activities, under appropriate terms and conditions, is not incompatible with the protection and proper management of the natural, environmental, cultural, and other resources and values of the Federal lands in the California desert area.

**1.1.26 SEC. 802. MILITARY OVERFLIGHTS.**

(a) OVERFLIGHTS- Nothing in this Act, the Wilderness Act, or other land management laws generally applicable to the new units of the National Park or Wilderness Preservation Systems (or any additions to existing units) designated by this Act, shall restrict or preclude low-level overflights of military aircraft over such units, including military overflights that can be seen or heard within such units.

(b) SPECIAL AIRSPACE- Nothing in this Act, the Wilderness Act, or other land management laws generally applicable to the new units of the National Park or Wilderness Preservation Systems (or any additions to existing units) designated by this Act, shall restrict or preclude the designation of new units of special airspace or the use or establishment of military flight training routes over such new park system or wilderness units.

(c) NO EFFECT ON OTHER LAWS- Nothing in this section shall be construed to modify, expand, or diminish any authority under other Federal law.

**1.1.27 SEC. 803. WITHDRAWALS.**

(a) CHINA LAKE- (1) Subject to valid existing rights and except as otherwise provided in this title, the Federal lands referred to in paragraph (2), and all other areas within the boundary of such lands as depicted on the map specified in such paragraph which may become subject to the operation of the public land laws, are hereby withdrawn from all forms of appropriation under the public land laws (including the mining laws and the mineral leasing laws).



**1.1.27.1 TITLE IX--AUTHORIZATION OF APPROPRIATIONS**

**1.1.28 SEC. 901. AUTHORIZATION OF APPROPRIATIONS.**

There is authorized to be appropriated to the National Park Service and to the Bureau of Land Management to carry out this Act an amount not to exceed \$36,000,000 over and above that provided in fiscal year 1994 for additional administrative and construction costs over the fiscal year 1995-1999 period, and \$300,000,000 for all land acquisition costs. No funds in excess of these amounts may be used for construction, administration, or land acquisition authorized under this Act without a specific authorization in an Act of Congress enacted after the date of enactment of this Act.



## APPENDIX B: PUBLIC COMMENTS

### INTRODUCTION

There have been three specific periods of public engagement during the planning process prior to release of the completed Death Valley National Park Wilderness and Backcountry Stewardship Plan in 2012. For each public comment period, the NPS issues a press release, announced the opportunity to comment via Twitter, and collected written comments via email, hard copy mail, and online through the NPS Planning, Environment, and Public Comment website. In addition, NPS staff members have participated as requested with the various organizations interested in Death Valley's wilderness and backcountry lands, including providing in-depth "interviews" for newsletters and publications, participating in Q&A sessions in person at meetings, and meeting with organizational leadership. The public comment periods were:

- Initial public scoping for a plan focused strictly on designated wilderness (specifically excluding all non-wilderness backcountry roads and lands) was opened from March 26 to June 30, 2009. A total of 18 pieces of correspondence, consisting of 59 individual comments were received during this period. The primary concern expressed was that the scope of the plan was too narrow and should be expanded to include backcountry lands and dirt roads. These comments were taken into consideration by the Park Superintendent and a decision was made to expand the scope of the project to include both wilderness and backcountry stewardship.
- A second public scoping for a plan that includes designated wilderness as well as backcountry lands and unpaved roads was opened from September 4 to November 15, 2009. A total of 97 pieces of correspondence, consisting of 407 individual comments were received during this period. These comments were used in developing the draft conceptual alternatives.
- Draft conceptual alternatives were shared with the public via a newsletter in order to solicit feedback on the range of alternatives, each alternative as a whole package, and the degree of support or opposition to the individual elements within the alternatives. The public comment period was April 1 to May 1, 2011. A total of 52 pieces of correspondence, consisting of 196 individual comments were received during this period. These comments were used in developing the alternatives presented in the Wilderness and Backcountry Stewardship Plan.

The content analysis report for each of these three public comment periods are included sequentially below. These reports were generated by the NPS Planning, Environment, and Public Comment website specific to each comment period, including a summary of the geographic and organizational demographics of commenters, and frequency with which each comment was voiced. In addition, a few comments were received nearly a year after the end of the last scoping period. These are documented in summarized narrative form at the end of this appendix.

Following publication of this document, there will be another public review and comment period for the completed plan. It is anticipated that public review period will occur in late 2012. The summary of those comments will be included in the decision document at the conclusion of the planning process.

The NPS Planning, Environment, and Public Comment website is <http://parkplanning.nps.gov>. The project identification number for the Death Valley National Park Wilderness and Backcountry Stewardship Plan is 23311. After the project is complete the public review documents and supporting links will be available as an archived project in the system in the Death Valley National Park page.

**Content Analysis Report for Initial Public Scoping (March 26 – June 30, 2009)****Document ID:** 26515**Document Title:** Request for Public Input**Comment Distribution by Status**

Status	Number of Comments
Coded	59__
<b>Total</b>	<b>59__</b>

**Correspondence Distribution by State**

State	Percentage	Number of Correspondence
CA	77.8 %__	14__
AZ	5.6 %__	1__
NV	5.6 %__	1__
unknown	5.6 %__	1__
NM	5.6 %__	1__
<b>Total</b>	—	<b>18__</b>

**Correspondence Distribution by Country**

Country	Percentage	Number of Correspondence
USA	94.4 %__	17__
Unspecified	5.6 %__	1__
<b>Total</b>	—	<b>18__</b>

**Correspondence Signature Count by Organization Type**

Organization Type	Correspondences	Signatures
Conservation/Preservation	1__	1__
NPS Employee	4__	4__
Unaffiliated Individual	13__	13__
<b>Total</b>	<b>18__</b>	<b>18__</b>

**Comment Distribution by Code**

**(Note: Each comment may have multiple codes. As a result, the total number of comments may be different than the actual comment totals)**

Code	Description	Signatures	Comments
VN110	Value wilderness character (untrammled, undeveloped, natural, and solitude)	8	8
IP110	Identify and actively manage or remove installations in wilderness	4	4
IV120	Road Access: Keep open roads open	4	4
IV130	Road Access: do not increase number, maintenance, or use of backcountry roads	3	3
IV190	Provide road access for disabled visitors	3	3
MT1200	Concern or recommendation regarding a facility or issue outside the scope of this plan.	3	3

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TN110	Off road vehicle use damages desert environment	3	3
VN100	VALUES - Value the natural resources or setting (flora, fauna, views, natural quiet, undev. areas)	3	3
VV100	VALUES - Value the visitor opportunities (activities, programs, recreation)	3	3
VV190	value intangible emotional benefits	3	3
IN110	Increase water availability for wildlife	2	2
IV110	Road Access: Re-open closed roads	2	2
IV140	Road Access: non-specific	2	2
IV180	Provide designated campsites/campground in high use areas	2	2
IV185	Increase ranger presence to protect resources and/or provide visitor services	2	2
MT1001	Testing PEPC system	2	2
PN3100	Scope of analysis is too limited and needs to include adjacent backcountry road corridors.	2	2
TN120	Modern noise (roads, aircraft)negatively impacts natural resources	2	2
TV120	aircraft overflights detract from wilderness experience and solitude	2	2
TV150	debris left from recent land use (mining, etc) detracts from the wilderness experience	2	2
VN120	Value silence and/or natural soundscapes	2	2
VN130	Value broad vistas and viewsheds	2	2
VN140	Value opportunities to see wildlife and indicators of their presence	2	2
VN150	Value geologic resources	2	2
IN111	Water source management is an issue	1	1
IN120	Non-native species (plants and/or animals) are an issue that should be addressed	1	1
IN130	Wildland fire management is an issue that should be addressed	1	1
IN140	Grazing management is an issue	1	1
IP100	ISSUES - Park management issues	1	1
IP120	wilderness designation reduces economic opportunities (e.g mining, timber, grazing)	1	1
IP130	Removal of downed aircraft is an issue	1	1
IP140	visitor safety is an issue	1	1
IP150	Provide online permits with visitor use regs and education	1	1
IP160	Inholder access is an issue	1	1
IP170	Commercial filming is an issue	1	1
IV100	ISSUES - Visitor use or experience issues	1	1
IV150	Keep/maintain existing trails	1	1
IV151	Trail markers are an issue	1	1
IV155	Accommodate Canyoneering	1	1
IV160	Improve cell coverage to provide for visitor safety	1	1
IV170	Improve visitor information	1	1
MT1100	Add to mailing list	1	1
TV110	Unauthorized vehicles in wilderness detract from wilderness experience	1	1

TV130	Unsanitary conditions or improper disposal of human waste impacts park resources and/or visitor experience	1	1
VH100	VALUES - Value the history or cultural resources	1	1
VH110	Value historic mining sites/remains	1	1
VN160	Value restoration of previously disturbed areas	1	1
VV110	Value opportunities to hike and backpack	1	1
VV120	Value opportunity for driving on backcountry roads	1	1
VV180	Value opportunity to learn about or become advocates for wilderness and wildlands	1	1

#### Correspondence Distribution by Correspondence Type

Type	Number of Correspondences
Web Form	12_
E-mail	5_
Letter	1_
<b>Total</b>	<b>18_</b>

**Content Analysis Report for Re-initiated Public Scoping (September 4 – November 15, 2009)****Document ID:** 29400**Document Title:** Death Valley National Park Invites Public Input on Wilderness & Backcountry Stewardship Plan**Comment Distribution by Status**

Status	Number of Comments
Coded	393__
In Process	2__
New	12__
<b>Total</b>	<b>407__</b>

**Correspondence Distribution by State**

State	Percentage	Number of Correspondence
CA	73.2 %__	71__
NV	7.2 %__	7__
AZ	3.1 %__	3__
unknown	3.1 %__	3__
OR	3.1 %__	3__
NM	2.1 %__	2__
LA	1.0 %__	1__
TX	1.0 %__	1__
FL	1.0 %__	1__
DC	1.0 %__	1__
IL	1.0 %__	1__
UT	1.0 %__	1__
OH	1.0 %__	1__
WA	1.0 %__	1__
<b>Total</b>	<b>—</b>	<b>97__</b>

**Correspondence Distribution by Country**

Country	Percentage	Number of Correspondence
USA	100.0 %__	97__
<b>Total</b>	<b>—</b>	<b>97__</b>

**Correspondence Signature Count by Organization Type**

Organization Type	Correspondences	Signatures
Conservation/Preservation	5__	5__
Unaffiliated Individual	92__	92__
<b>Total</b>	<b>97__</b>	<b>97__</b>

**Comment Distribution by Code**

**(Note: Each comment may have multiple codes. As a result, the total number of comments may be different than the actual comment totals)**

<b>Code</b>	<b>Description</b>	<b>Signatures</b>	<b>Comments</b>
IV120	Road Access: Keep open roads open	90	90
VV125	Value roads as access to wilderness	41	41
VN110	Value wilderness character (untrammelled, undeveloped, natural, and solitude)	35	35
VV120	Value opportunity for driving on backcountry roads	32	32
IV140	Road Access: non-specific	26	26
VH100	VALUES - Value the history or cultural resources	21	21
IV130	Road Access: do not increase number, maintenance, or use of backcountry roads	18	18
IP121	Wilderness designation reduces access	17	17
IV190	Provide road access for disabled visitors	15	15
VN100	VALUES - Value the natural resources or setting (flora, fauna, views, natural quiet, undev. areas)	15	15
IV110	Road Access: Re-open closed roads	13	13
VN150	Value geologic resources	12	12
VV100	VALUES - Value the visitor opportunities (activities, programs, recreation)	12	12
VV190	value intangible emotional benefits	11	11
VH110	Value historic mining sites/remains	10	10
VV150	Sense of adventure, exploration and/or challenge	10	10
IP105	Balance visitor use and resource protection.	9	9
IV131	Road Access: Improve backcountry road conditions	9	9
IP110	Identify and actively manage or remove installations in wilderness	8	8
VN120	Value silence and/or natural soundscapes	8	8
IP102	Application of wilderness values to non-wilderness lands	7	7
IV142	Improve road signs, wayfinding and maps	7	7
IV188	Enforce regulations	7	7
MT1200	Concern or recommendation regarding a facility or issue outside the scope of this plan.	7	7
IP101	Management policies are too restrictive	6	6
IV125	Road Access: Close certain backcountry roads	6	6
VV110	Value opportunities to hike and backpack	6	6
IP107	Support current management practices and/or policies.	5	5
IP180	Wilderness zoning and/or buffers are an issue	5	5
IP190	Profiteering by private individuals/ businesses from public lands	5	5
IV132	Manage roads as they were historically intended	5	5
IV161	Visitor initiated trail/road/cabin stewardship through volunteer program	5	5
IV165	Provide for visitor education (eg. Leave No Trace, Tread Lightly).	5	5
VN115	Value the uniqueness of Death Valley National Park	5	5
VN125	Value dark night sky	5	5
VN130	Value broad vistas and viewsheds	5	5
VN140	Value opportunities to see wildlife and indicators of their presence	5	5
IC125	Maintain cultural and historic resources.	4	4



IC130	Keep historic and cultural sites open	4	4
IN109	Manage backcountry for wildlife	4	4
IN115	Protect sensitive species and/or habitats (e.g. riparian)	4	4
IP111	Do not allow new installations in wilderness	4	4
IP112	Protect park from new development/over development	4	4
IV145	At existing levels of use, backcountry road driving and hiking/backpacking can both be accommodated	4	4
IV146	Loss of road access diminishes visitor access to wilderness	4	4
IV175	Manage visitor use through permit system	4	4
IV186	Closely monitor impacts to wilderness	4	4
CC1400	Include state and local governments in planning process	3	3
IP104	Wilderness Designation: General Comments	3	3
IV100	ISSUES - Visitor use or experience issues	3	3
IV141	clearly mark closed roads as closed	3	3
IV181	Access to backcountry roads/sites diminished for many due to the abuses of a few	3	3
IV185	Increase ranger presence to protect resources and/or provide visitor services	3	3
IV191	Provide access/basecamps for disabled and elderly visitors	3	3
MT1000	Miscellaneous Topics: General Comments	3	3
TV140	Protect wilderness values from adjacent non-wilderness uses	3	3
VN165	Value protection and preservation	3	3
VV170	Value opportunity to engage in resource stewardship (road maintenance, cabin maintenance, etc.)	3	3
VV180	Value opportunity to learn about or become advocates for wilderness and wildlands	3	3
IC110	Inventory old mining sites and provide for the protection of significant features.	2	2
IC115	Inventory abandoned mines and install safety features	2	2
IN112	Protect dark night skies	2	2
IN120	Non-native species (plants and/or animals) are an issue that should be addressed	2	2
IP140	visitor safety is an issue	2	2
IP152	Do not require permits	2	2
IV133	Provide road/trail access to foster public support	2	2
IV152	Improve or increase established trails	2	2
IV170	Improve visitor information	2	2
IV179	Provide for roadside camping via pullouts	2	2
IV182	Backcountry camping rules are a concern	2	2
IV184	Restore and staff backcountry ranger stations	2	2
PN3000	Purpose And Need: Scope Of The Analysis	2	2
TN120	Modern noise (roads, aircraft)negatively impacts natural resources	2	2
TV100	THREATS - Threats to visitor use or experience	2	2
VV115	Value opportunities to pursue photography	2	2
VV130	Value access to areas of scientific interest	2	2

CC1100	Formally include recreation interests in the planning process (e.g. citizens advisory group)	1	1
CC1200	Proactively engage the public in the planning process (includes media relations, meetings, etc.)	1	1
CC1300	Include Indian tribes/Timbisha in planning process and/or management	1	1
CC1500	Proactively engage the scientific community in the planning process	1	1
IC100	ISSUES - Cultural resource issues	1	1
IN100	ISSUES - Natural resource issues	1	1
IN110	Increase water availability for wildlife	1	1
IN140	Grazing management is an issue	1	1
IP100	ISSUES - Park management issues	1	1
IP103	Do not expand wilderness	1	1
IP115	Manage air tours and/or coordinate with Air Tour Management Plan	1	1
IP120	wilderness designation reduces economic opportunities (e.g. mining, timber, grazing)	1	1
IP125	Do not authorize motorized equipment and vehicles in wilderness	1	1
IP130	Removal of downed aircraft is an issue	1	1
IP135	Debris and/or trash is a concern	1	1
IP136	Improper disposal of human waste/lack of toilet facilities is an issue	1	1
IP151	Provide for visitor use permits to manage overuse of popular destinations	1	1
IP191	Visitor use benefits local economic and political interests	1	1
IP195	Do not allow horses in wilderness	1	1
IV134	ORV trespass/use is not an issue at Death Valley	1	1
IV143	Parking in backcountry	1	1
IV150	Keep/maintain existing trails	1	1
IV151	Trail markers are an issue	1	1
IV153	Improve trail for bicycle use	1	1
IV166	Do not provide visitor education site in wilderness	1	1
IV178	Allow people to pull off road for roadside camping	1	1
IV183	Do not allow campfires	1	1
IV187	minimize NPS presence in the backcountry and/or wilderness	1	1
IV189	Provide for wild plant gathering for personal consumption	1	1
PN3105	Concern: Scope includes backcountry	1	1
TN130	modern, ongoing, and/or future mining activities threaten park resources and/or visitor experience	1	1
TV120	aircraft overflights detract from wilderness experience and solitude	1	1
VN160	Value restoration of previously disturbed areas	1	1

## Correspondence Distribution by Correspondence Type

Type	Number of Correspondences
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Appendix B: Public Comments

Web Form	91_
E-mail	4_
Letter	2_
<b>Total</b>	<b>97_</b>

**Content Analysis Report for Conceptual Alternatives (April 1 – May 1, 2011)****Document ID:** 40010**Document Title:** Conceptual Alternatives Newsletter**Comment Distribution by Status**

Status	Number of Comments
Coded	196__
<b>Total</b>	<b>196__</b>

**Correspondence Distribution by State**

State	Percentage	Number of Correspondence
CA	44.2 %__	23__
OR	15.4 %__	8__
UN	15.4 %__	8__
NV	7.7 %__	4__
MA	5.8 %__	3__
AZ	3.8 %__	2__
TX	1.9 %__	1__
ID	1.9 %__	1__
AR	1.9 %__	1__
WI	1.9 %__	1__
<b>Total</b>	—	<b>52__</b>

**Correspondence Distribution by Country**

Country	Percentage	Number of Correspondence
USA	100.0 %__	52__
<b>Total</b>	—	<b>52__</b>

**Correspondence Signature Count by Organization Type**

Organization Type	Correspondences	Signatures
County Government	1__	1__
Town or City Government	1__	1__
Unaffiliated Individual	50__	58__
<b>Total</b>	<b>52__</b>	<b>60__</b>

**Comment Distribution by Code**

**(Note: Each comment may have multiple codes. As a result, the total number of comments may be different than the actual comment totals)**

Code	Description	Signatures	Comments
AL110	Prefer or support conceptual draft alternative #2: minor changes	24	20
AL100	Prefer or support conceptual draft alternative #1: No Action	23	19
AL160	Oppose visitor use restrictions	14	14
AL168	Support availability of dispersed roadside camping opportunities	14	14

Appendix B: Public Comments

IV120	Road Access: Keep open roads open	12	12
AL150	Oppose new infrastructure or facilities in any alternative	11	11
IV110	Road Access: Re-open closed roads	14	10
AL151	Oppose new backcountry signs (wayfinding, regulatory, interp)	9	9
AL173	Oppose mandatory permit system	9	9
AL121	Oppose conceptual draft alternative #3: major changes	8	8
AL182	Support primitive toilet installations in specific areas (vault, composting, solar, etc)	8	8
AL131	Oppose conceptual draft alternative #4: moderate changes	7	7
AL156	Support maintenance of cabins for visitor use	10	6
AL161	Support primitive backcountry campgrounds	6	6
AL172	Support user permit system (online, onsite, etc)	6	6
VN110	Value wilderness character (untrammelled, undeveloped, natural, and solitude)	6	6
VV150	Sense of adventure, exploration and/or challenge	6	6
AL130	Prefer or support conceptual draft alternative #4: moderate changes	5	5
AL197	Support cabin stewardship activities as part of visitor experience.	9	5
PN3000	Purpose And Need: Scope Of The Analysis	5	5
VV120	Value opportunity for driving on backcountry roads	9	5
AL165	Support designated roadside camping corridors	4	4
AL167	Support speed restrictions on dirt roads.	4	4
AL177	Oppose trailheads and/or designated trails	4	4
AL190	Support increased visitor education	4	4
IV130	Road Access: do not increase number, maintenance, or use of backcountry roads	4	4
MT1200	Concern or recommendation regarding a facility or issue outside the scope of this plan.	4	4
AL111	Oppose conceptual draft alternative #2: Minor changes	3	3
AL153	Support new backcountry signs (wayfinding, regulatory, interp)	3	3
AL158	Oppose limits on group size	3	3
AL163	Allow campfires in backcountry/wilderness campsites	3	3
AL166	Oppose designated roadside camping corridors	3	3
AL171	Oppose user fees	3	3
AL175	Oppose alternative due to cost to implement.	3	3
AL176	Campfires should only be allowed in fire rings where provided	3	3
AL180	Support human waste disposal strategies	3	3
AL192	Support restoration of wilderness by removal of non-historic debris/trash	3	3
AL194	Support establishment of a written road maintenance strategy	3	3
AL196	Support road stewardship activities as part of visitor experience.	3	3
AL198	Oppose commercial activities	3	3
IV165	Provide for visitor education (eg. Leave No Trace, Tread Lightly).	3	3
VN115	Value the uniqueness of Death Valley National Park	3	3
VV110	Value opportunities to hike and backpack	7	3

Appendix B: Public Comments

VV125	Value roads as access to wilderness	3	3
AL157	Support limits on group size	2	2
AL162	Oppose primitive backcountry campgrounds	2	2
AL169	Oppose group camps	2	2
AL174	Oppose fee for backcountry camping	2	2
AL178	Support trailheads and/or designated trails	2	2
AL185	Oppose "pack out" human waste mgmt strategy at specific high use locations.	2	2
AL187	Oppose fuelwood gathering	2	2
IP105	Balance visitor use and resource protection.	2	2
IP151	Provide for visitor use permits to manage overuse of popular destinations	2	2
IV170	Improve visitor information	2	2
MT1000	Miscellaneous Topics: General Comments	2	2
TV111	Excessive vehicles and/or roads threaten wilderness resources and/or visitor experience	2	2
VH100	VALUES - Value the history or cultural resources	2	2
VN150	Value geologic resources	2	2
VN165	Value protection and preservation	2	2
VV115	Value opportunities to pursue photography	6	2
AL120	Prefer or support conceptual draft alternative #3: major changes	5	1
AL154	Oppose signs in wilderness (specifically)	1	1
AL155	Support cabin management strategy at Warm Springs/Butte Valley.	1	1
AL164	Allow campfires in fire pans in backcountry/wilderness campsites.	1	1
AL170	Allow fuelwood gathering	1	1
AL179	Provide for maintenance and access for paved highways as required.	1	1
AL184	Support "pack out" waste disposal strategy at specific high use areas.	1	1
AL186	Support emergency access/response	1	1
AL188	Support stock use in wilderness	1	1
AL193	Need more analysis and/or data	1	1
AL199	Support/expand commercial opportunities (including communication towers)	1	1
CC1100	Formally include recreation interests in the planning process (e.g. citizens advisory group)	1	1
IN109	Manage backcountry for wildlife	1	1
IP102	Application of wilderness values to non-wilderness lands	1	1
IP106	Revisit decisions made in plan at regular intervals	1	1
IP180	Wilderness zoning and/or buffers are an issue	1	1
IV125	Road Access: Close certain backcountry roads	1	1
IV133	Provide road/trail access to foster public support	1	1
IV146	Loss of road access diminishes visitor access to wilderness	1	1
IV150	Keep/maintain existing trails	1	1

IV153	Improve trail for bicycle use	1	1
IV185	Increase ranger presence to protect resources and/or provide visitor services	1	1
IV187	minimize NPS presence in the backcountry and/or wilderness	1	1
IV188	Enforce regulations	1	1
MT1100	Add to mailing list	1	1
PN3105	Concern: Scope includes backcountry	1	1
TN120	Modern noise (roads, aircraft)negatively impacts natural resources	1	1
TN140	Feral animals threaten park resources	1	1
TV110	Unauthorized vehicles in wilderness detract from wilderness experience	1	1
TV120	aircraft overflights detract from wilderness experience and solitude	1	1
TV130	Unsanitary conditions or improper disposal of human waste impacts park resources and/or visitor experience	1	1
VN100	VALUES - Value the natural resources or setting (flora, fauna, views, natural quiet, undev. areas)	1	1
VN120	Value silence and/or natural soundscapes	1	1
VN130	Value broad vistas and viewsheds	1	1
VN140	Value opportunities to see wildlife and indicators of their presence	1	1
VV130	Value access to areas of scientific interest	1	1
VV170	Value opportunity to engage in resource stewardship (road maintenance, cabin maintenance, etc.)	1	1

#### Correspondence Distribution by Correspondence Type

Type	Number of Correspondences
Web Form	32__
E-mail	16__
Letter	4__
<b>Total</b>	<b>52__</b>

Two written comments regarding the development of the Wilderness and Backcountry Stewardship Plan were received by the park nearly a year after the published deadline for the final scoping period. Both of these comments were from individuals who operate commercial guiding operations in Death Valley's backcountry and wilderness areas. One of those commenting on 6/6/12 expressed an interest in leading commercial canyoneering trips in wilderness, and asked that the plan consider this commercial use. In addition, the commenter expressed concern about the potential increase of fixed anchors in wilderness areas. The other commenter, who wrote the park on 6/21/12, had concerns with group size and camping areas. This commenter felt that a reduction in group size from current levels could affect his company's business model, although he understood that there were other reasons for potentially reducing group size. In addition, this commenter hoped that he could work with park staff to help identify some campsites along Hole in the Wall Road should that area be designated a roadside camping corridor.





## **APPENDIX C: VISITOR USE STUDY FOR DEATH VALLEY NATIONAL PARK**

### **BACKGROUND**

In support of the wilderness planning effort at Death Valley National Park, the National Park Service entered into an agreement with University of Idaho, Park Studies Unit to conduct a visitor use study focused on backcountry and wilderness users. The work was conducted in 2009 and 2010 using standard methodologies established by the National Park Service's Social Science Program. The full report and an appendix with visitor comments is available online at [www.wilderness.net](http://www.wilderness.net), at "find a wilderness" > "Death Valley Wilderness" > "links"

The citation for the full report is:

Holmes, N. C., A. Blotkamp, D. Eury, and S. J. Hollenhorst. 2010. Death Valley National Park wilderness/backcountry users visitor study: spring 2010 and fall 2009. Natural Resource Report NPS/NRPC/SSD/NRR—2010/143/105771. National Park Service, Fort Collins, Colorado.

### **EXECUTIVE SUMMARY**

This report describes the results of two visitor studies at Death Valley National Park (NP) during March 18-24, 2010 and November 22 - December 8, 2009. During the spring survey, a total of 371 questionnaires were distributed to visitor groups. Of those, 304 questionnaires were returned resulting in an 81.9% response rate. During the fall survey a total of 360 questionnaires were distributed to visitor groups. Of those, 271 questionnaires were returned resulting in a 75.2% response rate.

This report profiles a systematic random sample of Death Valley NP wilderness/ backcountry users during two survey periods. Most results are presented in graphs and frequency tables. Summaries of visitor comments are included in the report and complete comments are included in the Visitor Comments Appendix.

Key findings are summarized as follows:

- Forty-eight percent (48%) of spring visitor groups and 46% of fall visitor groups consisted of two people. Forty-four percent (44%) of spring visitor groups and 51% of fall visitor groups were in family groups.
- Forty-nine percent (49%) of spring visitors and 39% of fall visitors were in the 46 to 65 year age group while 29% of spring visitors and 32% of fall visitors were in the 21 to 40 year age group.
- For 44% of spring visitors and 45% of fall visitors, this was their first visit to Death Valley NP, while 17% of spring visitors and 18% of fall visitors had visited seven or more times.
- United States visitors during the spring survey were from 37 states and Washington, D.C. In the fall survey, U.S. visitors were from 34 states. The highest proportion of visitors was from California (53% spring, 62% fall). International visitors during the spring survey were from eight countries and comprised 5% of spring visitation, with the highest proportion (44%) from Canada. Similarly, during

the fall survey, international visitors were from ten countries and comprised 5% of fall visitation, also with a majority from Canada (43%).

- Ninety-one percent (91%) of spring visitor groups and 95% of fall visitor groups stayed overnight away from home within Death Valley NP and/or in the surrounding area. The most common type of lodging used inside the park was tent camping in developed campgrounds (38% spring, 38% fall). The most common types of lodging used outside the park were lodges, hotels, cabins, vacation rentals, B&B, etc. (57% spring, 64% fall).
- Of the visitor groups that spent more than 24 hours visiting the park, 28% of spring visitor groups and 27% of fall visitor groups spent three days. The average length of stay in the park was 4.3 days for spring visitor groups and 4.2 days for fall visitor groups.
- Most visitor groups (94% spring, 94% fall) obtained information about Death Valley NP prior to their visit. A majority of visitor groups (69% spring, 72% fall) used the park website to obtain their information.
- The most common activities in the park were: “walking/hiking” (spring 89%, fall 87%); “driving on backcountry roads” (spring 86%, fall 85%); and “viewing scenic attractions” (spring 82%, fall 81%). The most important activities at the park were “walking/hiking” (34% spring, 37% fall), followed by “viewing scenic attractions” (15% spring, 19% fall).
- Eighty percent (80%) of spring visitor groups and 82% of fall visitor groups were aware of the protected wilderness areas in Death Valley NP. A majority of all visitor groups said they were aware of “Leave No Trace” principles (97% spring, 96% fall) and a majority also followed these principles (99% spring, 97% fall).
- Seventeen percent (17%) of spring visitor groups and 13% of fall visitor groups backpacked overnight in the park wilderness, and about half of these (49% spring, 51% fall) obtained voluntary backcountry camping permits.
- The most used visitor services and facilities included restrooms (81% spring, 80% fall) and backcountry roads passable to non-4x4 vehicles (77% spring, 73% fall).
- Regarding ratings of the importance and quality of visitor services and facilities, it is important to note that the number of visitor groups that responded to each question varies with each service/facility. The service/facility that received the highest combined proportions of “extremely important” and “very important” ratings was open camping (88% spring, 82% fall).
- The services/facilities that received the highest combined proportions of “very good” and “good” quality ratings by spring visitors was the Death Valley backcountry road map and assistance from park staff (88%). For fall groups, the highest quality rating was for the visitor center (89%).
- Most visitor groups (96% spring, 95% fall) rated the overall quality of services, facilities, and recreational opportunities at Death Valley NP as “very good” or “good.” Less than one percent of spring visitor groups, and no fall groups, rated the overall quality as “very poor” or “poor.”

## **APPENDIX D: GEOSPATIAL MODEL OF WILDERNESS CHARACTER AT DEATH VALLEY NATIONAL PARK**

### **INTRODUCTION**

In support of the wilderness planning effort at Death Valley National Park, the National Park Service entered into an agreement with Dr. Peter Landres of the Aldo Leopold Wilderness Research Institute to develop a geospatial model of wilderness character at Death Valley National Park. The model was developed in 2010-2011 by Dr. Landres and James Tricker (GIS Specialist at Aldo Leopold Wilderness Research Institute) with input from a project team composed of subject matter specialists from the park, the NPS, and the University of Leeds. The full report as well as a technical report is available online at [www.wilderness.net](http://www.wilderness.net) in the wilderness character toolbox. The online reports contain numerous colored maps to describe the inputs and outputs of the modeling process.

### **EXECUTIVE SUMMARY**

#### **Background**

The recent development of an interagency strategy to monitor wilderness character allows on the-ground managers and decision-makers to assess whether stewardship actions for an individual wilderness are fulfilling the mandate to “preserve wilderness character.” By using credible data that are consistently collected, one can assess how wilderness character changes over time and evaluate how stewardship actions affect trends in wilderness character. As most of these data depict spatial features in the wilderness, this study investigates whether a model can be developed to provide a spatially explicit understanding of these changes and trends over time.

#### **Work undertaken**

A GIS-based approach was developed to identify the state of wilderness character in Death Valley National Park. The four qualities of wilderness character (untrammelled, undeveloped, natural, and outstanding opportunities for solitude or primitive and unconfined recreation) as defined by Keeping it Wild (Landres et al. 2008) provided the framework for the analysis. A set of indicators and measures were identified by park staff to be used as the basis for developing the model and selecting data inputs. These data inputs were derived from a variety of spatial datasets and sub-models, and were entered into the model using a common relative scale. Each data input was “weighted” by park staff to reflect its importance in relation to other data inputs. The model was used to generate maps for each of the four qualities of wilderness character, which were added together to produce the wilderness character map for Death Valley National Park.

#### **Main findings**

The wilderness character map delineates the range in quality of wilderness character in the Death Valley National Park wilderness. A histogram of the map reveals that the majority of wilderness character is of high quality, with the top 10 percent areas to be found mostly in the northern section of the park. Using this map as a baseline of wilderness character quality, future reruns of the model with updated datasets will allow for identifying areas where wilderness character is changing over time. Furthermore, this map was used by park staff to evaluate, on a pixel-by-pixel basis, the spatial impacts of the different planning alternatives for the Death Valley National Park Wilderness and Backcountry Stewardship Plan.



## **APPENDIX E: WILDERNESS CHARACTER NARRATIVE**

### **OVERVIEW**

Death Valley is a landscape described by superlatives:

.... one of the most arid places on earth where parts of the park receive 5 cm of precipitation annually, and some years none at all

.... one of the hottest places on earth where a blistering and relentless desert sun, unfiltered by clouds or humidity, bakes a parched landscape and its inhabitants from May through September, forcing acts of avoidance and adaptation to ensure survival for the plants, animals, and humans who exist here

....the lowest elevation in North America at 282 feet below sea level, a position exaggerated by its immediate proximity to the high Panamint Mountains 15 miles to the west, which are largely snowbound for at least half the year having captured the last of the Pacific moisture and casting a rain shadow that defines a vast region of the Mojave and Great Basin Deserts

.... highly complex geology showcased in numerous desert mountain ranges interspersed with structural basins, both of which have historically been exploited for mineral wealth and now are protected for less consumptive purposes

.... extreme variation in surrounding lands, whereby the central portion of the park is within a few hours drive of the major metropolitan areas of Los Angeles and Las Vegas, while much of the south and southwestern border is bounded by military reservations, the eastern border by small mining towns, and the north and northwestern border by several wilderness areas managed by the BLM and Forest Service.

.... The largest unit of the National Park System outside of Alaska, encompassing 3.4 million acres

.... The largest designated and named wilderness area in the contiguous United States, encompassing 3.1 million acres of land, but carved up into 44 smaller wilderness units separated by a vast backcountry road network sprawling across the landscape for a combined 800 miles

The original protected area of Death Valley National Monument was designated by Presidential Proclamation on February 17, 1933. The 1994 California Desert Protection Act greatly enlarged the park to its present size and designed 91% of the park as wilderness. The park has taken its responsibility seriously for the preservation of the awesome wilderness resources encompassed in the Death Valley National Park Wilderness, and has also embraced its responsibility for the stewardship of the “sum of its parts”, that is, it’s wilderness character.

Wilderness character at Death Valley includes these universal and intrinsic qualities of wilderness character: naturalness, solitude or primitive and unconfined recreation, undeveloped, and untrammelled. 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 the this quality. There is 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 19<sup>th</sup> century and the first half of the 20<sup>th</sup> 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 untrammled, with few intentional manipulations of the parks 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 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**

*"Primarily Wilderness areas provide me with access to a world pretty much left untrammelled by humanity. There, I can see the natural unfolding of life, death, erosion, renewal, and feel closer to the great mystery of creation. It is the protection such places get from the extractive and consumptive nature of human activity that draws me there. They provide for me islands of originality, and their very presence makes me hopeful for the future. So much of the world is taken over for mankind, what is wild should wild remain."* Submitted by David "Malakai" McMullen during public scoping 2009.

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

Ecological values	Geological Values	Scientific Values	Educational Values	Scenic Values	Historical Values
extreme conditions and isolation provide habitat for an unusually high number of plant and animal species that are highly adapted to these conditions <sup>1</sup> (e.g. endemic species)	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 <sup>1</sup>	contains one of the nation's most diverse and significant fossil records and most continuous volcanic histories <sup>1</sup>	one of the largest expanses of protected warm desert in the world <sup>1</sup>	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 <sup>1</sup>	continuous home of Native Americans, from prehistoric cultures to the present day Timbisha Shoshone Tribe <sup>1</sup>
provides habitat for a number of threatened, endangered, and sensitive species	includes a continuous section of the Pleistocene shoreline of Lake Manly providing an excellent opportunity for quaternary studies	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 <sup>1</sup>	provides outstanding opportunities for solitude, challenge, and self-reliance including the opportunity to practice primitive skills and use primitive tools	includes some of the darkest night skies in the region, especially on the north end of the park	contains an unusually high number of well-preserved archeological sites, including rock art and alignments <sup>1</sup>
		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 earth <sup>1</sup>			includes an extensive and well-preserved mining history representing over 150 years of mining technology <sup>1</sup>

<sup>1</sup> taken from 2002 GMP

## APPENDIX F: VISITOR USE PERMIT SYSTEM IMPLEMENTATION STRATEGY

### 1. INTRODUCTION

A voluntary backcountry permit system was initiated in 1998 for overnight use by backpackers. Most of the permits have been issued from the Furnace Creek Visitor Center, but they have also been issued at the Stovepipe Wells Ranger Station and the Scotty's Castle Visitor Center. In the most recent five year period, 150 overnight backcountry permits have been issued each year, though the actual number of overnight backcountry groups is believed to be significantly higher.

The 2009-2010 Backcountry Visitor Use Study found that approximately 55% of backpackers were obtaining backcountry permits. The survey found that 80% of backpackers would be willing to support a free mandatory overnight permit system and 50% were willing to pay a fee to support a wilderness permit system. The survey also found that 55% of backpackers stated that their preferred method to obtain a permit was online.

Various alternatives in the Death Valley Wilderness and Backcountry Stewardship Plan, including the National Park Service's (NPS) preferred alternative, include the concept of a mandatory permit system for various types of backcountry and wilderness visitor use.

In particular, the preferred alternative outlines the following administrative actions regarding permits:

- **Overnight Visitor Use Permits:** Phase in a mandatory permit system for all overnight camping in dispersed wilderness, designated sites in Designated Roadside Camping Corridors (DRCCs), overnight camping in or immediately adjacent to cabins, and primitive campgrounds (including Eureka Dunes, Salt Wells, and Homestake Dry Camp). The permit application would include a proposed itinerary disclosure to aid in search and rescue as well as to inform visitor use statistics. Permit terms and conditions would apply. Permits would be issued through multiple venues, including via the internet and in person at visitor contact stations both inside and outside of the park. A fee system may be initiated for the use of primitive campgrounds and designated sites in DRCCs. The exact fee would be determined based on NPS Policy and comparability study. If fees are initiated for the primitive campgrounds mentioned above then they would also be required at the existing Emigrant, Wildrose, Thorndike, and Mahogany Flat campgrounds. Permits and fees for dispersed roadside camping would not be required, but could be instituted in the future if resource monitoring indicates deteriorating campsite conditions.
- **Day use permits** would be required for all private canyoneering trips due to the limited routes available, the increasing popularity of the sport, and the fact that generally only one party can complete a route in one day. Permits would allocate routes on a per day, per party basis. The permit system would be phased in and would include online access to permits. Permits may be free or for a nominal cost, depending on the requirements for the permit system selected. All permits would include terms and conditions to require clean and safe canyoneering practices, environmental sensitivity, and respect for other park visitors.
- **Administrative Camps:** Warm Springs Cabin and associated buildings would be re-purposed as an administrative camp with bunkhouses and kitchen facilities to host research groups, education groups, work crews, volunteers, artists in residence, and other administrative uses on a seasonal reservation system during spring and autumn, approximately 6 months per year. The three cabins in Butte Valley would be auxiliary administrative sites managed under the same reservation system but

would also be available for public use on a first-come, first-serve basis when there are no reservations.

- Campground Hosts: Volunteer campground hosts would be sought for primitive campgrounds during high use seasons. The highest priority for siting a host would be Eureka Dunes.

## **2. RELEVANT LAW, POLICIES, AND GUIDANCE**

### **2.1 The Wilderness Act**

Section 4(b) of the Wilderness Act of 1964 states that the NPS is “responsible for preserving the wilderness character of the area” it manages. Further, section 4(b) outlines the public purposes of wilderness to include “recreational, scenic, scientific, educational, conservation, and historical use.”

### **2.2 NPS Organic Act of 1916**

The Organic Act states that a particular park’s “purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

### **2.3 NPS Management Policies**

National Park Service Management Policies 2006 (Section 6.4.3) states that “recreational uses of wilderness will be of a type and nature that ensures that its use and enjoyment (1) will leave it unimpaired for future use and enjoyment as wilderness, (2) provides for the protection of the area as wilderness, and (3) provides for the protection of wilderness character.”

Regarding permits and establishing different times of use for different sites, NPS Management Policies 2006 (Section 8.2.2.1) states that “Superintendents will consider a wide range of techniques in managing recreational use to avoid adverse impacts on park resources and values or desired visitor experiences. Examples of appropriate techniques include visitor information and education programs, separation of conflicting uses by time or location, ‘hardening’ sites, modifying maintenance practices, and permit and reservation systems. Superintendents may also use their discretionary authority to impose local restrictions, public use limits, and... designate areas for a specific use or activity (see 36 CFR 1.5).”

Regarding fees, NPS Management Policies 2006 (Section 8.2.6.1) states “Visitors who use federal facilities and services for recreation may be required to pay a greater share of the cost of providing those opportunities than the population as a whole. Under the guidelines and criteria established by law and regulation, the Service will collect recreation fees of the appropriate type for its parks, facilities, and programs. No fees will be collected in circumstances in which the costs of collection would exceed revenue or where fee collection is prohibited by law or policy.”

### **2.4 Death Valley National Park General Management Plan**

The park’s General Management Plan (April 2002, p. 54-55) states “The current backcountry voluntary permit system will be replaced by a mandatory permit system when and where better resource protection was needed or where visitor use had exceeded the desired future conditions for visitor use experiences and resource conditions. The park has the authority to limit any activity that is causing resource damage.”

### **3. PERMIT IMPLEMENTATION PROGRAM**

#### **3.1. Phase One: Develop and Establish a Multi-Access-Point, Free Permit System**

Representatives from the Interpretation, Resources Management, and Visitor Protection Divisions will work with the IT Program Manager and Wilderness Coordinator to establish a free online permit system that provides the necessary visitor safety and resource protection information for each of the following activities: overnight dispersed wilderness camping, overnight camping in designated roadside camping corridors, overnight camping in primitive campgrounds, overnight camping in or immediately adjacent to cabins, and day use canyoneering. The permit application would include a proposed itinerary disclosure to aid in search and rescue as well as to inform visitor use statistics. Permits would be date and party specific, but not location specific.

Simultaneous to the roll-out of the free online permit system, free permits will be made available at the Furnace Creek Visitor Center and the Stovepipe Wells Visitor Contact Station, in either an electronic format, a hard copy format, or both. Permits may be made available at the Scotty's Castle Visitor Center and the Lone Pine Visitor Center, depending on availability of staff and overall feasibility. Backcountry patrol rangers will be supplied with hard copy permit forms and associated information, in order to facilitate the issuance of free permits and dissemination of visitor safety and resource protection information. All personally identifiable information associated with permits will be managed as per NPS policy. The data regarding permits issued from all sources will be compiled semi-annually by the wilderness coordinator for consideration in Phase 2.

This free permit system will be developed and piloted within 6 months of the effective implementation date of the Wilderness and Backcountry Management Plan. The data gathered in the implementation of the permit system will be stored by the Wilderness Coordinator, and all personal information will be maintained under procedures to insure privacy and confidentiality. The free, mandatory permit system will be maintained for 3 years, with the goal of educating Park visitors about the regulations to promote visitor safety and resource protection. At the conclusion of 3 years, the Park will move to Phase Two of the permit system.

#### **3.2. Phase Two: Evaluation**

To commence the evaluation phase, the Wilderness Coordinator will convene, through the Park's Wilderness Committee, an Interdisciplinary Team (IDT) to review the data gathered during the first three years of mandatory permit implementation. The IDT will consist of members of the Wilderness Committee, in addition to the Park Fee Manager. There will be at least one other representative of the Visitor Protection Division, and at least one representative of the Interpretation Division.

The IDT will conduct a two-part analysis. That analysis will focus on:

- the effectiveness of the permit system in achieving its goal of educating Park visitors about the regulations to promote visitor safety and resource protection, and
- the concentration of park visitor use in certain areas or locations, and whether there are visitor use conflicts or resource impact concerns associated with that use.

The IDT will document the results of both of these analyses and use them to make a determination about the need, appropriateness, and feasibility of implementing a fee-based permit system modeled on (or adapted from) the free permit system the Park implemented for three years. When considering a fee system, the IDT will examine staffing levels and follow the guidance of NPS Management Policies that "no fees will be collected in circumstances in which the costs of collection would exceed revenue." If

fees are recommended for the other primitive campgrounds, then they should also be considered at the existing Emigrant, Wildrose, Thorndike, and Mahogany Flat campgrounds, in order to promote consistency across the Park's backcountry areas. The IDT will prepare a report for the Park Superintendent and provide a recommendation about whether to modify or maintain the Park's permit system. This recommendation shall address the issue of fees.

### **3.3 Phase Three: Implementation**

The Park will implement the decision of the Park Superintendent, as advised by the IDT, regarding the future direction of the permit system. The options could include, but are not limited to the following:

- Maintain the pilot, mandatory free permit program with no or negligible modifications;
- Maintain the pilot, mandatory free permit program with minor modifications, to include fees for certain high use areas where fee collection is feasible and would provide a useful management tool for reducing visitor use conflicts and resource management damage or adverse impacts and potentially seasonal use allocations where visitor use exceeds capacity.

If any fee system is implemented, it would be according to applicable laws and NPS Policy, which would involve a comparability study for similar recreational facilities in the region and an open process to include input from the interested public. The Park Environmental Protection Specialist would maintain the administrative record for this process.

## APPENDIX G: WILDERNESS CHARACTER MONITORING STRATEGY

### 1. INTRODUCTION

The wilderness character monitoring strategy at Death Valley National Park is based on the interagency framework established in *Keeping it Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System* (Landres et al. 2008), of which the NPS is a signatory. This monitoring strategy was developed specifically in support of the Death Valley National Park Wilderness Stewardship Plan (NPS 2012a), but is expected to evolve over time as additional information is collected and analyzed and NPS guidance is developed. The Wilderness Character Narrative (Appendix E) serves as the foundation for this strategy by articulating what is special about Death Valley Wilderness and what actions or issues degrade wilderness character.

This strategy is supported by the use of the National Park Service Wilderness Character Monitoring Database, which serves as the repository of the baseline assessment and monitoring data.

This strategy was developed by the Death Valley Wilderness Planning Team over a series of workshops in 2009-2011. These workshops were facilitated by subject matter experts, specifically Dr. Peter Landres (US Forest Service, Aldo Leopold Wilderness Research Institute) for the wilderness character indicators and measures workshop in October 2009 and Dr. Kerri Cahill (National Park Service Visitor Capacity Program Lead) for the visitor use measures and standards workshop in May 2011. It was also informed by discussions with the Mojave Network Inventory and Monitoring Program and the development of a geospatial model for wilderness character at Death Valley NP.

#### 1.1. Law and Policy

The 1964 Wilderness Act established the NWPS “for the protection of these areas, the preservation of their wilderness character” (Section 2(a)). Congress (United States Congress 1983) and legal scholars (McCloskey 1999; Rohlf and Honnold 1988) confirmed that the primary affirmative legal mandate is to preserve the wilderness character of all areas designated as wilderness. Zahniser (1962), principal author of the Wilderness Act, emphasized this when he wrote, “The purpose of the Wilderness Act is to preserve the wilderness character of the areas to be included in the wilderness system, not to establish any particular use.” Likewise, the *NPS Management Policies 2006, Chapter 6, Wilderness Preservation and Management*, states that “The purpose of wilderness in the national parks includes the preservation of wilderness character.”

It is expected the Directors Order and Reference Manual 41: Wilderness Stewardship will further detail the requirements and procedures to preserve wilderness character in NPS managed wilderness. These documents are expected to be released in late 2012 and this Death Valley strategy is consistent with the internal review drafts available at the time of this writing (NPS 2012b).

#### 1.2. Monitoring Goal and Objectives

The overall goal of wilderness character monitoring at Death Valley NP is to preserve or improve wilderness character now and in the future.

The objectives of this monitoring strategy are to:

- Evaluate and select a set of measures that are relevant, cost-effective, and tied to preserving wilderness character
- Periodically compile existing data and/or collect new data at reasonable frequencies to determine trends in these measures
- Use these trends to assess the status of wilderness character and report that status to the Park Superintendent, Regional Office, and Washington Office

- Where applicable, compare measure outputs and/or trends with the standards established in the Wilderness and Backcountry Stewardship Plan (or other plans) and implement prescribed management actions as necessary to achieve desired conditions

### 1.3. Functional Definitions

Keeping it Wild (Landres et al. 2008) defines these key terms which are included here for ease of reference. This interagency monitoring Framework is based on hierarchically dividing wilderness character into successively finer elements. These elements, starting from wilderness character, are:

Qualities: Primary elements of wilderness character that link directly to the statutory language of the 1964 Wilderness Act. In this Framework, all four qualities are necessary to assess trends in wilderness character and each wilderness would be required to report the trend for each quality.

Monitoring Questions: Major elements under each quality that are significantly different from one another. Monitoring questions frame this monitoring to answer particular management questions. In this context, monitoring questions are similar to monitoring goals. Each wilderness and agency would be responsible for reporting on the trend for all eight monitoring questions.

Indicators: Distinct and important elements within each monitoring question. In nearly all cases, there is more than one indicator under a monitoring question. Each wilderness and agency would be responsible for reporting on the trend for all 13 indicators.

Measures: A specific aspect of wilderness on which data are collected to assess trend of an indicator. In nearly all cases, there is more than one measure to provide each agency (and potentially each wilderness within an agency) a range of options for assessing trend in the indicator. Some of these measures are more accurate and precise but costly, while others are less accurate and precise but easier and less expensive to monitor.

## 2. SELECTION OF MEASURES

Measures were initially identified and screened in two different group workshops. This effort was also influenced by the development of a geospatial model of wilderness character and the necessity to identify existing and new geospatial data sources relevant to wilderness character (see Appendix D for details). Potential measures and data sources were also discussed at length with the Mojave Network Inventory and Monitoring Program to identify opportunities for co-evolution of the monitoring efforts and to avoid redundancy.

In October 2009, the wilderness planning team and invited subject-matter experts participated in a workshop facilitated by Peter Landres to consider the global list of wilderness character indicators and measures identified in Keeping it Wild. First the group considered the need for unique qualities to more completely describe wilderness character at Death Valley. Two unique qualities were identified at that time: Cultural Resources and Timbisha Relationship to the Land. During that workshop preliminary measures identified for all six qualities (untrammelled, undeveloped, natural, outstanding opportunities for solitude or primitive and unconfined recreation, cultural resources, and Timbisha relationship to the land) were screened using four equally weighted criteria: significance, responsiveness, credibility, and feasibility.

Then in May 2011, after development of plan alternatives, the planning team participated in a workshop facilitated by Peter Landres and Kerri Cahill to consider the integration of NPS visitor use monitoring methods with wilderness character methods. That workshop focused on indicators and measures that were related to visitor use, namely influences of visitors on other visitors or visitors on resources. To focus on those measures most important to Death Valley, a two step screening process was used which first evaluated



each possible measure topic by importance/vulnerability and connection to visitor use, then if a minimum score was achieved those topics were further screened for reliability and reasonableness.

The outcomes of these efforts are summarized on the Table 1- 4 below. Note that because each one had slightly different objectives for the selection of measures and data sources, that the relationships are not strictly one-to-one. The discussion and details considered in each workshop were recorded in the administrative record, but are listed here only in a summary format to demonstrate the interrelatedness of the various measures considered for long-term monitoring.

The column headings refer to these origins:

“KIW WC” refers to the publication Keeping it Wild (KIW) and wilderness character (WC).

“Landres Workshop (2009) Measures” refer to the workshop in October 2009 facilitated by Dr. Peter Landres to identify potential wilderness character measures relevant to Death Valley NP.

“Spatial Model (2010) Data Inputs” refer to the geospatial data inputs used to develop the model of wilderness character at Death Valley NP by Dr. Peter Landres and James Tricker.

“User Capacity Workshop (2011) Measure Topics” refer to the measure topics identified in the workshop in May 2011 facilitated by Dr. Kerry Cahill to identify measures relevant to visitor use capacity within the context of wilderness character.

“MOJN I&M Data Sources” refers to the data sources being concurrently developed by the NPS Mojave Network Inventory and Monitoring Program that may be relevant to wilderness character.

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Table 1. Full suite of measures considered for the untrammelled quality

Quality	KIW WC Indicator	KIW WC Measures	Landres Workshop (2009) Measures	Spatial Model (2010) Data Inputs	User Capacity Workshop (2011) Measure Topics	MOJN I&M Data Source
Untrammelled	Actions authorized by the Federal land manager that manipulate the biophysical environment	Number of actions to manage plants, animals, pathogens, soil, water, or fire	# of currently collared/tagged wildlife			
			Number of burro round-ups and # of burros rounded-up	Burro removals		
			# of floodwater diversions installed and/or maintained	manipulation of landscape that alters water flow *NO DATA*		
			Number and type of actions in wilderness for exotic plant control	treat weeds		
			Number and type of authorized natural history collections			
				install mine closures/bat gates		
		Percent of natural fire starts that received a suppression response	Number and type of mechanized fire suppression actions in wilderness	Suppress fire (natural ignitions)		
		Number of lakes and other water bodies stocked with fish				
	Actions not authorized by the Federal land manager that manipulate the biophysical environment	Number of unauthorized actions by agencies, citizen groups, or individuals that manipulate plants, animals, pathogens, soil, water, or fire	Number and type of state-agency game management actions			
			grazing trespass			
			digging			
			weed pulling			
			unauthorized natural history collections – permittees exceeding permit, unpermitted	poaching incidents *NO DATA*		
			Number and type of mechanized incursion into wilderness			

Table 2. Full suite of measures considered for the natural quality

Quality	KIW WC Indicator	KIW WC Measures	Landres Workshop (2009) Measures	Spatial Model (2010) Data Inputs	User Capacity Workshop (2011) Measure Topics	MOJN I&M data source
Natural	Plant and animal species and communities	Abundance, distribution, or number of indigenous species that are listed as threatened and endangered, sensitive, or of concern	Health and abundance of aquatic invertebrate communities			Groundwater and Springs Monitoring Protocol
			Trend in Threatened and endangered species			Riparian Bird Monitoring Protocol
			Trend in species of mgmt concern			
		Number of extirpated indigenous species				NPSpecies Database
		Number of nonindigenous species				NPSpecies Database
		Abundance, distribution, or number of invasive non-indigenous species	Abundance, distribution, or number of non-indigenous plants	Exotic plant locations (APCAM data base)	spread of exotic plants	Invasive/Exotic Plants Monitoring Protocol
			Abundance, distribution, or number of non-indigenous animals (burros)	Burros		
		Number of acres of authorized active grazing allotments and number of animal unit months (AUMs) of actual use inside wilderness				
		Change in demography or composition of communities	Trends in illegal collection of terrestrial invertebrates (butterflies, scorpions)	Landcover	Impacts to wildlife/plants	Integrated Upland Monitoring Protocol; Riparian Vegetation Monitoring Protocol
			Trends in illegal succulent harvesting			
			Trends in endemic plants			
	Physical resources	Visibility based on average deciview and sum of anthropogenic fine nitrate and sulfate	Trends in dark night sky	Nightsky - dvlpallsky		
			Trends in visibility (distance, clarity)			Air Quality Monitoring Protocol

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		Ozone air pollution based on concentration of N100 episodic and W126 chronic ozone exposure affecting sensitive plants		AQ - Ozone		Air Quality Monitoring Protocol
		Acid deposition based on concentration of sulfur and nitrogen in wet deposition	Trends in nitrogen deposition	AQ - Acid Deposition		Air Quality Monitoring Protocol
		Extent and magnitude of change in water quality	Trend in water quality (Fecal coliform, chemical contamination)	Springs		Groundwater and Springs Monitoring Protocol
			Trend in water quantity	Springs		Groundwater and Springs Monitoring Protocol
		Extent and magnitude of human-caused stream bank erosion				
		Extent and magnitude of disturbance or loss of soil or soil crusts	Trends in presence/absence or health of cryptobiotic soils	Mining sites - AML & Open Pits & USGS		Integrated Upland Monitoring Protocol
	Biophysical processes	Departure from natural fire regimes averaged over the wilderness	Changes in fire regime	Fire regime (FRCC) *NO DATA*		Fire and Fuel Dynamics Monitoring Protocol
		Extent and magnitude of global climate change	Global climate change	Climate change *NO DATA*		
		Area and magnitude for pathways for movement of non-indigenous species into the wilderness	Pathways for movement of non-indigenous species			Landscape Dynamics Monitoring Protocol
		Area and magnitude of loss of connectivity with the surrounding landscape	Loss of connectivity due to habitat fragmentation			Landscape Dynamics Monitoring Protocol
			Trends in dune stabilization			Invasive/Exotic Plants Monitoring Protocol
			Changes in alluvial processes			

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			Spring recharge and subsurface water (Amargosa)			Groundwater and Springs Monitoring Protocol
				Grazing		
				Guzzlers		

Table 3. Full suite of measures considered for the undeveloped quality

Quality	KIW WC Indicator	KIW WC Measures	Landres Workshop (2009) Measures	Spatial Model (2010) Data Inputs	User Capacity Workshop (2011) Measure Topics	MOJN I&M Data Source
Undeveloped	Non-recreational structures, installations, and developments	Index of authorized physical development	Count installations (need to define unit of measure for multi-component installations)	Installations (Including guzzlers&fences)	Number of Installations	
			Index of installations weighted on permanence	Borrowpits		
		Index of unauthorized (user-created) physical development		Unauthorized installations/debris		
	Inholdings	Inholdings Area and existing or potential impact of inholdings	Acres of inholding indexed by intensity of development (annotated GIS database)	State with road access		
				state no roads or wildlife		
			Acres of inholding	Unpatented		
				Private (all)		
	Use of motor vehicles, motorized equipment, or mechanical transport	Type and amount of administrative and nonemergency use of motor vehicles, motorized equipment, or mechanical transport	Type and amount of administrative non-emergency use	admin uses		
		Type and amount of emergency use of motor vehicles, motorized equipment, or mechanical transport	Type and amount of administrative emergency use			
		Type and amount of motor vehicle, motorized equipment, or mechanical transport use	Type and amount of unauthorized landing of aircraft			

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		not authorized by the Federal land manager	Type and amount of unauthorized ORV use	ORV trespass	Off Road Travel	
Loss of statutorily protected cultural resources <sup>1</sup>	Number and severity of disturbances to cultural resources	Condition of cultural resources	ASMIS outputs (based on condition class poor = 0.5 or destroyed = 1)	Arch site degradation		
		Number of sites documented with human caused impacts (low, mod, high)				
		Condition of sites stabilized				
		Number of AML sites inventoried in wilderness				
		Number of AML remediations in wilderness				
		Number of structures on the List of Classified Structures by condition		Backcountry Cabin and outbuilding degradation		
		see Timbisha list under Landres tab				

<sup>1</sup> Keeping it Wild puts cultural resources in the undeveloped quality. During the 2009 workshop, cultural resources and ethnographic resources were identified as two separate unique qualities of wilderness character. After working through the geospatial modeling process in 2010 and considering how best to consider these unique features of the landscape, the park determined to include them as wilderness values where they occur rather than as qualities of wilderness character. Then, in February 2012, the NPS Wilderness Character Integration Team proposed that such values be considered as an “Other Quality” to be determined by the park and proposed indicators and measures for use cultural and paleo resources to be used where those resources have been determined to be integral to wilderness character. As the Death Valley National Park Wilderness and Backcountry Stewardship Plan identifies those topics as wilderness values, they were selected to be included in this monitoring plan as “Other Qualities” to be consistent with NPS servicewide direction.

Table 4. Full suite of measures for the solitude or primitive and unconfined recreation quality

Quality	KIW WC Indicator	KIW WC Measures	Landres Workshop (2009) Measures	Spatial Model (2010) Data Inputs	User Capacity Workshop (2011) Measure Topics	MOJN I&M Data Source
Solitude or Primitive and Unconfined Recreation	Remoteness from sights and sounds of people inside the wilderness	Amount of visitor use	Number and size, frequency of use, of campsites		incidences of improperly disposed human waste	
			Amount of use (Cottonwood/Marble canyons)		increased crowding	
		Number of trail contacts	Number of encounters (group or individual; day use or overnight use)			
		Number and condition of campsites			size and number of campsites and proliferation of campfire rings	
		Area of wilderness affected by access or travel routes that are inside the wilderness		viewshed model		
				remoteness model		
	Remoteness from occupied and modified areas outside the wilderness	Area of wilderness affected by access or travel routes that are adjacent to the wilderness		remoteness model		Landscape Dynamics Monitoring Protocol
		Night sky visibility averaged over the wilderness	Night Sky visibility averaged over the wilderness	Nightsky- dark sky index		
		Extent and magnitude of intrusions on the natural soundscape		Soundscape	noise from vehicular traffic along backcountry roads	
				Overflights		
	Facilities that decrease selfreliant recreation	Type and number of agency-provided recreation facilities	Type and number of agency-provided recreation facilities (trails, campsites, cairns, privies, signs)			
			Type and number of comments received			
		Type and number of user-created recreation facilities				
	Management restrictions on visitor behavior	Type and extent of management restrictions	Type and extent of management restrictions			



From these workshops and analyses, the park selected the following preliminary measures and data sources (Table 5) as the minimum necessary to begin monitoring wilderness character in Death Valley with at least one measure for each indicator. The emphasis in selecting measures is on compiling data from existing, reliable data sources, the sensitivity of the measures to the management actions prescribed in the Wilderness and Backcountry Stewardship Plan, and on the repeatability of the measures over time.

The wilderness-wide indicators and measures summarized on Table 5 may be augmented by visitor capacity measures in specific high use/directed use locations as identified on table 4 in the Wilderness and Backcountry Stewardship Plan. A schedule of how and when each high use/directed use area will be assessed will be determined by the park's wilderness committee within one year of the completion of the planning process. It is expected that a non-random sample or subset of the locations will be assessed each year during the peak visitation season for that location to determine that current status of the site relative to the measures and standards established in the plan. The results of that assessment for sites in wilderness will be reported in the wilderness character monitoring database.

The database will be used to capture both the data and the protocol for each measure, such as how the information is obtained and any additional details necessary to make the measurements repeatable over time and to aid in the interpretation of the results. As of early 2012 the database is still in a beta mode and some aspects are not fully functional, though it is anticipated that after subsequent versions will have the capacity to export the narrative files regarding the data protocols and details which will then be incorporated into this strategy in future revisions.

After the first year of monitoring these measures, the park's Wilderness Committee will re-visit the full list of measures considered in the previous workshops (as shown on the tables above) to identify additional measures needed to better capture the status and trend of wilderness character in Death Valley National Park Wilderness.

Table 5. Measures and data sources selected to initiate wilderness character monitoring at Death Valley NP (2 pages)

Quality	Indicator	DEVA measure	Periodicity and Data source
Untrammeled	Actions authorized by the Federal land manager that manipulate the biophysical environment	Number of exotic plant treatments, burro removal actions, fire suppression of natural ignitions, and prescribed fire incidents in wilderness conducted within each calendar year	Compiled annually by park staff from the Alien Plant Control And Monitoring (APCAM) database, Wildland Fire Management Information (WFMI) database, and burro removal reports
	Actions not authorized by the Federal land manager that manipulate the biophysical environment	Number and type of state-agency game management actions in wilderness within each calendar year	Compiled annually by RM Staff in consultation with California Fish and Game and Nevada Department of Wildlife
Natural	Plant and animal species and communities	Abundance <sup>1,2</sup> of selected indigenous species that are listed as threatened and endangered, sensitive, or of concern	I&M Groundwater and Springs Monitoring (for biota) <sup>1</sup> and I&M Riparian Bird Monitoring <sup>2</sup>
		Changes in species composition <sup>1</sup> of important shrubland communities	I&M Integrated Upland Monitoring <sup>1</sup>
		Number of acres of authorized active grazing allotments	Annual estimate derived from DEVA GIS
	Physical Resources	Acid deposition based on concentration of sulfur and nitrogen in wet deposition	Annual average and annual max from the I&M Air Quality Monitoring as estimated by the Furnace Creek station (Nevares Spring Water Tank Site AQS#06-027-0101)
	Biophysical Processes	Area and magnitude of loss of connectivity with the surrounding landscape	I&M Landscape Dynamics Protocol <sup>2</sup>
Undeveloped	Non-recreational structures, installations, and developments	Acres directly affected by authorized research installations, utility corridors, and communication installations	Compiled every five years by DEVA GIS staff from Research Permit and Reporting System (RPRS) database and rights-of-way permit records
		Number of non-historic debris and abandoned installation sites removed to improve wilderness character quality	Compiled every five years by DEVA GIS staff based on wilderness restoration records and staff input
	Inholdings	Acres of inholdings	Compiled by DEVA GIS staff every 5 years from official lands records maintained by PWRO
	Use of motor vehicles, motorized equipment, and mechanical transport	Number of days in which motorized or mechanized equipment was authorized for use	Compiled annually from Minimum Requirements Decision Analysis records (for non-emergency uses) and case incidents reports (for emergency uses)

Quality	Indicator	DEVA measure	Periodicity and Data source
Solitude or primitive and unconfined recreation	Remoteness from sights and sounds of people inside the wilderness	Number of trail encounters on designated trails/routes measured as number of parties encountered along one route per four hours during high use season	Manual count by NPS staff or volunteers at specific locations and times as documented in the WC database
	Remoteness from occupied and modified areas outside the wilderness	Night sky quality as an index of actions taken by NPS and cooperators to mitigate light pollution from non-wilderness areas in the park	Count the number of actions taken to fulfill requirements of International Dark Sky Park
	Facilities that decrease self-reliant recreation	Number of agency provided recreation facilities	Compiled annually from Facilities Management System Software (FMSS) database
	Management restrictions on visitor behavior	Type and extent of management restrictions	Compiled annually from the Superintendents compendium
Other	Deterioration or loss of cultural resources integral to wilderness character	# of unauthorized actions that result in disturbances to cultural resources (looting, trespass activities, non-compliance with NHPA)	Compiled annually from citations, ARPA violations, Secretary's Annual Report to Congress (SRC), LOOT report in SRC, ASMIS and PMDS site condition reporting
	Loss of important paleontological resources	Number and severity of disturbances to paleontological resources at Copper Canyon	Compiled every five years from case incident reports

<sup>1</sup> The Mojave Network Inventory and Monitoring program is currently in the process of developing and/or finalizing these monitoring protocols which are scheduled for completion in the near future and are relevant to the wilderness character measure identified, but it is unknown at this time which metric for wilderness character monitoring and at what periodicity.

<sup>2</sup> The Mojave Network Inventory and Monitoring program has identified these protocols for future development but it is unclear at this time when they will be available, what metric will be useful for wilderness character monitoring, and at what periodicity the data will be available. They are listed here based on what wilderness character measure that is likely to be addressed, but these are subject to revision once the protocol development process is initiated.

### 3. Defining Baseline Conditions

Prototypic baseline conditions were established for many of these measures in the development of the geospatial model of wilderness character in 2010. These baselines will be reiterated in the narrative portion of the monitoring database and additional baselines will be established as needed to cover all of the measures listed in Table 5 above.

If the funding and advanced modeling skills are available at the time, the 2010 geospatial model should be re-run in 5 to 10 year increments to see how wilderness character varies temporally and spatially and to relate observed changes back to the implementation of the Wilderness and Backcountry Stewardship Plan (if applicable).

### 4. Implementation of Monitoring Strategy

#### 4.1. Data Management

This strategy primarily relies on pre-existing databases that are already subject to established quality assurance/ quality control standards. These databases are listed in the table above. The primary data steward for each data base is listed here for reference:

ASMIS – DEVA Cultural Resources Manager

APCAM – DEVA Vegetation Program in the Resource Management Division

FMSS – DEVA Maintenance Division

I&M databases – Mojave Network Inventory and Monitoring Program

Case Incident Reports – DEVA Ranger Division

Air Quality data – NPS Air Resource Division

WFMI - Pacific West Region Fire Management Office

As databases are inherently dynamic, it is important to describe within the Wilderness Character Monitoring Database narrative fields the data quality (including both accuracy and temporal and/or geospatial completeness), assumptions, and any other information necessary to make a repeat measure in the future from the same data source.

#### 4.2. Roles and Responsibilities

Wilderness Coordinator: This position has the primary responsibility to oversee the wilderness character monitoring program, including populating and maintaining the database, soliciting data and assistance from other programs in a timely fashion, compiling the supporting documentation from existing data sources, validating the results of the monitoring effort, and generating reports periodically for submission to the Park Superintendent and other NPS offices, as requested. The Wilderness Coordinator will review this Strategy every two years and work with the Wilderness Committee to update it as necessary to keep in step with NPS policy requirements and database infrastructure.

Wilderness Committee: The parks Wilderness Committee will serve as the primary review body for the monitoring reports and will also be the forum for discussions regarding appropriate use of and access to databases needed to monitor trends in wilderness character. This group will also be charged with analyzing any downward trend in any quality of wilderness character and making the recommendations for management actions to correct the trend. The wilderness committee will also oversee the development of the on-the-ground monitoring program during the first five years, identifying any additional measures needed for effective monitoring and fine tuning the metrics used in each measure.

Park Superintendent: The Superintendent, or at their delegation the Senior Management Team, will be the recipient of the monitoring report and is responsible for taking action as necessary to preserve or improve the qualities of wilderness character.

## 5. References

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## APPENDIX H: FRAMEWORK FOR EVALUATING PROPOSALS FOR RESEARCH AND SCIENTIFIC ACTIVITIES IN WILDERNESS

### 1. INTRODUCTION

Death Valley National Park—with its diversity of animal and plant life, rich cultural history, unique geology, complex hydrology, varied geography, and climatic extremes—presents researchers an ideal place to explore legitimate and pressing scientific questions. Because 91% of the park is federally designated wilderness, the majority of research permit applications at Death Valley propose research in wilderness.

The standard for approving research and scientific activities is set higher inside wilderness than in other areas because of the National Park Service’s responsibility as outlined in the 1964 Wilderness Act for “preserving wilderness character.” The purpose of this evaluation framework is to create a streamlined and systematic approach that would preserve wilderness character, provide clarity for Death Valley National Park and its researchers, reduce conflict, and document how decisions relating to research in Death Valley National Park wilderness are made. This framework is primarily based upon the following sources:

- *A Framework to Evaluate Proposals for Scientific Activities in Wilderness* (Landres et al. 2010)
- *Scientific Activities and Research in NPS Wilderness: Guidelines for Wilderness Managers* (NPS Wilderness Stewardship Division 2011)

### 2. RELEVANT LAW, POLICIES, AND GUIDANCE

#### 2.1 The Wilderness Act

The public purposes of wilderness as outlined in section 4(b) of the Wilderness Act of 1964 include “recreational, scenic, scientific, educational, conservation, and historical use.” Scientific activities directly meet the statutory purpose of wilderness, as long as they do not compromise the accompanying mandate in section 4(b) to preserve wilderness character. Specific guidance for meeting this mandate is outlined in section 4(c) of the Act, which states “...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act... 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 of installation within any such area.” These are referred to as the 4(c) prohibited uses or prohibitions.

#### 2.2 NPS Management Policies

National Park Service Management Policies 2006 (Section 6.3.6) addresses scientific activities in wilderness, stating “The statutory purposes of wilderness include scientific activities, and these activities are encouraged and permitted when consistent with the Service’s responsibilities to preserve and manage wilderness.”

National Park Service Management Policies 2006 (Section 6.3.5) mandate the application of a “minimum requirement analysis” for potential actions involving section 4(c) prohibited uses within the wilderness area. The minimum requirement analysis applies to research and scientific activities, if these activities “have the potential to impact wilderness resources or values.”

#### 2.3 Death Valley National Park General Management Plan

The 2002 General Management Plan (GMP) reaffirms the National Park Service commitment to research, issuing “an invitation for scientists to conduct approved research within units of the national park system.” Regarding research in wilderness, the plan states “Public use of wilderness may include...

scientific study.” The GMP also strengthens the mandate for the preservation of wilderness character, stating that “Management would include the maximum statutory protection allowed for these areas, the preservation of their wilderness character, and the gathering and dissemination of information regarding their use and enjoyment as wilderness.”

### **3. FRAMEWORK FOR EVALUATING SCIENTIFIC ACTIVITIES IN WILDERNESS**

#### **3.1. How Does This Evaluation Framework Work?**

This framework consists of a series of steps or filters that would be used in the following sequence to reach a recommendation about the proposal.

- Initial Review Filter – Identify any potential “red flags” that would potentially damage wilderness character. This filter is a tool to sort the research permits into those that require more detailed analysis and those that will undergo the Park’s standard research permit analysis.
- Quality of Proposal Filter—Ensure that proposal activities are legitimate and will achieve their intended outcome. All research in the Park undergoes this analysis, whether it is in wilderness or not.
- Legal and Policy Filter—Evaluate conformity with existing legislation and applicable agency policies. This filter is triggered if the answer to one of the questions in the Initial Review Filter is answered “yes.”

#### **3.2. Initial Review Filter**

When a research permit request is submitted, the Park’s Research Permit Coordinator reviews it and answers the following yes or no questions:

- Does the proposal call for a structure or installation in wilderness?
- Does the proposal call for the use of motorized vehicles, motorized equipment, or mechanized transport in wilderness?
- Does the proposal involve the landing of aircraft in wilderness?
- Does the proposal call for establishing a temporary road in wilderness?
- Would the proposed activity be in a wilderness area with high resource sensitivity (Racetrack, Eureka Dunes, Copper Canyon, or on a site with sensitive cultural resources)?
- Would the proposed activity pose additional impact in an area that already has an unacceptable level of cumulative impacts or is close to an unacceptable level of cumulative impacts?
- If the submitter has conducted work in the area before, were there any problems with completing administrative requirements (such as following Park protocols for resource protection, submitting reports, removing installations and other debris from the activity, completing curatorial and specimen documentation requirements) in a timely and professional manner?

If the answer to any of these Initial Review questions is “yes,” then the Research Permit Coordinator contacts the Park’s Wilderness Coordinator and NEPA Coordinator to conduct a Legal and Policy analysis as outlined in Section 3.4 of this Appendix. Simultaneously, the Research Permit Coordinator contacts appropriate subject matter experts in the Resources Management division to assist with the Quality of Proposal analysis as outlined in Section 3.3 of this Appendix. The Quality of Proposal analysis proceeds regardless of whether the thresholds in the Initial Review Filter are triggered, as this is part of the Park’s process for evaluating all scientific activities in Death Valley National Park.

#### **3.3 Quality of Proposal Filter**

The Research Permit Coordinator reviews all permit applications, and decides for each application which subject matter expert(s) in the Resources Management division are most qualified to assist in evaluating the proposal for its quality and scientific integrity.



The subject matter expert uses his or her knowledge of the discipline and professional judgment to make a determination regarding the quality of each proposal. The following questions are applied to focus the analysis.

- Is the proposed scientific activity sufficiently well designed to accomplish its stated purpose, thereby providing the intended benefits to management and science?
- Is the proposal redundant to previous or ongoing research—that is, has the proposed research already been done at the same site, asking the same question with similar methodology by previous researchers?
- If the proposal involves specimen collection, and the material is to be destroyed or taken, is there an appropriate amount of material for the study and adequate justification?
- If the proposal involves specimen collection, and the material is to be stored or archived, is there an appropriate amount of material, adequate justification, and a proper archival or storage plan? To determine, the subject matter expert and Research Permit Coordinator should consult with the Park Curator.
- Does the proposal describe how the results and any reports will be communicated to local management staff?

The subject matter expert communicates the results of this independent review with the Research Permit Coordinator and.

If the proposal does not pass the Quality of Proposal filter, the permit is denied as per Park policy regarding research.

If the proposal has passed both the Initial Review Filter and the Quality of Proposal Filter, the Research Permit Coordinator approves the research permit. No Minimum Requirements Analysis is needed or conducted.

If the proposal exceeds a threshold in the Initial Review Filter but passes the Quality of Proposal Filter, the Quality of Proposal analysis should be integrated with the Legal and Policy analysis as described in Section 3.4 of this Appendix, under “Step 6.”

### **3.4 Legal and Policy Filter**

This filter is activated when the answer to any of the Initial Review Filter questions is “yes.” The Research Permit Coordinator contacts the Park’s Wilderness Coordinator and NEPA Coordinator and asks them to conduct a Legal and Policy analysis. The goal of this analysis is to evaluate conformity with existing legislation and applicable agency policies. It takes the form of the following flowchart.

Step 1: Does the proposed activity include any actions or uses that are prohibited by Section 4(c) of the Wilderness Act?

- If yes, go to Step 2.
- If no, skip Steps 2-4 and go to Step 5.

Step 2: Are there any legislated exceptions that allow the actions or uses that would normally be prohibited?

- If yes, skip Steps 3-4 and go to Step 5.
- If no, go to Step 3 to evaluate the uses prohibited by Section 4(c) of the Wilderness Act.

Step 3: Are the prohibited actions or uses necessary? To answer this question, use the following series of questions for guidance.

- A. Does the proposed work address an urgent or important health or safety concern?
  - If yes, document this concern and go to Step 5.
  - If no, go to Step 3.B
- B. Can the prohibited actions or uses only be conducted inside the wilderness?
  - If yes, go to Step 3.D
  - If no, go to Step 3.C
- C. If the prohibited actions or uses can be conducted outside the wilderness, will the benefits of the research to wilderness stewardship (i.e., preserving wilderness character) or to science (consult with Research Permit Coordinator) be reduced?
  - If yes, go to Step 3.D
  - If no, deny the proposed work.
- D. Will the proposed actions or uses help preserve wilderness character?
  - If yes, go to Step 5
  - If no, go to Step 4.

Step 4: Return the proposal for revision with an explanation of why it is being returned. If additional consultation with US Fish and Wildlife Service has been identified as a requirement under the Endangered Species Act, this should be identified as well. The revised proposal should include an explanation of changes, and any USFWS consultation requirements, including any necessary permits. Go back to step 1 with the revised proposal.

Step 5: Is there a restriction in law, policy, or management plan that would prevent the actions or limit where or when they could be used?

- If yes, go to Step 4.
- If no, go to Step 6.

Step 6: Consult with the Research Permit Coordinator and appropriate subject matter experts to integrate the results of the Quality of Proposal Filter with the results of the Legal and Policy Filter. Do the benefits of the proposal to wilderness stewardship and to science justify the impacts of the proposed research activities?

- If yes, conduct a Minimum Requirements Analysis. Pending outcome of the MRA, approve the research.
- If no, go to Step 4.

# APPENDIX I: WILDERNESS AND BACKCOUNTRY EDUCATION STRATEGY

## 1.0 INTRODUCTION

Visitor education is often the preferred indirect method of addressing park management issues and is perhaps the most important tool available for wilderness management, because it provides a way to actively engage the public and promote stewardship without imposing upon or negatively impacting the visitor experience within wilderness. Education does not alter the wilderness resource or wilderness experience directly; it leaves visitors the liberty to make their own choices, yet these choices are better informed. Education benefits the visitor by increasing their appreciation for wilderness and backcountry experiences and by helping them attain the type of experience they seek, while helping managers achieve their goals of reducing social and resource impacts.

### Goals:

In addition to site and issue specific goals, there are three broad goals for the wilderness and backcountry education program that will inform specific messages:

- 1) *Visitors will realize that wilderness and backcountry areas offer opportunities for personal challenge, inspiration, solitude and renewal, as well as opportunities to connect with nature and our shared heritage.*
- 2) *The public will understand that wilderness and backcountry areas are critical to maintaining a healthy and diverse ecosystem, which benefits not only its inhabitants, but also people and communities outside its boundaries.*
- 3) *Visitors will understand and adopt Leave No Trace and Tread Lightly! practices and ethics.*

## 2.0 RELEVANT POLICIES AND PLAN

### 2.1 NPS Management Policies

The 2006 NPS Management Policies support educational programs in order to foster development of a visitor stewardship ethic and to increase public support for National Parks and their missions. In particular, section 6.4.2 of the 2006 Management Policies mandates the following with regards to interpretation and education within wilderness:

- (1) *Operate public education programs designed to promote and perpetuate public awareness of and appreciation for wilderness character, resources, and ethics while providing for acceptable use limits;*
- (2) *Focus on fostering and understanding of the concept of wilderness that includes respect for the resource, willingness to exercise self-restraint in demanding access to it, and an ability to adhere to appropriate, minimum-impact techniques; and*
- (3) *Encourage the public to use and accept wilderness on its own terms – that is, the acceptance of an undeveloped, primitive environment and the assumption of the potential risks and responsibilities involved in using and enjoying wilderness areas* (NPS Management Policies 2006 sect. 6.4.2).

Additionally, NPS policy mandates that recreational uses are evaluated for impacts, and that Leave No Trace principles and practices are to be applied to all forms of visitor use management within wilderness (NPS Management Policies 2006 sect 6.4.3).

### 2.2 General Management Plan

The Wilderness and Backcountry Education Strategy supports several aspects of Death Valley National Park's 2002 General Management Plan (GMP). In particular, this education strategy meets the stated purpose to "Provide opportunities for compatible public outdoor recreation and promote the public's

understanding and appreciation of the California desert by interpreting the natural and cultural resources (GMP 2002).” The GMP identifies wilderness as a significant resource, as it provides “unique opportunities for quiet, solitude, and primitive adventure in an extreme desert ecosystem (GMP 2002).”

Management objectives listed in the plan include protecting natural and cultural resources, wilderness values, visitor use, interpretive services, and recreational activities. This education strategy contributes to the protection and communication of each of these objectives.

## 2.3 Long Range Interpretive Plan

The Long Range Interpretive Plan (LRIP) is a component of the Comprehensive Interpretive Plan (CIP), as outlined by NPS Director’s Order #6 (DO-6). This plan articulates a vision for the park’s interpretive future, and recommends the media, facilities, and programs best suited for meeting visitor needs, achieving management goals, and connecting visitors to park stories. The LRIP addresses both personal and non-personal (media) activities.

Draft Director’s Order 41 calls for wilderness resources and stewardship to be “an integral component” of the park’s long range interpretive plan. Additionally, wilderness parks are to include and address interpretive themes that reflect the park’s wilderness. The LRIP guides the education of visitors about wilderness and backcountry (both its value and any rules that protect it). Well-informed park visitors have a powerful role to play, not only in minimizing their impacts to wilderness and backcountry resources, but also as advocates of such action to other users and outside influences on the park.

This Wilderness and Backcountry Education Strategy supports Death Valley’s LIRP by calling for education about the park’s wilderness and backcountry areas and opportunities. This is directly in line with several of the primary interpretive themes identified in the LIRP, including:

- *Death Valley National Park’s finite and irreplaceable wilderness is where “wildness,” solitude, and heritage values are enjoyed, preserved, and protected for future generations.*
- *The perception of “wilderness” in Death Valley provides an enhanced rich experience for park visitors from all walks of life.*
- *Activities inside and outside park boundaries present continuing challenges to balancing human use with resource preservation.* (Death Valley National Park Long-Range Interpretive Plan, 2005)

In addition, the following Visitor Experience Goals are identified in the LIRP, and are relevant to the Wilderness and Backcountry Education Strategy:

- *Experience quality, environmentally friendly facilities, personal services, and the opportunity to obtain accurate information through a variety of media.*
- *Experience solitude and “wildness” on the individual’s and park’s own terms within a reasonable expectation of safety*
- *Gain an understanding of the mission of the National Park Service, the significance of Death Valley National Park and a sense of personal stewardship.*
- *Experience true wilderness, dark night skies, and extreme silence.* (Death Valley National Park Long-Range Interpretive Plan, 2005)

Finally, the LIRP calls for further development of educational programming, stating, “As the Las Vegas region continues to grow, more people (including school groups) will discover the park. There is a great opportunity for the park to tap into the education community and develop strong and positive connections.”

## 3.0 BASIC MESSAGES

### 3.1 Leave No Trace

Leave No Trace (LNT) is an educational and ethical program created to help outdoor recreationists make responsible choices to reduce their impacts when participating in outdoor activities. The program seeks to educate the public about the effects of their actions on resources and other visitors as well as methods to prevent and reduce these effects. Leave No Trace messages are applicable to both front and backcountry use, and compliment messages about the preservation of wilderness character. If adopted, they may reduce conflicts between visitors in high use areas, reduce signs of previous visitors, and improve resource stewardship. The program is based on seven principles. Information on the application of these principles in desert environments can be found in the *Leave No Trace Deserts and Canyons Skills and Ethics Handbook*. The park may consider developing education or interpretation materials for visitors specific to issues at Death Valley National Park.

1) *Plan Ahead and Prepare*

Spend some time before the trip learning about the area you will be visiting, including local rules and regulations, terrain, routes, weather, and hazards. Keep your group size to a minimum, and try to avoid high use seasons. Plan meals to minimize weight, waste, and need for a campfire.

- When planning a trip in the desert, be aware of the extreme temperature fluctuations that are typical of deserts, as well as the possibility of thunderstorms and flash floods. Water sources may be unreliable and few and far between. Each person should carry at least one gallon of water per day. Cell phones and radios often do not work in canyons and other remote desert areas.

2) *Travel and Camp on Durable Surfaces*

Use established trails and campsites, and stay on durable surfaces, such as rock, gravel, dry grasses, or snow. Avoid camping within 200 feet of lakes, streams, springs, and seeps. In popular areas, walk single file on established surfaces, and in pristine areas, disperse use to avoid the creation of new trails and campsites.

- In the desert, hike on established trails, expanses of rock, gravel, sand, or dry creek beds. Dry grasses are also naturally resilient due to their robust root structures and flexible stems. Avoid areas that are prone to erosion, as well as dry creek beds if there is any risk of an upstream storm. Be aware of and avoid cryptobiotic soil crusts, vulnerable desert plants, and desert pavement
- Respect water sources. California state regulations require campsites to be 210 steps or 600 feet from water, and visits to water sources must last less than 30 minutes (California Administrative Code- Section 730). Conserve water sources for wildlife, and adjust the amount of water you take according to the size of the source.

3) *Dispose of Waste Properly*

Pack out all trash, including toilet paper, and deposit solid human waste in catholes at least 6 to 8 inches deep and at least 200 feet from water, campsites, and trail. Use biodegradable soaps and scatter dishwater.

- In the desert, microbes break down feces much slower, so ensure that cat holes are well hidden and buried deeply. Avoid burying waste in or near water sources, dry creek beds, and ravines.

4) *Leave What You Find*

Avoid altering campsites and constructing furniture or additional fire rings. Don't remove natural or cultural artifacts, damage trees, or pick plants.

- Arid environments preserve artifacts better than damper climates, so the likelihood of encountering archeological, paleontological, or mining sites is higher. It is illegal to disturb or

remove artifacts. Stay on established trails when approaching these sites to prevent erosional damage. Never touch, trace, or chalk rock art. Don't disturb or remove plants or other natural features.

5) *Minimize Campfire Impacts*

Consider using a lightweight stove in place of a campfire. Where fires are permitted, use existing fire rings. Fires should be small, and use only small pieces of wood that can be broken by hand. Do not gather firewood in the park as it is prohibited. Use only pest-free firewood to avoid the introduction of pathogens that could affect forest health or destroy historic structures. Pack out ash when finished with fire.

- Deserts as a whole generally do not rely on fires for forest succession and most native desert vegetation is slow to re-establish following a fire. Only build a fire when wildfire danger is low. If building a pit fire, avoid areas with organic soil, and create a depression in sand or in gravel along the bottom of dry washes.

6) *Respect Wildlife*

Don't approach or follow wildlife, and make sure to avoid wildlife at times when they may be mating, nesting, or raising young. Never feed animals, and store your food and trash responsibly to protect both the animals and yourself. Leave pets at home.

- Times of high temperature and water stress, particularly in the summer, are especially difficult for desert animals. During these times, animals are especially active at dusk and dawn, so minimize loud noises and other disturbances. Leave wildlife clear access to water sources. Desert tortoises may void their bladders and lose most of their stored water supplies when bothered, and as water supplies are limited and tortoises may drink infrequently, disturbances are particularly harmful.
- Food only needs to be hung a few feet off the ground in the desert, as primary scavengers are rodents. Be aware of risks associated with Hantavirus.

7) *Be Considerate of Other Visitors*

In addition to reducing your impact on resources, be mindful of your impact on other visitors and respect their experience. When camping or taking breaks, move away from the trail and other people, and refrain from shouting or generating loud noises. If you encounter pack stock, move to the downhill side of the trail.

- Consider wearing earth-toned clothing to blend in with desert scenery. Respect tribal land boundaries and public land closures for Native American religious ceremonies, and ask permission to cross private lands or to take pictures of people.

**Leave No Trace in High Use/Directed Use Zones:**

Although LNT was created for wilderness and backcountry users, the majority of visitors to Death Valley National Park are concentrated in popular areas such as Badwater Basin, Mesquite Flat Sand Dunes, The Racetrack, and other areas that have been labeled High Use/Directed Use zones. In order to respond to the growing number of people visiting frontcountry areas, LNT has developed a frontcountry education program based largely on the same seven principles, as they remain applicable to all outdoor recreationalists.

The primary issues in these high use/directed use zones include improper disposal of waste and trash, crowding, off road travel and parking, and vegetation trampling. Leave No Trace principles address each of these issues, primarily through the principles travel and camp on durable surfaces, dispose of waste properly, and be considerate of other visitors, so there is an opportunity to stress these messages in high use/directed use zones.

### **Leave No Trace in Backcountry Corridor, Backcountry Exploration, and Wilderness Zones:**

If adopted, LNT ethics can significantly reduce both social and resource impacts. Both backcountry and wilderness areas in Death Valley National Park share some of the issues that appear in high use/directed use zones, such as improper disposal of human waste, crowding or competition for sites in popular areas, and off road vehicle issues. In addition, these areas face problems with damage to sensitive archeological and natural resources, social trails, and user created route markers and campsites.

LNT principles address each of these problems, and research has shown that the principles can effectively alter visitor knowledge, behavior, and social and resource impacts (Marion and Reid, 2007). An awareness course and a variety of educational materials are offered online for free, and LNT provides additional trainer and master educator courses.

### **3.2 Tread Lightly!**

Similar to Leave No Trace, Tread Lightly! is a national nonprofit organization that teaches outdoor ethics and stewardship. The program seeks to balance the interests of outdoor recreationists with the need for environmental protection, primarily focusing on user groups that are involved with motorized and mechanized vehicles. Tread Lightly! provides training and educational materials, has instituted a restoration program, and seeks to promote five principles:

1. **Travel Responsibly:**  
Remain on established roads. Don't widen the road by going around obstructions, and cross streams at established crossings. Avoid wet areas, and in water, use designated waterways and launch sites.
2. **Respect the Rights of Others**  
Be conscientious of the rights of other users and private property owners, and avoid disturbing the experience of others. Allow others to pass you, and give right of way to those going uphill.
3. **Educate Yourself**  
Do your research before your trip. Familiarize yourself with maps, route, rules and regulations, take recreation skills classes, and learn how to operate equipment properly.
4. **Avoid Sensitive Areas**  
Avoid venturing off designated routes into meadows, lakeshores, wetlands, and streams to avoid disturbing sensitive habitats and soils. Refrain from damaging historical, archeological, or paleontological sites.
5. **Do Your Part**  
Pack out waste, reduce the impact or use of fires, refrain from spreading invasive species, and repair degraded areas. In general, leave a site in better condition than you found it, and be a good role model to others.

### **Tread Lightly! in Backcountry Corridor and Backcountry Exploration Zones:**

Death Valley has approximately 1,000 miles of dirt roads, more than any other national park. The park also attracts a user group of 4x4 recreationalists that value the opportunity to explore difficult backcountry routes to which these messages are particularly applicable. Education and adoption of the Tread Lightly!

messages may help mitigate problems with off road vehicle travel and resource damage, especially in sensitive areas such as the playas.

### 3.3 Wilderness Character

The primary mandate of the Wilderness Act is to preserve wilderness character. This is further reinforced by NPS policy, and is the primary consideration when making decisions that affect a wilderness area. The conceptual framework of wilderness character facilitates explaining the rationale behind management decisions to the public and communication among staff. Minimal regulation of visitor behavior requires staff to clearly articulate the values of preserving wilderness character and the ways in which visitors share that responsibility. Similarly, some circumstances warrant visitor restrictions, in which case communicating that these restrictions are in place to preserve wilderness character is equally important. Public awareness of these values may further enhance their experience.

Wilderness character may be described as the combination of biophysical, experiential, and symbolic ideals that distinguishes wilderness from other lands. These ideals combine to form a complex and subtle set of relationships between the land, its management, and the meanings people associate with wilderness. Wilderness character is considered to be comprised of qualities, five taken directly from the language of the Wilderness Act and one identified specifically by Death Valley National Park:

- *Untrammeled* – Wilderness is essentially unhindered and free from modern human control or manipulation. This quality relates to human activities that directly control or manipulate the components or processes of ecological systems inside wilderness.
- *Natural* – Wilderness ecological systems are substantially free from the effects of modern civilization. This quality captures effects of modern people on ecological systems inside wilderness since the time the area was designated.
- *Undeveloped* – Wilderness is essentially without permanent improvements or modern human occupation. This quality relates to the presence of non-recreational structures, construction, habitations, and other evidence of modern human presence or occupation.
- *Outstanding opportunities for solitude or a primitive and unconfined type of recreation* – Wilderness provides opportunities for people to experience solitude or primitive and unconfined recreation, including the values of inspiration and physical and mental challenge. This quality is primarily about the opportunity for people to experience wilderness, and is influenced by settings that affect these opportunities.
- *Added Values*: Wilderness preserves site specific ecological, geological, scientific, educational, scenic, and historical values of wilderness, including culturally significant resources and paleontological resources.
- *Intangible Values*: Wilderness also preserves intangible aspects, including the ethnographic value to the Timbisha Shoshone and ongoing traditional cultural uses by the Timbisha Shoshone within their Natural and Cultural Preservation Area and other special use areas.

Each of these qualities can be preserved by the adoption of Leave No Trace and Tread Lightly! principles and ethics.

### 3.4 Visitor Use Restrictions

While outdoor ethics messages have the potential to alter visitor behavior and impacts, sometimes a more direct management action may be necessary. Visitor use restrictions are in place to protect both the visitor



and resources. These restrictions, however, are only effective if the public is aware of their existence. Important or frequently violated visitor use restrictions, and the reasons behind them, should be incorporated into educational and interpretation messages. The messages should be delivered to the target audience or user group in manner that optimizes the audience's exposure, attention to, and reception of the message. A list of the most frequently violated park rules and regulations can be found on the park website, <http://www.nps.gov/deva/parkmgmt/rules-and-regulations.htm>. For additional visitor use restrictions enforced in Death Valley, consult the *Code of Federal Regulations*, the *Superintendent's Compendium*, the *United States Code*, and the *California Vehicle Code*.

It is important to note that while visitor use restrictions are in place for visitor and resource protection, excessive regulations and overly prominent or regulatory managerial presence can impact a visitor's sense of experiencing wilderness and facing challenges on one's own. Managerial contact ideally occurs outside rather than inside the wilderness. This has the added advantage of informing visitors before they potentially violate a restriction.

#### 4.0 ISSUE IDENTIFICATION

It is the two-fold goal of Death Valley National Park to provide visitors with opportunities for quality wilderness and backcountry experiences, as well as to minimize impacts on resources caused by visitor use. Visitors, either knowingly or inadvertently, have the potential to impact the experience of other visitors and the resource itself. Visitor actions and impacts can be classified into five types:

1. *Illegal actions* – violations of agency regulations and/or the Wilderness Act. They can often be addressed by informing the public where appropriate areas are for these activities
2. *Careless or thoughtless violations of regulations* – these violations include littering, exceeding group size restrictions, or camping in closed areas. They can often be mitigated by effective communication of regulations, or by facilitating responsible actions (i.e. providing litter bags).
3. *Unskilled actions resulting from lack of skills or knowledge* – these often are a result of once-recommended but out of date camping practices or inexperienced recreationalists. These can be remedied by promoting LNT education.
4. *Uninformed actions* – these actions, while not a violation, tend to intensify impacts yet might have been different with effective communication of information. For example, a large number of visitors entering the wilderness or backcountry at popular points might have been dispersed had visitors been aware of lesser-known entry points.
5. *Unavoidable Impacts* – even with the increase of LNT and other programs that teach low impact recreation, a minimum and unavoidable level of impact will occur. If the accumulation of these impacts becomes excessive, after implementing visitor education strategies, managers may consider limiting use as a last resort.

Education can be effective for addressing a variety of issues, but the message and mechanism for education will vary depending on the specific issue at hand. The majority of wilderness and backcountry issues at Death Valley are visitor use related, and have been identified in Chapters 1 and 2 of the Wilderness and Backcountry Stewardship Plan. While some are site specific, others are common to many of the areas of the wilderness and backcountry that receive higher use. The majority are resource stewardship issues, although some involve conflicts among visitors themselves, particularly in popular areas and high use seasons. The primary issues identified are:

- Improper disposal of human waste, especially in high use seasons and proximate to springs
- Unauthorized “maintenance” of cabins, alterations, or other user-created developments within the wilderness or backcountry

- Spur trails, cutting of switchbacks, multiple routes, and visitor created route markers
- Illegal off-road travel, including motorized travel on closed routes
- Illegal sandboarding and similar activities
- Collecting rocks from or hiking on playa when wet
- Out-of-bounds parking when lots are at capacity and unsafe shoulder parking and associated damage
- Disturbance to sensitive habitats by visitors (e.g. nesting riparian birds, or spring access for bighorn sheep)
- Collecting from and/or disturbance to archeological, historical, or other cultural sites
- Proliferation of out-of-bounds campsites, user defined campsites along routes, and size creep of existing campsites
- Crowding due to frequency of encounters with other parties
- Large groups exceeding site capacity
- Competition for campsites in high-use seasons

Education can address all of these issues, but the message and mechanism of that message should be tailored to the specific sites at which the issues occur and the audience or user group in question. Some of these issues can be mitigated by visitor restrictions, but Table I1 lists each issue, the problem with that issue, and the desired educational outcomes.

Table 1. Summary of common issues, problems, and desired educational outcomes (3 pages)

Issue	Problem	Desired Educational Outcome
Improper disposal of human waste, especially in high use seasons and proximate to springs	Water contamination and health risks; detracts from sense of solitude and visitor experience	Proper waste disposal techniques, Need to treat water
Unauthorized “maintenance” of cabins, alterations, or other user-created developments within the wilderness or backcountry	Damages historical resources; detracts from opportunity for solitude or primitive and unconfined recreation	Significance of historical and cultural resources and importance of protecting them; increase awareness of how user-created developments impact experience
Spur trails, cutting of switchbacks, multiple routes, and visitor created route markers	Creates soil compaction, erosional problems, and change in soil biota; alter drainage patterns; damages vegetation and sensitive habitats; detracts from visitor’s solitude and opportunity to explore their own route and take risks.	LNT messages (travel and camp on established and/or durable surfaces); ecological and social impacts
Illegal off-road travel	Damages sensitive habitats; harms vegetation and cause soil compaction and change in biota; can detract from the undeveloped quality of wilderness character	Tread Lightly! messages, increase understanding of impacts to landscape and to wilderness character
Illegal sandboarding	Damage to sensitive habitat (two endangered endemic species)	Increase awareness of Eureka Valley dune grass and the Eureka Dunes evening primrose – significance of endangered and endemic species and impacts of sandboarding
Collecting rocks from or hiking on playa when wet	Alters natural environment; damage to sensitive habitat	Increase awareness of how and why this damages the playa

Issue	Problem	Desired Educational Outcome
Out-of-bounds parking when lots are at capacity and unsafe shoulder parking and associated damage	Vegetation and soil damage; evidence of crowding detracts from solitude; safety risk	'Tread Lightly!' messages; alternate sites to visit in the park (disperse use)
Disturbance to sensitive habitats by visitors (e.g. nesting riparian birds, or spring access for bighorn sheep)	Damage to reproductive success and survival of riparian birds, water access critical to wildlife survival and therefore ecosystem health	Wildlife and wilderness are interdependent
Collecting from and/or disturbance to archeological, historical, or other cultural sites	These sites are valuable as cultural resources in and of themselves, and can also contribute to wilderness character.	Increase understanding of site significance and damage that collection and disturbance can cause
Proliferation of out-of-bounds campsites, user defined campsites along routes, and size creep of existing campsites	Vegetation trampling, soil compaction, change in soil and vegetative composition, visible visitor impacts decrease opportunity for solitude.	Increase LNT messaging and visitor understanding of experiential and resource impacts.
Crowding due to frequency of encounters with other parties	Impacts opportunity for solitude; (social conditions are more likely to affect visitor experience than the natural condition)	Adjust visitor expectations; Inform visitors of alternate locations
Large groups exceeding site capacity	Impacts opportunity for solitude, strongly affects visitor experience (more impacts at site than on a trail); vegetation loss; soil compaction; change in veg and soil composition	Increase awareness of group size limits; promote keeping groups small as possible or splitting groups (LNT), increase understanding of experiential and resource impacts
Competition for campsites in high-use seasons	Impacts opportunity for solitude, overall visitor experience, visitor conflicts	Adjust visitor expectations; inform visitors of alternate locations
Campfire proliferation	Ecological impacts (loss of wood debris where applicable, loss of organic matter in soil of burned area), impacts to opportunities for solitude, fire risk, importation of forest pests in firewood	Increase LNT education and understanding of impacts
Fire start potential	Safety hazard, potentially harmful ecological impacts	Educate visitors about risky actions that may start fire and promote the use of stoves or minimum impact fire building methods (pit, pan, or mound fires).

Issue	Problem	Desired Educational Outcome
Conflicts associated with technology	Change in visitor expectations (help is close by, GPS creates confidence to go anywhere, false sense of security), change in experience (loss of solitude, loss of the unknown, meeting wilderness on its own terms)	Emphasize commonly underestimated safety hazards, awareness of personal and gear/equipment limitations, portray the experiential value of a tech-free wilderness
Visitor safety	Underestimation of hazards, equipment, and ability, lack of knowledge about risks and safe practices	Emphasize commonly underestimated safety hazards, awareness of personal and gear/equipment limitations, educate about all potential risks
Presence of pets	Possibility of disease transmittal, impacts to vegetation, disruption of animal scent patterns and interactions	Educate visitors about disease and why pets are ecologically disruptive
Soundscape and night skies	Sounds and light generated by humans impact animal communication and behavior, as well as visitor experience and solitude	Educate visitors about ecological and experiential impacts, and how they can reduce their impacts in the park and at home

### Primary Issues:

#### Off-road Vehicles:

Off-road vehicle travelling and parking is an issue of particular concern due to frequency of occurrence and severity of impacts. Off-road parking occurs primarily in high use areas and seasons, as spillover from parking lots, and on roadsides, as visitors often pull over for photo opportunities. This issue is common to all user groups, and visitors are likely unaware of the effects of their actions.

The more serious issue of off-road vehicle travel primarily occurs at dune sites and playas. It is likely that most visitors are not conscious that they are violating a park regulation, either because they do not pay attention to the signs elsewhere in the park, or because they do not understand English. The presence of existing vehicle tracks from past violations may give the false indication that this is an accepted action. Vehicles entering the park from the south do not encounter informational kiosks warning them of park regulations and the danger of getting stuck. Off-road driving at Eureka Dunes may be more purposeful, and therefore may require a more direct mitigation method.

Off-road vehicle travel and parking damages sensitive habitats and vegetation, and causes soil compaction and a resulting change in biota. While tire tracks on the dunes may disappear quickly, they persist on the playas until the next flooding event. Out of bounds parking at popular sites is a visible sign of crowding, and can negatively impact visitor experience. In addition, vehicle use inside the wilderness boundary not only detracts from the undeveloped quality of wilderness character, but is also a violation of the Wilderness Act.

Out of bounds parking may be reduced if visitors are aware of alternate, less crowded sites, or if visitors are aware of the ecological damage caused by their actions. The user groups who drive vehicles in dune areas or on playas may be similarly unaware of their impacts, and may benefit from Tread Lightly! messaging, as well as further education about park regulations and the ecological impacts of their actions. Small signs or low, visually unobtrusive fencing placed at problem areas may be beneficial, but both tire tracks and signs are unsightly. If signs or low fencing is used, they would cause the least additional visual impact if placed close

the road. Mitigation measures that would not create an additional visual impact include increasing awareness at the visitor center and adding additional languages to the website and existing signs, although both of these measures would only reach a portion of the visitor population. Because off-road drivers at the dunes are more likely to be consciously violating rules, more direct mitigation methods may be necessary.

### **Collection and Disturbance of Resources**

Collection and disturbance of archeological, paleontological, geologic, historical, or other cultural resource sites poses a significant threat and irreversible damage to both the resources themselves and the opportunity for study and evaluation by archeologists. Death Valley is home to cultural resources of the California desert associated with prehistoric, historic, and contemporary Native American culture, patterns of western exploration, settlement, and mining endeavors, as well as distinctive, world renowned geology, and some of the most diverse and significant fossil records in the country.

While some illegal collecting of cultural sites occurs, the most common issue is the unintentional damage caused by well-meaning visitors who come across a mining or archeological site and bring an artifact to park staff. The issue of illegal collection will most likely require direct mitigation methods outside the scope of this education strategy, but the latter problem arises from visitors who want to be good stewards but lack the knowledge to do so. This group of well-meaning visitors would benefit from instructions for the proper way to bring cultural resources to the attention of park staff. Educational messages should emphasize the importance of not touching or moving the artifact, taking a photograph, and recording the exact location of the discovery.

### **Proliferation and Expansion of Campsites**

Campsites experience detrimental impacts from visitor use in the form of expansion of and vegetation loss around the sites themselves, and in the form of proliferation of new sites. Visitors who use existing sites cause expansion and vegetation loss due to large group size, and lack of knowledge about minimum impact camping techniques. Large party sizes and crowding during high use seasons lead to the proliferation of new sites, which exacerbates vegetation, soil, and social impacts, perhaps beyond the carrying capacity of the area.

This issue can be appropriately addressed through increased Leave No Trace messaging combined with informing visitors of alternate camping locations during high use seasons. It may also be necessary to adjust visitor expectations such that a visitor planning on camping at a popular location during a time of high visitation is aware of the decreased opportunities for solitude. Visitors who seek a solitary experience should be informed of locations where this is possible.

Leave No Trace education will inform visitors about keeping their group sizes small, which will improve both social and ecological impacts. LNT stresses camping on existing and durable sources, maintaining minimal footprint, and refraining from treading on vegetated or sensitive areas. LNT also encourages visitors to be respectful of the recreational experience of others. Opportunities to educate campers about outdoor ethics and minimum impact recreation are numerous. The park website, visitor center, and contact with staff during a (potential) permitting process present unobtrusive methods of education. These indirect methods are the most appropriate for wilderness visitors. At popular roadside sites where this issue is of particular concern, informational signs may be necessary.

## **5.0 AUDIENCES**

### **5.1 General Visitors**

The majority of backcountry visitors to Death Valley National Park do not stop at the visitor center, unlike at many other National Parks. This is primarily due to the large size and extensive road network of Death Valley, which provides a variety of options for entry into the park. Because of these circumstances, visitors often do not benefit from personal interactions with staff and the comprehensive interpretive

messages that are typical of park visitor centers elsewhere. Instead, visitors encounter the majority of on-site educational messaging at the kiosks on highway 190 and through roadside and site specific signage. Visitors have begun to rely more heavily on the internet as a source for off-site and pre-visit information.

### **5.1.1 Non-English Speaking Visitors**

As a park that is known worldwide for its extreme climate, dramatic landscape, and unique resources, Death Valley receives many international visitors. In the summer months, the majority of visitors to the park are international, and many do not speak English. As a result, this demographic is often unaware of visitor regulations, and signs in the park are only in English. Non-English speaking visitors often do not grasp the dangers associated with extreme climate, the vast remoteness, and the unavailability of help or rescue. While it is not feasible to display signs in every language, a greater effort will be made to reach non-English speaking visitors. The park website is an ideal mechanism to include foreign languages, because links to foreign language texts can be included without visually crowding the webpage, and foreign visitors are very likely to visit the website while planning their trip.

## **5.2 Long-Term Repeat Visitors**

Long-term repeat visitors to Death Valley are a distinct user group in that they tend to seek specific experiences at specific sites. They are typically aware of regulations, the terrain, and risks. As a result, they are unlikely to consult the website, kiosks, or stop at the visitor center. These factors make this group a particularly difficult demographic to reach with educational messages or when regulations change. Long-term repeat visitors have established expectations about sites, routes, and uses, and may resist potential changes, such as a requirement to obtain a permit or road/site closures. Messages directed to this group will require a thorough explanation of why the park is requesting a particular behavioral change.

## **5.3 Special Use Groups**

### **5.3.1 Jeeps and Other Drivers**

Death Valley is a popular destination for visitors seeking 4x4 driving opportunities. These visitors are especially susceptible to hazards associated with backcountry travel, and must be aware of rough road conditions, the likelihood of flat tires, and the scarcity of water and assistance. 'Tread Lightly!' messaging is especially applicable to this group, particularly with regards to driving etiquette such as letting other vehicles pass, keeping dust trails to a minimum, and assisting other visitors with vehicle problems.

### **5.3.2 Canyoneering**

Because of the technical nature of the sport, canyoneering groups leave behind webbing to avoid placing bolts. Abandoned webbing is an unavoidable consequence of the activity, but bolts should not be placed or replaced. General canyoneering ethics dictates that canyoneers should replace old webbing with new webbing and carry out the old webbing. Leave No Trace messaging should still be emphasized to avoid the installation of new bolts. The sport is growing in popularity, and minimum impact canyoneering ethics will be addressed in the permitting process.

### **5.3.3 Special Events**

Several types of special events occur in Death Valley National Park annually. The most notable of these groups is the Death Valley 49ers, a group that comes to the park each fall to celebrate the 1849 journey through Death Valley of several parties of gold-seekers, and attracts thousands of visitors. Three groups associated with the 49ers that impact the wilderness and/or backcountry are the Wagon Train, Equestrian Trail Riders, and 49er jeep tours. The Wagon Train travels from Wade Monument to Furnace Creek and stops along the way at Saratoga Springs, Ashford Junction, Salt Tanks, Tule Springs, and Desolation Canyon. The Equestrian Trail Riders travel 125 miles from Ridgecrest through the 20 Mule Team Route. In the past,

groups have ranged as large as 85-90 riders and can cause significant impact from vehicles, horses, and camping. Other special events that take place in Death Valley include the Enviro-Sports marathon through Titus Canyon and Panamint Valley Days, which involves jeep tours in the west side of the Panamint Mountains. Messages involving park regulations, specifics of special use permits, and minimum impact techniques can be addressed in person with each group, as these groups have traditionally maintained a positive relationship with the park. By working with the event organizers, key messages can also be included in event registration information to clarify expectations prior to arrival in the park.

#### **5.3.4 Researchers**

Scientists and others conducting research in Death Valley National park must first obtain a permit to do so. All permits that propose activities in wilderness are evaluated according to their impact on wilderness character. Those that propose a use prohibited by section 4(c) of the Wilderness Act are stringently evaluated through the Minimum Requirements Analysis. For a more detailed description of this process, see [www.wilderness.net/mrdg](http://www.wilderness.net/mrdg). Before completing the permit application, researchers are directed to a page informing them about preserving wilderness character and evaluation criteria.

#### **5.3.5 School and University Groups**

Over the past four years, approximately 140 education fee waivers have been issued per year to school and university groups visiting the park, although all school groups may not obtain fee waivers. While some groups are accompanied by the park's education specialist, many travel alone. At least 80 education fee waivers are issued per year to university geology and geography groups, many of whom travel and study in wilderness areas. These groups may or may not be familiar with park rules and regulations or backcountry and wilderness ethics. Some unsupervised groups collect rocks and vegetation without a permit, while some geology groups use rock hammers. The majority of these groups are most likely unaware of the illegality of their actions, and some believe that their status as an educational group exempts them from park rules and regulations. Large groups of any kind contribute to crowding and impact the visitors' sense of solitude, and should split into smaller groups. Both school and university groups would benefit from an overview of wilderness and backcountry ethics and park rules and regulations. This may be delivered in their signed fee waiver, through a brief orientation upon arrival in the park, or direct correspondence with group leaders before the group's arrival.

### **5.4 Commercial Services**

A few commercial services operations exist within the park, primarily guided hiking and backpacking. Vision Quest groups lead backpacking trips, coupled with solo journeys. For these groups, Leave No Trace Skills are particularly important. Many participants do not have previous experience with hiking, camping, or minimum impact techniques, and often create cairns or other resource alterations and disturbances. Because these groups all operate under a Commercial Use Authorization, the issuance of the permit is an appropriate time to address these problems and emphasize Leave No Trace ethics.

### **5.5 Park Staff**

It is especially important that park staff are aware of Leave No Trace principles, Tread Lightly! principles, wilderness character, park rules and regulations, and most importantly, the reasons and rationale behind them. Almost all park staff interface with visitors at some point, and visitors don't always distinguish among interpreters, law enforcement, maintenance, or other divisions. Because of this, all park staff should receive training on wilderness character and backcountry ethics.

#### **5.5.1 Interpretation**

Interpreters are skilled communicators and have an important opportunity to interface with visitors and communicate messages personally, which increases the likelihood that visitors will pay attention to, understand, and retain the message. Visitor center staff and front desk personnel can provide tailored information to visitors based on the visitor's activity and destination. Interpreters are ideal for communicating regulations and basic LNT messages and have a unique opportunity to explain the reasons behind them, either in a one-on-one interaction with a visitor, or in the context of a program or presentation.

#### **5.5.2 Law Enforcement**

Law Enforcement officers also have a high frequency of interaction with the public, although these interactions often occur too late, after the impact has been made. When enforcing rules and regulations, officers must be able to communicate why such regulations are in place. Visitors seeking solitude are often sensitive to the presence of law enforcement officers in the wilderness and backcountry, so it critical to reach visitors with wilderness and backcountry messages beforehand, and for law enforcement officers to understand the experiences that these visitors value.

#### **5.5.3 Resource Management**

Resource management staff spend time in some locations that are popular destinations, such as mine sites and springs, as well as remote wilderness and backcountry areas and are frequently camping overnight. Resource management staff also tend to have extended contact with researchers, so it is not only important they understand wilderness character and practice backcountry ethics, but be able to communicate messages as well.

#### **5.5.4 Maintenance**

Maintenance staff frequently interface with visitors in campgrounds and at trailheads, yet may not be able to properly field questions about wilderness areas, backcountry rules and regulations, and why they're important. This division would particularly benefit from wilderness character and backcountry ethics training.

## **6.0 MESSAGES AND DELIVERY MECHANISMS**

Basic messages that apply to many sites and issues (i.e. LNT, Tread Lightly!, and wilderness character information) should be featured prominently on the park website, visitor information kiosks, in the park newspaper, and at each of the park's visitor centers. The park website offers an opportunity to present these messages in a video and audio format, and can include podcasts and short video messages to increase visitor interest, retention, and to appeal to a broader audience. Video, audio, and other multi-media displays can also be featured in the visitor center, as well as a map large enough to display the wilderness boundary. Games, quizzes, and other interactive delivery mechanisms could be featured on the website or in the visitor center to target kids. The Junior Ranger book could be updated to include a more comprehensive wilderness page. The newly remodeled visitor center includes a backcountry desk within the visitor center that can help visitors the significance and responsibility of visiting the wilderness.

Specific messages and delivery mechanisms are identified in Table 2 for each site zoned as high use/directed use in at least one of the action alternatives in the Wilderness and Backcountry Stewardship Plan. During the planning process, educational messaging was identified as a first step management tool to address visitor capacity and resource degradation issues.



Table 2. Key messages and communication mechanisms for each area zoned for high use/directed use (8 pages).

Issue	Message	Audience	Sites	Mechanism
Improper disposal of human waste, especially in high use seasons and proximate to springs	Proper waste disposal techniques, Need to treat water, pack out waste during high use seasons	All audiences, particularly wilderness and backcountry overnight users and large overnight groups	Aguerberry point, Cottonwood Canyon/Marble Canyon hiking loop, Darwin Falls, Eureka Dunes, Indian Pass, Sidewinder Canyon, Skidoo, Surprise Canyon, Telescope Peak, Titus Canyon, Ubehebe Crater	<p><i>Personal communication</i> - explain proper human waste disposal or pack out techniques when issuing special use permits and backcountry/wilderness permits (if implemented) and in interpreter-visitor interactions</p> <p><i>Off-site non-personal education</i> - proper waste disposal techniques on website, visitor information kiosks, and visitor center display or pamphlets.</p> <p><i>On-site non-personal education</i> - visitor use information signs at backcountry trailheads and rules printed on permit</p>
Unauthorized “maintenance” of cabins, alterations, or other user-created developments within the wilderness or backcountry	Significance of historical and cultural resources and importance of protecting them; increase awareness of how user-created developments impact experience	Primarily long term repeat visitors (?)	Butte Valley and Warm Springs Cabins (backcountry), other cabin sites	<p><i>Personal communication</i>-deliver message when issuing permits (if implemented), establish cabin stewardship program to facilitate cabin maintenance and proper care for historic materials, other staff-visitor interactions</p> <p><i>Off-site non-personal education</i> –website, visitor information signs and kiosks, visitor center displays or pamphlets</p> <p><i>On-site non-personal education</i> – small, non-intrusive sign (non-wilderness backcountry sites), and rules printed on permit</p>

Issue	Message	Audience	Sites	Mechanism
Spur trails, cutting of switchbacks, multiple routes	LNT messages (travel and camp on established and/or durable surfaces); ecological and social impacts	All audiences	All popular wilderness and backcountry areas	<p><i>Personal communication</i> – deliver LNT messages when issuing permits (if implemented), one-on-one visitor interactions, incorporate into interpretive talks</p> <p><i>Off-site non-personal education</i>- emphasize LNT messaging on website, visitor information kiosks, visitor center displays/pamphlets</p> <p><i>On-site non-personal education</i> – visitor use information signs at trailheads (non-wilderness), and rules printed on permit</p>
Visitor created route markers	LNT messages, impact on wilderness character, primitive recreation and discovery as an aspect of the wilderness experience	All audiences	All popular backcountry and wilderness use areas	<p><i>Personal communication</i> – deliver LNT messages when issuing permits (if implemented), one-on-one visitor interactions, incorporate into interpretive talks</p> <p><i>Off-site non-personal education</i>- emphasize LNT messaging on website, visitor information kiosks, visitor center displays/pamphlets</p> <p><i>On-site non-personal education</i> – visitor use information signs at trailheads (non-wilderness), and rules printed on permit</p>

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Issue	Message	Audience	Sites	Mechanism
Illegal off-road travel	Tread Lightly! messages, increase understanding of impacts to landscape and to wilderness character	Jeep and 4WD users, non-English speaking visitors	Eureka Dunes, Racetrack Playa, other playas	<p><i>Personal communication</i> – work with Jeep and 4WD rental companies , one-on-one visitor interactions</p> <p><i>Off-site non-personal education</i> – Tread Lightly! messaging on website, visitor information kiosks, visitor center displays, backcountry roads pamphlet, give educational pamphlet to Jeep/4WD rental companies, increase communication in popular foreign languages</p> <p><i>On-site non-personal education</i> – include in visitor information signs at playa and in other languages, and rules printed on permit.</p>
Illegal sandboarding	Increase awareness of Eureka Valley dune grass and the Eureka Dunes evening primrose – significance of endangered and endemic species and impacts of sandboarding	General visitors	Eureka Dunes	<p><i>Personal communication</i> – one-on-one interactions with visitors who are visiting dunes, incorporate into interpretive programs about the dunes</p> <p><i>Off-site non-personal communication</i> – website, visitor center display, visitor information kiosks</p> <p><i>On-site non-personal communication</i> – visitor information sign at dunes, and rules printed on permit</p>

Issue	Message	Audience	Sites	Mechanism
Collecting or defacing rocks from or hiking on playa when wet	Increase awareness of how and why this damages the playa	All audiences, especially non-English speaking visitors	Racetrack Playa and other playas	<p><i>Personal communication</i> – one-on-one interactions with visitors who are visiting Racetrack Playa, incorporate into interpretive programs about the playas</p> <p><i>Off-site non-personal communication</i> – website (add links to information in foreign languages), visitor center display, visitor information kiosks</p> <p><i>On-site non-personal communication</i> – visitor information sign at playa, include information in common foreign languages, and rules printed on permit</p>
Out-of-bounds parking when lots are at capacity and unsafe shoulder parking and associated damage	Tread Lightly! messages; alternate sites to visit in the park (disperse use)	All audiences	Indian Pass, Mosaic Canyon, Natural Bridge	<p><i>Personal communication</i> – visitor center staff can recommend alternate sites to visit during high use seasons and days</p> <p><i>On-site non-personal communication</i> – friendly “no-parking” signs at lots with brief explanation</p>
Disturbance to sensitive habitats by visitors (e.g. nesting riparian birds, or spring access for bighorn sheep)	Wildlife and wilderness are interdependent	All audiences, especially backpackers	Cottonwood Canyon, Marble Canyon, Titus Canyon	<p><i>Personal communication</i> – educate visitors when issuing special use or backcountry permits (if implemented), incorporate into interpretive programs/messaging</p> <p><i>Off-site non-personal communication</i>- website, visitor center information, informational kiosks</p> <p><i>On-site non-personal communication</i> – visitor information signs at trailhead, and rules printed on permit</p>

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Issue	Message	Audience	Sites	Mechanism
Collecting from and/or disturbance to archeological, historical, or other cultural sites	Increase understanding of site significance and damage that collection and disturbance can cause	All audiences	Eureka Dunes, Keane Wonder Mine, Mesquite Flat Dunes, Skidoo Historic Site, Leadfield, Titus Canyon Petroglyphs	<p><i>Personal communication</i> – educate visitors when issuing special use or backcountry permits (if implemented), incorporate into interpretive programs/messaging</p> <p><i>Off-site non-personal communication</i>- website, visitor center information, informational kiosks</p> <p><i>On-site non-personal communication</i> – visitor information signs in non-wilderness, and rules printed on permit</p>
Proliferation of out-of-bounds campsites, user defined campsites along routes, and size creep of existing campsites	Increase LNT messaging and visitor understanding of experiential and resource impacts.	Backpackers and overnight campers	Cottonwood Canyon/ Marble Canyon loop, Eureka Dunes, Telescope Peak	<p><i>Personal communication</i> – educate visitors when issuing permits (if implemented)</p> <p><i>Off-site non-personal communication</i> – website, visitor center information, informational kiosks</p> <p><i>On-site non-personal communication</i> – signs at trailheads in non-wilderness, and rules printed on permit</p>
Crowding due to frequency of encounters with other parties	Adjust visitor expectations; Inform visitors of alternate locations	All audiences	All popular wilderness and backcountry sites	<p><i>Personal communication</i> – inform visitors of high use areas, especially during peak seasons, and suggest alternate locations for those seeking solitude. Encourage large groups to split into smaller groups</p> <p><i>Non-personal off-site communication</i> – website and kiosk information about high use locations, and encourage large groups to split into smaller groups</p>

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Issue	Message	Audience	Sites	Mechanism
Large groups exceeding site capacity	Increase awareness of group size limits; promote keeping groups small as possible or splitting groups (LNT), increase understanding of experiential and resource impacts	Backpacking and camping groups, especially special use groups and Boy Scouts	Cabin sites, Cottonwood Canyon/Marble Canyon loop, Indian Pass, Eureka Dunes, Telescope Peak	<p><i>Personal communication</i> – educate groups when issuing permits, direct contact with large group/special group leaders</p> <p><i>Non-personal off-site communication</i> – website, informational kiosks, visitor center</p>
Competition for campsites in high-use seasons	Adjust visitor expectations; inform visitors of alternate locations	Backpackers and campers	Cottonwood Canyon/Marble Canyon loop, Telescope Peak (?)	<p><i>Personal communication</i> – inform visitors of high use conditions or inform of alternate locations when issuing permits (if implemented)</p> <p><i>Non-personal off-site communication</i> – website and kiosk information about high use location and seasons, social network site updates</p>
Campfire proliferation	Increase LNT education and understanding of impacts	Backcountry roadside campers, Backpackers and campers, special use groups	Most backcountry roads, Cottonwood Canyon/Marble Canyon, and Eureka Dunes,	<p><i>Personal communication</i> – educate visitors when issuing permits (if implemented)</p> <p><i>Off-site non-personal communication</i> – website, visitor center information, informational kiosks</p> <p><i>On-site non-personal communication</i> – signs at trailheads in non-wilderness, and rules printed on permit</p>

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Issue	Message	Audience	Sites	Mechanism
Fire start potential	Educate visitors about risky actions that may start fire	Backpackers and campers	Backcountry and wilderness campsites	<p><i>Personal communication</i> – educate visitors when issuing permits (if implemented)</p> <p><i>Off-site non-personal communication</i> – website, visitor center information, informational kiosks</p> <p><i>On-site non-personal communication</i> – signs at trailheads in non-wilderness, and rules printed on permit</p>
Conflicts associated with technology	Emphasize commonly underestimated safety hazards, awareness of personal and gear/equipment limitations, portray the experiential value of a tech-free wilderness	All audiences, especially non-English speaking visitors and Jeep/4WD users	All wilderness and backcountry locations	<p><i>Personal communication</i> – Staff-visitor interactions, coordinate with Jeep/4WD rental companies, continued coordination with GPS companies</p> <p><i>Off-site non-personal communication</i> – website (multiple languages), visitor center, visitor information kiosks</p> <p><i>On-site non-personal communication</i> – visitor information signs at trailheads in non-wilderness</p>
Visitor safety	Emphasize commonly underestimated safety hazards, awareness of personal and gear/equipment limitations, educate about all potential risks	All audiences, especially non-English speaking visitors	All wilderness and backcountry locations	<p><i>Personal communication</i> – Staff-visitor interactions, continued coordination with GPS companies</p> <p><i>Off-site non-personal communication</i> – website (multiple languages), visitor center, visitor information kiosks</p> <p><i>On-site non-personal communication</i> – visitor information signs at trailheads in non-wilderness</p>

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<b>Issue</b>	<b>Message</b>	<b>Audience</b>	<b>Sites</b>	<b>Mechanism</b>
Presence of pets	Educate visitors about disease and why pets are ecologically disruptive	All audiences	Popular wilderness and backcountry areas such as Fall, Natural Bridge, and Mosaic Canyons as well as Eureka Dunes and the Mesquite Flat Dunes	<i>Personal communication</i> – Staff-visitor interactions  <i>Off-site non-personal communication</i> – website, visitor center, visitor information kiosks
Soundscape and night skies	Educate visitors about ecological and experiential impacts, and how they can reduce their impacts in the park and at home	All audiences	All wilderness and backcountry locations	<i>Personal communication</i> – interpretive programs  <i>Off-site non-personal communication</i> – website, visitor center, visitor information kiosks



## 7.0 EVALUATION OF SUCCESS

A successful education strategy will result in a reduction in the magnitude of each of these issues. Table 4 in Chapter 2 lists proposed standards for each high use wilderness or backcountry site. Implementation of the education strategy should result in an improvement at each of these sites such that the standards are not exceeded. If the standards continue to be exceeded, more direct management actions may be necessary.

The backcountry sites where problems are occurring are regularly visited by park staff, so staff should be able to maintain a sense of whether the issue is improving or the standards are continuing to be reached. For sites and issues that occur within wilderness, indicators, measures, and standards will be tracked through a formal monitoring strategy. Visitor perceptions and experiences can be evaluated as part of annual scorecards or approximately every five years through backcountry visitor surveys. Visitor Use surveys may be conducted by the NPS Social Science Division or through university partners.

### 7.1 Relationship to Monitoring Indicators, Measures, and Standards

The success of this education strategy can be largely evaluated through the wilderness character monitoring strategy (see Appendix G). The methods used to assess conditions and track change in wilderness character in this monitoring strategy are based on the publication *Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System* (Landres and others 2008), with additional qualities, indicators, and measures that are specific to the Death Valley Wilderness.

A successful education strategy should result in an improvement in all six qualities of wilderness character by improving visitor experience and reducing resource impacts. For example, if disturbance to sensitive habitats is reduced through visitor education, then this should result in an improvement in the measure that captures the change in demography or composition of communities. This may result in an improvement in the “plant and animal species and communities” indicator, and in turn, an improvement in the natural quality. Some indicators and measures of wilderness character track change in factors related to visitor experience. The amount of visitor use and visitor encounters in certain sites may be reduced by informing visitors of alternate sites to visit during high use seasons. This results in an improvement to that measure, followed by an improvement in the indicator “remoteness from sights and sounds of people inside the wilderness,” which leads to an improvement in the opportunity for solitude primitive and unconfined recreation.

Standards are the minimum acceptable condition for each measure, or a threshold that measures should not exceed. They serve as triggers for management actions, so where measures are exceeding standards in many wilderness sites, the education strategies should be employed as a first mitigation method. If measures continue to reach or exceed standards, despite increasing visitor and staff education, then more direct management actions may be necessary.

### 7.2 Visitor Perceptions

Altering visitor perceptions of their own actions is an integral part of this education strategy. The goal may be to alter what a visitor perceives to be acceptable, ethical camping practices, or their perception of how the light and sound they’re generating is affecting others. Just as important as altering perceptions of their own actions, is a visitor’s perceptions of the actions of others, the condition of the resource, and the overall wilderness and backcountry experience. Visitor perception is an important metric in evaluating the success of this strategy.

For some issues, it is safe to assume that visitor perceptions improve as the issue improves. For example, if park staff begin to notice significantly fewer incidences of improperly disposed human waste, then it follows that a visitor's sense of solitude and overall experience also improves.

In some cases, the standard is measured by visitor complaints. For example, the standard for crowding at Racetrack Playa and Homestake Dry Camp is less than five complaints about crowding per year. An improvement in visitor perceptions of crowding in this area should result in fewer complaints about crowding per year. In most cases, however visitor perceptions are less quantifiable. Staff may be able to get a sense for trends in visitor perceptions through informal interactions and conversations, but a more reliable, thorough evaluation will result from the park's periodic backcountry surveys. Generally, there are three aspects of visitor experience: encounter rates on trails and at campsites, user-to-user- and activity conflicts, and overall preferences, likes, and dislikes.

*Encounter Levels on Trails and at Campsites:*

Park staff or volunteers can assess this aspect by recording individuals and groups encountered each day while mimicking the speed and distance of a typical visitor, and repeating in the same location over a period of time. An alternate approach is to talk to visitors themselves. Formal evaluative questions, such as asking about how many individuals or groups they encountered, and how it affected their experience, should be incorporated into official backcountry surveys with OMB approval.

To assess visitor experiences in a campsite, staff can record metrics such as how many other occupied campsites are visible from each occupied camp, and other intrusions such as light and noise. Similar to trail encounters, staff can ask visitors about their experiences.

*User-to User Conflicts:*

All visitor behavior affects that of other visitors in some way, either positively or negatively. The extent to which visitors are affected by other visitor's behavior depends on each visitor's expectations and perceptions. Because of this, the success of the education strategy on this aspect of visitor experience is particularly difficult to assess. Visitors who are from a dense urban area may not be as negatively affected by the behavior of other visitors, while some users who may be used to primitive, isolated experiences may perceive the behavior of others to be intrusive and bothersome. Due to the varying level of visitor sensitivity, the success of the education strategy on visitor perceptions of other visitor's behavior can be evaluated through informal conversations with visitors themselves but should be more methodically evaluated through OMB approved survey questions.

*Preferences, Likes, and Dislikes:*

As with user-to-user conflicts, visitor preferences, likes, and dislikes should also be incorporated into the park's backcountry surveys. Staff will want to ask about trail conditions, campsite conditions, crowding, waste, and other issues specific to the strategy, although questions asked of visitors must be consistent. In addition, questions asked should be phrased in a neutral, non-leading way. Ideally, visitor perceptions will improve because the issue itself is improving, and because the education strategy should lead to more accurate visitor expectations about their experience.

## **8.0 IMPLEMENTATION**

### **8.1 Training**

All park staff who interface with visitors and/or wilderness have a responsibility to understand park regulations, wilderness character, backcountry ethics, be able to communicate these concepts to the public, and practice proper wilderness and backcountry stewardship techniques themselves.

It is the responsibility of the wilderness coordinator to coordinate with division chiefs to ensure that staff are trained in wilderness character concepts, Leave No Trace, and Tread Lightly! principles. This is equally important for seasonal employees, so workshops should be conducted at least once a year when seasonals begin work. The park may choose to do one large training session for all employees, but supervisor should ensure that employees understand how these concepts relate to their particular job.

It will be beneficial for protection and resource staff to take the free *Wilderness Act* course at <http://eppley.org>. Supervisors may need to take the entire course, while other employees may only need to take the part of the course dealing with wilderness character and prohibitions. However, it is preferable that wilderness character training be engaging, thought provoking, and lead to discussions about wilderness character at Death Valley and how it relates to each person's job. More information about wilderness character training is available in the forthcoming *Keeping it Wild in the National Park Service: A User Guide to Integrating Wilderness Character into Park Planning, Management, and Monitoring*. Further resources are available at <http://share.nps.gov/wci>.

Leave Not Trace offers a free *Online Awareness Course* at [www.lnt.org/training](http://www.lnt.org/training), which takes approximately (30-60 min). The park may consider sponsoring a staff member to become a Master Educator or requesting the help of a travelling trainer. Free resources are available on the Leave No Trace website, and by request from the organization.

Tread Lightly! offers a similar 30-45 minute *Online Awareness Course* at [www.treadlightly.org](http://www.treadlightly.org), as well as an 8-hour *Tread Trainer* course which could qualify a staff member to train other park employees. Resources and videos are also available on the organization's website.

## 8.2 Priorities for Implementation

Action items that are no or low cost can begin implementation within the fiscal year. Other action items should be incorporated into updates of the five year work plan as part of the Resource Management Strategic Plan. The park may want to consider establishing a sign committee to address signage concerns and needs called for in this strategy and others. Responsibilities and timelines are presented on Table 3.

### 8.2.1 Staffing Responsibility and Timeline

Table 3. Timeline for implementation.

Action Item	Staffing & Responsibility	Fiscal Year to Submit for Funding	Target Implementation Fiscal Year
<b>No or Low Cost Implementation Items</b>			
In-house staff training	Wilderness Coordinator will coordinate with Division Chiefs	N/A	FY 2012
Formal LNT Master Educator or Trainer Courses for select staff	Wilderness Coordinator and Education Specialist	FY 2012	FY 2012
All “personal communication” messages (visitor interactions, incorporate into interpretive programs)	All staff that interact with the public, particularly Interpretation	N/A	FY 2013
Website messages and incorporating other languages into website	Webmaster, Interpretation staff, and Wilderness Coordinator	N/A	FY 2013
Kiosk information, pamphlets	Chief of Interpretation and Wilderness Coordinator	FY 2013	FY 2013-2014
<b>Capital Investment Items</b>			
Visitor Center displays and updates (including Stovepipe rehab)	Chief of Interpretation and Wilderness Coordinator	FY 2013	FY 2014-2016
Visitor information signs at sites and trailheads	Wilderness Coordinator and Sign Committee?	FY 2014	FY 2015-2016
Backcountry visitor surveys	Wilderness Coordinator and others	Every 5 years	Every 5 years

## **APPENDIX J: DETERMINATION OF EXTENT NECESSARY FOR COMMERCIAL SERVICES**

### **1.0 INTRODUCTION**

This appendix evaluates the extent to which commercial services in wilderness are necessary for activities that are proper for realizing the recreational and other purposes of wilderness areas within Death Valley National Park. This evaluation considers both proposed and ongoing commercial services in wilderness. This evaluation complies with the Wilderness Act and applicable NPS wilderness policies.

#### **1.1 Authorities**

The Wilderness Act was passed in 1964 to “secure for the American people of present and future generations the benefits of an enduring resource of wilderness.”<sup>1</sup> Section 4(c) of the Wilderness Act explicitly bars “commercial enterprises within designated wilderness areas.”<sup>2</sup> An exception to this ban, subject to limitations, is provided for commercial services such as guides and outfitters in section 4 (d) 6, which states that “commercial services may be performed within the wilderness areas designated by this Act to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas.”<sup>3</sup> “Wilderness purposes” are defined in section 4 (b) of the Act as “recreational, scenic, scientific, educational, conservation, and historical use.”<sup>4</sup>

NPS policy also governs management of wilderness areas in national parks. Under the 2006 NPS Management Policies, commercial services in wilderness must meet the “necessary and appropriate” test of the National Park Service Concessions Management Improvement Act of 1998,<sup>5</sup> and must be consistent with the application of the minimum requirement concept.<sup>6</sup> Commercial services also cannot be allowed if they would compromise wilderness character.

### **2.0 DEFINITIONS AND AUTHORIZING INSTRUMENTS**

A “commercial service” is defined as any service that is offered to the general public and is undertaken for, or results in compensation, monetary gain, benefits or profit to an individual, organization, or corporation, whether or not such an entity is organized for such purposes or recognized as non-profit. The park issues Commercial Use Authorizations (CUAs) and Special Use Permits (SUPs) for both types of activities. Group activities in which there is no paid staff, no goods or services are sold or transferred for money, and where all commissary is pooled, and in which the unexpended balance for commissary is reissued to the members at the conclusion of the activity are not considered to be commercial services. Educational programs offered through accredited schools, colleges, and universities (as defined in NPS Reference Manual 22, ch.10, §1.3) are not considered to be commercial services, even if the trip involves use of paid instructors or guides.

#### **2.1 Commercial Use Authorizations**

A Commercial Use Authorization is a permit authorizing suitable commercial services to park visitors in limited circumstances. Under PL 105-391, a CUA may be issued only to authorize services that:

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<sup>1</sup> Wilderness Act, 16 USC 1131 (a)

<sup>2</sup> Wilderness Act, 16 USC 1133 (c)

<sup>3</sup> Wilderness Act, 16 USC 1133 (d) (5)

<sup>4</sup> Wilderness Act, 16 USC 1133 (b)

<sup>5</sup> NPS Concession Management Improvement Act of 1998, Public Law No. 95-391

<sup>6</sup> NPS Management Policies 2006 6.4.4.

- 1) are determined to be an appropriate use of the park;
- 2) will have minimal impact on park resources and values; and
- 3) are consistent with the purpose for which the park was established, as well as all applicable management plans and park policies and regulations.

Activities allowed under a commercial use authorization are often outfitter and guide activities including guided hiking and backpacking, guided bicycle tours, art and photography workshops, and others. The authorization allows entities to charge for supplying equipment or guiding services.

#### *Commercial Filming and Photography*

Any filming, photography, videography, or audiography conducted within the park by individuals who receive compensation from any entity, whether for-profit, not-for-profit, or governmental is considered a commercial service. NPS policy limits all commercial filming and photography in wilderness to those that are “necessary or proper for providing educational information about wilderness uses, resources or values, or necessary for other wilderness purposes.”

## **2.2 Special Use Permits**

Special Park Uses are activities that provide a benefit to an individual, group or organization rather than the public at large; require written authorization and some degree of management control from the NPS in order to protect park resources and the public interest; is not prohibited by law or regulation; and is neither initiated, sponsored nor conducted by the NPS.

Activities include but are not limited to weddings, ceremonies, First Amendment activities, festivals, concerts, cultural programs, sporting events, and public spectator attractions. In some cases, an activity authorized under a Special Use Permit (SUP) may qualify as a commercial service. Commercial services authorized under SUPs will be subject to the limitations described below.

## **3.0 GEOGRAPHIC CONTEXT OF DEATH VALLEY NATIONAL PARK WILDERNESS**

The Death Valley National Park Wilderness was designated by Congress in the California Desert Protection Act of 1994 to preserve “a public wildland resource of extraordinary and inestimable value for this and future generations.” The Death Valley National Park Wilderness at 3,102,456 acres is the largest named area of wilderness in the continental United States and includes 91% of the Park. These wilderness lands are parceled by an extensive network of backcountry roads and highways into forty four smaller wilderness units, ranging in size from 494,000 acres in the Cottonwood Mountains to several units less than 1,000 acres. Approximately 40 primitive dirt roads ranging from one to 15 miles in length are “cherry-stemmed” into some of these wilderness units.

In general, Death Valley National Park Wilderness begins:

- ✓ 300' from centerline of road along Hwy 190
- ✓ 200' from centerline of most of the remaining Park paved roads
- ✓ 50' from centerline along most dirt roads, such as the Mosaic Canyon Road and Devil's Golf Course Road.

## **4.0 COMMERCIAL SERVICES IN THE DEATH VALLEY NATIONAL PARK WILDERNESS**

### **4.1 Wilderness Activities**

Congress has delegated the management of the Death Valley National Park Wilderness to the National Park Service (NPS). The NPS is required to consider the effects of commercial use in the Death Valley National

Park Wilderness as part of its delegated responsibility to maintain the wilderness character of the lands under its charge. The text of the Wilderness Act and its legislative history indicate that commercial services in wilderness were intended by Congress to be subject to limits. Commercial services may be allowed, but only to the extent they are necessary for activities that are proper for realizing the wilderness purposes of the Act.

Congress mandated that commercial services be limited in order to ensure that the goals of the Wilderness Act would be met. First, the Wilderness Act requires that recreational opportunities be “primitive.” National Park Service policy also states that parks should “Provide opportunities for forms of enjoyment that are uniquely suited and appropriate to the superlative natural and cultural resources found in the parks.” NPS policy states that in wilderness, those opportunities include adventure: “[w]ilderness provides opportunities for physical and mental challenge, risk and reward, renewal, self-reliance...” NPS policy also states that visitors need to “accept wilderness on its own unique terms” including “the assumption of the potential risks and responsibilities involved in using and enjoying wilderness areas.” Commercial guide services may diminish the “primitive” experience that Congress intended to preserve when it passed the Wilderness Act. Many guiding operations expressly try to reduce risk, mental and physical challenge, and the need for self-reliance for their commercial clients.

Second, the Wilderness Act requires NPS to protect “wilderness character.” Wilderness character is the combination of biophysical, experiential, and symbolic qualities that distinguishes wilderness from all other lands. It includes the untrammeled, natural, undeveloped, and experiential (solitude, primitive and unconfined recreation) qualities that are listed in section 2 (c) of the Wilderness Act.

## **4.2 The Wilderness Act**

The vast majority of Death Valley NP (91%) is designated as federally protected wilderness by the California Desert Protection Act of 1994. The Wilderness Act was passed in 1964 to “secure for the American people of present and future generations the benefits of an enduring resource of wilderness.” Section 4(c) of the Wilderness Act explicitly prohibits “commercial enterprises within designated wilderness areas.” An exception to this ban, subject to limitations, is provided for guides and outfitters in section 4 (d)(5), which states that “commercial services may be performed within the wilderness areas designated by this Act to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas.” “Wilderness purposes” are defined in section 4 (b) of the Act as “recreational, scenic, scientific, educational, conservation, and historical use.”

In addition, commercial services must be consistent with the application of the minimum requirement concept discussed below in Section 4.7.

## **4.3 Wilderness Character**

The Wilderness Act mandates preservation of wilderness character as the central goal of wilderness management. Wilderness character embodies three primary ideals:

- Natural environments relatively free from modern human manipulation and impacts;
- Personal experiences in natural environments that are relatively free from the encumbrances and signs of modern society; and
- Symbolic meanings of humility, restraint, and interdependence in how individuals and society view their relationship to nature.

These ideals are embodied in the Wilderness Act, particularly in section 2(c), which defines wilderness as possessing these qualities: untrammeled, natural, undeveloped, and having outstanding opportunities for solitude or a primitive and unconfined type of recreation. Wilderness may also contain scenic, scientific, educational, or historical features that contribute to its wilderness character. Wilderness character is also

reflected in section 4(c) of the Wilderness Act, which prohibits various activities, structures, and tools, as well as commercial enterprise.

The wilderness character of Death Valley National Park Wilderness specific to each quality of wilderness character has been described in detail in a geospatial analysis (Tricker et al. 2012) and is summarized in Section 3.2 of the Wilderness and Backcountry Stewardship Plan.

In order to prevent the degradation of wilderness character, NPS must ensure that natural resources are protected from damage that can result from overuse, and that outstanding opportunities for solitude are preserved. In the Death Valley National Park Wilderness, wilderness character is preserved in part through the use of the commercial and special park use permit system, which tracks the amount commercial services in the park and prevents overuse in popular or more easily accessed areas.

#### **4.4 Extent Necessary Determination and Legal Framework**

The purpose of this section is to determine limits on commercial use in the wilderness in accordance with the requirements of the Wilderness Act.

##### **Proper Activities in Wilderness**

Section 4 (d)(6) of the Wilderness Act only allows commercial services which are “proper for realizing the recreational or other wilderness purposes of the areas.” Proper uses of wilderness are further limited by Section 4(c) of the Wilderness Act, which prohibits public use of motor vehicles, other forms of mechanical transport, motorized equipment, and landing of aircraft. NPS policy states that recreational uses in wilderness will be of a nature that:

- Enables the areas to retain their primeval character and influence;
- Protects and preserves natural conditions;
- Leaves the imprint of man’s work substantially unnoticeable;
- Provides outstanding opportunities for solitude or primitive and unconfined types of recreation; and
- Preserves wilderness in an unimpaired condition.

These guidelines apply equally to commercial and noncommercial public use. The Wilderness Stewardship Plan addresses the types of activities that are appropriate in Death Valley National Park Wilderness.

The 2012 Death Valley National Park Wilderness and Backcountry Stewardship Plan and Environmental Assessment identifies the following types of recreational activities as appropriate in wilderness subject to limitations imposed for the purpose of protecting park resources and visitor safety: hiking, backpacking, photography, horse and pack animal trips, trail running, and volunteer stewardship activities under the direction of the NPS. Section 2.6.8. of the plan also identifies and limits these specialized recreational activities: sandboarding, peak summitting and registration, long distance backpacking, caving, climbing, and canyoneering.

##### **Purposes of Wilderness**

After determining whether an activity is proper, NPS must determine the extent to which that activity is necessary to realize the wilderness purpose of the area. It does that by determining the number of commercial visitors needed to realize the wilderness purposes of a given area. In this document, each wilderness purpose is analyzed separately in order to determine the extent of commercial services, if any, that may be required in order to realize a given purpose.

##### **1. Recreation**



All visitors to the Death Valley National Park Wilderness help to realize the recreational purpose. The recreational purpose is realized when people are engaged in proper activities in wilderness. Hiking, backpacking, horseback riding, nature study, photography are just a few examples of the many ways that visitors help to realize this purpose.

## 2. Education

While many wilderness visitors are engaged in some type of informal, self-directed education, formal education is also an appropriate activity that is necessary to realize the educational purpose.

Examples of formal education that help to realize the educational purpose of wilderness include, but are not limited to the following:

- “How to” education on wilderness related topics, more advanced outdoor “skills” training;
- Coursework on wilderness values, ethics or philosophy;
- Coursework on scientific aspects of wilderness ecology;
- Programs specifically designed to teach residents of urban areas, particularly inner-city youth, wilderness skills;
- Making of educational films about wilderness

Films focused on displaying scenic beauty rather than providing education on a topic may more properly be considered to fulfill the “scenic” purpose described below. NPS policy limits all commercial filming and photography in wilderness to those that are “necessary or proper for providing educational information about wilderness uses, resources or values, or necessary for other wilderness purposes.”

## 3. Scenic

All visitors to the Death Valley National Park Wilderness help to realize the scenic purpose. Wilderness possesses a particular type of scenery--natural and untrammeled. The scenic purpose is realized when visitors observe the natural landscape of wilderness. It is also realized when people take photographs of scenery and share them with others outside of the wilderness. As with the educational purpose, however, there is a deeper, more formal appreciation of scenery that is enjoyed by photographers and other artists. Commercial services can help realize this purpose by offering photography, painting, or even writing workshops that focus on appreciating the wilderness resource and interpreting the wilderness aspects of the scenery.

## 4. Conservation

Actions that realize the wilderness purpose of conservation help to maintain the wilderness in a largely natural and untrammeled state, with native biodiversity intact and natural processes uninterrupted.

Examples of activities in wilderness that help to realize the conservation purpose include, but are not limited to:

- Ecological restoration projects
- Trail building and maintenance
- Species preservation activities
- Eradication or removal of non-native invasive species

Occasionally a commercial group conducts a “service trip” that includes conservation work. In Death Valley NP, however, these groups are not able to work independently of NPS control and supervision. They are designated as volunteers. Such trips are therefore noncommercial administrative use. While they would be required to obtain the appropriate authorization (CUA or SUP) to conduct a commercial activity in the park, they are not subject to the requirements of this Extent Necessary Determination.

## 5. Historic

Visitors help to realize the historic purpose of Death Valley National Park Wilderness when they encounter the land in a state that is representative of earlier historical periods. The historic purpose is realized by

maintaining the wilderness character of the land, by primitive recreation in the wilderness, by the provision of opportunities for solitude, and by enjoying the scenic wonders of the natural and untrammeled landscape.

#### 6. Scientific

Realizing the scientific purpose means allowing scientific research and monitoring that is specific to wilderness. These scientific proposals must undergo analysis to ensure that the proposed activities do not impair wilderness character and cannot be conducted outside of wilderness. Unlike conservation activities, scientific activities fall on a spectrum from administrative to independent: Some are conducted by the agency, some are conducted by academics but sponsored or overseen by the agency, and some are conducted by independent academics or graduate students. None of these uses are commercial and are administered under a separate process.

### **4.5 Analysis of Extent Necessary in Death Valley**

This section describes the purposes used to determine the extent necessary for wilderness commercial services in the Death Valley National Park Wilderness and Backcountry Stewardship Plan of 2012. All future proposed commercial activities in Death Valley National Park Wilderness not specifically analyzed by this plan will be assessed using a similar process to determine whether or not they fulfill the purposes of wilderness. If commercial activities are not necessary to meet the purpose of wilderness, they will be denied. Additional purposes from the list in Section 4.4 of this appendix may apply to these unforeseen future commercial service determinations. Implementation of the Extent Necessary Determination will be integrated into Death Valley NP's CUA/SUP application procedures.

#### A. Overnight Use

##### *Recreational Purpose*

If a zone is substantially full with noncommercial visitors, then commercial visitors are not needed to realize the recreational purpose.

##### *Educational Purpose*

The educational purpose is considered realized when there are opportunities for both informal and formal education taking place in the wilderness. Informal education is self-directed learning available to all wilderness visitors. NPS Management Policies directs that “. . . the service will, to the extent practicable, afford visitors ample opportunity for inspiration, appreciation, and enjoyment through their own personalized experiences-without the formality of program or structure.” Formal education on wilderness can also help to realize the educational purpose.

##### *Scenic Purpose*

All visitors are engaging in informal appreciation of wilderness scenery, as are individuals located outside of wilderness who are looking at photographs and other art depicting wilderness scenery. In addition to this informal scenic enjoyment, a formal appreciation of wilderness scenery helps to realize a purpose of the Wilderness Act by fostering the appreciation of wilderness scenery in society as a whole through photography and art. The large amount of informal scenic appreciation means that the scenic purpose of wilderness is being met.

#### B. Day Use

##### *Recreational Purpose*

Determining when the recreational purpose is “realized” for day use is, like that for overnight use, an exercise in management discretion. Determination will be made based on balancing the need to realize the recreational purpose with the mandate to prevent the impairment of wilderness character.

#### *Educational Purposes*

Some commercial day use satisfies more than a recreational purpose. Examples include commercial day hikes that provide formal education and daytime photography or art workshops that may help to realize the educational and scenic purposes of the wilderness area. These are in addition to the informal educational and scenic use, and the commercial overnight use described above. For the educational and scenic purposes, a small amount of commercial day use may be necessary to realize these purposes.

#### *Scenic Purpose*

As for overnight use, day use visitors observing Death Valley National Park Wilderness are engaging in informal appreciation of wilderness scenery. In addition to this informal scenic enjoyment, a formal appreciation of wilderness scenery helps to realize a purpose of the Wilderness Act by fostering the appreciation of wilderness scenery in society as a whole through photography and art.

### **4.6 Minimum Requirement Analysis**

By policy, the National Park Service must apply the minimum requirement concept to decisions about commercial use in wilderness. The minimum requirement concept is a two part process that determines “if administrative actions, projects, or programs undertaken by the Service or its agent and affecting wilderness character, resources, or the visitor experience are necessary, and , if so how to minimize impacts.”

As part of the minimum requirement process, the National Park Service weighs the impacts and benefits to wilderness character. If an activity is wilderness dependent, an analysis will be completed to determine the impacts to wilderness and how it can be implemented with the least impact to wilderness character. Commercial/Special Use activities that realize more than one purpose accrue more benefit to wilderness character than those that only realize one purpose but have the same amount of impact. For this reason, activities that realize a higher number of purposes will receive preference over those realizing a lower number of purposes when allocating access.

Part of a minimum requirement decision is determining whether an activity is wilderness dependent. Wilderness dependence as used here means if the activity can occur outside of wilderness with little loss of value, it should not take place in wilderness. The wilderness dependence criteria will be used during the application screening process. Commercial trips whose primary purpose is teaching subject that is not wilderness dependent will be treated as recreational rather than educational. Examples of such topics are: weight loss, yoga, and cooking.

Consistent with this concept, when two commercial groups that are realizing the same number of purposes are competing for the same date in the same location, the lower impact trip will be given preference.

### **4.7 Equitable Access for Commercial and Private Uses**

Draft NPS guidance on wilderness management states that: “An appropriate ratio between commercial and private wilderness use allocations, including number of groups/people, location, and timing is to be addressed within the park wilderness stewardship plan or commercial services plan and associated environmental compliance documents.”

The vast majority of Death Valley National Park wilderness receives a level of visitation that is well below capacity. However, there are specific destination locations in wilderness that can, especially at prime seasons and times of day, experience levels of use that result in greater impacts to park resources or the wilderness

experience. These locations are discussed in detail in Table 4 of the 2012 Wilderness and Backcountry Stewardship Plan and those wilderness locations that are subject to use limitations in the preferred alternative (Alternative D) are listed here for ease of reference: Cottonwood/Marble Canyon Hiking Loop, Eureka Dunes, Indian Pass, Mesquite Flat Dunes, Mosaic Canyon, Natural Bridge, Racetrack Playa, Sidewinder Canyon, and Telescope Peak.

Due to the current and anticipated relatively low number of commercial services in Death Valley National Park Wilderness, Death Valley NP is not allocating between commercial/special uses and private use. However, the management strategies for high use destinations identified in Table 4 of the 2012 Wilderness and Backcountry Stewardship Plan will be adhered to when considering a commercial use application that includes that location.

#### 4.8 Other Commercial Use Limits

To comply with the expressed legislative intent in the Wilderness Act to limit commercialization of wilderness, and of the legislative mandate to permit commercial use only to the extent necessary to realize the wilderness purposes, the following policies will be implemented:

- In the Death Valley National Park Wilderness, off-trail areas are managed to provide outstanding opportunities to enjoy solitude as well as a more pristine natural environment.
- In order avoid overcrowding popular areas, groups will be dispersed so that they will not be in the same area at the same time or substantially impact general public users. This limit is necessary to protect the wilderness resource from overuse, and the location limits specific to each activity are discussed in section 4.9, below.

#### 4.9 Amount of Commercial Use that is Necessary

Death Valley National Park's interdisciplinary planning team examined a range of commercial services in wilderness for this Wilderness and Backcountry Stewardship Plan to determine the extent of commercial services necessary for realizing the purposes of Death Valley National Park Wilderness. Table 1 shows the use limits established by this process for the park's Preferred Alternative (Alternative D: Focused Action) in the Wilderness and Backcountry Stewardship Plan.

**Table 1. Commercial use limits in wilderness for the park's preferred alternative (Alternative D)**

<b>Day Use Limits for Commercial Services in Wilderness</b>	
<b>Activity</b>	<b>Limits</b>
Guided Day-Hiking & Photography Groups	12 people per group. No more than 1 group per day in Mosaic Canyon, Natural Bridge Canyon, and Sidewinder Canyon.
Guided Horse and Pack Animal Groups	Not allowed
Guided Canyoneering Day Use	Not allowed
Guided Climbing Day Use	Not allowed
<b>Overnight Limits for Commercial Services in Wilderness</b>	
<b>Activity</b>	<b>Limits</b>
Guided Hiking, Camping & Photography Groups	12 people per group; one group per day in Cottonwood Canyon, Marble Canyon, and Indian Pass Canyon.

For each considered activity, an interdisciplinary analysis was conducted to determine the extent to which that commercial service is necessary for realizing the purpose of Death Valley National Park Wilderness. For each activity listed in the table, there is a summary below of the rationale used to determine the amount of commercial use that is necessary to realize the purpose of Death Valley National Park Wilderness.

#### *Guided Day-Hiking*

The size and scope of Death Valley National Park Wilderness, its many remote and rugged locations for exploration, and the fact that many routes and trails in Death Valley National Park Wilderness are underutilized or not substantially full are all factors that the park's interdisciplinary team considered closely in its examination of the commercial activity of guided day-hiking. Under the preferred alternative, there are 55 miles of designated trails and routes throughout the 3.1 million acres of wilderness. Many additional hiking opportunities exist as informal routes in canyons, up peaks, or along ridgelines, or cross country travel. Commercial day use hiking as an activity achieves the recreational and scenic purposes of wilderness by leading visitors to many of these lesser-visited locations dispersed throughout the Death Valley National Park Wilderness. Because the wilderness areas in the park used for this activity are not substantially full, the activity of commercial day-hiking is necessary to realize the recreational purpose of wilderness. Because the scenic qualities of Death Valley National Park Wilderness vary greatly over its large and diverse landscape, the informal appreciation of wilderness scenery is enhanced by commercial day-hiking groups visiting low use areas, helping realize the scenic purpose of wilderness. Commercial day hiking is also an activity that naturally pairs with education, as the pace of travel while hiking across a desert landscape lends itself to frequent stops at points of natural or cultural interest and the delivery of information related to those features. Guided day hiking therefore helps fulfill the educational purpose of wilderness by augmenting a participating visitor's experience with educational opportunities related to the natural and cultural features of wilderness. There is the possibility that commercial groups could adversely impact noncommercial visitors' experience of wilderness, degrading the opportunities for solitude or primitive or unconfined recreation in Death Valley National Park Wilderness. For this reason, the group size for commercial groups is restricted to 12, and only one commercial group per day will be permitted in canyons that are popular day use wilderness locations. These locations include: Mosaic Canyon, Natural Bridge Canyon, and Sidewinder Canyon. Because these popular locations, by nature of their geography, have more limited opportunities to disperse, they tend to concentrate impacts to wilderness character. Regulating commercial day use hiking to one group per day in these locations helps meet the recreational, scenic, and educational purposes of wilderness while preserving wilderness character.

#### *Guided Day-Use Photography Groups*

The size and scope of Death Valley National Park Wilderness, its diverse wilderness landscape and the fact that user capacity has not been exceeded in wilderness locations are factors that the park's interdisciplinary team considered closely in its examination of commercial guided photography. Because wilderness areas in the park utilized for commercial photography groups are not substantially full, the activity of commercial photography groups is necessary to realize the recreational purpose of wilderness. Because the scenic qualities of Death Valley National Park Wilderness vary greatly over its large and diverse landscape, the informal appreciation of wilderness scenery is enhanced by commercial photography groups visiting many of these low use areas, helping realize the scenic purpose of wilderness. In addition, photography can make wilderness scenery available to those not immediately present, realizing the scenic purpose of the Wilderness Act by fostering the appreciation of wilderness scenery in society as a whole through shared images and art. Thus, commercial photography is necessary to realize the scenic purpose of Death Valley National Park Wilderness. The nature of photography is to capture images of natural and cultural features and reflect upon them, and for this reason the activity inherently allies itself with education. There are multiple opportunities for learning about the natural and cultural features in wilderness, both during this commercial activity itself and after the activity, in the sharing of images. Therefore, commercial day-use photography helps realize the educational purpose of wilderness. There is the possibility that commercial groups could adversely impact noncommercial visitors' experience of wilderness, degrading the opportunities for solitude or primitive or unconfined

recreation in Death Valley National Park Wilderness. For this reason, the group size for commercial groups is restricted to 12, and only one commercial group per day will be permitted in canyons that are popular day use wilderness locations. These locations include: Mosaic Canyon, Natural Bridge Canyon, and Sidewinder Canyon. Because these popular locations, by nature of their geography, have more limited opportunities to disperse, they tend to concentrate impacts to wilderness character. Regulating commercial photography to one group per day in these locations helps meet the recreational, scenic, and educational purposes of wilderness while preserving wilderness character.

#### *Guided Horse and Pack Animal Groups—Day and Overnight Use*

The size and scope of Death Valley National Park Wilderness, the limited number and size of established hiking trails, water limitations, and the fact that there is no history of commercial horse and pack animal trips in Death Valley National Park Wilderness are factors that the park's interdisciplinary team considered closely in its examination of guided horse and pack animal groups as a commercial activity. There is no history of commercial guided horse and pack animal groups in Death Valley National Park Wilderness and no current demand; this is largely a result of the geographic realities of this park. The potential paths for travel are rugged and narrow, and the scarcity of free-flowing water demands that a commercial pack trip carry enough water for the animals. This tends to make such a trip unfeasible. The historic lack of demand for such a commercial service in Death Valley National Park Wilderness is a key factor in determining that guided horse and pack animal groups are not necessary for meeting the recreational, scenic, or educational purposes of wilderness.

#### *Guided Day-Use Canyoneering*

The size and scope of Death Valley National Park Wilderness, the rugged nature of its landscape, and the limited number of canyons that can be utilized for the recreational activity of canyoneering are factors that the park's interdisciplinary team considered closely in its examination of guided canyoneering as a commercial activity. Based on an analysis completed by Death Valley National Park's protection division, from 2008-2011 the total number of canyoneering routes in the park—all of them in wilderness—was 43. The minimum number of people using these routes during 2008-2011 for noncommercial recreation was 269, with the total number likely higher. The minimum number of individual rappels during that time period is approximately 3625. More detailed monitoring in 2012 has revealed that the number of visitors engaging in this particular recreational activity has expanded rapidly, most likely as a result of private websites posting detailed information about the routes<sup>7</sup>, in combination with a growing national popularity of the sport.<sup>8</sup> The amount of equipment necessary for canyoneering imposes limits on how far canyoneers can hike from the road before beginning or after ending a descent. This means that while Death Valley National Park Wilderness is vast at 3.1 million acres, the wilderness lands available for canyoneering are relatively limited. Based on current and reasonably foreseeable patterns of use, the recreational purpose of wilderness specific to these canyons is being met by noncommercial canyoneers, who organize trips to these remote locations and disseminate information to other noncommercial users by means of publicly published information.<sup>9</sup> Because of geographic constraints within the narrow and extreme canyons utilized for canyoneering in Death Valley National Park Wilderness, and because of the limited number of routes, commercial canyoneering would likely displace some of the noncommercial canyoneering taking place. Based on this potential conflict with noncommercial recreation, commercial canyoneering is not necessary to meet the recreational purpose of wilderness for Death Valley's situation. Because canyoneering is the only way to enter many of these canyons, commercial canyoneering could be seen as enhancing the scenic purpose of wilderness by enabling visitors to enter these places that would otherwise be inaccessible. However, based on the growing popularity of canyoneering as a sport, there are numerous opportunities for visitors to learn the skills necessary to enter Death Valley's canyons on their own.<sup>10</sup> Commercial canyoneering is therefore not necessary to view the

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<sup>7</sup> <http://www.bluugnome.com/>

<sup>8</sup> Wren, C. 1999. Canyoning Catches On as a Chic, Extreme Sport. The New York Times.

<sup>9</sup> [http://www.bluugnome.com/canyoneer\\_tripreport\\_list\\_death-valley\\_cal.aspx](http://www.bluugnome.com/canyoneer_tripreport_list_death-valley_cal.aspx)

<sup>10</sup> Black, D. 2008. Canyoneering: A Guide to Techniques for Wet and Dry Canyons.

scenery of the 43 canyons that comprise the routes in the park. Education regarding the natural and cultural features along a particular route could be part of a commercial canyoneering experience, but it is more likely that any canyoneering experience in Death Valley National Park Wilderness would be focused on overcoming the natural features that present a challenge to safe passage. Thus, commercial canyoneering as an activity is not necessary to meet the educational purpose of the Death Valley National Park Wilderness. In conclusion, commercial canyoneering is not necessary to meet the recreational, scenic, or educational purposes of Death Valley National Park Wilderness.

#### *Guided Day-Use Climbing*

The size and scope of Death Valley National Park Wilderness, the rugged nature of its landscape, and the historic lack of demand for commercial climbing relative to other commercial activities are factors that the park's interdisciplinary team considered closely in its examination of guided day-use climbing as a commercial activity. Climbing as an activity is much less popular in Death Valley National Park than it is in other protected public land in the region such as Joshua Tree National Park, Alabama Hills Recreation Area, and Red Rock Canyon National Conservation Area. One reason for this disparity in demand is that Death Valley's rock is more unpredictably erodible than the rock in other areas. The established lack of demand for climbing as a commercial service in Death Valley's Wilderness is a key factor in determining that commercial, guided climbing groups are not necessary for meeting the recreational, scenic, or educational purposes of wilderness.

#### *Guided Overnight Hiking and Backpacking*

The size and scope of Death Valley National Park Wilderness, its many remote and rugged locations for exploration, and the fact that many routes and trails in Death Valley National Park Wilderness are underutilized or not substantially full are all factors that the park's interdisciplinary team considered closely in its examination of the commercial activity of guided overnight hiking and backpacking. Under the preferred alternative, there are 55 miles of designated trails and routes throughout the 3.1 million acres of wilderness. Many additional hiking opportunities exist as informal routes in canyons, up peaks, or along ridgelines or cross country travel. Commercial overnight hiking and backpacking opportunities are necessary for achieving the recreational and scenic purposes of wilderness because this commercial service leads visitors to many lesser-visited locations dispersed throughout the Death Valley National Park Wilderness. Backpacking enables visitors to travel further into remote wilderness and away from more visited sites. Because the wilderness areas in the park used for this activity are not substantially full, the activity of commercial backpacking realizes the recreational purpose of wilderness. Because the scenic qualities of Death Valley National Park Wilderness vary greatly over its large and diverse landscape, the informal appreciation of wilderness scenery is enhanced by overnight hiking and backpacking groups visiting remote areas. Overnight hiking and backpacking are activities that naturally pair with education, as the pace of travel while hiking across a desert landscape lends itself to frequent stops at points of natural or cultural interest and the delivery of information related to those features. Staying overnight in wilderness provides further opportunities for reflection on the natural or cultural features of the wilderness and opportunities for education. Commercial overnight hiking and backpacking is thus necessary to meet the educational purpose of wilderness because it augments a participating visitor's experience with educational opportunities related to the natural and cultural features of wilderness. There is the possibility that commercial backpacking groups could adversely impact noncommercial visitors' experience of wilderness, degrading the opportunities for solitude or primitive or unconfined recreation in Death Valley National Park Wilderness. For this reason, the group size for commercial groups is restricted to 12, and only one commercial group per day will be permitted in canyons that are popular overnight use wilderness locations. These locations include: Marble Canyon, Cottonwood Canyon, and Indian Pass Canyon. Because these locations, by nature of their geography, have more limited opportunities to disperse, they tend to concentrate impacts to wilderness character. Regulating commercial overnight hiking and backpacking to one group per day in these locations is necessary for meeting the recreational, scenic, and educational purposes of wilderness while preserving wilderness character.

### *Guided Overnight Photography Groups*

The size and scope of Death Valley National Park Wilderness, its diverse wilderness landscape and the fact that wilderness locations for this activity are not substantially full are all factors that the park's interdisciplinary team considered closely in its examination of commercial guided photography. Because wilderness areas in the park utilized by overnight commercial photography groups are underutilized, this commercial activity is necessary to realize the recreational purpose of wilderness. Because the scenic qualities of Death Valley National Park Wilderness vary greatly over its large and diverse landscape, the informal appreciation of wilderness scenery is enhanced by commercial photography groups visiting many of these areas, helping realize the scenic purpose of wilderness. In addition, photography can make wilderness scenery available to those not immediately present, realizing the scenic purpose of the Wilderness Act by fostering the appreciation of wilderness scenery in society as a whole through shared images and art. Thus, commercial photography is necessary to realize the scenic purpose of Death Valley National Park Wilderness. The nature of photography is to capture images of natural and cultural features and reflect upon them, and for this reason the activity inherently allies itself with education. There are multiple opportunities for learning about the natural and cultural features in wilderness, both during this commercial activity itself and after the activity, in the sharing of images. Therefore, commercial overnight photography helps realize the educational purpose of wilderness. There is the possibility that these commercial groups could adversely impact noncommercial visitors' experience of wilderness, degrading the opportunities for solitude or primitive or unconfined recreation in Death Valley National Park Wilderness. For this reason, the group size for commercial overnight photography groups is restricted to 12, and only one commercial group per day will be permitted in canyons that are popular overnight wilderness locations. These locations include: Marble Canyon, Cottonwood Canyon, and Indian Pass Canyon. Because these popular locations, by nature of their geography, have more limited opportunities to disperse, they tend to concentrate impacts to wilderness character. Regulating commercial overnight photography groups to one group per day in these locations is necessary to meet the recreational, scenic, and educational purposes of wilderness while preserving wilderness character.

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## **APPENDIX K: CABIN STEWARDSHIP STRATEGY**

### **1.0 INTRODUCTION**

Many backcountry and wilderness visitors seek out the park's remote backcountry and wilderness cabins as a source of shelter from a harsh climate, as a place to reflect on past human relationships with the land, as a source of intellectual interest, or as a touchstone for shared human experiences. Some visitors travel great distances for the specific purpose of visiting these cabins, while others encounter the cabins incidental to their planned adventures. Some visitors stay only minutes, others linger for hours, while still others steep themselves in the experience for several days.

The federally and privately owned structures in Death Valley's backcountry and wilderness are either part of large historic mining districts or ranching properties where the park knows the historic eligibility status, or they are in outlying areas where the status largely unknown. The Park has attempted to manage these structures over the years with various levels of success and public involvement. While park staff, including the Abandoned Mine Lands (AML) crew and dedicated individuals have conducted impressive preservation work, members of the public should be commended for their dedication to the structures and history of the park as well. Based on the regulations and programs outlined in this Strategy, the Park will manage its backcountry structures in accordance with its enabling legislation and mandated laws and policies, and will maintain the cabins as an integral part of the backcountry and wilderness experience of Death Valley. Through working together on federal, state, and public partnerships, we should be able to preserve these resources for future generations to enjoy.

Numerous structures are present in Death Valley's backcountry and wilderness. These include structures used for habitation (cabins, dugouts, houses, lean-to's, wickiups, etc), as well as those relating to mining, ranching, and recreation (including outbuildings, mills, tramways, headframes, adits, shafts, fences, grazing infrastructure, roads, and the like). Some of these structures are over 50 years of age, and are either listed or potentially eligible for listing on the National Register of Historic Places (NRHP). Many of them taken together comprise a historic district or cultural landscape, where an entire area has been found to have intact structures and landscape elements (mining features, fences, walls, roads, trails) that adequately convey a historical theme, for instance, mining or ranching in Death Valley. As Death Valley is such a difficult landscape for human habitation, and the mining history is a significant theme, there are hundreds of eligible structures on the List of Classified Structures, and probably hundreds more that are potentially eligible but have not been recorded. There are only a few backcountry or wilderness structures in Death Valley that have been preliminarily identified as not being eligible for the NRHP, either because the structure is less than 50 years of age, or because it was constructed outside of the period of significance for that site. Still others are privately owned or are infrastructure related to valid mining or ranching interests, and are not being actively considered as part of the current planning process, though the park is often times aware of their presence and significance.

While a majority of the structures present in the backcountry and wilderness are remnants of mine infrastructure, the park has numerous structures that could be categorized as backcountry cabins. As these structures have been identified as a popular visitor attraction, and since they are frequently used by the public

and in various stages of decay, a majority of this document will be dedicated to discussions on backcountry cabins.

## 2.0 AUTHORITIES

### 2.1 Cultural Resources Laws and Policies

There are numerous laws and regulations that govern the preservation of the nation's cultural heritage. Many of these laws are broadly applicable, such as the Antiquities Act and the National Historic Preservation Act. Figure 1 lists the laws and policies pertain to the preservation and management of park cultural resources which includes historic structures, i.e., backcountry cabins (For a complete list of relevant laws and regulations, go to <http://www.nps.gov/history/laws.htm>):

**Figure 1. Relevant Cultural Resources Laws and Policies**

<u>Archeology</u> <ul style="list-style-type: none"><li>American Antiquities Act of 1906 as amended (16 USC 431-433)</li><li>Archeological and Historic Preservation Act of 1974 as amended (16 USC 469-469c-2)</li><li>Archaeological Resources Protection Act of 1979, as amended (16 USC 470aa-mm)</li><li>Preservation of American Antiquities (43 CFR 3)</li><li>Protection of Archeological Resources (43 CFR 7)</li></ul>
<u>Historic Preservation</u> <ul style="list-style-type: none"><li>Executive Order No. 11593 Protection and Enhancement of the Cultural Environment (1971)</li><li>Executive Order No. 13287 Preserve America (2003)</li><li>Historic Sites Act of 1935 as amended (16 USC 461-467)</li><li>National Environmental Policy Act of 1969 as amended (42 USC 4321, and 4331 - 4335)</li><li>National Historic Preservation Act of 1966, as amended (16 USC 470 et seq.)</li><li>National Historic Landmarks Program (36 CFR 65)</li><li>National Register of Historic Places (36 CFR 60) and Determinations of Eligibility for Inclusion in the National Register (36 CFR 63)</li><li>National Trust for Historic Preservation, as amended, [Creation and Purpose] (16 USC 468)</li><li>Protection of Historic Properties (36 CFR 800)</li><li>Theft of Government Property (18 USC 641)</li></ul>
<u>National Park Service</u> <ul style="list-style-type: none"><li>Mining in the National Parks Act of 1976, (Section 9)(16 USC 1908)</li><li>National Park Service Organic Act, Section 1, as amended, [Mission] (16 USC 1)</li><li>National Park Service Organic Act (16 USC 1-4, 22, 43)</li><li>National Park Service Organic Act, Section 8, as amended, [Reports on Threatened Landmarks and New Area Studies] (16 USC 1a-5)</li></ul>
<u>Native Americans &amp; NAGPRA</u> <ul style="list-style-type: none"><li>American Indian Religious Freedom Act of 1978 as amended (42 USC 1996 and 1996a)</li><li>Executive Order No. 13007 Indian Sacred Sites (1996)</li><li>Native American Graves Protection and Repatriation Act of 1990, as amended (25 USC 3001 et seq.)</li><li>Native American Graves Protection and Repatriation Act: Final Rule (43 CFR 10)</li></ul>

## 2.2 Wilderness Laws and Policies

Where structures and other cultural resources occur in wilderness, the wilderness laws and policies must also be considered concurrently with cultural resources laws and policies.

NPS Management Policies (2006), 6.3.8, directs that:

*“The Wilderness Act specifies that the designation of any area of the park system as wilderness “shall in no manner lower the standards evolved for the use and preservation of” such unit of the park system under the various laws applicable to that unit (16 USC 1133(a)(3)). Thus, the laws pertaining to historic preservation also remain applicable within wilderness but must generally be administered to preserve the area’s wilderness character. The responsible decision-maker will include appropriate consideration of the application of these provisions of the Wilderness Act in analyses and decision-making concerning cultural resources.*

*Cultural resources that have been included within wilderness will be protected and maintained according to the pertinent laws and policies governing cultural resources using management methods that are consistent with the preservation of wilderness character and values...”*

The document *Keeping it Wild in the National Park Service: A User Guide for Integrating Wilderness Character into Park Planning, Management and Monitoring* (NPS 2012b, expected to be included in Reference Manual 41 as part of NPS policies in late 2012) further elaborates on the relationship between Cultural Resources and Wilderness in its “Principles to Foster Wilderness and Cultural Resource Integration”:

- 1) *Preserving cultural resources and wilderness resources are equally important and compatible park management objectives.*
- 2) *Wilderness designation can benefit cultural resources by protecting them from modern human development and activity that could destroy them or diminish their integrity.*
- 3) *Cultural resources can benefit wilderness areas by allowing visitors to understand and feel connected to the vital and varied relationships between people and nature.*
- 4) *The passage of the Wilderness Act and the concept of wilderness represent significant contributions to the history of our nation. The history of wilderness is an important historic theme along with other historic or ethnographic themes that a wilderness area or sites within a wilderness area may represent.*
- 5) *All applicable resource protection laws and regulations must be followed in wilderness areas, unless explicitly stated otherwise in law.*
- 6) *Cultural features are an integral part of an area’s wilderness character when these resources are specified in the enabling legislation of the wilderness unit.*
- 7) *Cultural features that are not specified in the enabling legislation of the wilderness unit may still be included as part of the unit’s wilderness character. Pursuant to law and policy, parks must go through an inventory and planning process to determine which cultural resources are significant and establish objectives for managing them.*
- 8) *In all cases, the goal is to understand and respect the integrity of both cultural and wilderness resources, and then determine the appropriate management action. These management actions should be considered as both wilderness stewardship and cultural resource stewardship objectives, be developed in tandem, and*

*be reflected in both Wilderness Stewardship and Cultural Resource Stewardship plans. Proposed management actions that would negatively impact either cultural resources or wilderness, or both, must be resolved on a case-by-case basis.*

Key to the application of these principles is an understanding of what cultural resources contribute to wilderness character in Death Valley National Park Wilderness. The California Desert Protection Act of 1994, which enlarged Death Valley National Park to its current size and configuration and designated the majority of the Park as wilderness, articulates these cultural resources values in Section 2 (B) (1) (c):

*“In order to secure for the American people of this and future generations an enduring heritage of wilderness, national parks, and public land values in the California desert, it is hereby declared to be the policy of the Congress that--(1) appropriate public lands in the California desert shall be included within the National Park System and the National Wilderness Preservation System, in order to--(c) 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.”*

The User Guide re-affirms NPS Management Policies and provides additional direction regarding the stewardship of cultural resources in wilderness:

*“Cultural resources that are located in wilderness (whether considered part of wilderness character or not), should be managed to minimize impacts to the other qualities of wilderness character. For example, a minimum requirements analysis must be completed for preservation prescriptions or actions on historic structures inside of wilderness. As the other guiding principal of wilderness stewardship is to manage wilderness “as a whole,” cultural resource stewardship activities in wilderness should be designed to maximize the preservation of the other qualities of wilderness character. These integrated goals should be clearly articulated in both Wilderness Stewardship and Cultural Resource Management planning documents. Inventory, monitoring and treatment activities should be included as well as scientific investigations. Known significant resources and their management goals should be included specifically, but also guidelines for evaluating previously unknown or unrecognized resources as well as resources that are just becoming an age or a resource type that would be considered “historic.”*

### **3.0 BACKGROUND INFORMATION REGARDING BACKCOUNTRY STRUCTURES**

#### **3.1 Backcountry Cabins**

Although no comprehensive studies have been made indicating how much use individual buildings receive, many visitors come with the expectation of spending probably one to three nights in one of these cabins. Based on the recent Visitor Use Study (Holmes et al. 2010), staff observations, cabin log books, and online chat room discussions, most visitors appear to be keenly aware of the significance and utility of Death Valley's backcountry cabins and treat them with care. Generally cabins are kept clean and minor repairs are made to maintain them. Many cabins have record books or logs for inspirational messages and/or notes and comments. Many contain woodstoves, glass windows, and numerous home furnishings. Pots and pans, canned food, and other non-perishable supplies are often available. Many cabins are visited by individuals or groups who informally "adopt" the structure and return year after year with additional furnishings and embellishments. While most cabin users are respectful of the structure and other users, some cabins have been vandalized and furnishings stolen.

Other actions affecting cabins have included repairs and “improvements,” construction of additions and water systems, planting of trees, and installation of pit toilets and/or sewer systems. Some visitors have been kept away from cabins by occupants with guns and/or aggressive attitudes, though this is uncommon. The isolated location of many backcountry cabins is part of their attraction but also contributes to the challenges in caring for them. Cabins farther from paved roads are tend to be better maintained but are the site of more frequent violations such as firearms use, fireworks discharge, and off-road vehicle travel.

### 3.2 Federally Owned Historic Structures (50 years of age or greater)

Death Valley's enabling legislation (from 1933 and 1994) recognizes not only the stunning natural environment, but also the human history, ranging from the Timbisha Shoshone who settled in the park thousands of years ago, to the infrastructure created by explorers, miners, and ranchers that entered the area in the past 160 years. NPS policy and numerous laws and regulations encourage preservation of significant properties and historic structures including: National Historic Preservation Act; Archeological and Historic Preservation Act; Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation; the Secretary of the Interior's Standards for the Treatment of Historic Properties; 2008 Programmatic Agreement (the NPS, the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers [SHPOs]); NPS Management Policies 2006; and DO-28: Cultural Resource Management Guideline. In addition, the Organic Act states:

*[The National Park Service] shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified... by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. (16 USC 1)*

While there are hundreds of historical structures in the park that are greater than 50 years of age, the eligibility of those structures for listing on the NRHP is known for approximately half of those structures, most of which are in the frontcountry (e.g. Scotty's Castle, Cow Creek, etc) or are large mining sites (Panamint City, Keane Wonder, Leadfield, Skidoo, etc). Smaller scale backcountry sites, such as those mainly comprised of cabins and small mine sites usually have not been formally documented or evaluated for NRHP eligibility.

Preservation of these structures requires that the park coordinate with cultural resources specialists to ensure that significant properties are preserved in a manner that enhances, and does not detract from their historic character. While the park can at times undertake those preservation activities on its own, larger scale activities usually require coordination with the California and/or Nevada State Historic Preservation Officers, and many times, assistance from NPS historic structure specialists. This coordination ensures that the park is undertaking appropriate activities and conducting them in a responsible manner. Documentation of historic preservation proposals and the actual work completed is critical to ensure that the park is adequately repairing and preserving intact structural elements, only replacing those elements that are beyond repair, and not treating non-historic repairs or replacements as original construction.

### **3.3 Federally Owned Non-Historic Structures (less than 50 years of age)**

Many of the known federally owned non-historic structures in the park that are less than 50 years of age are located in frontcountry, and include office buildings, housing, utilities infrastructure, storage, etc. Other structures are known to exist in the backcountry and wilderness, including the remnants of later mining ventures, visitor constructed backcountry and wilderness cabins, and fences, many of which are related to wildlife or grazing management. While occasionally structures less than 50 years of age are eligible for listing on the NRHP (for instance, Hoover Dam was listed before it was 50 years old), it is unlikely that significant structures that are less than 50 years of age (constructed pre-1962, at the time of this writing) are present in Death Valley. However, as the park acquires inholdings, new lands through boundary adjustments, or just in general as time marches along, it is possible that this may change in the future.

### **3.4 Privately Owned Structures (all ages)**

In addition to those structures that are managed by the Federal Government, there are those structures that are privately held, on patented mining claims, active mining claims, or tribal land. Some of these structures are over 50 years of age, while others were constructed quite recently. The park currently provides law enforcement assistance, and has agreements regarding water to several private landowners in the frontcountry areas of Death Valley, such as Furnace Creek Resort and the Timbisha Shoshone Tribe. However, many of these structures are well under 50 years of age, and most have been modified so extensively that they are probably not eligible for listing on the National Register of Historic Places. The Timbisha Shoshone Tribe has identified a potential historical district on their land, but it has not been formally nominated or evaluated for NRHP eligibility.

While the park does not have the jurisdiction to actively manage privately owned historic properties, if a private landowner was interested in discussing historical preservation with the park, the park would be interested in a collaborative relationship. The park has access to historic preservation specialists, and may assist those landowners in activities that historic property owners may find suitable; for instance, providing advice on archaeological site or historical structure documentation, assistance in identifying and applying for grants, and if those property owners are interested, assistance in documenting and nominating their eligible structures, districts, sites, or landscapes for inclusion on the NRHP. While the park has mainly provided that type of collaborative assistance to adjacent landowners (e.g. BLM, Timbisha Shoshone Tribe), the park may be interested in pursuing that type of collaborative relationship with a private landowner inside the boundary of Death Valley, if those owners were amenable.

While NRHP documentation, evaluation, and listing are efforts that some property owners take, others mistakenly believe that having their property declared a historic property may make it more difficult to sell or modify their property in the future. This is not true. There are numerous benefits to listing: access to historic preservation grants, tax incentives (for property owners rehabilitating income-generating historic properties, or establishing of preservation easements), and the pride of owning a property with history that is significant in our history at a national, state, or local level.

## 4.0 EXISTING CONDITIONS

### 4.1 NPS Stewardship of Cabins as Cultural Resources

The park has undertaken efforts in the past to identify and document backcountry and wilderness historic structures. A number of historic structures were documented and preserved in the early days of the Monument by the Civilian Conservation Corps. These efforts began again in the 1970s, with documentation and stabilization of Harmony Borax Works (frontcountry) and the Wildrose Charcoal Kilns (backcountry). In the 1980s, the maintenance personnel conducted stabilization activities at Hunter Cabin, and probably worked at other backcountry structures as well, but a majority of efforts were concentrated in the frontcountry at places like Scotty's Castle, Lower Vine Ranch, and Cow Creek.

The List of Classified Structures (LCS) is a database that describes the park's historic structures, ranging from landscape elements (walls, fences) to small scale features (troughs, monuments) to larger features like buildings and mine structures. The list for DEVA is currently comprised of approximately 250 structures, many of which are in the frontcountry. As the goal of the LCS is to only include structures that are eligible for listing on the NRHP, the park has avoided adding new structures to this list, unless the structure has been determined eligible for the NRHP in consultation with the SHPO. Until then, the information is kept in a separate file.

Treatment of historic and non-historic structures in Death Valley has been inconsistent over the years. While quite a few historical structures have been and are still actively preserved, other potentially significant historical structures have been removed. Some of this activity took place prior to establishment of the National Historic Preservation Act, while other actions may have taken place in the more recent past. This plan cannot comment on those past actions, as it took place prior to current park management. Instead, we wish to move forward and concentrate on future planning efforts to identify, preserve, and maintain significant historic properties.

Beginning in earnest in the 1950s, archaeologists from universities began documenting historical structures in Death Valley, most of which were prehistoric sites, but also included ethnohistorical Native American structures, such as wickiups, corrals, alignments, and fences. In the 1970s and later, archaeologists began documenting historical structures as well, including historical Euroamerican archaeological sites such as mines and ranches. The documentation has become more sophisticated in the past 20 years, and often times include photographs, drawings, and descriptions of those structures. Archaeologists do not usually conduct stabilization efforts, but instead concentrate on documentation of the existing condition. Since archaeological site records are protected from release under the Freedom of Information Act, those records are usually known only to the archaeologists in the park, though they may be shared with NPS historic structure specialists who are working on park projects.

In the late 1970s, the National Park Service began an effort to document the history of Abandoned Mine Lands (AML) in Death Valley. The undertaking, completed by two NPS Denver Service Center Historians, resulted in a multiple volume document (Greene and Latschar 1981) that discussed the history of mining in Death Valley National Monument. During that effort, a multitude of mines were visited (both publicly owned and private), their history researched, and photos taken. As many of the mines have habitation structures present, photos of some of the cabins were included in the assessment. The overall history that

was presented in the document is a wealth of information, providing not only historical information, but a picture of use, conditions, and management of these areas in the late 1970s. The document additionally mentions management guidelines for some of the mines and structures, many of which are not valid today. For instance, some structures were recommended as not eligible for the NRHP, but were later found to be eligible, or provided brief management recommendations that have not been followed (e.g. not to preserve a particular structure, which the Park or visitors have in fact maintained it over time). One inadvertent hazard associated with the publication of the document is that it provided a description of archaeological sites and many of the interesting artifacts that were present at sites were later removed by park visitors.

The park's Abandoned Mine Land (AML) crew conducted stabilization activities at numerous historic structures in the park including Skidoo Mill, Skidoo Road structures, Keane Wonder Mine Tramway, Gold Hill Mill, Eureka Mine, Queen of Sheba Mine, Trail Canyon structures, Aguerberry Camp, and Strozzi Ranch in the past 20 years. These activities were many times conducted in a way that emphasized stabilization through activities such as sistering (adding bracing around historical materials), cabling, and roof replacement. Many times, removed historical materials were left on site nearby. The park has reports on file for some of these activities, others we are only able to determine through materials that were stamped with dates indicating the year repair work was conducted. It may be that as we delve more thoroughly in the AML files, we will find more reports describing work proposed and completion reports and photos.

The park drafted a preliminary "Use Policy for Backcountry Cabins" in 1996, but it was never completed nor implemented. The draft divided management policies into those structures that were known to be "historic," and those that were known to be "general public use cabins" (i.e. not historic). The intent was to complete an inventory of backcountry structures which would further delineate the "historic" versus "general public use cabins."

In 1997, the NPS Denver Service Center (Unrau 1997) produced a document detailing a history of the new lands that were added to Death Valley following passage of the 1994 California Desert Protection Act. This study continued where Greene and Latschar's 1981 history left off, but detailing the history of the 1.5 million acres added to the in 1994. The history mentions several cabin sites and provides some historical context for these new lands.

In 1997, University of California, Riverside was contracted to produce an archaeological study of "At-Risk" sites in Death Valley National Park (Brewer et al 2000). The purpose of the project was to conduct surveys in areas that were suspected of having high archaeological value, or areas where visitor and administrative activities were concentrated. The efforts mainly concentrated on archaeological survey and site documentation in the vicinity of developed areas in the park, but also included some forays into cabin areas, including Strozzi Ranch, Nevares, and Hunter Cabin, as well as documentation of Wildrose Kilns. During that project, sites were documented to state standards, and records submitted to the park and the state archaeological information center.

In 2001, staff from the NPS Pacific West Regional Office completed inventory and condition assessments at 24 backcountry cabins, 21 of which were located in the park, were not ruins, and were potentially eligible for the NRHP (either they were 50 years of age or greater or would need evaluation once they were 50 years of age) (Mortier et al 2001). Preliminary rapid assessments of age and historical significance were made at the



structures, but no formal eligibility assessments were conducted. A number of observations were made regarding condition and impacts, and recommendations made for further work.

From 2001 to 2003, archaeologists and historic preservation personnel conducted archaeological documentation and provided stabilization recommendation for selected historical AML sites in Death Valley National Park (Donald et al 2002, Brown et al 2003). The immense undertaking resulted in documentation of a two dozen mine sites, many of which have cabins. This was one of the first large scale documentation projects where GPS was used, therefore, we have good locational and photographic information for these sites. The documentation has been sent to the state in a piecemeal fashion, but most of the sites have received state site numbers.

In 2005, the NPS Pacific West Region contracted with Historic Resource Associates to complete draft NRHP nominations that were initially prepared as part of the 1970s AML documentation. Thirteen nominations were ultimately completed. The California SHPO concurred with the eligibility determinations in 2010, and they were sent to the Keeper of the NRHP for inclusion in 2011. These nominations included six sites having cabins (Chloride Cliff, Harrisburg, Panamint City, Queen of Sheba, Ubehebe, and Warm Spring). While the site itself may have been determined eligible for listing, individual cabins and features in some of these sites have been found not eligible for listing, including, for instance, several cabins at Panamint City.

Cultural landscape studies have been undertaken by the NPS Pacific West Regional office for several sites in Death Valley that have historic cabins. Cultural landscape studies are much like NRHP nominations, however, they also examine site design and layout, and often times provide management recommendations. In 2005, a study was completed for Thomason-Barker Ranch (Hankinson et al 2011), and the SHPO concurred with the eligibility determination. A similar document is currently in draft for Strozzi Ranch (Braa et al 2005), and it is hoped that the park will receive eligibility concurrence later in 2012.

In 2009, Thomason-Barker Ranch, located in the southwestern part of the park, was stabilized by a NPS historic preservation crew from Bandelier National Monument (Warren and Stark 2009). A few weeks after finishing the work, the main house and workshop was destroyed in what, according to an investigator from the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF), appeared to be an accidental fire, presumably caused by a leaky propane stove utilized by a park visitor. In 2010 to 2011, NPS employees and volunteers, assisted by Nevada Conservation Corps crews, cleaned up and stabilized the ruins.

In 2010, a crew comprised of NPS employees from Mount Rainier, North Cascades, and Death Valley completed rehabilitation activities at Hunter Cabin (Slaton 2010). The cabin had previously received minor stabilization by NPS employees in the 1980s. The 2010 work concentrated on stabilizing the foundation, replacing in kind deteriorated logs, and replacing deteriorated wood flooring. In addition, the door was replaced, and a portion of the roof was slightly extended in order to prevent wood deterioration to logs on the east side of the cabin, presumably caused by melting snow.

In 2011, park staff completed condition assessments at a majority of the parks structures that are listed in the list of classified structures, and began the cabin inventory. This work was accomplished by a crew of two personnel, who spent 2.5 months traveling around the park, and documenting the condition of priority structures. Additionally, that crew also rehabilitated the dugout at Strozzi Ranch in August and September 2011, which was in danger of collapse. The crews replaced in kind the sill beams, rebuilt deteriorated

portions of the east and west rock walls, and straightened the south rock wall. Park staff rehabilitated the Chloride Dugout and reroofed the Geologist's Cabin in late 2011.

In 2011, the Death Valley 49ers published a book on cabins in Death Valley. The document provided a short history on several of the cabins in the park. The document was authored by members of the 49er group who have a personal connection with the cabins. The document was not produced by park management.

The Warm Springs area was first settled as an Indian allotment owned by Panamint Tom. However, as was a similar situation in other parts of Death Valley, mine interests were also attracted to the areas geological and water resources. Louise Grantham began mining in Warm Springs Canyon in 1933, and while Panamint Tom was ultimately awarded an Indian allotment in the same area in 1936, his allotment was lost during a court battle that was decided in August 1941 (Greene et al 2007). The mines were in almost continuous operation from 1941 until 1981 (except for a three year period in the 1970s), and was a large supplier of talc. The property was managed by Grantham into the early 1970s, then later acquired by Johns-Manville Corporation and Desert Minerals in the 1970s, Pfizer in the 1980s, and ultimately acquired by the park in the late 1980s.

The remains of Grantham Camp today make up the bulk of the Warm Springs Camp. The three concrete block buildings that the park today is considering using for a research camp were constructed as part of the mine camp habitation in 1951. Three outbuildings (two of which are also concrete block, and one which was damaged in a visitor caused fire in 2010), as well as an in-ground swimming pool and various shade trees, are also present. The original 1930s gold mill is also present just north of the buildings. An active spring originates in the rocky outcrops south of the camp, and water flows downhill through the center of the camp year round. The NRHP period of significance identified for the site is from 1930 to 1973, which includes the period of time that the site was owned and operated by Louise Grantham.

The park cleaned up the site after acquiring the property, removing generators, fuel tanks, and non-contributing (i.e. more recently constructed) sheds and other structures. The AML crew repaired windows and closed open mine features in the mid-2000s, NPS Resources Management staff have managed vegetation, and in 2010 NPS Maintenance staff installed new metal roofs on the three residential structures. Two portable toilets are present on the site, but were not installed by nor are they maintained by the park. The structures are currently open to visitor use, and two of the three structures are empty, while the third is sparsely furnished and used intermittently by visitors during day trips as well as overnight visits.

The Geologist Cabin, a single room stone cabin in Butte Valley, has also been proposed for use several months of the year as an administrative site for an Artist in Residence. The site has not been evaluated for NRHP eligibility, but was constructed in the 1930s as a seasonal residence by Asa Russell. The site has been actively maintained by the park and user groups for several decades. The NPS most recently repaired the roof in late 2011. Infrastructure improvements would be needed to make the structure attractive for longer term seasonal residence, including installation of a toilet facility and arrangements for potable water. Two other cabins are located in close proximity to Geologist Cabin: Stella's and Russell's.

The backcountry structure program is currently administered by employees from the Resource Management, Visitor and Resources Protection, and Maintenance divisions. Since these efforts are so divided among divisions, this means that little meaningful work is undertaken at the structures by any of these divisions

during any given year. Since the structures are tracked in different NPS databases (e.g. Archaeological Site Management Information System [ASMIS], List of Classified Structures [LCS], Facility Management Software System [FMSS], Wildland Fire Data System [WFDS]) or, as in the case of most of these structures, not tracked in any databases, this can lead to challenges for park managers. Lastly, paper files containing incomplete information are maintained by different divisions as well. In short, this planning effort is the first major attempt by the park to identify cabins since the 2001 cabin survey, and this document outlines priorities for inventory and management of these resources.

## 4.2 Current Cabin Management Policies (circa 2012)

Today, most backcountry structures are managed by the park as potentially significant historical structures, whether or not they are historic in age and until formal determinations of eligibility can be made. Ideally the park would have a complete inventory of its properties and concentrate its limited funds on maintaining significant resources in accordance with NPS policies. Currently park rules are posted at the backcountry cabins; however, the posted rules are frequently damaged or destroyed and so may not be visible to all visitors. In addition, many of these structures are uninhabitable due to structural deterioration, rodent waste, and modern garbage. While the 2001 cabin inventory project recommended that park staff visit and conduct minor repairs at each cabin on an annual basis, this task has not been undertaken as the park has an incomplete inventory of backcountry structures, and the workload exceeds the organizational capacity of the park's staff and program budget.

Additionally, about a dozen of the backcountry sites are actively used and repaired by park visitors. These actions probably extend the life of the structure (in most cases), but frequently such work is done without the knowledge of park staff and sometimes involves inappropriate materials or techniques that damage the original fabric. Such work is conducted outside of current park management guidelines, which state that with the -exception of emergency repairs, "...all cabin maintenance will be performed only with written approval from the Superintendent" (Figure 2). With the exception of Barker Ranch, the park has not received inquiries from members of the public or public use organizations for written authorization for repair or stabilization of cabins; therefore, these rules and procedures are largely disregarded or unknown to many park users. Instead, it appears that people either enter the backcountry intent on repairing cabins on their own, or discuss repair needs on internet message boards, which are then viewed by other park users or park staff, who then may decide to take on the repairs.

**Figure 2. Current backcountry cabin visitor use policy and guidelines**

**Death Valley National Park Rules and Regulations** (from 2012 Superintendent's Compendium)

### **BACKCOUNTRY CABINS**

May be used for overnight camping or day-use subject to the following conditions:

- Cabins are not to be locked. Any locks in place will be cut and removed.
- Cabins are to be used on a first-come, first-served basis and for short-term occupancy only (no more than 7 days).
- Except for emergency repairs, all cabin maintenance will be performed only with written approval from the Superintendent.
- Fires are restricted to existing wood-burning stoves or fireplaces that function safely. All firewood must be brought in, wood and brush gathering is prohibited.

- The primary concern with the use of backcountry cabins is that historic structures and cultural landscapes not be destroyed by fire and/or vandalism or be subject to modifications that will alter their historical character or physical integrity. The park recognizes that the general public has used many of these cabins for years and feels a certain sense of ownership. It is the Superintendent's goal to work towards a partnership with the public in the preservation, maintenance, and interpretation of Death Valley's backcountry cabins.

**Table 1. Current visitor use patterns at backcountry cabins regularly used by the public**

Cabin	Level of use
Rhodes Cabin	moderate to heavy in fall, winter, spring; low in summer
Russell's Camp	heavy in fall, winter, spring; moderate to low in summer
Stella's Cabin	heavy in fall, winter, spring; moderate to low in summer
Geologist's Cabin	heavy in fall, winter, spring; moderate to low in summer
Warm Springs Camp	moderate to heavy in fall, winter, spring; low in summer
Trail Canyon Cabin	moderate in spring, fall, and winter; low in summer
Gem Mine Cabin	moderate in spring, fall, and winter; low in summer
Panamint City Cabins (2)	moderate to heavy in spring , fall, low to moderate in winter and summer
Rita's Cabin	low to moderate in spring, summer, fall; very low in winter
Tucki Mine Cabin	moderate to low in spring, fall, winter, low in summer
Hunter Cabin	moderate in spring, summer, fall; very low in winter
Saline Range Cabins (3)	low to moderate in spring, summer, fall; very low in winter
Tar Paper Shack	light in spring, summer, fall; very low in summer
Nelson Range Cabins (2)	moderate in spring, summer, fall; low in winter
Barker Ranch Bunkhouse	moderate in spring, summer, fall, and winter

## 5.0 NEW MANAGEMENT DIRECTION FOR BACKCOUNTRY CABINS

### 5.1 Desired Conditions Based on Servicewide Mandates and Policies

Under all of the alternatives as described in the Park's *Wilderness and Backcountry Stewardship Plan*,

- All historic structures and landscapes would continue to be surveyed, inventoried, and evaluated under National Register of Historic Places criteria to determine their eligibility for listing in the national register.
- The qualities that contribute to the listing or eligibility for listing of historic structures on the national register are protected in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, unless it is determined through a formal process that disturbance or natural deterioration is unavoidable.

- Historic structures and cultural landscapes located in wilderness would be stabilized and preserved according to the pertinent laws and policies governing cultural resources and wilderness, using management methods that are consistent with the preservation of wilderness character and values, consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (1995).
- Current preservation and maintenance activities would continue on historic structures and cultural landscapes.
- Historic landscapes including road and trail systems and associated features would be stabilized and preserved.
- All of the alternatives would be expected to have *no adverse effects* on historic structures and cultural landscapes; the continued program of preservation and maintenance activities would have minor to moderate beneficial impacts on these resources.

## 5.2 Desired Conditions Specific to Death Valley National Park

The historic character of historic buildings (cabins, shelters, etc), structures (fences, mining features, etc), circulation features (roads, trails, etc), cultural landscape plantings (native and non-native), natural or constructed features (such as ponds and other resources) that are found in historical or prehistoric sites in Wilderness and are related to the broad patterns of the park's history are managed in accordance with Sections 5.3.5.2, 5.3.5.4, and 6.3.8 of 2006 NPS Management Policies. Historic structure and cultural landscape inventories and reports are prepared, and existing reports are amended as needed. Actions identified in historic structure and cultural landscape reports are implemented and a record of treatment added to the reports.

Identified and evaluated historic structures and landscapes are monitored, inspected and managed to enable the longterm preservation of a resource's historic features, qualities and materials.

Strategies to reach the desired condition include:

- Curtail visitor behaviors that damage or have the potential to damage historic structures, such as graffiti, modifications to building design or furnishings, and use of nonfunctional stoves and fireplaces.
- Inventory historic structures and cultural landscapes; clean structures and document maintenance needs.
- Prioritize determinations of eligibility for historic structures and cultural landscapes to assess if they are eligible for listing on the NRHP, and determine if they are eligible under one or more of four criteria listed below; in addition to the criteria, the structures must retain integrity of location, design, setting, materials, workmanship, feeling, and association.
- Non-historic structures and features located in wilderness that are formally determined to be not eligible for listing on the NRHP will be prioritized for removal as per the Wilderness Restoration Criteria (Death Valley National Park Wilderness and Backcountry Stewardship Plan Appendix O; NPS 2012a).
- Employ comprehensive maintenance, protection and preservation measures in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. For properties lacking

specific plans, preservation actions would be based on the Secretary's Standards and NPS policy and guidelines. Treat all historic structures and cultural landscapes as eligible for listing on the National Register of Historic Places pending formal determination (by NPS and the state historic preservation officer).

- Establish a Volunteer Cabin Stewardship Program; consider some historic buildings not actively being used in the park for adaptive reuse by other public and private entities to assist in preservation of the structures (i.e. Warm Springs and Butte Valley cabins); establish stewardship guidelines where public participation is beneficial to the structures and there is a potential for greater preservation of these sites through ongoing and appropriate government sponsored maintenance projects.
- Create design guidelines and/or historic structure/cultural landscape reports to preserve the architectural and landscape-defining features.
- Pursue basic preservation maintenance activities to avoid costly rebuilding or reconstruction of historic structures or cultural landscapes.
- Comply with cultural resource protection and preservation policies and directives, and the wilderness minimum requirement concepts in wilderness areas, for the maintenance of historic structures and cultural landscapes.
- Consult with the state historic preservation office and the Advisory Council for Historic Preservation, as appropriate, before modifying any historic structure or cultural landscape listed on the National Register of Historic Places.

### **5.3 Priorities for Management**

The park has determined several priorities for management of structures and associated cultural landscape features in backcountry and wilderness, concentrating at this time on backcountry cabins. Ideally these tasks will be undertaken in priority order, but with the realization that there may be opportunities (by way of funding, partnerships, or staffing) to undertake tasks concurrently or out of sequence. As these are all pressing needs, they will be accomplished in whatever order and by whatever means they can be expeditiously and properly be achieved in accordance with NPS policy.

#### Priority 1: Complete Inventory of Historic Structures and Landscapes

Currently, the park does not have an up-to-date inventory of backcountry structures. Additionally, the structures are checked sporadically by employees and volunteers from different divisions, including resource management, visitor protection, maintenance, and others. With 3.34 million acres to cover, and structures spread throughout the park, the task is daunting. On average, it takes several hours to several days to record each structure in the field, and an average of three times the length of the field work to transform paper records into digital records, catalog photos, enter structures in various NPS databases, and send archaeological paperwork to state offices. In addition, if one wishes to determine NRHP eligibility for structures, that requires additional days spent in the park archives and at local county and state offices and museums.

In order to inventory and document the structures, the park is proposing to hire a three-person crew to document cabins. It is estimated that the documentation work would take six months, and would include visiting some 69 federally owned backcountry and wilderness structures (including updating the structures first documented in 2001). The structures would be documented for entry into various NPS databases (ASMIS, LCS, FMSS, WFDSS), documented as archaeological sites and historical structures if applicable (or

the records updated if they have already been documented), and the records prepared and sent to Nevada or California State Information Center offices. GIS, digital network based files, and paper files would be updated and made accessible to resource management, visitor protection, and maintenance divisions for use.

Funding to accomplish this project is being applied for in the park's Recreation Fee plan (PMIS 181225). Funding would be used to hire and train the three-person crew, and provide for their salary, overnight travel, and vehicle costs. The positions would be supervised by the park archaeologist, with one of the positions serving as the crew lead and directing the fieldwork following initial training. Funding for this portion of the project is estimated to cost approximately \$77,500.

**Priority 2: Implement Visitor Use Policy and Guidelines to protect cultural resources and mitigate Safety Hazards**

As the historic and safety-focused inventory of backcountry cabins progresses, the park will establish the following interim visitor use guidelines that relate to the protection of resources and visitor safety. The park may modify these guidelines should inventory results and cabin conditions change. Due to the interest of the public in these structures, the Park will develop such visitor use guidelines with due consideration of public input and in the interest of public safety.

**Figure 3. New backcountry cabin visitor use policy and guidelines.**

- Cabins are used at visitors' own risk.
- Cabins are not to be locked. Any locks in place will be cut and removed.
- Visitors wishing to camp overnight at any cabin will be required to obtain a free permit, available online or at one of the Park's visitor centers. Obtaining a permit is not a guarantee of a cabin's availability, as the cabins will continue to be available on a first-come, first-served basis. The permit is to insure that those using the cabins overnight have read and agree to these conditions of use.
- Warm Springs Cabin and associated buildings will be re-purposed as an administrative camp with bunkhouses and kitchen facilities to host research groups, education groups, work crews, volunteers, artists in residence, and other administrative uses on a seasonal reservation system during spring and autumn, approximately 6 months per year. The three cabins in Butte Valley will be auxiliary administrative sites managed under the same reservation system but will also be available for public use on a first-come, first-serve basis when there are no reservations. Within those constraints, the following cabins will be open to the public on a first-come, first-served basis with a 3-consecutive-night stay limit: Russell's Camp, Stella's Cabin, and Geologist Cabin.
- Other cabins will be open to the public on a first-come, first served basis for a maximum stay of seven consecutive days. The Park will monitor cabin use in these areas and, with due consideration for visitor input regarding the opportunity for all visitors to access these cabins, consider 3-consecutive-night limits on other impacted cabins as well.
- All fires including the use of camp stoves in cabins are prohibited. Use of stoves is permitted outside cabins. If the Park installs a metal fire ring outside a cabin, consistent with an action alternative in the Wilderness and Backcountry Stewardship Plan, fires are permitted in the fire rings. All firewood must be brought in, wood and brush gathering is prohibited. Wood that is brought in must be certified forest pest-free. Ashes must be packed out.
- All trash must be packed out.
- Human waste must be disposed of at least 400 feet from the cabin or packed out, unless there is a Park-installed toilet facility.
- All cabin maintenance will be performed only with written approval from the Superintendent. If a member of the public notices the need for a maintenance or safety modification, he or she should report it in writing to the Park Superintendent. The public is invited to participate in the ongoing maintenance of cabins through the Cabin Stewardship Program, outlined in this document.
- A guiding concern with the use of backcountry cabins is visitor safety. The Park will disseminate information about Hantavirus risk and remediation to all those acquiring permits for cabin use. In addition, the Park will inventory the cabins for safety risks, welcome public input about safety concerns, and make determinations about remediating these risks.
- Another guiding concern with the use of backcountry cabins is that historic structures and cultural landscapes not be destroyed by fire and/or vandalism or be subject to modifications that will alter their historical character or physical integrity. The park recognizes that the general public has used many of these cabins for years and feels a certain sense of ownership. It is the Superintendent's goal to work towards a partnership with the public in the preservation, maintenance, and interpretation of Death Valley's backcountry cabins.

Priority 3: Prepare a Programmatic Agreement for conducting work at unevaluated structures

As it will take years to complete the evaluation process for the backcountry cabins, the park will prepare a Programmatic Agreement with the California and Nevada SHPOs for conducting work at unevaluated structures. As it stands, the 2008 NPS Nationwide Programmatic Agreement (PA) only covers structures that have eligibility determinations, meaning that any proposed work on the remaining structures must go through individual consultation with the SHPO. While additional review at the state level by qualified historical architects is not a bad thing, it can significantly delay the project start date since the documentation needs to be sent to the state 30-45 days before the project can be implemented. By entering into a park specific programmatic agreement with the SHPO, the park would assume these structures are eligible for the purposes of the undertaking, and place requirements on individual projects that:

- 1) Projects would be conducted at structures that appeared to be eligible for the NRHP and over 50 years of age;
- 2) All projects would be proposed and conducted by appropriate park staff, and Assessments of Effect documents for the undertakings written and reviewed by qualified park cultural resources staff;
- 3) Work would be constrained to the types of activities that are currently eligible for streamlined review under the NPS 2008 Nationwide Programmatic Agreement;
- 4) Projects would be included in the year-end SHPO PA reporting, and
- 5) The park will make an effort to pursue funding for preparation of DOEs for unevaluated structures.

Priority 4: Assess and Document Historic Structures and Landscape Conditions

Currently cabins are in various stages of decay. Decades of use by both humans and rodents has led to an accumulation of trash and feces, which may contribute to unsafe or unhealthy conditions for visitors. Since the structures are not permanently inhabited by people, there are usually minor repairs that are needed to keep the structures rodent-proof and protected from the elements. Annual visits and minor repairs were one of the major recommendations provided by the cabin inventory in 2001. It is proposed that the park have a six-month seasonal position dedicated to handling annual cleanup, conduct safety inspections, perform minor repairs that may or may not require compliance, and assess larger scale repairs and enter work orders in the FMSS database. Funding would provide for that employee's salary, supplies to be used for cleaning rodent waste (bleach, respirator, and sprayer), tools and materials for performing minor repairs, as well as resource protection signage to be posted at the cabins. The employee would be a recurring six month seasonal WG-05 position, based in the resources management program under the supervision of the park cultural resources manager. Funding for this portion of the project is estimated to cost approximately \$26,000 annually.

Priority 5: Prioritize Historic Structures and Landscapes for Determination of Eligibility

Currently, there are few historic structures in the park outside of large mining districts that have had formal determinations to assess if they are eligible for listing on the NRHP. The NRHP evaluation process requires examination of the structures to determine if they are eligible under one or more of four criteria, listed below. In addition to meeting one or more of the criteria the structures must have integrity of location, design, setting, materials, workmanship, feeling, and association:



- a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- b) that are associated with the lives of persons significant in our past; or
- c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d) that have yielded, or may be likely to yield, information important in prehistory or history.

If a structure and/or landscape meets one or more of the four criteria and has sufficient integrity, then the park should prepare a determination of eligibility, work with the SHPO for concurrence, and if appropriate, plan for conducting further stabilization activities at this structure.

There are several reasons to determine the eligibility of these structures. First, it is NPS responsibility under Section 110 of NHPA to document and assess historic structures and sites for eligibility determination. Second, historic structures should be a higher priority for work that is to be accomplished using limited cultural resource dollars. Third, the more that we know about a historic structure, the easier it is to receive funding and consult with the SHPO when repairs are needed. If inappropriate repairs continue to be made at eligible structures by the public or the park, there is a possibility that they would be changed so significantly that they are no longer eligible for NRHP listing. This may mean that park management would decide to treat these structures in a different manner (ranging from management by volunteer groups, to benign neglect, to outright removal).

Currently, the park has identified 69 federally owned structures in the park as "backcountry cabins." Of these structures, 13 are inside the boundaries of historic districts and are either categorized as "contributing" or "non-contributing." The remaining 56 cabins have not been evaluated. The park has prepared a prioritized ranking list for completion of the determinations of eligibility for the remaining 56 structures (Table 2).

**Table 2. Prioritized ranking list for backcountry cabins in Death Valley for completion of determinations of eligibility.**

Priority Ranking	Prioritized Cabin List	Reasoning for ranking priority
1	Butte Valley Cabins (Stella's, Russell's, and Geologist)	High visitor use, high instance of visitor modifications, potentially eligible for the NRHP, planned administrative uses
2	Hunter Cabin	Probably eligible for the NRHP, history is largely known
3	Gem Mine	Probably eligible for the NRHP, DOE completed in 1997, but SHPO has not concurred with documentation (privately owned at the time)
4	Scotty's Cabin	Potentially eligible for the NRHP, history is largely unknown
5	Trail Canyon Cabins	Grouping of structures, status is unknown, recommended for future research/work in 2001 cabin survey
6	Badwater Road Cabins	High visitor use, much visitor maintenance, history largely unknown, recommended for future research/work in 2001 cabin survey
7	Lee Flat Cabins	High visitor use, recommended for further research/work in

		2001 cabin survey
8	North Saline Pass Cabins	Some visitor use, recommended for further research/work in 2001 cabin survey
9	Skidoo Road Cabins	Some visitor use, largely unknown
10	Ibex Springs Cabins	Some visitor use, largely unknown

It is anticipated that it will take at least 10 years to complete these determinations of eligibility. Some determinations could be completed by park staff and volunteers, especially for cabins that are historic but believed to be non-significant, or those that are not 50 years of age. However, as those cabins reach 50 years of age, they may become "significant" and protected under NHPA.

Writing determinations of eligibility are a task that are often undertaken by regional office staff, contractors, or park staff hired specifically for that task, and are completed either through individual structure determinations, or more likely through assessment of an entire site, such as through a historic district or cultural landscape. Writing of determinations of eligibility for many of these structures will involve funding for research at the park and at state and county offices, as well as travel to conduct and write the assessments. Depending on the site or grouping of sites, writing a determination of eligibility may cost approximately \$10,000 per structure or site. Generally, that work is best undertaken by historians, landscape architects, historic architects, archaeologists, or others with experience in primary research, technical writing, and the Section 106 compliance process. Funding for this endeavor is not as easy to get as actual rehabilitation work funding; therefore completing DOE's will probably will be a relatively long process (10+ years). The park has not had good luck finding volunteers to complete this type of paperwork in the past; however, the park will remain open to volunteers who wish to contribute in this way. It may be that those volunteers could conduct much of the background research in the archives, and then park personnel or contractors could prepare the actual DOEs.

#### Priority 6: Establish Volunteer Cabin Steward Program

One program, which has been operating in the California desert administered by the Bureau of Land Management for approximately 20 years, is the adopt-a-cabin program. This program was implemented to encourage use and maintenance of the numerous desert structures by user groups. Some of the park's cabins were unofficially managed under this program prior to 1994. The program has had tangible benefits, as dozens of park backcountry structures have been used, enjoyed, and maintained by these groups. However, during the process of caring for the cabins, well intentioned users cleaned up archaeological sites, unknowingly modified historic structures, established their own cabin use and improvement rules, and removed historical materials from the site.

While the park does not currently (as of 2012) have an official Volunteer Cabin Steward Program, there is an unofficial one that has been operating informally in the park for decades. The general public has used many of these backcountry cabins for years and feels a certain sense of ownership. In most cases their involvement has been beneficial to the structures, many of which would probably not be standing if they had not received this care. The park will try to maintain this level of public interest by providing on-site interpretive information on individual cabins and the mining operations and people with which they have been associated whenever possible, and by stressing our need for help in caring for these resources. Our goal is to not

discourage this type of involvement, but to work toward a partnership with the public in the preservation, maintenance, and interpretation of Death Valley's backcountry cabins.

The Park will improve upon its existing (albeit unofficial) Volunteer Cabin Steward Program through improved user education including volunteer ethics forms, having responsive managers at the park who are assigned to take on this program, developing and providing volunteer cabin stewardship training, responding in a timely manner to the public who are visiting structures, and collaboratively working with the public toward solutions. As backcountry structures are inventoried, documented, and evaluated by the State Historic Preservation offices, the Park's formalized Volunteer Cabin Steward Program will continue to include the support and efforts of a multi-disciplinary team of Park staff (from the offices of Resources Management, Volunteer Management, Wilderness Management, Visitor and Resources Protection, Maintenance, and Interpretation), as well as key volunteers and/or user groups.

**Table 3. Roles and responsibilities of Death Valley National Park's volunteer cabin steward program**

Name of Program	Job Description
Cabin Steward	<p><u>Description of Duties:</u> The volunteer will visit a cabin 2 times per year minimum (and as many as 4 times per year) (preferably spaced evenly through the year) and fill out a condition assessment form, describing present conditions and maintenance needs (e.g. repairs to roof, windows, replace signage, etc.). Volunteer will report on conditions to park supervisor, and provide paperwork within 10 days through e-mail or send a hard copy. Volunteers will be required to use an online calendar to inform the supervisor of their trip (or if they do not have access to a computer, they can call the park (who will then put the schedule on the calendar).</p> <p><u>Required Training:</u> Nevada or California Site Steward Training, 4 hour park training (offered 2 times per year at the park)</p> <p><u>Implementation timeline:</u> Following cabin inventory, first offered to park staff and Site Stewards, then offered to the general public.</p>

Name of Program	Job Description
Cabin Preservation Steward	<p><u>Description of Duties:</u> Duties include those listed above for a Cabin Steward, and in addition: Volunteer will attend required training that includes NEPA/Section 106 compliance, hantavirus mitigation, and performing minor pre-approved repairs (e.g. repair screens, reattach doors, etc.). Volunteers will fill out forms describing the work performed, and provide information to supervisor. A minor repairs toolkit and supplies appropriate to that cabin/circuit will be provided by the park for checkout during that 1 year commitment. If repairs are performed by the steward beyond what is previously approved by the park, the volunteer agreement with that steward will be terminated.</p> <p>If the volunteer makes changes that are inappropriate, they may be held financially liable for staff time to undo changes.</p> <p><u>Required Training:</u> Completion of 1 or more years as a Cabin Steward, plus an additional 8 hours park training.</p> <p><u>Implementation timeline:</u> One year after program is offered to general public, and following development of a programmatic agreement with the CA/NV SHPO for conducting work at unevaluated structures.</p>
Cabin Rehabilitation Steward	<p><u>Description of Duties:</u> Duties include those listed above for a Cabin Preservation Steward, and in addition: Volunteers performing Level III duties will have spent a minimum of one year performing all duties described in Level I as well as a year in II, and attend additional trainings in historic preservation maintenance offered by the park and/or partners, and assist park staff in larger scale rehabilitation projects. All materials will be provided by the park.</p> <p><u>Required Training:</u> To be determined.</p> <p><u>Implementation timeline:</u> One year after Cabin Preservation Steward program is implemented.</p>

Name of Program	Job Description
District Cabin Lead	<p><u>Description of Duties:</u> The park will identify 2 to 4 leads that can serve as the main point of contact for Cabin Stewards. Cabin Leads will have previously served as Level I volunteers for a minimum of two years, or have progressed from Level 1 to Level III, or be DEVA Volunteers that are park staff. The volunteer will manage information and volunteers in one of four districts (NW Quadrant: Saline Valley/Racetrack, SW Quadrant: Butte Valley/West Side Road, NE Quadrant: Nevada Triangle/Scotty's Castle, and SW Quadrant: Ashford/Jubilee Pass/Saratoga Springs. In the event of repairs being needed at one of the cabins, the Lead will communicate those needs to the park for compliance, work order submittal, and project approval.</p> <p><u>Required training:</u> Cabin Steward and Cabin Preservation Steward courses and additional training as needed.</p> <p><u>Implementation timeline:</u> Following cabin inventory, first offered to park staff and Site Stewards, then offered to the general public.</p>

#### Priority 7: Prepare Warm Springs and Butte Valley Cabins for Administrative Use

The cabins located in Warm Springs and Butte Valley are located in close proximity to each other, are in relatively good repair, and are geographically located in an area of interest for research, education and artistic endeavors. Such administrative uses that will be accommodated at the Warm Springs Camp (including the bunkhouse, cookhouse, caretaker's house, and associated outbuildings) include use as a by-reservation research and education facility to provide overnight accommodations and a short-term work base for field crews, research permittees and educational field trips with the caretakers house serving as the seasonal quarters for an on-site overseer. The administrative uses that will be accommodated at the Butte Valley Cabins (Russell's Camp, Stella's Cabin, and Geologist Cabin) include short duration artist-in-residence fellowships, research permittees, and volunteer work groups. These administrative uses would help fulfill the goals and objectives of the park's Wilderness and Backcountry Stewardship Plan and were included as year-round uses in Alternative C and seasonal administrative uses (spring and fall) in Alternative D (NPS 2012b).

The Warm Springs Camp requires some work before they can be used as a research camp/administrative site. These activities include (but are not limited to):

- Relocating the leach field and/or installing outdoor toilets (vault, composting, or other);
- Removing or encapsulating asbestos floor tiles;
- Managing the swimming pool safety hazard;
- Manage the fireplace safety hazard, which appears to be venting into the interior of one of the residences;
- Managing the site vegetation, including the large trees that shed limbs on the site, and the oleander which is a safety hazard when burned or ingested (even in small quantities);
- Managing the water source through the site, as well as setting up a potable water source;
- Taking the structures down to the studs on the interior, and rewiring for electricity, etc., as well as providing a power source;
- Maintaining the road on a more consistent basis from West Side Road to Warm Springs Camp;

- Arranging for an onsite seasonal caretaker (but still allowing for overnight use of the area by the casual visitor); and
- Procuring funding to do the above work, as well as maintain the site for years to come.

Fundraising for these repairs and maintenance could be accomplished with the assistance of partner groups.

The Butte Valley cabins also require some work to be suitable for administrative uses, primarily structural stabilization and rodent proofing.

#### Priority 8: Identify Future Funding Sources

There are several funding sources potentially available for work on backcountry structures. Non-historic structures that are highly ranked on a scale that evaluates need and condition among other attributes may be eligible for funding under Park Base, Cyclic Maintenance, Recreation Fees administered under the Federal Lands Recreation Enhancement Act, or other sources. Historic structures may be eligible for funding under Park Base, Cultural Cyclic Maintenance, Historic Structure Stabilization, or Recreation Fees administered under the Federal Lands Recreation Enhancement Act. Other funding sources include private donations, made either to the park or an associated non-profit partner organization, such as the Death Valley Natural History Association.

As the Park works with its partners in this process, and should we receive adequate funding from these sources on a more consistent basis, our goal is to include funding for staff time in proposals, which would allow the Park to fund one or more additional seasonal or term positions. These position(s) could take on managing larger historic preservation projects associated with backcountry cabins that are funded by the park on the region, and since they would be park-based staff (as opposed to project staff or contractors from other parks that require additional funding for travel costs), they would have some additional time available to write and enter new funding requests, submit work orders, identify issues, complete the necessary National Environmental Policy Act compliance, and address the many challenges of maintaining the cabins. Additionally, as park personnel and volunteers work collaboratively on projects, we will learn more about the structures, the process, and how to effectively manage this much needed program.

## **6. ROLES AND RESPONSIBILITIES**

Cultural Resource Manager: The Cultural Resources Manager or their designee will direct the implementation of the priorities listed in section 5, particularly the technical requirements of priorities 1, 3, 4, and 5. Cultural Resources staff will supervise project staff, external cooperators/contractors, and volunteer cabin stewards. The Cultural Resources program will maintain site records and cultural resources databases.

Law Enforcement Rangers: The Chief Ranger or their designee will incorporate the new visitor safety rules and regulations into the next update to the Superintendent's Compendium. Park Rangers will patrol the cabins to enforce those regulations as well as maintain postings of the regulations at the cabins. They will

advise cabin users of the requirement to obtain a use permit, issue permits in the field, and enforce permit requirements.

Interpretation and Education: The Chief of Interpretation or their designee will provide current information to cabin users via multiple delivery methods, including onsite and via internet. They will target specific educational messages to cabin users as identified in the park's Wilderness and Backcountry Education Strategy. Advise prospective cabin users of the requirements to obtain a use permit and issue permits in accordance with the park's permit procedures.

Volunteer Coordinator: The Volunteer Coordinator will oversee the administration of the volunteer cabin steward program, including recruitment of volunteers, completion of required forms, logging hours worked, and assuring that the requirements of Director's Order #7 are met.

Chief of Maintenance: The Chief of Maintenance or their designee, in consultation with the Cultural Resource Manager, will periodically inspect and maintain the cabins identified as assets in the FMSS database. The Chief of Maintenance also has the primary responsibility for implementation of priority #7, repair/rehab of the Warm Springs Camp and Butte Valley cabins for administrative uses.

Wilderness Coordinator: The Wilderness Coordinator will consult on treatment of cabins located in wilderness and assist the cultural resource manager in completion of the minimum requirements analysis for any proposed treatments in wilderness, including in situ preservation or documentation and removal.

Park Superintendent: The Superintendent is the decision-maker for all aspects of cabin stewardship and visitor use of cabins, including establishing priorities for implementation of this strategy relative to other park priorities and needs.

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## **APPENDIX L: MINIMUM REQUIREMENTS ANALYSIS PROCESS**

### **1. INTRODUCTION**

The Minimum Requirements Analysis helps determine whether any administrative action affecting the wilderness is truly necessary, and if so, what is the activity with the least impact to wilderness character. In the past, this was referred to as the “minimum tool”, but is now generally referred to as the “minimum activity”, because factors other than what type of tools are used are also considered important when deciding on how best to preserve wilderness character (e.g. mode of transport, seasonality).

The Minimum Requirements Analysis should not be done by one person, but should be a thoughtful process implemented by an interdisciplinary team so that the action is considered from all viewpoints. It should be performed before the administrative action in question takes place, and not afterward as a justification. A range of feasible alternatives should be considered, including the possibility that the most appropriate administrative response may be no action at all.

When determining minimum requirements, the potential disruption of wilderness character and resources will be considered before, and given more significance, 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 (2006 NPS Management Policies 6.3.5). The Minimum Requirements Decision Guide (MRDG) can be a useful tool by facilitating constructive conversations, ensuring compliance with law and policy, and by helping managers make responsible wilderness stewardship decisions.

### **2. RELEVANT LAW, POLICIES, AND GUIDANCE**

#### **2.1 The Wilderness Act**

The concept of “minimum requirements” stems from section 4(c) of the Wilderness Act of 1964, stating “...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act... 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 of installation within any such area.” These are referred to as the 4(c) prohibited uses or prohibitions.

#### **2.2 NPS Management Policies**

National Park Service Management Policies 2006 (Sections 6.3.1 and 6.3.5) require the application of the concept of “minimum requirement” for potential actions involving section 4(c) prohibited uses within the wilderness area, regardless of wilderness category (designated, recommended, proposed, eligible for study, and potential). The analysis should also be applied to any potential action or management decision that may affect the wilderness. Section 6.3.5 states, “When determining minimum requirements, the potential disruption of wilderness character and resources will be considered before, and given considerably more weight than, economic efficiency and convenience.”

#### **2.3 Death Valley National Park General Management Plan**

The 2002 General Management Plan reaffirms the preservation of wilderness character and the use of the minimum requirements analysis process, stating that “Potential disruption of wilderness character and resources and applicable safety concerns will be considered before, and given significantly more weight than, economic efficiency. If some activities must occur in wilderness, only those actions that will have acceptable impacts will be acceptable” (Death Valley GMP 2002).

### **3. MINIMUM REQUIREMENTS ANALYSIS PROCESS**

### **3.1. Identify an Interdisciplinary Team**

The project proponent should discuss the issue and potential need for action with the park's Wilderness Coordinator, who will initiate the minimum requirements analysis and vet it through an interdisciplinary team. The interdisciplinary team should consist of the Wilderness Coordinator, Environmental Protection Specialist, and a representative from Resource Management, Visitor Protection, and any other relevant division. For larger projects and research proposals that may have a greater impact on wilderness character, the interdisciplinary team should formally meet to discuss the impacts to wilderness character and alternatives. Each team member should be familiar with the Wilderness Act and the Minimum Requirements Decision Guide (MRDG). This team will use the latest version of the MRDG form that is available at [www.wilderness.net/MRDG/](http://www.wilderness.net/MRDG/) and on the park's O: drive.

The minimum requirements concept will be applied as a two-step process:

- *Step 1:* determines whether the proposed management action is 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; and
- *Step 2:* determines the techniques and types of equipment needed to ensure that impacts on wilderness resources and character are minimized.

### **3.2. Describe the situation that may prompt action and why it is an issue**

This should not be a description of a possible method or tool, but rather of the situation that prompts the possible need for action. It is incorrect to say "We need to use a helicopter to fix the radio repeater." Instead, say, "Radio repeater is malfunctioning which poses a threat to staff and visitor safety." The team will then determine if action is necessary, and if so, what the minimum activity will be.

### **3.3 Determine whether action is necessary**

Step 1 is for determining whether the action is necessary; it does not discuss specific impacts to wilderness character associated with different action alternatives, as this discussion is explored in Step 2. In some cases, not all of the qualities of wilderness character may be applicable to a proposed action because there would be no change as a result of taking action.

Moving on to Step 2 can only occur if the action is determined to be necessary. This decision must consider if the action supports one or more of the qualities of wilderness character. The decision must document the reasoning behind whether there is sufficient rationale to proceed to Step 2 or not.

### **3.4 Determine the minimum activity**

Develop a range of alternatives that describe what specific methods and techniques will be used, when and where the activity will take place, what mitigation measures are necessary, and the general effects to the wilderness resource and character. For example, the park may consider conducting activities during seasons and in areas of low visitor use to minimize impacts to visitor solitude. If the use of primitive tools is determined to be a safety liability, then the park may consider additional training to mitigate risks.

Brainstorm a full range of feasible alternatives, including a no action alternative. The interdisciplinary team should also consider alternatives that employ no section 4(c) alternatives, or minimal use of prohibited uses (i.e. a combination of motorized and non-motorized transport methods or tools). After alternatives have been developed, the team may still decide that doing nothing is the best way to preserve wilderness character and the proposed action should not be carried out. Alternatives that the team has considered and dismissed should be explained to document the rationale for rejection.

Analyze the potential effects of each alternative on the wilderness by considering the impact on each quality of wilderness character. The guide allows the park to consider criteria such as maintaining traditional skills, special provisions, and economics/convenience, yet these considerations must be secondary to wilderness character. From a legal standpoint, the Wilderness Act mandates that wilderness

character be preserved, not that a park may select the less expensive, more convenient option. Consider the effect of each stage of the activity, including design, construction, management, removal, or restoration as necessary.

Examples, case studies, and worksheets are located on [www.wilderness.net/mrdg](http://www.wilderness.net/mrdg).

### **3.5 Sign and scan the MRDG**

After completing the MRDG, have members of the interdisciplinary team and the superintendent sign the form. Scan the form and save it to the Minimum Requirements Analysis folder on the O: (Resources) drive.

### **3.6 File the MRDG in the Administrative Record**

The MRDG should form part of the administrative record alongside any research permit or NEPA document, including categorical exclusions for management actions taken at Death Valley National Park. To complete the administrative record file, an electronic copy of the signed and scanned MRDG should be included in the appropriate project folder contained within the Completed NEPA Documents folder on the O: (Resources) drive. The original signed copy of the MRDG will be kept on file in the Wilderness Coordinator's office.

## **4. ROLES AND RESPONSIBILITIES**

Wilderness Coordinator: The Wilderness Coordinator serves as the primary point of contact for the project proponent as this individual navigates the Minimum Requirements Analysis process. The Wilderness Coordinator convenes the Interdisciplinary Team and provides guidance to help shape the Minimum Action. The Wilderness Coordinator circulates the MRDG for signature, scans the document after it has been signed, and files the hard and electronic copies.

NEPA Coordinator and Research Permit Coordinator: The NEPA Coordinator and Research Permit Coordinator are responsible for initially identifying which new proposed projects occur in wilderness and may involve Section 4(c) prohibitions of the Wilderness Act. Both of these coordinators then contact the Wilderness Coordinator and the project proponent, connecting them and providing guidance during the Minimum Requirements Analysis process. The NEPA coordinator is responsible for making sure that a scanned MRDG is part of the administrative record file for any NEPA processes, and the Research Permit Coordinator is responsible for making sure that the scanned MRDG is part of the Research Permit file.

Project Proponent: The project proponent is responsible for consulting with the Wilderness Coordinator if his or her proposed project occurs in wilderness and this person has been directed by the NEPA Coordinator or Research Permit Coordinator to initiate a dialogue about the project and its need for a Minimum Requirements Analysis. The project proponent is also responsible for providing input and alternatives to determine the Minimum Action. Finally, the project proponent is responsible for knowing and implementing the Minimum Action.

Park Superintendent: The Superintendent is responsible for making the final decision regarding the Minimum Requirement Analysis, informed by the input of the Interdisciplinary Team.



## **APPENDIX M: PROCESS FOR EVALUATING EMERGING RECREATIONAL OPPORTUNITIES IN WILDERNESS**

### **1. INTRODUCTION**

Technological innovations and changing social demographics have resulted in, and are likely to continue to result in, an international increase in new varieties and types of recreation (Ewert and Hollenhorst, 1997). Because of Death Valley National Park's size, international fame, amount of designated wilderness, and varied landscapes, this overall trend towards an increase in adventure-based and other forms of outdoor recreation is likely lead to an increased demand for new forms of recreation in the Park's designated wilderness areas.

A Wilderness and Backcountry Stewardship Plan cannot reasonably be expected to predict new technology, or anticipate all emerging trends in recreation. However, it is reasonable to assume that future land managers at Death Valley National Park will have to make decisions about emerging recreational opportunities, and examine how these forms of recreation would affect wilderness. This appendix is intended as a tool for current and future land managers to help guide these decisions about future visitor use, by outlining a process and identifying criteria that will assist in meeting the mandate of the Wilderness Act and the NPS Organic Act, as well as the guidance of NPS Management Policies (2006).

A general guideline for implementing this decision-making process is that it should not be done by one person, but should be a thoughtful process implemented by an interdisciplinary team (IDT) so that the action is considered from all viewpoints. It should be performed before a decision about managing the recreational activity takes place, and not afterward as a justification.

When evaluating the recreational activity, the potential disruption of wilderness character and resources will be a key consideration, as will the NPS Organic Act's mandate that the National Park Service provide for the enjoyment of park resources in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

### **2. RELEVANT LAW, POLICIES, AND GUIDANCE**

#### **2.1 The Wilderness Act**

Section 4(b) of the Wilderness Act of 1964 states that the NPS is "responsible for preserving the wilderness character of the area" it manages. Further, section 4(b) outlines the public purposes of wilderness to include "recreational, scenic, scientific, educational, conservation, and historical use."

Specific prohibitions on activities in wilderness are stated in section 4(c) of the Wilderness Act: "...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act... 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 of installation within any such area." These are referred to as the 4(c) prohibited uses or prohibitions.

#### **2.2 NPS Organic Act of 1916**

The Organic Act states that a particular park's "purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

#### **2.3 NPS Management Policies**

National Park Service Management Policies 2006 (Section 6.4.3.1) states that "Recreational uses—particularly new and emerging activities that compromise the stated purposes and definitions of

wilderness or unduly impact the wilderness resource or the visitor experience within wilderness—will be evaluated to determine if these uses are appropriate or should be limited or disallowed through use of the superintendent’s compendium in 36 CFR 1.5. Evaluation or reevaluation should be accomplished in wilderness management plans or similar implementation plans. Recreational uses that do not meet the purposes and definitions of wilderness should be prohibited in NPS wilderness.”

### **3. EMERGING RECREATION OPPORTUNITIES EVALUATION PROCESS**

#### **3.1. Identify an Interdisciplinary Team**

Any park staff member who identifies an emerging recreational activity at Death Valley National Park or on public lands with similar features or opportunities as Death Valley National Park contacts the park’s Wilderness Coordinator, who assembles an interdisciplinary team. The interdisciplinary team should consist of the Wilderness Coordinator, Environmental Protection Specialist, and a representative from Resources Management, Visitor Protection, and Management divisions. If the recreational activity is proposed as a special park use or a new commercial use, the Special Park Uses Manager should be part of the interdisciplinary team. The Park’s Wilderness Committee could function as the Interdisciplinary Team for this review.

As the proposed recreational activity may have an impact on wilderness character, the interdisciplinary team should formally meet to discuss the impacts to wilderness character and alternatives. Each team member should be familiar with the Wilderness Act and the emerging recreational activity. Directed research in advance of the meeting may be required to gain familiarity with the emerging recreational activity that is being proposed and analyzed.

#### **3.2. How Does This Evaluation Process Work?**

This evaluation process consists of three filters. An initial filter serves as a means to ensure compliance with the section 4(c) prohibitions of the Wilderness Act. A qualitative analysis filter serves to develop a full understanding of the impacts of the proposed activity to Death Valley National Park’s wilderness character. Finally, a quantitative analysis filter provides metrics by which the IDT can make a recommendation to the Park Superintendent regarding the emerging recreation opportunity.

#### **3.3 Step One: Initial Filter**

The Initial Filter would consist of the IDT, as a group, answering the following questions:

- Would the proposed activity involve any of the section 4(c) prohibitions as stated in the Wilderness Act (establish a temporary road in wilderness, use of motor vehicles in wilderness, motorized equipment or motorboats in wilderness, landing of aircraft in wilderness, other form of mechanical transport in wilderness, structure or installation in wilderness)?
  - If the answer is no, then move to Step 2: Qualitative Analysis, as described in Section 3.4 of this appendix.
  - If the answer is yes, then describe the potential violations and answer the next bulleted question below.
- Would the Park be able to sufficiently regulate the activity to prevent any and all of the section 4(c) prohibitions from occurring?
  - If the answer is no, then document the analysis and present it to the Superintendent with a recommendation to disallow the activity.
  - If the answer is yes, then describe the feasible regulations that would prevent the prohibitions from occurring. This mitigated recreational activity forms the baseline for analysis as the IDT moves to the following three questions and Step 2: Qualitative Analysis.

The following three questions should then be answered.



- Is the recreational activity prohibited by other existing law, or by NPS policy?
- Would the recreational activity damage natural or cultural resources?
- Would the recreational activity endanger park visitors?

If the answer to any of these three questions is yes, then document the analysis and present it to the Superintendent with a recommendation to disallow the activity. If the answer to all three of these questions is no, then proceed to the next filter.

### **3.4 Step Two: Qualitative Analysis Filter**

The Qualitative Analysis Filter would consist of a series of questions for the IDT to answer in sequence:

- Would the proposed activity degrade or improve the untrammeled quality of wilderness character? If so, describe the frequency, intensity, and/or duration of the anticipated impact.
- Would the proposed activity degrade or improve the undeveloped quality of wilderness character? If so, describe the frequency, intensity, and/or duration of the anticipated impact.
- Would the proposed activity degrade or improve the natural quality of wilderness character? If so, describe the frequency, intensity, and/or duration of the anticipated impact.
- Would the proposed activity degrade or improve the quality of wilderness character that provides outstanding opportunities for solitude or primitive and unconfined recreation? If so, describe the frequency, intensity, and/or duration of the anticipated impact.
- Would the proposed activity impact any specific wilderness values such as features of recreational, scientific, cultural, or educational interest? If so, describe the frequency, intensity, and/or duration of the anticipated impact.
- Would the proposed activity impact any intangible or symbolic qualities of wilderness character, such as Timbisha views or values? If so, describe.

After the IDT has discussed and documented the answers to these questions, move to Step Three: Quantitative Analysis Filter.

### **3.5 Step Three: Quantitative Analysis Filter**

The IDT asks the following questions and assigns a numeric value based on the analysis completed in Step Two. If the proposed activity would degrade the particular quality of wilderness character, assign it a number from -1 to -10, based on the severity of the degradation, with -10 being the most serious degradation. If the activity would improve the particular quality of wilderness character, assign it a number on the positive side of the scale, between 1 and 10, with 10 representing the greatest improvement. Apply this numeric ranking system to the following questions:

- Would the proposed activity degrade or improve the untrammeled quality of wilderness character?
- Would the proposed activity degrade or improve the undeveloped quality of wilderness character?
- Would the proposed activity degrade or improve the natural quality of wilderness character?
- Would the proposed activity degrade or improve the quality of wilderness character that provides outstanding opportunities for solitude or primitive and unconfined recreation?

- Would the proposed activity adversely or positively impact any specific wilderness values such as features of recreational, scientific, cultural, or educational interest?
- Would the proposed activity adversely or positively impact any intangible or symbolic qualities of wilderness character, such as Timbisha views or values?

If the IDT can agree on consensus numeric values in response to these questions, then the IDT should proceed with this quantitative analysis in a consensus-based approach and document the numeric scores. If IDT members do not agree on the exact numeric values, then each should conduct a separate, written quantitative analysis, with the written scores collected and averaged.

If the total score for the proposed recreational activity is greater than zero, then the IDT would collect the documents from this meeting and analysis as part of the administrative record and provide a recommendation to the Park Superintendent to allow the activity as analyzed.

If the total score for the proposed recreational activity is zero or less than zero, then the IDT would collect the documents from the meeting and analysis as part of the administrative record and provide a recommendation to the Park Superintendent to disallow the activity as analyzed.

The Park Environmental Protection Specialist would maintain the administrative record for this decision-making process.

#### **4. REFERENCES**

Ewert, AW and Hollenhorst, SJ. 1997. Adventure Recreation and Its Implications for Wilderness. *International Journal of Wilderness*. Volume 3, Number 2: 21-26.

## **APPENDIX N: BACKCOUNTRY ROAD MAINTENANCE GUIDELINES**

### **1.0 INTRODUCTION**

National Park Service Management Policy 9.2.1.1 states that

*“Park roads will be well constructed, sensitive to natural and cultural resources, reflect the highest principles of park design, and enhance the visitor experience. Park roads are generally not intended to provide fast and convenient transportation; rather, they are intended to enhance the quality of a visit while providing for safe and efficient travel with minimal or no impacts on natural and cultural resources.”*

Death Valley National Park Roads Maintenance Division maintains two hundred and forty three (243) miles of paved roads and about 875 miles of unpaved roads for two wheel and four wheel drive vehicles. These roads serve as thoroughfares through the park as well as providing park visitors and park staff access to scenic points, and natural and cultural areas of interest. Maintenance of Park roads is conducted to provide safe travel for park visitors while enhancing their experiences during their visit to Death Valley National Park.

This document addresses the various levels of routine, emergency, planned and projected maintenance performed on the park’s unpaved roads consistent with the Death Valley National Park Wilderness and Backcountry Stewardship Plan. This document does not address paved roads or roads managed by entities other than the National Park Service (e.g. private roads, state maintained roads, and county maintained roads). In addition, this document does not address road closures as a result of wilderness restoration planning priorities.

This document provides supplemental guidance to the Death Valley Park Road Maintenance Standards which prescribes the road functional classifications, road designs, numbering system, and general maintenance operations. The implementation of road maintenance described in this document and in the Road Maintenance Standards is subject to the limitations and mitigation measures prescribed in the Park’s Transportation Programmatic Categorical Exclusion. All other road projects proposed outside of the standards set in this document will be processed through the park’s Section 106 and NEPA compliance protocols.

In addition to the park maintained unpaved roads, there are approximately 125 miles of unpaved roads maintained by Inyo County. These roads include Saline Valley Road, Big Pine Road, South and North Eureka Valley Roads, and the Greenwater Valley Road. This appendix does not specifically apply to those roads.

### **2.0 ROAD CONDITIONS**

The park’s unpaved roads will be managed to three different standards: two-wheel-drive low clearance, two-wheel-drive high clearance, and four-wheel-drive high clearance. Snow removal will not be part of normal maintenance of unpaved roads.

When performing maintenance on the park’s unpaved roads, all maintenance activities will be performed within the established roadway. There will be no widening or additional pullouts installed. Where roads alignments abut wilderness lands, the road alignment will be maintained within the narrow corridor legally excluded from wilderness designation as described in the legal land description and supporting maps for the Death Valley National Park Wilderness. No motorized equipment will encroach into the wilderness during maintenance activities.

## **2.1 Two-Wheel-Drive Low Clearance Roads**

Commonly found in the parks defined High Use/ Directed Use Zone, these are roads where a standard two-wheel-drive well maintained passenger vehicle, driven by an experienced and competent driver, should be able to travel up to a speed of 35 MPH, on long, dry straight-of-ways, without losing control due to wash boarding, ruts, or dips. In hilly areas or in curves, the safe speeds may be significantly lower. Wash boarding should be no more than two inches high from crest to crest when a 6 foot level plain is placed perpendicular to the ridges.

There should be no locations where the above-defined vehicle would get stuck or high centered. When the average wash board height exceeds two inches, or other conditions do not meet the above standards, the road should then be temporarily reclassified to the lower standard (two-wheel-drive high clearance) that best describes the current conditions, until improvements can be made, road maintenance will then be scheduled. These roads will receive the higher priority for road maintenance over the following listed road standards.

Dust palliatives will be considered for use on these roads where suitable in order to reduce impacts of airborne dust on visibility, air quality, and adjacent resources.

## **2.2 Two-Wheel-Drive High Clearance Roads**

These are roads commonly found in the parks Backcountry Corridor Zone where a well maintained two-wheel-drive high clearance vehicle, driven by an experienced and competent driver, should be able to be driven at a speed of up to 25 MPH, on long dry straight-of-ways, without losing control due to wash boarding, ruts, or dips. In hilly areas or on curves, the safe speed may be significantly lower. There should be no locations where the above-defined vehicle would get stuck or high centered. When conditions do not meet the above standards, the road then should be temporarily reclassified to the lower standard that best describes the current condition (Four-wheel-drive high clearance), until improvements can be made, road maintenance will then be scheduled.

## **2.3 Four-Wheel-Drive High Clearance Roads**

These are roads commonly found in the parks Backcountry Exploration Zone where a well-maintained four-wheel-drive high clearance vehicle, in four-wheel-drive, driven by a competent driver experienced in four-wheel-drive techniques, can drive the road without getting stuck. When this standard can not be met, road maintenance will be scheduled. In addition, if drivers are avoiding the roadway, driving around problem areas and causing resource damage, road maintenance will be scheduled. Maintenance will be confined to the problem areas only, that are causing vehicles to get stuck or to spots where drivers are driving off road to avoid problem areas. This would allow for the continued opportunity of a challenging four-wheel-drive experience.

## **3.0 SIGNS**

Road signage will be limited to regulatory, warning and wayfinding signs within the park's defined High Use/Directed Use and Backcountry Corridor Zones. The Backcountry Exploration Zone roads will generally not be signed for wayfinding in order to provide visitors the opportunity for self-discovery. Where road junctions or intersections involve roads of different zones, only the main route (High Use/Directed Use or Backcountry Corridor) will be signed to aid in through navigation and the intersecting road will not be signed if it zoned as Backcountry Exploration.

Signage will be consistent with the standards contained in the Federal Manual on Uniform Traffic Control Devices, as supplemented by the NPS Sign Manual as directed by the National Park Service Management Policy 9.2.3.

## 4.0 RE-ESTABLISHMENT OF ROADS SEVERELY DAMAGED BY ACTS OF NATURE

As the Death Valley landscape is dynamic and many of the NPS backcountry roads are in alignments that are subject to flash flooding, it is inevitable that some portion of roads will be severely damaged in any given year. When such damage occurs, park staff led by the Roads Foreman will evaluate the situation. For complex situations, specialized engineering expertise will be sought in an effort to consider all viable options. Based on the evaluation, the Chief of Maintenance will make a recommendation to the Superintendent to either repair the road or close the road. It is unlikely that rerouting existing roads to alternate alignments would be considered because most of the adjacent land is designated wilderness and the establishment of roads (temporary or permanent) is prohibited in section 4 (c) of the Wilderness Act.

The following criteria will be included in the evaluation of severely damaged roads:

- From an engineering perspective, what is the feasibility of re-establishing the road?
- What is the likelihood of repeat catastrophic failure in the next 20 years?
- What is the estimated cost to re-establish the road?
- What, if any, is the increase or decrease in annual road maintenance costs for that portion of the road under consideration?
- What does the road provide access to? Through roads are generally given a higher consideration for repair than dead end roads
- Are there any other alternatives to provide such access (e.g. convert the former road alignment into a trail)?
- Are there any wilderness, cultural, or natural resource concerns to consider before re-establishing the road?

Where possible, the NPS will try to re-establish roads as it is recognized that the vast network of backcountry roads is highly valued by the visiting public as both a visitor experience in itself and as a means to access specific destinations. However, where the engineering assessment finds that it is ill-advised to re-establish the road, and, if the closure meets wilderness restoration planning priorities (see Appendix O of this Plan), the Superintendent may close the road temporarily (for example, pending additional funds necessary to complete the repairs) or permanently. Such closures will be clearly marked and park maps (both digital and paper) will be updated to reflect the closure. All road closures are enforced by NPS Rangers.

## 5.0 ENVIRONMENTAL PROTECTION

Environmental protection measures are prescribed in the Park's Transportation Programmatic Categorical Exclusion. In addition, the protection measures listed in Table 1 will be followed during maintenance operations on backcountry roads consistent with the direction provided in the Death Valley National Park Wilderness and Backcountry Stewardship Plan. These measures will be updated periodically and included in future revisions to the Programmatic Categorical Exclusion and/or additional compliance documents completed in support of backcountry road projects. They may also be incorporated as appropriate into agreements for roads maintained by other agencies.

Table 1. Environmental protection measures to be incorporated into road maintenance activities (in addition to those identified in the Park's Programmatic Categorical Exclusion).

Protection Measure	Justification
Equipment used in road maintenance will be free from exotic plant seed or propagules and reasonable efforts will be made to avoid spreading exotic plants during road maintenance activities.	Roadside exotic plants are a major concern in the Mojave Desert. The presence of exotic plants degrades the natural quality of wilderness character and the efforts to control them in wilderness degrades the untrammeled quality of wilderness character. Additionally, some exotic plants pose an increase fire risk for human ignited fires.
For roads in desert tortoise habitat, road berms will be designed to avoid forming an impediment to tortoise travel. Design features may include lowering the berm height or providing more frequent berm cuts. Maintenance work will be avoided during periods when tortoises are active (e.g. early spring)	Desert tortoise is a federally listed threatened species and their presence enhances the natural quality of wilderness character. Roads and associated vehicle strikes pose a hazard to the survivorship of individual tortoises and the viability of tortoise populations. Road berms that cannot be traversed by tortoises can entrap tortoises in the road corridor which serves to increase the potential for a lethal vehicle strike. Road berms can also impede tortoise movement, which can affect the ability to find mates, establish new home ranges (for young tortoises), respond to variations in resource (food, water) availability, and affect gene flow.
Roads will be maintained in such a way that: (1) they will not discourage use of appropriate roadside campsites, and (2) they will discourage use of inappropriate campsites. Placement of road berms and rocks will generally be the technique used to direct such uses.	The careful placement of road berms and rocks can be used as a social engineering method to encourage use of appropriate campsites and discourage use of inappropriate campsites. Where such methods are effective, they are generally preferable to hard closures and sign proliferation in wilderness and backcountry settings.
Any road work outside the established road prism or the re-establishment of severely damaged roads will be reviewed by the Park Archeologist and onsite monitoring of cultural resources may be required during ground disturbing activities.	Death Valley is rich with archeological resources, including many documented sites as well as thousands of undocumented sites. Archeological resources are legally protected and contribute to wilderness character as important wilderness values. Ground disturbing work in areas that have not recently been disturbed may inadvertently damage archeological resources. These mitigation measures are meant to avoid and minimize such damages.

## 6.0 ROLES AND RESPONSIBILITIES

Field Rangers: Observe and promptly report damage to roads to the Roads Foreman. Enact immediate closures as needed to protect public safety. Enforce temporary and permanent road closures as directed by the Superintendent.

Roads Foreman: The Park Roads Foreman generally has the responsibility for the implementation of these Guidelines as well as the Park's Road Maintenance Standards and for incorporating the necessary information into work plans and contracts. The Foreman also has the responsibility to initiate revisions to both

documents as needed to meet new and unanticipated challenges. The Roads Foreman also has the responsibility to lead the evaluation of severely damaged roads, bringing in additional expertise as needed.

Environmental Compliance Specialist: The Environmental Compliance Specialist has the responsibility to work with the Roads Foreman to periodically update the Transportation Programmatic Categorical Exclusion and to incorporate the environmental protection measures identified above into this and other compliance documents for road work, as appropriate. The Environmental Compliance Specialist may also periodically review these documents in relation to the park's General Management Plan and Wilderness and Backcountry Stewardship Plan to assure that routine operations are conducted in compliance with the direction and constraints provided in those decision documents. Other resource specialists (e.g. cultural resource specialist, wildlife biologist, hydrologist, etc) as well as the Environmental Review Committee may assist as needed with these tasks.

Maintenance Representative to the Park's Wilderness Committee: The maintenance representative to the Park's Wilderness Committee has the responsibility to bring forward any minimum requirements decision analyses for any road maintenance actions that may affect adjacent wilderness resources.

Wilderness Coordinator: The Wilderness Coordinator has the responsibility to review proposed revisions to these guidelines and the re-establishment of severely damaged roads for potential impacts (positive or negative) on wilderness resources and visitor experience.

Park Superintendent: The superintendent has the responsibility to approve changes to road maintenance standards and guidelines as well as to approve or not approve the re-establishment of severely damaged roads. The Superintendent may also enact temporary or permanent road closures as necessary to protect park resources and public safety.





## APPENDIX O: WILDERNESS RESTORATION CRITERIA AND PRIORITIES

### 1. INTRODUCTION

Wilderness restoration, as defined in this appendix, primarily applies to the restoration of small-scale impacts caused by human actions in wilderness, rather than large ecosystem restoration efforts. The purpose of these wilderness restoration efforts is to restore the desired conditions specific to Wilderness Character as defined by the 1964 Wilderness Act, NPS Management Policies, the park's General Management Plan, and the park's Wilderness and Backcountry Stewardship Plan. The intent of this effort is to improve the undeveloped and solitude qualities of wilderness character.

Wilderness restoration efforts may include:

- Removal of hazardous waste sites involving drug manufacturing or growing.
- Removal of illegal off-road vehicle tracks.
- Removal of non-historic debris, including the removal of non-functioning and abandoned utility and research installations (repeaters, relay towers, seismic stations, etc); remains of motorized vehicles and airplane crashes; abandoned property, and other similar debris for the purpose of preserving Wilderness Character.
- Removal of non-historic motor vehicle routes for the purposes of converting such routes into trails, restoring them to natural conditions, or being managed as a cultural resource, or, in accordance with Appendix N of this Plan.
- Removal of non-historic, artificial wildlife watering devices that interfere with natural spring flows or wildlife interactions.

Recent wilderness restoration efforts have focused on the removal of off-road vehicle tracks and the clean up and removal of debris—not survey markers—left on the summits of desert peaks by USGS survey crews in the late 1940s and early 1950s. In the past three years, over two hundred pounds of debris have been removed from 80 peaks while another 40 peaks have been confirmed free of debris. Additional restoration efforts have focused on the clean up and removal of several pick-up loads of trash and debris from the vicinity of Rita's Cabin in Pleasant Canyon and from a fallen down cabin on the ridge between Middle and South Park.

When determining which sites or areas should be restored, the project proponent will ensure all park resources that have been included within wilderness are protected and maintained according to the pertinent laws and policies governing park natural and cultural resources, using management methods that are consistent with the preservation of wilderness character and values. If Section 4(c) prohibited acts are proposed to be utilized to restore a site, then the Minimum Requirements Decision Guide will be used to determine which alternatives would have localized, short-term adverse impacts while providing long term beneficial impacts to the undeveloped and natural qualities.

Project proponents will thoroughly address the question of whether site restoration is the best management action, and if so, will develop a site specific restoration plan that address patterns of human use, and will consider all resource management needs or issues. Project proponent will also consider a full range of feasible alternatives, including a no action alternative. Alternatives that employ no section 4(c) prohibited acts, or minimal use of prohibited uses (i.e. a combination of motorized and non-motorized transport methods or tools) are preferable to ones proposing extensive use of prohibited acts. After alternatives have been developed, the Wilderness Committee or the Environmental Review Committee may still decide that doing nothing is the best way to preserve wilderness character and the proposed action should not be carried out. The project proponent will also ensure resources will be restored

according to an approved restoration plan; larger restoration projects will include project monitoring and documentation.

## **2. RELEVANT LAW, POLICIES, AND GUIDANCE**

### **2.1 The Wilderness Act**

The Wilderness Act of 1964, defines wilderness as “.....an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable.....” Section 4 (c) prohibits “...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act... 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 of installation within any such area.”

### **2.2 National Historic Preservation Act**

Section 1 (b)

“the historic and cultural foundations of the nation should be preserved as a living part of our community life.....”

“the preservation of this irreplaceable heritage is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational,.....benefits will be maintained and enriched for future generations of Americans.”

### **2.3 NPS Management Policies**

National Park Service *Management Policies 2006* (Section 6.3.10.1 “ Administrative facilities (for example radio repeater sites, phone relay equipment, associated storage or support structures, seismic stations, and drift fences) may be allowed in wilderness only if they are determined to be the minimum requirement necessary to carry out wilderness management objectives and are specifically addressed within the park’s wilderness management plan. As rapidly as possible, disturbed resources will be restored according to an approved restoration plan. Where abandoned roads have been included in the wilderness, they may be used as trails, restored to natural conditions, or managed as a cultural resource. ”

Section 6.3.10 states “Maintenance or the removal of historic structures will also comply with cultural resource protection and preservation policies and directives, and with the concept of minimum requirement management techniques for wilderness.”

### **2.4 Death Valley National Park General Management Plan**

The 2002 General Management Plan’s objectives call for the park to “Restore to natural appearance, inasmuch as feasible, the land surfaces disturbed by man, recognizing that significant cultural values must be preserved.” More specifically within wilderness, the Plan calls for staff to “Strive to restore disturbed areas in wilderness.” The Plan also states that “Terrain and plants could be manipulated where necessary to restore natural conditions on lands altered by human activity.”

The Plan reaffirms the preservation of wilderness character and the use of the minimum requirements analysis process, stating that “Potential disruption of wilderness character and resources and applicable safety concerns will be considered before, and given significantly more weight than, economic efficiency. (Death Valley GMP 2002).

## **2.5 Death Valley National Park Wilderness and Backcountry Stewardship Plan**

The Plan identifies wilderness restoration as an action common to all action alternatives. This document, which is an appendix to the Plan, serves as additional implementation guidance regarding how the park will identify, approve, and carry out restoration efforts.

### **3. WILDERNESS RESTORATION PROCESS**

#### **3.1 Describe the situation that may prompt action and why it is an issue:**

The following are considered negative impacts to Wilderness Character and should be addressed as appropriate in the situation description:

- Non-historic, abandoned debris such as
  - Hazardous waste sites associated with drug manufacturing or growing.
  - Non-functioning and abandoned utility and research installations (repeaters, relay towers, seismic stations, etc). Should installations such as Dry Mountain or Grapevine repeater sites or USGS seismic installations become obsolete, unnecessary, or abandoned - they should be removed or relocated.
  - Remains of motorized vehicles and airplane crashes.
  - Structures, fences, pipes, power lines, and other installations.
- Non-historic motorized vehicle routes such as
  - Sections of old roads to be removed in order to deter continued unauthorized use and to initiate actions to promote the natural rehabilitation of these routes within wilderness. Restoration activities will reduce the visibility and accessibility of these routes to motor vehicles which will enhance the naturalness, solitude and primitive recreation values of wilderness.
  - Roads that are deemed ineligible for listing on the National Register after appropriate cultural review.
  - Roads that require closure when an engineering assessment finds that it is ill-advised to re-establish a road, and, if the closure meets wilderness restoration planning priorities (see Appendix N of this Plan).
- Non-historic, artificial wildlife watering devices that interfere with natural spring flows or wildlife interactions, in consultation with the Park Wildlife Biologist

#### **3.2. Identify appropriate restoration sites**

Before a project would proceed at any site, the park would conduct an appropriate level of cultural review. If an archeological survey of the proposed project area is determined to be necessary, it will be coordinated with the Tribal Historic Preservation Officer and the State Historic Preservation Officer as necessary, to ensure cultural properties are protected as prescribed by law. All cultural resources such as archeological sites, historic trails, routes, cultural landscapes, and structures that have been included within wilderness will be protected and maintained according to the pertinent laws and policies governing cultural resources using management methods that are consistent with the preservation of wilderness character and values. (The Wilderness Act specifies that the designation of any area of the park system as wilderness “shall in no manner lower the standards evolved for the use and preservation of” such unit of the park system under the various laws applicable to that unit (16 USC Section 1133(a)(3)). Thus, the laws pertaining to historic preservation also remain applicable within wilderness but must generally be administered to preserve the area’s wilderness character. The responsible decision maker will include appropriate consideration of the application of these provisions of the Wilderness Act in analyses and decision making concerning cultural resources.)

Non-historic debris, non-historic motorized vehicle routes, and non-historic, artificial wildlife watering devices, would be prioritized for removal based on the criteria and process outlined below. Removal of any debris that may be of military origin would be coordinated with the appropriate military command.

### **3.3 Determine criteria for what is restored**

The following criteria would be used to determine priorities for wilderness restoration actions.

- Is the site or object an imminent safety threat to park visitors?
- Does the site adversely affect the ecosystem or have the potential to adversely affect it?
- Is there a high potential for wildfire associated with visitor use of the site or structure?
- Does the site adversely affect other important resources (water, historic sites, etc.)?
- How large a portion of the wilderness area is directly impacted by the site (footprint)?
- Does the site adversely affect a large amount of wilderness viewshed?
- What is the feasibility of restoration (distance from roads, toxic materials on site, etc.)?
- What is the cost of restoration?
- Are there environmental hazards at the site?
- Is the site located on or near private or state property?
- Are there legal claims on the site (mining, water rights, grazing, etc) that constrain action?
- Is the restoration action itself an adverse effect?

## **4. WILDERNESS RESTORATION PRIORITIES**

### **Hazardous Waste Sites/Hazard Mitigation**

The park's highest wilderness restoration priority should be the clean up and restoration of drug related waste sites while ensuring that all appropriate levels of safety concerns and protections are provided. The park's mine safety program should survey mine related waste sites to determine their level of toxicity and identify opportunities to mitigate hazardous conditions while improving wilderness character with due consideration for the protection of cultural resources. Where abandoned vehicles and/or equipment may not be removed expeditiously due to logistical challenges or cultural resource considerations, the potentially hazard fluids (oil, antifreeze, etc) should be drained and properly disposed of according to NPS policy in order to prevent future soil contamination. All hazardous waste and hazard mitigation work will be coordinated with the Park Safety Officer.

### **Removal of Trespass Vehicle Tracks**

Every year dozens of vehicles are driven off-road by park visitors illegally travelling cross-country within designated wilderness. This trespass vehicle activity can damage native plants, soils, and archeological sites, and diminishes the undeveloped quality of the wilderness. The prolonged presence of vehicle tracks also encourages additional off-road vehicle traffic. Vehicle tracks will remain visible for months to years. Backcountry patrol staff will make it a high priority to eliminate (rake out) the first two hundred feet of trespass vehicle tracks as soon as reasonably possible. Active efforts to restore the natural and undeveloped qualities of the Badwater Basin salt flats, where vehicle tracks persist for years, have recently proven successful. Future salt flat restoration efforts can be anticipated as numerous areas of vehicle tracks remain. The park's archeologist should be notified to insure appropriate cultural review and protection of archeological sites before large scale remedial action is taken.

### **Big Game Guzzlers**

Five big game guzzlers were installed by the California Department of Fish and Game in the 1980s in what was then lands administered by the Bureau of Land Management. All of the guzzlers consist of one or more large metal tanks, a hundred feet or more of metal piping and other associated infrastructure. Removal of the

non-functional guzzlers in Dolomite Canyon and Little Chute Canyon will be a high priority. The Wilderness Coordinator will seek funding to facilitate the disassembling and removal of these installations. The guzzler south of Pyramid Peak is also non-functional and should be the next priority for consideration for removal. The status of the Dry Mountain and Last Chance guzzlers will continue to be reviewed and if they are shown to be unnecessary for the survival of nearby bighorn sheep herds they will also be removed. All guzzler removal efforts will be coordinated with the Park Wildlife Biologist.

### **Fences**

Over a half dozen non-historic fences ranging from the three mile long Hunter Mountain grazing allotment fence to several much smaller vegetation study plot enclosure fences exist within the park's wilderness boundaries. These fences have been built over the past four decades to fence out cattle or feral burros and horses. The three mile fence built on Hunter Mountain in the 1990s to keep cattle from crossing onto National Monument property will be removed once the Hunter Mountain grazing allotment is retired. The status of the "butterfly fence" which protects specialized butterfly habitat will be reviewed once the grazing allotment is retired. It may stay in place if the non-native feral horses are not removed from the area. The status of the fences surrounding the study plots in Grapevine Canyon and Butte Valley and fences surrounding Waucoba Spring and the Artesian Well in Saline Valley should be reviewed once the grazing allotment, and feral burros and horses are removed from their respective areas. All fence removal efforts will be coordinated with the Park Wildlife Biologist and/or Park Botanist.

### **Research Installations**

Four seismographs are located in the wilderness. They were originally associated with the Yucca Mountain Research project and were installed in 1978 and 1988. One is located at the mouth of Cottonwood Canyon, one south of the Skidoo Road, one north of the Indian Pass Road, and one in Greenwater Valley south of the Furnace ghost town site. The research permit will be up for renewal in 2017. The Wilderness Coordinator will consult with the current permit holders with the University of Nevada Reno to locate appropriate alternative sites nearby where each of the seismographs can be re-located outside of wilderness.

Abandoned research installations and markers will also be identified and efforts will be made to locate the original researcher or research institution. They will be removed, at permittee expense if possible, after review by the park's Research Coordinator and other subject matter specialists to determine that there is no value to subsequent study.

### **Military Crash Sites, Debris, and Installations**

Over a dozen military plane crash sites exist within the park's wilderness boundaries. Only one of these sites has been fully restored. Priority will be given to surveying and documenting all known crash sites. Those less than fifty years old will be considered for full removal and restoration. Efforts will be made to involve the appropriate military branch with the removal and clean up of military plane crash sites.

Numerous sites with military debris exist within the park's wilderness boundaries especially in the Owl'shead Mountains. This debris ranges from large to small sections of target drones and their associated hardware, to spent and unspent ammunition. Much of the debris was unintentional spill over from the neighboring Fort Irwin Training Center dating back to the 1970s, 1980s, and early 1990s before the area became part of the park and was designated as wilderness. Some of the spent ammunition may be several decades older. Due to the potential for unexploded ordinance military debris should be approached cautiously and not handled. A GPS location and photographs should be taken and the location reported to the District Ranger and to the park's Wilderness Coordinator. The park's liaison with the military will initiate contact and discussions to determine their interest in removing the debris in question. If the military chooses to become involved, the park's military liaison and wilderness coordinator will co-operatively work to insure safe removal. Military debris that is less than fifty years old will be a priority for removal while debris fifty years old or older will be evaluated for eligibility for the NRHP. If not eligible, debris will be removed. If it is determined eligible, the park's Cultural Resource Manager will develop a treatment plan appropriate to the resource and visitor use,

which may include in situ preservation or documentation and removal. The park Superintendent, the Wilderness Coordinator, and the park's military liaison will seek to build a relationship with neighboring military commands to facilitate their assistance with the removal of debris.

Abandoned military installations of any nature will be identified for removal and coordinated with Department of Defense for proper disposal and remediation depending on the nature of the installation using the communication method outlined above.

### **Non-historic Cabins and other Structures**

There are numerous non-historic cabins and mining structures within park wilderness. While some of these cabins are occasionally used by the public and receive maintenance, others are in extremely poor condition, and receive little or no ongoing maintenance. Cabins will be prioritized for removal when they are

- deemed ineligible for listing on the national register, after appropriate cultural review, or properties that may be over 50 years in age should have a formal determination by the NPS, state historic preservation officers, and associated Indian tribes, and,
- considered a safety hazard to park visitors, and
- documented to be an adverse effect to Wilderness Character, and,
- pose a threat to wildlife, vegetation, or other natural resources

See appendix K of this Plan for information regarding the treatment and management of historic cabins located in wilderness. The following cabins are a high priority for evaluation for NRHP eligibility and visitor safety hazards:

- Huntley Cabin ( within view of the White Top Mountain Road)
- Hall Canyon Cabin
- Weston Cabin (in Happy Canyon)
- Wolfman Jack Cabin (in Saline Valley)
- (New) Lemoigne Cabin (in Lemoigne Canyon)
- Martin's Crossing Cabin (near Tucki Mountain)

Abandoned utility installations or other such structures that affect wilderness character will also be removed. Where feasible, the costs of such removal will be borne by the utility owner.

## **5. ROLES AND RESPONSIBILITIES**

Project Proponent: The project proponent should receive supervisory approval before submitting a wilderness restoration proposal to the park's Wilderness Coordinator. With support and assistance from the Wilderness Coordinator the proposal can then be submitted to the Wilderness Committee. If approved by the Wilderness Committee, the project would move to the Environmental Review Committee for compliance and approval.

Wilderness Coordinator: It is expected that the park's Wilderness Coordinator will be the primary project proponent for most wilderness restoration projects. The Wilderness Coordinator will seek potential funding sources and/or submit wilderness restoration proposals to a variety of funding sources. If wilderness restoration projects are submitted by others, the wilderness coordinator will review the proposal, offer suggestions for improvement, and if supportive, assist the proponent in submitting the proposal to the Wilderness Committee. If actions that would violate Section 4 (C) of the Wilderness Act are proposed, the Wilderness Coordinator will prepare a minimum requirements analysis.

Chief Ranger: The Chief Ranger or his designee will oversee the removal of hazardous waste, including drug manufacturing or growing sites, in coordination with the Wilderness Coordinator. All appropriate safety measures will be followed when conducting removal operations. Whenever possible methods that would not

## Appendix O: Wilderness Restoration Criteria and Priorities

violate Section 4 (C) of the Wilderness Act are preferred if an emergency situation does not exist. The Chief Ranger or designee will serve as the liaison to the military to address concerns regarding military crash sites, debris, and installations.

Wilderness Committee: The Wilderness Committee will review and approve all wilderness restoration project proposals before they are forwarded to the Environmental Review Committee for compliance and approval. Restoration proposals involving installations listed as a high priority for removal will be given precedence.

Safety Officer: The park safety officer will be consulted for any restoration activity that involves unusual safety issues or specific health hazard, such as hazardous waste sites.





## **APPENDIX P: WILDERNESS COMMITTEE CHARTER**

### **1.0 INTRODUCTION**

The geographic and programmatic scope of wilderness stewardship at Death Valley National Park affects virtually every aspect of park management. An interdisciplinary wilderness committee serves an important advisory function to the Park Superintendent and the Senior Management Team in fulfilling the park's wilderness stewardship responsibilities. While many of the day-to-day wilderness stewardship tasks are carried out by the park's wilderness coordinator, there are other wilderness stewardship tasks that benefitted by an interdisciplinary approach at some point in the implementation process.

Rather than convene an ad hoc interdisciplinary team as needed to meet the park's wilderness stewardship needs, a standing Wilderness Committee is hereby chartered by direction of the Park Superintendent. One of the benefits of a chartered committee rather than an ad hoc team is the opportunity to invest in training and accumulate experience that will serve to improve the park's wilderness stewardship expertise over time. It also provides a means to strategically align the committee membership to best meet the park's most pressing needs while providing for some flexibility to adapt to unique situations or to add in specialized skills as required for specific tasks.

### **2.0 LAWS AND POLICIES**

The NPS User Guide to Integrating Wilderness Character into Planning, Monitoring, and Management identifies that one of the steps to integrate wilderness character into management and operations is to charter a park interdisciplinary wilderness committee. This is identified as one of the building blocks that all parks with wilderness are expected to complete by 2014. (As of March 2012, the User Guide is an internal draft document, but is expected to adopted as part of agencies policy as a component of Reference Manual 41).

### **3.0 VISION, MISSION, AND GOALS**

#### **3.1 Vision**

Commitment to Wilderness: Death Valley National Park employees are leaders in Wilderness stewardship, with a passion for understanding, protecting, and communicating wilderness values.

#### **3.2 Mission**

The Mission of the Death Valley National Park Wilderness Committee is:

- To increase awareness and understanding among all DEVA employees about why wilderness matters, and why everyone in the park has a part in its care and appreciation
- To work for wilderness by emphasizing how it connects to all NPS programs and endeavors, and by pursuing agreements with the Timbisha Shoshone Tribe, BLM, U.S. Forest Service and other organizations for joint projects in the cause of wilderness
- To embrace and work for the protection and restoration of wilderness character with bold, imaginative ideas and initiatives that reach well into the 21<sup>st</sup> century
- To inspire all in the Park, whether they work at a desk or in the field, to be stewards of wilderness, and
- To promote better communication among and by DEVA staff about our the park's wilderness resources so that the American public will better understand, appreciate and cherish national park wilderness and the values within it

The committee also serves as a link and catalyst for cooperative insight and wilderness advocacy among the DEVA Superintendent, all the park's employees and park partners, the Timbisha Shoshone Tribe, federal

land agencies (including U.S. Forest Service, U.S. Fish and Wildlife Service, and the Bureau of Land Management) and the national NPS wilderness program, including the National Wilderness Steering Committee.

### 3.3 Goals

Awareness: Continue to refine and refresh the message of “why wilderness is important,” and foster awareness and understanding of wilderness values among park employees and the public which leads to embracing wilderness stewardship.

Training: Promote wilderness training opportunities for park staff and cooperators, including the use of existing training programs (e.g. Carhart, Leave No Trace) as well as park specific opportunities.

Stewardship: Facilitate the implementation of the park’s Wilderness and Backcountry Stewardship Plan to preserve or improve wilderness character now and in the future.

Commemoration: Plan and execute local events to commemorate significant milestones in wilderness preservation, including the 50<sup>th</sup> anniversary of the Wilderness (2014) and the 20<sup>th</sup> anniversary of the California Desert Protection Act (2014).

Outreach: Engage local governments and communities to promote a shared understanding of the Park’s wilderness values and to solicit input and coordinate on wilderness related issues of local interest.

## 4.0 TASKS AND FUNCTIONS

The committee is chaired by the Wilderness Coordinator and reports to the Park Superintendent. The committee meets monthly, as needed, prior to the Park’s Environmental Review Committee and generally conducts the rest of its business primarily by phone and e-mail. The administrative record for the actions and recommendations made by the Wilderness Committee is maintained by the Park’s Environmental Protection Specialist.

The Wilderness Committee plays a key role in implementation of the Death Valley Wilderness and Backcountry Stewardship Plan (DVW&BSP). The specific tasks are detailed in the relevant appendices, but are summarized here:

- Wilderness Character Monitoring (see DVW&BSP Appendix G): The parks Wilderness Committee will serve as the primary review body for the monitoring reports and will also be the forum for discussions regarding appropriate use of and access to databases needed to monitor trends in wilderness character. This group is also charged with analyzing any downward trend in any quality of wilderness character and making recommendations for management actions to correct the trend. The wilderness committee will also oversee the development of the on-the-ground monitoring program during the first five years, identifying any additional measures needed for effective monitoring and fine tuning the metrics used in each measure.
- Minimum Requirements Decision Analysis (see DVW&BSP Appendix L): The parks Wilderness Committee will serve as the interdisciplinary team for the review of the minimum requirements decision analyses prepared by project proponents for work in wilderness that involves prohibited acts.
- Evaluating Emerging Recreational Opportunities in Wilderness (see DVW&BSP Appendix M): The parks Wilderness Committee may serve as the interdisciplinary team for this evaluation at the discretion of the Park’s Environmental Protection Specialist and Wilderness Coordinator. The interdisciplinary team should formally meet to discuss the impacts to wilderness character and

alternatives. Each team member should be familiar with the Wilderness Act and the emerging recreational activity. Directed research in advance of the meeting may be required to gain familiarity with the emerging recreational activity that is being proposed and analyzed. The Team will apply the filters listed in Appendix M and make a recommendation to the Park Superintendent to allow or not allow the activity.

- Wilderness Restoration (see DVW&BSP Appendix O): The Wilderness Committee will review and approve all wilderness restoration project proposals before they are forwarded to the Environmental Review Committee for compliance and approval.

In addition to these standing functions, the Wilderness Committee can be convened at the direction of the Park Superintendent to review past actions or make recommendations for future actions. Such uses might include an after action review of a significant emergency incident in wilderness, early input on a wilderness proposal put forth by law makers, review of significant actions proposed on adjacent lands that might impact the park's wilderness, review of a concern brought forth by non-governmental organizations, or any other topic the Superintendent chooses.

## **5.0 MEMBERSHIP**

### **5.1 Committee Composition**

These positions, or their designees, are fixed members of the committee and will serve on the committee by virtue of their position for the duration of their tenure at Death Valley NP:

- Park Superintendent
- Wilderness Coordinator (Chair)
- Chief of Resources Management
- Environmental Protection Specialist
- Chief Ranger

These positions are rotating members of the committee and will serve on the committee for at least one year and no more than three years:

- program diversity (natural resources, cultural resources, public affairs, interpretation, facilities, and protection with an emphasis on field Rangers)
- A designated Tribal representative may also be a member of the committee upon agreement by both the Tribal Leadership and Park Superintendent

As vacancies occur in the rotating membership, the fixed members will make review the committee membership and identify possible members with skills that may be of value to the anticipated tasks of the committee and make those recommendations to the Park Superintendent who will then make the selection in consultation with the appropriate Division Chief. To the extent possible, the committee membership turnover will be staggered to maintain organizational consistency and to avoid a situation where the majority of the positions are filled by new members at the same time.

A printed roster of committee membership, tenure, and contact information will be maintained by the Chair of the Wilderness Committee.

### **5.2 Training Requirements for Committee Members**

Within 3 months of joining the Wilderness Committee, all members will read the Death Valley National Park Wilderness and Backcountry Stewardship Plan and will complete these on-line training modules through the Arthur Carhart Interagency Wilderness Training Center (Carhart):

- The Wilderness Act
- Minimum Requirements Analysis
- Deciding to Keep Wilderness Wild: Four Cornerstones for Wilderness Managers

In consultation with their Supervisor and as other work priorities will allow, committee members are expected to take additional wilderness training courses to improve their knowledge and/or to remain current with agency policies and procedures. Some additional training opportunities include:

- Other online Carhart training classes, such as visitor use management, cultural resources, and natural resources
- Bi-monthly Wilderness Character webinars sponsored by Carhart
- Online courses offered through the University of Montana Wilderness Management Distance Education Program
- Classroom training offered by Carhart, such as the regional wilderness stewardship workshops
- NPS Wilderness Character Forums
- Wilderness related sessions at professional meetings, such as George Wright Society Biennial Conference, Ranger Rendezvous, and National Interpreters Workshop
- Outdoor Skills and Ethics training offered by Leave No Trace

Training records (certificates of completion and SF-182s) should be submitted to the park's Training Officer for inclusion in the employee's official personnel file. Training needs and opportunities for each committee member should be discussed with their Supervisor and identified in their employee development plan annually.

## **APPENDIX Q: TRAILS LIST AND TRAIL MAINTENANCE STANDARDS**

### **1. INTRODUCTION**

Trails are an important means of access to the wilderness and a means of protecting the park's natural and cultural resources. The park's trail system consists of twenty-five trails and marked routes covering fifty five miles providing access to a variety of habitats including; colorful badlands, expansive salt flats, sand dunes, fragile wetlands, riparian areas, mountain summits, volcanic landscapes, and a variety of geologically interesting and scenically spectacular canyons.

All of these trails and routes will typically have at a minimum a trailhead sign with safety and regulatory information as well as a trailhead parking area. The interpretive and maintained trails will also be marked by a sign on the paved or dirt road that is used to access the parking lot. The busier trails will have toilet facilities at or near the trailhead to mitigate human waste concerns.

The implementation of trail maintenance will be carried out in accordance with annual work plans and subject to the availability of funds. With the recognition that the Park has limited human and fiscal resources and unlimited natural hazards there is no expectation that any trail will be maintained in a hazard free condition and visitors should be prepared for the challenge and risk associated with travel in a wild landscape.

Due to the dozens of accessible canyons and hundreds of thousands of acres of open desert terrain readily crossed by hikers, the park does not have a large number of constructed or maintained trails. Dozens of other cross country routes and abandoned or closed roads covering hundreds of miles exist in the park and are occasionally used by hikers to access remote canyons, distant peaks, and old mining camps. Many of these routes are historic and are associated with ancient Indian cultures, patterns of western exploration and settlement, and sites that exemplify mining, ranching and transportation history. Some of these routes may appear on maps, but will not be actively maintained or marked by park.

### **2. RELEVANT LAW, POLICIES, AND GUIDANCE**

#### **2.1 The Wilderness Act**

The Wilderness Act declares that wilderness areas be "...administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness..."

#### **2.2 NPS Management Policies**

National Park Service Management Policies 2006 (Sections 9.2.3 and 9.2.4) recognize the importance of trails to allow visitor access and to protect natural and cultural resources.

"Trail design will vary to accommodate a wide range of users and will be appropriate to user patterns and site conditions. Wetlands will generally be avoided and, where possible, they will be spanned by boardwalk or other means using sustainable materials that will not disturb hydrologic or ecological processes. Backcountry trails will offer visitors a primitive outdoor experience, and will be unsurfaced and modest in character except where a more durable surface is needed.

#### **2.3 Death Valley National Park General Management Plan**

The 2002 General Management Plan reaffirms the importance of trails to provide visitor access and protect natural and cultural resources. The GMP states that "... the wilderness/backcountry plan will address specific trail use by hikers, equestrians, and people with disabilities. The plan will also address the intensity of trail development, including the type and number of signs, trails, trailheads, long distance trails extending into other jurisdictions, and the anticipated maintenance levels for developed trails.

Trailhead orientation signs will be installed where appropriate to aid in visitor safety and resource protection. Signs should be unobtrusive, minimal, and blend in with the natural environment so that the undeveloped wilderness character and sense of exploration remains.” (Death Valley GMP 2002).

## **2.4 Death Valley National Park Wilderness and Backcountry Stewardship Plan**

The 2012 Wilderness and Backcountry Stewardship Plan details trail and trail related facilities and monitoring standards to assure that wilderness quality is preserved and improved over time. This document is an appendix to that plan and serves as the implementation details to accomplish the tasks briefly described in the plan itself.

## **3. TRAIL DEFINITIONS**

### **3.1 Interpretive Trails**

These trails are short, usually a mile or less in length. The Golden Canyon Interpretive Trail was originally built and used as a road until destroyed in a flash flood in 1976. Interpretive trails may have a boardwalk that is accessible to visitors with disabilities though that is not required. A trailhead sign with safety and regulatory information, a trailhead parking area, and rest rooms are provided. Interpretive signs or an interpretive booklet keyed to numbered posts are present. These trails are only open to hikers. No horses or other stock, bicycles, or vehicles are allowed.

### **3.2 Maintained Trails**

These historic trails vary from one to over six miles in length and were originally constructed as hiking trails or mine access routes. Many of them are currently listed on the NRHP, or, are eligible for listing on the NRHP. The Telescope Peak Trail was constructed in the late 1930s by the Civilian Conservation Corps and extensively rehabilitated in 2006 by a Student Conservation Corps crew. It may be eligible for listing on the NRHP. The first mile of the Wildrose Peak Trail was originally constructed and used in the 1880s by timber cutters working to fill the Charcoal Kilns. The Keane Wonder Mine and Ubehebe Peak trails and the old road to Keane Wonder Spring and the road through Surprise Canyon to Panamint City were originally constructed by miners in the late 1870s and early decades of the 1900s.

A trailhead sign with safety and regulatory information as well as a parking area are generally provided. Restrooms are provided at the busier trailheads. Only the Telescope Peak, Wildrose Peak, and Darwin Falls trails are maintained on a regular basis. These trails are open to hikers. At this time, the Wildrose Peak Trail is the only maintained trail appropriate for horses and other stock use. These trails are closed to bicycles and vehicles.

If Surprise Canyon, either through the separate Surprise Canyon EIS planning process or pending legislation, were designated off-limits to vehicle traffic, a trail and trailhead would be established cooperatively with the BLM at Chris Wicht’s Camp.

### **3.3 Marked Hiking Routes**

The marked hiking routes range from a half mile to nearly 12 miles in length. No formally constructed trail exists. These routes vary widely from being mostly in the open; ie Badwater Salt Flats, Mesquite Flat Dunes, and Dante’s Peak, to single lane paths through narrow canyons such as Fall Canyon, Mosaic Canyon, Sidewinder Canyon, and Marble Canyon, to cross country routes across open desert terrain such as the first half of the Indian Pass Canyon route and the connecting portion of the Cottonwood and Marble Canyon Loop route.

A trailhead sign with safety and regulatory information and a trailhead parking area are generally provided. Rest rooms are provided at the busier trailheads. Signs are not located along the routes. These routes are open to hikers. Horses or other stock are not allowed on the shorter routes, but are allowed on

the Fall Canyon, Indian Pass and the Cottonwood and Marble Canyon Loop routes. All of the routes are closed to bicycles and vehicles.

## 4. TRAIL SYSTEM

The Wilderness and Backcountry Trail System for Death Valley National Parks consists of twenty-five maintained trails and marked routes; consisting of two interpretive trails, ten constructed and maintained trails, and thirteen marked cross country routes covering fifty five miles. Three frontcountry interpretive trails are also listed here. This list of trails and routes may be periodically updated whenever the park's Wilderness and Backcountry Stewardship Plan is revised.

### 4.1 Interpretive Trails

* Golden Canyon Interpretive Trail	1.0 mi.
* Salt Creek Interpretive Trail	0.5 mi.
	<b>1.5 miles</b>
Frontcountry Trails	
* Harmony Borax Interpretive Trail	0.3 mile
* Tie Canyon Interpretive Trail	0.75 mile
* Scotty's Grave Interpretive Trail	0.25 mile

### 4.2 Maintained Trails

* Badlands Loop Trail	1.0 mi.
* Darwin Falls Trail	1.0 mi.
* Gower Gulch Loop Trail	2.5 mi.
* Keane Wonder Mine Trail	1.0 mi.
* Keane Wonder Spring Trail	1.0 mi.
Surprise Canyon Trail	2.5 mi.
* Telescope Peak Trail	6.5 mi.
Ubehebe Peak Trail	2.5 mi.
Wildrose Peak Trail	4.0 mi.
* Zabriskie Point to Golden Canyon Trail	1.5 mi.
	<b>22.5 miles</b>

### 4.3 Marked Hiking Routes

* Badwater Salt Flats Route	1.0 mi.
Cottonwood & Marble Canyon Loop Route	12 mi.
* Dante's Peak Route	0.5 mi.
* Eureka Dunes Route	1.0 mi.
Fall Canyon Route	2.5 mi.
Indian Pass Canyon Route	6.0 mi.
* Little Hebe Crater Route	0.5 mi.
* Mesquite Flat Dunes Route	1.0 mi.
* Mosaic Canyon Route	1.5 mi.
* Natural Bridge Canyon Route	1.0 mi.
* Sidewinder Canyon Route	2.5 mi.
* Ubehebe Crater Route	0.5 mi.
* Ubehebe Crater Loop Route	1.0 mi.
	<b>31.0 miles</b>

\* Horses and other stock animals are not allowed on these trails or routes

## 5. TRAIL MAINTENANCE STANDARDS

### 5.1 General Trail Maintenance

Most of the trails and the hiking routes in the park will not be regularly maintained due to the open terrain or narrow canyons they traverse. Where trails are maintained, work involving the removal or trimming of vegetation will not be performed between March 15 and August 15 without prior consultation with the park's wildlife biologist to protect nesting birds. Proper pruning and cutting techniques will be followed in order to cause the least amount of stress or harm to the vegetation, whether shrub, tree or herbaceous plant. Care will be taken to ensure that branch collars on woody plants (trees or large shrubs) are not injured or removed; and overly long stubs are not left when pruning or cutting back encroaching limbs and branches from trails. Injury to branch collars can have a detrimental effect on a plant's defense system while leaving long branch stubs opens up opportunity for pests and other organisms to invade the stub causing rots, cankers, or other types of disease. Excessive sap flow from wounds caused from cutting back limbs and branches at an improper time of year may cause considerable die-back, the reduction of growth or vigor of a plant. Rock and scree hazards are inherent in the desert landscape and minimal rock work will be conducted to maintain trails.

This document provides trail maintenance guidance including trail classifications, trail design and signage system, and general maintenance operations. Implementation of these guidelines is subject to the limitations and mitigation measures prescribed in the Park's Trail Management Programmatic Categorical Exclusion. All other trail projects proposed outside of the standards set in this document will be processed through the park's Section 106 and NEPA compliance protocols.

### 5.2 Interpretive Trails

The boardwalk at Salt Creek will be inspected for missing or damaged boards, and for exposed nails and repaired at least twice yearly. The trail through Golden Canyon will have well maintained numbered posts for the interpretive trail booklet and all trail junctions will be signed. Asphalt that breaks off from the remains of the old road will be removed from Golden Canyon.

### 5.3 Maintained Trails

The Telescope Peak, Wildrose Peak, and Darwin Falls trails will be maintained on at least a yearly basis as staffing allows. Maintained trails will have a trail tread width ranging from 18 to 30 inches wide. Overhanging tree branches and brush intruding upon the trail will be cut and removed. Larger trees blocking the trail path will be removed with a cross cut saw. Rocks and other debris will be removed from the trail path. Because of the large number of rare and endemic plants near and along the Telescope Peak Trail, care will be taken to ensure material and debris removed from the trail will be carefully deposited out of sight on the downhill side, and not piled upon native vegetation growing along side or downhill from the trail. Telescope Peak is habitat for one of the rarest plants in Death Valley, the Telescope Peak bedstraw (*Gallium hypotrichium* ssp. *tomentellum*). This plant is found only on the scree slopes within 1000 ft of the summit and in the historic rockwork of the trail switchbacks. In the event that the rockwork is restored, the Death Valley botanist should be contacted to provide plant identification materials. Care should be taken not to disturb this plant and under no circumstances should it be "cleaned out" of these rock walls.

If Surprise Canyon, either through the separate Surprise Canyon EIS planning process or pending legislation, were designated off-limits to vehicle traffic, a trail would be established cooperatively with the BLM from a trailhead at Chris Wicht's Camp through Surprise Canyon to Panamint City.

### 5.4 Marked Hiking Routes



Hiking routes are generally not maintained. In Cottonwood Canyon the route through the denser vegetation of the riparian areas will have a single lane cleared of brush wide enough for a backpacker to safely pass through. Portions of the Cottonwood and Marble Canyon Loop, Fall Canyon, Indian Pass Canyon, and Sidewinder Canyon hiking routes may be marked by small rock cairns at important wayfinding locations.

### **5.5 Signage**

There will be no wayfinding or interpretive signage provided along hiking routes or along trails within the wilderness. Safety, regulatory, and interpretive signage will be provided at the trailhead. Carsonite posts with the hiker symbol may be used to mark the trail to Zabriskie Point. Trail junction signs will be installed and maintained for the Golden Canyon to Zabriskie Point Trail and the Gower Gulch Loop Route.

## **6. ROLES AND RESPONSIBILITIES**

Roads and Trails Foreman: The Roads and Trails Foreman has primary responsibility for overseeing the fifty miles of trails and routes located within designated wilderness and backcountry areas. He is also responsible for maintaining the established boardwalk at Salt Creek, the trail junction and wayfinding signage in the Golden Canyon-Gower Gulch trail complex, and the trailhead parking lots. He will maintain the recognized trails and routes as park assets in the FMSS program and seek funding for laborers to perform trail maintenance. He will coordinate trail maintenance activities with the Wilderness Coordinator to insure that trail maintenance activities are not duplicated. He also coordinates with the Chief of Interpretation in the upkeep and installation of interpretive signs.

Wilderness Coordinator: The Wilderness Coordinator will work in coordination with the Roads and Trails Foreman to ensure that yearly maintenance is performed on the Telescope Peak, Wildrose Peak, and Darwin Falls Trails. If the roads and Trails Foreman is unable to obtain laborers to perform trail maintenance then the Wilderness Coordinator may assist by recruiting youth labor crews or volunteers to perform trail maintenance insuring that trails are maintained at established standards and that recognized routes are properly marked.

District Ranger: The District Ranger(s) will relay any trail or trailhead sign conditions reports provided by his staff to both the Roads and Trails Foreman and the Wilderness Coordinator. Field Rangers and volunteer staff will consult with either the Roads and Trails Foreman or the Wilderness Coordinator before performing anything beyond emergency maintenance on park trails or routes.

Chief of Interpretation: The Chief of Interpretation is responsible for the planning of interpretive trail signage, and in should cooperate with the Roads and Trails Forman to see that trailhead signage, and interpretive signs are well maintained.

Park Superintendent: The Superintendent is responsible for making the final decision in closing any roads which have been destroyed by flooding (see Appendix N) and for deciding if such closed roads should be incorporated into the park's trail or route system.



## APPENDIX R: SUMMIT REGISTERS

### 1.0 INTRODUCTION

Peak summiting is a long-standing pursuit in the park, popularized by the Sierra Club Desert Peaks Section (DPS) list of 99 desert peaks, and climbing books such as Walt Wheelock's Desert Peak Guides Part 1 and Part 2, and Andy Zdon's Desert Summits. Nineteen peaks on the DPS list and an additional 31 peaks mentioned in the Zdon book are located within the park.

These 50 peaks currently host peak registers, generally a weather resistant container with a small notebook and writing implement. Such peak registers are a tradition of many mountaineering organizations. The registers within the park were installed prior to the designation of wilderness and many have been in place for decades. These registers also have value to search and rescue operations as well as in documenting visitor use patterns of specific areas.

### 2.0 MANAGEMENT OF SUMMIT REGISTERS

These 50 peaks, listed alphabetically in the table below, receive the most attention from climbers and currently have registers where climbers record their names and short messages or observations.

Peak	Elevation (feet)		Peak	Elevation (feet)
Ashford Peak	3,546		Nelson Mtn. Summit	7,701 <sup>1</sup>
Bald Peak	7,770		Nevares Peak	2,859
Bennett Peak	9,980		Panamint Butte	6,585 <sup>1</sup>
Brown Mountain	4,947 <sup>1</sup>		Pinto Peak	7,510
Bullfrog Mountain	4,959		Porter Peak	9,101 <sup>1</sup>
Canyon Point	5,890 <sup>1</sup>		Pyramid Peak	6,703 <sup>1</sup>
Coffin Peak	5,503		Salsberry Peak	4,250
Colville Ridge	7,730		Saline Peak	7,045
Corkscrew Peak	5,804 <sup>1</sup>		Sandy Peak	7,062 <sup>1</sup>
Death Valley Buttes	3,017		Sentinel Peak	9,636 <sup>1</sup>
Desert Hound Peak	4,470		Schwaub Peak	6,448
Dry Mountain	8,674 <sup>1</sup>		Sheephead Mountain	4,274
Epaulet Peak	4,766		Smith Mountain	5,912 <sup>1</sup>
Funeral Peak	6,384		Striped Butte	4,773
Grapevine Peak	8,738 <sup>1</sup>		Sugarloaf Peak	4,820
Hunter Mountain	7,454		Telescope Peak	11,049 <sup>1</sup>
Ibex Peak	4,752		Thimble Peak	6,381
Jack Gunn Peak	5,604		Tin Mountain	8,953 <sup>1</sup>
Jubilee Mountain	2,527		Towne Peak	7,284
Last Chance Mountain	8,456 <sup>1</sup>		Tucki Mountain	6,732 <sup>1</sup>
Manly Peak	7,196 <sup>1</sup>		Ubehebe Peak	5,678
Mormon Peak	8,270		Wahguyhe Peak	8,628
Mount Palmer	7,979 <sup>1</sup>		White Top Mountain	7,607
Mount Perry	5,739		Wildrose Peak	9,065
Needle Peak	5,805 <sup>1</sup>		Winters Peak	5,033

<sup>1</sup> Peaks listed on Sierra Club's Desert Peak Section list of 99 Desert Peaks

The existing registers at the 50 peaks listed above will remain. The existing registers can be maintained in their current size and location as a traditional use, but cannot be expanded or “upgraded” to larger containers or other media.

Periodically, NPS staff will inspect the registers to assure compliance with these limitations and to summarize or photo document the contents of the register notebooks. When the register notebooks on Telescope Peak or Wildrose Peak are full, they will be removed and archived, and replaced with a new notebook. Otherwise, the register notebooks will remain in place in recognition of their value to repeat visitors and their contribution to the visitor experience.

No new registers will be allowed to be installed at additional locations within the park as such registers are an installation and therefore are generally not appropriate in wilderness. Any registers in locations not mentioned above will be removed.

### 3.0 ROLES AND RESPONSIBILITIES

Cultural Resource Manager: Under the direction of the park’s cultural resource manager the registers will be evaluated for historic significance, and if determined to be significant, will be managed as cultural resources with a preference for in-situ preservation.

District Rangers: The Backcountry District Ranger, or their designee, will direct the use of the summit registers as needed to inform search and rescue operations. This position will also work with the park’s Wilderness Coordinator to opportunistically collect and compile visitor use data from the registers. Inspect other peaks within the park and remove any registers not identified in the list above.

Wilderness Coordinator: The Wilderness Coordinator will be responsible for communicating the park’s policy regarding use/maintenance of existing registers and prohibition against installation of new registers to the mountaineering organizations. The Wilderness Coordinator, in cooperation with the Backcountry Ranger staff, will opportunistically inspect the registers in place and compile a record of their condition and summarize their content to ascertain visitor use patterns.

### 4.0 REFERENCES

Sierra Club Angeles Chapter Desert Peaks Section (DPS), 2003. 99 Peaks. 29th Edition.

Walt Wheelock. 1964. Desert Peaks Guide, Part 1. La Siesta Press.

Wheelock, Walt. 1975. Desert Peaks Guide, Part 2. La Siesta Press.

Zdon, A. 2006. Desert Summits: A Climbing & Hiking Guide to California and Southern Nevada. Spotted Dog Press. 416 pp.

## **APPENDIX S: AGENCY CORRESPONDENCE**

Copies of the written record of correspondence to date with State Historic Preservation Officers for California and Nevada, the Tribal Chairman of the Timbisha Shoshone Tribe, the Tribal Chairman of the Pahrump Paiute, and the United State Fish and Wildlife Service are included on the following pages.



## United States Department of the Interior

NATIONAL PARK SERVICE

Death Valley National Park

PO Box 579

Death Valley, California 92328



IN REPLY REFER TO

H4217

xN1623

December 15, 2009

Milford Wayne Donaldson  
State Historic Preservation Officer  
Attn: Mark Beason  
Department of Parks and Recreation  
Post Office Box 942896  
Sacramento, California 94296-0001

Re: Death Valley National Park Wilderness and Backcountry Management Plan and Environmental Assessment, Inyo and San Bernardino Counties, California, and Esmeralda and Nye Counties, Nevada

Dear Mr. Donaldson:

The National Park Service is initiating a combined Wilderness and Backcountry Stewardship Plan (Plan) and Environmental Assessment for Death Valley National Park. The park is comprised of approximately 3.37 million acres, of which approximately 93 percent is designated Wilderness. The purpose of this Plan is to guide the National Park Service and to make decisions regarding the future use and protection of the park's vast wilderness (3.1 million acres), backcountry lands (225,000 acres), and 800 miles of backcountry dirt road corridors (Enclosure 1).

The Plan does not include the Furnace Creek, Scotty's Castle, Stovepipe Wells, and Panamint Springs developed areas or visitor attractions accessed directly from paved roads (e.g. Zabriskie Point), or short, graded gravel roads (e.g. Mosaic Canyon), developed campgrounds, paved roads, private inholdings or other non-NPS lands. It also will not include the Saline Valley hot springs, as the non-wilderness lands surrounding them will be addressed in the future in a site-specific plan as per direction of the park's approved General Management Plan.

Tens of thousands of prehistoric, historic, and ethno-historic resources are present in the Death Valley wilderness and backcountry. These include significant historic sites that are listed on the National Register of Historic Places (Leadfield, Eagle Borax Works, Saline Valley Salt Tramway, and Skidoo), historic structures, and approximately 2,000 documented archeological sites (most of which are unevaluated). The park has received funding to revisit and document the condition of archeological sites located in backcountry and wilderness areas. It is anticipated that the process of assessing site condition will help to establish a baseline for assessing impacts to cultural sites in wilderness and backcountry areas, and contribute in future management efforts.

During project planning, the park will consult with affiliated Native American groups. The Timbisha Shoshone Tribe has designated a tribal member to be part of the planning team. The park recognizes that the Timbisha have significant interest in the management of Death Valley wilderness and backcountry. The Timbisha Shoshone Homeland Act of 2000 (P.L. 106-423) designated over 1.5 million acres of the park as a special use area for the Tribe, called the "Timbisha Shoshone Natural and Cultural Preservation Area," as well as a few smaller special use areas and cooperative agreement areas. Tribal interests will be an important factor in the planning process, not only for cultural sites, but also for identifying other resource concerns.

As part of the planning effort, the National Park Service will be completing an environmental analysis consistent with the National Environmental Policy Act. The project is currently on track to be completed mid-2011. The park will continue to consult with the California State Historic Preservation Office as the Plan progresses.

If you have any questions or concerns, please contact Leah Bonstead, Park Archeologist for Death Valley National Park at (760) 786-3232.

Sincerely yours,



Sarah Craighead  
Superintendent

Enclosures: Map - Wilderness and Backcountry at Death Valley National Park (1 page)

bcc: central files w/attachment

bcc (w/o attachment):

DEVA RM: L. Bonstead

DEVA RM: B. Davenport

DEVA Env: V. Wilkins

RM:LBONSTEAD:mdb:12/15/2009:760-786-3232

SO:MKO'DEA:mko\H4217\_WildernessPln\_10-021\_CASHPO\_12-16-09



## United States Department of the Interior

NATIONAL PARK SERVICE

Death Valley National Park

PO Box 579

Death Valley, California 92328



IN REPLY REFER TO

H4217

xN1623

December 16, 2009

Ronald M. James  
State Historic Preservation Officer  
State Historic Preservation Office  
100 North Stewart Street  
Carson City, Nevada 89701-4285

Re: Death Valley National Park Wilderness and Backcountry Management Plan and Environmental Assessment, Inyo and San Bernardino Counties, California, and Esmeralda and Nye Counties, Nevada

Dear Mr. James:

The National Park Service is initiating a combined Wilderness and Backcountry Stewardship Plan (Plan) and Environmental Assessment for Death Valley National Park. The park is comprised of approximately 3.37 million acres, of which approximately 93 percent is designated Wilderness. The purpose of this Plan is to guide the National Park Service and to make decisions regarding the future use and protection of the park's vast wilderness (3.1 million acres), backcountry lands (225,000 acres), and 800 miles of backcountry dirt road corridors (Enclosure 1).

The Plan does not include the Furnace Creek, Scotty's Castle, Stovepipe Wells, and Panamint Springs developed areas or visitor attractions accessed directly from paved roads (e.g. Zabriskie Point), or short, graded gravel roads (e.g. Mosaic Canyon), developed campgrounds, paved roads, private inholdings or other non-NPS lands. It also will not include the Saline Valley hot springs, as the non-wilderness lands surrounding them will be addressed in the future in a site-specific plan as per direction of the park's approved General Management Plan.

Tens of thousands of prehistoric, historic, and ethno-historic resources are present in the Death Valley wilderness and backcountry. These include significant historic sites that are listed on the National Register of Historic Places (Leadfield, Eagle Borax Works, Saline Valley Salt Tramway, and Skidoo), historic structures, and approximately 2,000 documented archeological sites (most of which are unevaluated). The park has received funding to revisit and document the condition of archeological sites located in backcountry and wilderness areas. It is anticipated that the process of assessing site condition will help to establish a baseline for assessing impacts to cultural sites in wilderness and backcountry areas, and contribute in future management efforts.



During project planning, the park will consult with affiliated Native American groups. The Timbisha Shoshone Tribe has designated a tribal member to be part of the planning team. The park recognizes that the Timbisha have significant interest in the management of Death Valley wilderness and backcountry. The Timbisha Shoshone Homeland Act of 2000 (P.L. 106-423) designated over 1.5 million acres of the park as a special use area for the Tribe, called the "Timbisha Shoshone Natural and Cultural Preservation Area," as well as a few smaller special use areas and cooperative agreement areas. Tribal interests will be an important factor in the planning process, not only for cultural sites, but also for identifying other resource concerns.

As part of the planning effort, the National Park Service will be completing an environmental analysis consistent with the National Environmental Policy Act. The project is currently on track to be completed mid-2011. The park will continue to consult with the California State Historic Preservation Office as this plan progresses.

If you have any questions or concerns, please contact Leah Bonstead, Park Archeologist for Death Valley National Park at (760) 786-3232.

Sincerely yours,



Sarah Craighead  
Superintendent

Enclosures: Map - Wilderness and Backcountry at Death Valley National Park (1 page)

bc: central files, w/attachment

bcc: (w/o attachment):

DEVA RM: L. Bonstead

DEVA RM: B. Davenport

SO-Env: V. Wilkins

RM:LBONSTEAD:mdb:12/15/2009:760-786-3232

MGMT: MKO'DEA:mko\H4217\_WildernessPln\_10-021\_NVSHOP\_12-16-09



## United States Department of the Interior

NATIONAL PARK SERVICE

Death Valley National Park  
PO Box 579  
Death Valley, California 92328



IN REPLY REFER TO

H4217

xN1623

December 16, 2009

Joe Kennedy  
Tribal Chair  
Timbisha Shoshone Tribe  
PO Box 206  
Death Valley, California 92328

Re: Death Valley National Park Wilderness and Backcountry Management Plan and Environmental Assessment, Inyo and San Bernardino Counties, California, and Esmeralda and Nye Counties, Nevada

Dear Mr. Kennedy:

The National Park Service is initiating a combined Wilderness and Backcountry Stewardship Plan (Plan) and Environmental Assessment for Death Valley National Park. The park is comprised of approximately 3.37 million acres, of which approximately 93 percent is designated Wilderness. The purpose of this Plan is to guide the National Park Service and to make decisions regarding the future use and protection of the park's vast wilderness (3.1 million acres), backcountry lands (225,000 acres), and 800 miles of backcountry dirt road corridors (Enclosure 1).

The plan does not include the Furnace Creek, Scotty's Castle, Stovepipe Wells, and Panamint Springs developed areas or visitor attractions accessed directly from paved roads (e.g. Zabriskie Point), or short, graded gravel roads (e.g. Mosaic Canyon), developed campgrounds, paved roads, private inholdings or other non-NPS lands. It also will not include the Saline Valley hot springs, as the non-wilderness lands surrounding them will be addressed in the future in a site-specific plan as per direction of the park's approved General Management Plan.

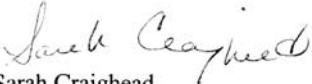
Tens of thousands of prehistoric, historic, and ethno-historic resources are present in the Death Valley wilderness and backcountry. These include significant historic sites that are listed on the National Register of Historic Places (Leadfield, Eagle Borax Works, Saline Valley Salt Tramway, and Skidoo), historic structures, and approximately 2,000 documented archeological sites (most of which are unevaluated). The park has received funding to revisit and document the condition of archeological sites located in backcountry and wilderness areas. It is anticipated that the process of assessing site condition will help to establish a baseline for assessing impacts to cultural sites in wilderness and backcountry areas, and contribute in future management efforts.

During project planning, the park will consult with affiliated Native American groups. The Timbisha Shoshone Tribe has designated a tribal member to be part of the planning team. The park recognizes that the Timbisha have significant interest in the management of Death Valley wilderness and backcountry. The Timbisha Shoshone Homeland Act of 2000 (P.L. 106-423) designated over 1.5 million acres of the park as a special use area for the Tribe, called the "Timbisha Shoshone Natural and Cultural Preservation Area," as well as a few smaller special use areas and cooperative agreement areas. Tribal interests will be an important factor in the planning process, not only for cultural sites, but also for identifying other resource concerns.

As part of the planning effort, the National Park Service will be completing an environmental analysis consistent with the National Environmental Policy Act. The project is currently on track to be completed mid-2011. The park will continue to consult with the California State Historic Preservation Office as the Plan progresses.

If you have any questions or concerns, please contact Leah Bonstead, Park Archeologist for Death Valley National Park at (760) 786-3232.

Sincerely yours,

  
Sarah Craighead  
Superintendent

Enclosures: Map - Wilderness and Backcountry at Death Valley National Park (1 page)

cc (with attachments):

Barbara Durham  
Tribal Historic Preservation Officer  
Timbisha Shoshone Tribe  
PO Box 206  
Death Valley, CA 92328

bcc: central files w/attachment

bcc (w/o attachment):

DEVA RM: L. Bonstead  
DEVA RM: B. Davenport  
DEVA Env: V. Wilkins

RM:LBONSTEAD:mdb:12/15/2009:760-786-3232

SO:MKO'DEA:mko\H4217\_WildernessPln\_10-021\_Timbisha\_12-16-09



## United States Department of the Interior

NATIONAL PARK SERVICE

Death Valley National Park  
PO Box 579  
Death Valley, California 92328



IN REPLY REFER TO

H4217

xN1623

December 16, 2009

Richard Arnold  
Tribal Chair  
Pahrump Paiute Tribe  
P.O. Box 3411  
Pahrump, Nevada 89041

Re: Death Valley National Park Wilderness and Backcountry Management Plan and Environmental Assessment, Inyo and San Bernardino Counties, California, and Esmeralda and Nye Counties, Nevada

Dear Mr. Arnold:

The National Park Service is initiating a combined Wilderness and Backcountry Stewardship Plan (Plan) and Environmental Assessment for Death Valley National Park. The park is comprised of approximately 3.37 million acres, of which approximately 93 percent is designated Wilderness. The purpose of this Plan is to guide the National Park Service and to make decisions regarding the future use and protection of the park's vast wilderness (3.1 million acres), backcountry lands (225,000 acres), and 800 miles of backcountry dirt road corridors (Enclosure 1).

The plan does not include the Furnace Creek, Scotty's Castle, Stovepipe Wells, and Panamint Springs developed areas or visitor attractions accessed directly from paved roads (e.g. Zabriskie Point), or short, graded gravel roads (e.g. Mosaic Canyon), developed campgrounds, paved roads, private inholdings or other non-NPS lands. It also will not include the Saline Valley hot springs, as the non-wilderness lands surrounding them will be addressed in the future in a site-specific plan as per direction of the park's approved General Management Plan.

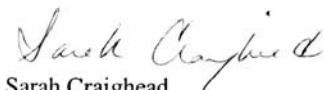
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During project planning, the park will consult with affiliated Native American groups. The Timbisha Shoshone Tribe has designated a tribal member to be part of the planning team. The park recognizes that the Timbisha have significant interest in the management of Death Valley wilderness and backcountry. The Timbisha Shoshone Homeland Act of 2000 (P.L. 106-423) designated over 1.5 million acres of the park as a special use area for the Tribe, called the "Timbisha Shoshone Natural and Cultural Preservation Area," as well as a few smaller special use areas and cooperative agreement areas. Tribal interests will be an important factor in the planning process, not only for cultural sites, but also for identifying other resource concerns.

As part of the planning effort, the National Park Service will be completing an environmental analysis consistent with the National Environmental Policy Act. The project is currently on track to be completed mid-2011. The park will continue to consult with the California State Historic Preservation Office as the Plan progresses.

If you have any questions or concerns, please contact Leah Bonstead, Park Archeologist for Death Valley National Park at (760) 786-3232.

Sincerely yours,

  
Sarah Craighead  
Superintendent

Enclosures: Map - Wilderness and Backcountry at Death Valley National Park (1 page)

bcc: central files w/attachment

bcc (w/o attachment):

DEVA RM: L. Bonstead

DEVA RM: B. Davenport

DEVA Env: V. Wilkins

RM:LBONSTEAD:mdb:12/15/2009:760-786-3232

SO:MKO'DEA:mko\H4217\_WildernessPln\_10-021\_Timbisha\_12-16-09



## United States Department of the Interior

NATIONAL PARK SERVICE

Death Valley National Park  
PO Box 579  
Death Valley, California 92328



IN REPLY REFER TO:  
1.7617

September 29, 2011

Carl Benz, Section 7 Program Coordinator  
U.S. Fish and Wildlife Service  
2493 Portola Road, Suite B  
Ventura, CA 93003

**RE: Wilderness and Backcountry Stewardship Plan for Death Valley National Park**

Dear Mr. Benz:

The National Park Service at Death Valley National Park (Park) is seeking comments and a species list regarding our management planning process for the Park's backcountry and wilderness areas. The National Park Service proposes to develop a combined Backcountry and Wilderness Stewardship Plan, the purpose of which is to make decisions regarding the future use and protection of the Park's vast wilderness and backcountry lands.

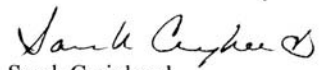
Death Valley National Park encompasses 3.1 million acres of federally designated wilderness, the access to which is often provided along backcountry roads, trails, and informal campsites. Some potential actions resulting from this planning process include formalizing primitive campgrounds, designating roadside camping corridors and specific sites in those corridors, formalizing trails and establishing trail signs, installing vault toilets and implementing other strategies to manage human waste in high-use areas, and developing a permit system and education program. While the planning process is for the entire Park, the Devils Hole exclave would not be affected by the proposed management overlay, as it is neither designated wilderness nor a backcountry area.

To help identify environmental issues that may be affected by Death Valley's Backcountry and Wilderness Stewardship Plan, please provide us with written comments concerning interests within your agency's responsibility. Specifically, we are interested in federally listed endangered, threatened, candidate, special concern species and habitat designations, and sensitive communities known to occur on or in proximity to the proposed locations throughout the Park. Your response within 30 days from the date of receipt of this letter would be greatly appreciated. The Park is also working with the California Department of Fish and Game regarding the presence of state-listed endangered, threatened, candidate, and special concern species and their potential habitat.

Carl Benz, Section 7 Program Coordinator  
U.S. Fish and Wildlife Service  
September 29, 2011  
Page Two

We welcome your input on the proposed project and our intended efforts to avoid adverse effects on threatened and endangered species. If, through the course of project development, it is determined that the project may affect any listed species, we intend to fulfill our obligations to consult under Section 7 of the Endangered Species Act. Thank you for your assistance. Should you have any questions, please contact Mike Cipra, Environmental Protection Specialist, at 760.786.3227; or Linda Manning, Wildlife Biologist, at 760.786.3252.

Sincerely,



Sarah Craighead  
Park Superintendent

MCIPRA:mko\Wilderness\_Plan\_USFWS-ScopingLtr\_9-26-11

Bcc: central files  
RM: Linda Manning  
RM: Kirsten Lund  
MGT: Mike Cipra



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Ventura Fish and Wildlife Office  
2493 Portola Road, Suite B  
Ventura, California 93003



IN REPLY REFER TO  
08EVEN00-2012-SL-0067

January 30, 2012

### Memorandum

To: Superintendent, Death Valley National Park, National Park Service, Death Valley, California

From: Assistant Field Supervisor, Ventura Fish and Wildlife Office, Ventura, California

Subject: Species List for the Wilderness and Backcountry Stewardship Plan, Death Valley National Park, Death Valley, California and Nevada (L7617)

This memorandum is in response to your request, dated September 29, 2011, and received in our office on October 3, 2011, for information on federally threatened and endangered species, candidate species, and proposed or designated critical habitat that occurs within Death Valley National Park. The National Park Service (NPS) proposes the development of a combined Wilderness and Backcountry Stewardship Plan to guide the NPS in making decisions regarding the future use and protection of the Death Valley National Park's wilderness and backcountry lands. Potential actions in the Wilderness and Backcountry Stewardship Plan could include formalizing primitive campgrounds, designating roadside camping corridors and specific sites in those corridors, formalizing trails and establishing trail signs, installing vault toilets and implementing other strategies to manage human waste in high-use areas, and developing a permit system and education program.

The attached list of species fulfills the requirements of the U.S. Fish and Wildlife Service under section 7(c) of the Endangered Species Act of 1973, as amended (Act). There is no proposed or designated critical habitat located within Death Valley National Park. The NPS, as the lead Federal agency for the project, has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a construction project which may require an environmental impact statement<sup>1</sup>, the NPS has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species. If the NPS determines that a listed species is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to

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<sup>1</sup> "Construction project" means any major Federal action which significantly affects the quality of the human environment designed primarily to result in the building of structures such as dams, buildings, roads, pipelines, and channels. This includes Federal actions such as permits, grants, licenses, or other forms of Federal authorizations or approval which may result in construction.



Superintendent

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threatened or endangered species prior to a written request for formal consultation. During this review process, the NPS may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

In your letter, you also requested comments on the development of the Wilderness and Backcountry Stewardship Plan. At this time, we do not have any comments. When the NPS completes a draft of the Wilderness and Backcountry Stewardship Plan, we would appreciate the opportunity to review it and provide any comments we may have.

We apologize for the delay in responding to your request. Should you have any questions regarding this letter, please contact Erin Nordin of the Ventura Fish and Wildlife Office at (909) 382-2959.

cc: Linda Manning, Wildlife Biologist, Death Valley National Park  
Mike Cipra, Environmental Protection Specialist, Death Valley National Park

**LISTED SPECIES WHICH MAY OCCUR IN DEATH VALLEY NATIONAL PARK,  
CALIFORNIA AND NEVADA**

Birds

Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E
Least Bell's vireo	<i>Vireo bellii pusillus</i>	E
Inyo California towhee	<i>Pipilo crissalis eremophilus</i>	T
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	C

Reptiles

Desert tortoise	<i>Gopherus agassizii</i>	T
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Plants

Eureka Valley evening-primrose	<i>Oenothera californica ssp. eurekaensis</i>	E
Eureka Valley dunegrass	<i>Swallenia alexandrae</i>	E

Insects

Nevares Spring naucorid bug	<i>Ambrysus funebris</i>	C
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**Key:**

E - Endangered      T - Threatened

C - Candidate species for which the Service has on file sufficient information on the biological vulnerability and threats to support proposals to list as endangered or threatened.



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



**National Park Service**

**United States Department of the Interior**



Death Valley National Park  
California and Nevada

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