Craters of the Moon National Monument and Preserve

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Dear Friends,

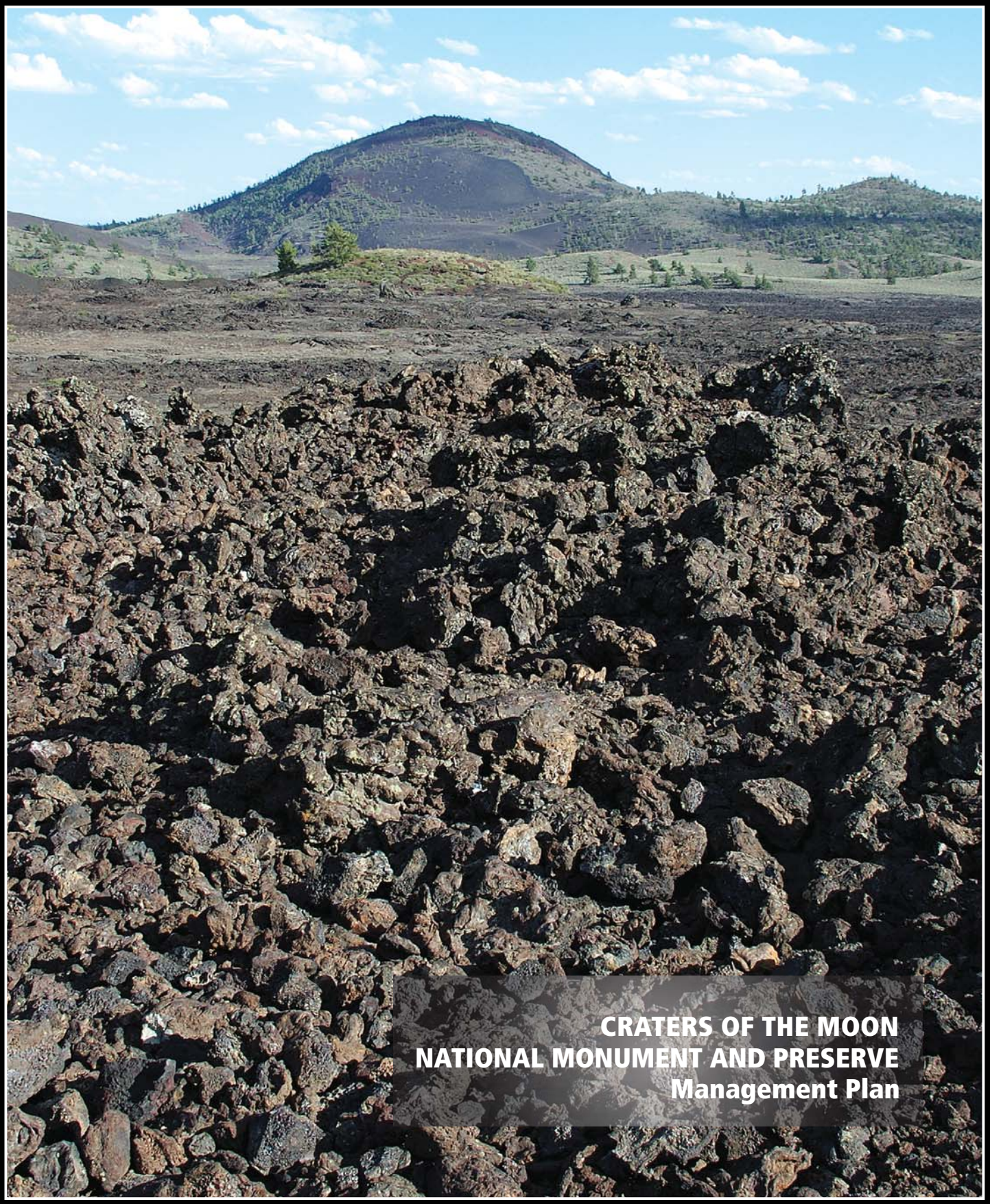
The Bureau of Land Management and National Park Service are pleased to release the approved Management Plan for Craters of the Moon National Monument and Preserve (Monument Plan). The Record of Decision, included as Appendix A of the Monument Plan, establishes the management framework for approximately 738,000 acres of public lands located on the Snake River Plain of Southern Idaho that are cooperatively managed by the Bureau of Land Management and National Park Service. Please note that this document is not a full reprint of the Proposed Monument Management Plan (Proposed Management Plan)/Final Environmental Impact Statement (FEIS). Some readers may find it valuable to refer to the Proposed Management Plan/FEIS while reading the condensed final Monument Plan.

The Bureau of Land Management and National Park Service are extremely appreciative of the active role that you have taken in this process over the last several years. Please be aware that the planning process does not end with the Record of Decision. We look forward, as we move on, to the implementation process. The implementation of the plan and its many elements will require your continued support and collective involvement with the individual organizations and agencies that participated in the plan development.

Thank you again for taking part in the management decision-making for Craters of the Moon National Monument and Preserve. Your active participation in the planning process will help the Bureau of Land Management and National Park Service achieve our respective missions to conserve, study, protect, and preserve this nationally significant resource and provide for public enjoyment for our visitors. We look forward to working with all interested governments, agencies, organizations, and members of the public in implementing this plan for the management of one of our nation's special places. We will strive to manage the Craters of the

National Park Service and Bureau of Land Management
U.S. Department of the Interior

Craters of the Moon National Monument and Preserve
Idaho



CRATERS OF THE MOON NATIONAL MONUMENT AND PRESERVE
Management Plan

FRONT AND BACK COVER PHOTOS BY DAVE CLARK.
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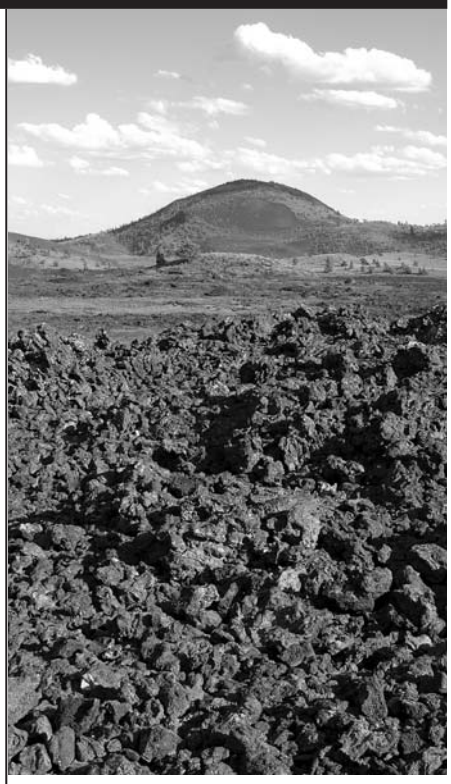
Craters of the Moon National Monument and Preserve

Monument Management Plan

U.S. Department of the Interior,
National Park Service
and Bureau of Land Management



Overview

This Monument Management Plan documents the overall management strategy, developed by the National Park Service and Bureau of Land Management, for Craters of the Moon National Monument and Preserve. This document summarizes the selected alternative from the Proposed Plan / Final Environmental Impact Statement (July 2005). The Record of Decision, approved by both agencies in September 2006, is included in this document as an appendix. The Record of Decision includes a summary of changes to the plan made following release of the Proposed Plan / Final Environmental Impact Statement in response to public and interagency review.

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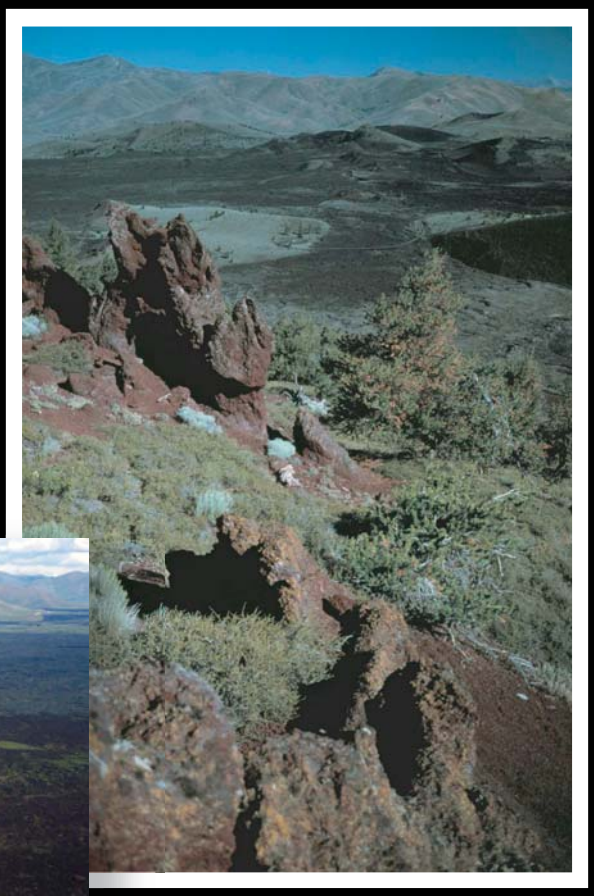
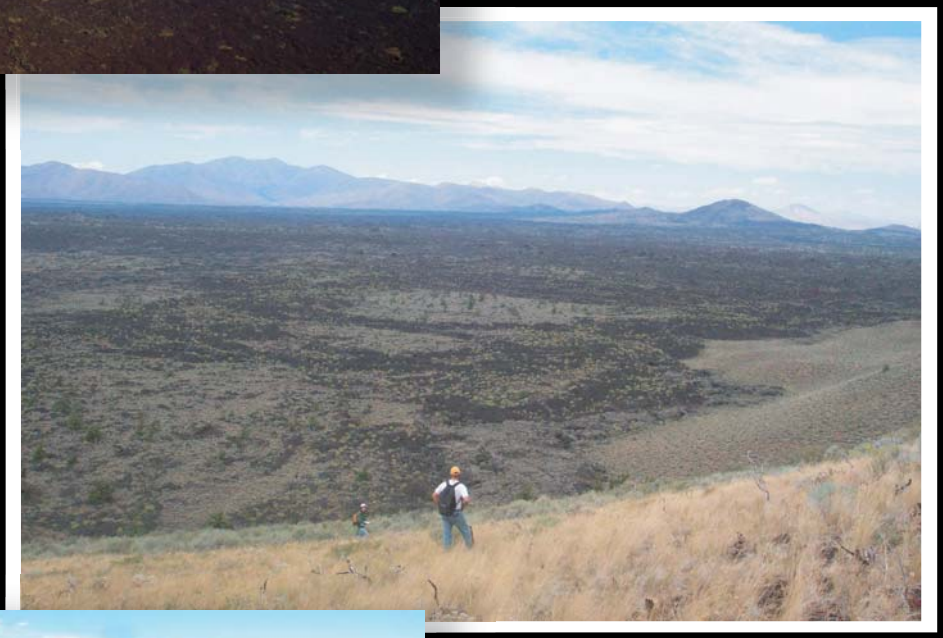




Chapter 1
INTRODUCTION

Chapter 1: INTRODUCTION

MONUMENT OVERVIEW

This document is the Craters of the Moon National Monument and Preserve Management Plan (Monument Management Plan or Management Plan), which sets forth the future direction for the use and management of the Monument. It includes the Record of Decision (see Appendix A). This plan covers all federal lands added by Proclamation 7373 and the original NPS Monument. It addresses the direction set forth in the proclamation and the designation of National Preserve status for NPS lands. The Bureau of Land Management and the National Park Service manage separate portions of the area according to different laws, regulations, and policies. However, this plan provides a jointly developed framework for cooperative management of the entire area by both agencies. It serves as a combined Resource Management Plan (RMP) / General Management Plan (GMP) to replace portions of four existing BLM resource management plans and one NPS general management plan. From here on, any reference to "the Monument" refers to all lands within the current Monument boundaries, including the BLM National Monument, the NPS National Monument, and the NPS National Preserve.

This Monument Management Plan provides a framework for proactive decision-making, including decisions on visitor use as well as on managing and preserving natural and cultural resources. It prescribes the resource conditions and visitor experiences that are to be achieved and maintained in the Monument over time. Where law, policy, or regulations do not provide clear guidance, management decisions have been based on the Monument's purpose, public concerns, and analysis of social and resource impacts of alternative courses of action, including long-term operational costs.

CINDER GARDEN

This document does not describe how particular programs or projects will be implemented or prioritized. Those decisions will be deferred to more detailed activity-level implementation plans, which will follow this document. Chapter 3 describes the implementation of this Management Plan in more detail.

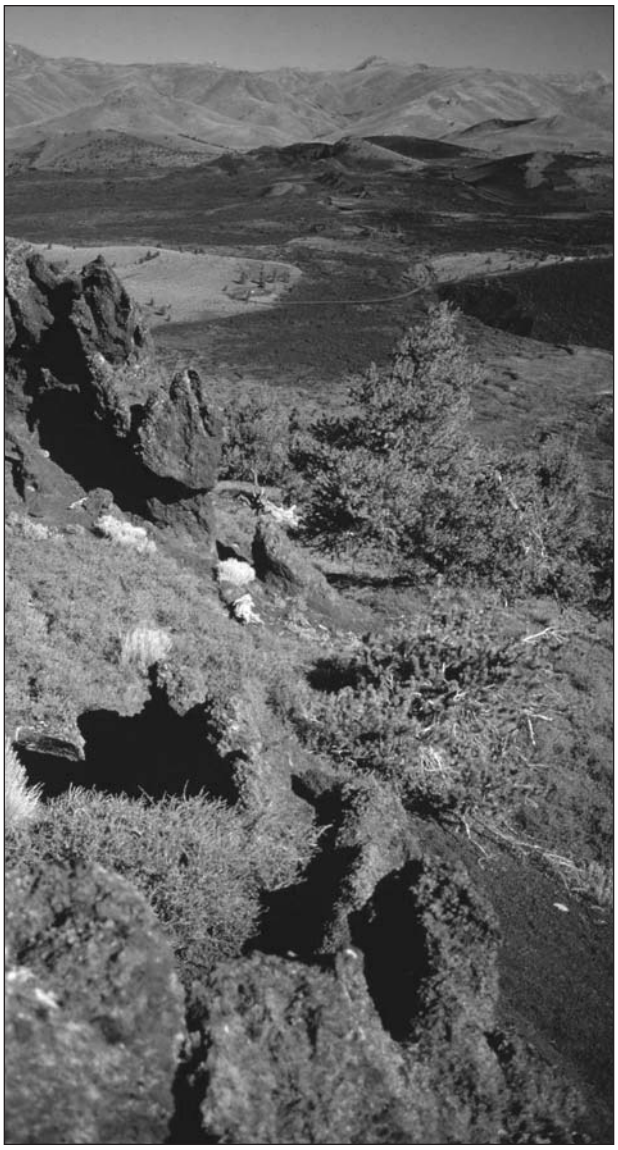
For more detailed information regarding the planning process, alternatives, and environmental analysis, readers should refer to the Proposed Monument Management Plan / Final Environmental Impact Statement (USDI NPS and BLM 2005).

MONUMENT HISTORY

Craters of the Moon National Monument, the first national monument in Idaho, was established on May 2, 1924 (Presidential Proclamation 1694), to protect some of the unusual landscape of the Craters of the Moon Lava Field. This "lunar" landscape was thought to resemble that of the moon and was described in the proclamation as "a weird and scenic landscape peculiar to itself."

Since 1924, the original Monument was expanded and boundary adjustments were made through five presidential proclamations issued pursuant to the Antiquities Act (34 Statute 225, 16 U.S. Code 431). Presidential Proclamation 1843 of July 23, 1928, expanded the NPS Monument to include certain springs for water supply and additional features of scientific interest. Further adjustments to the boundaries were made in Presidential

A VIEW OF THE PIONEER MOUNTAINS FROM BIG CINDER BUTTE.



Proclamation 1916 of July 9, 1930; Presidential Proclamation 2499 of July 18, 1941; and Presidential Proclamation 3506 of November 19, 1962. In 1996, Section 205 of the Omnibus Parks and Public Lands Management Act of 1996 (PL 104-333, 110 Statute 4093, 4106) made a minor boundary adjustment to the original NPS Monument.

Presidential Proclamation 7373 of November 9, 2000, expanded the boundary to 737,700 acres of federal land (from about 53,400 acres) to include many more of the area's volcanic features — including the 60-mile-long Great Rift. It also enlarged the Monument's administration by adding the efforts of the Bureau of Land Management to those of the National Park Service, all under the direction of the Secretary of the Interior. Federal legislation (PL 107-213, 116 Statute 1052), on August 21, 2002, made one further adjustment by designating the area within the expanded NPS boundaries of Craters of the Moon National Monument as a National Preserve, allowing hunting on lands that were closed to this activity by the November 2000 proclamation. Appendix B provides copies of the proclamations and legislation related to creation of the current Monument and Preserve.

MONUMENT DESCRIPTION

Craters of the Moon National Monument and Preserve is in South Central Idaho (see Figure 1) in Blaine, Butte, Lincoln, Minidoka, and Power Counties. It is within a one- to two-hour drive of Twin Falls, Idaho Falls, Pocatello, and other population centers along the Interstate 84 (I-84), I-86, and I-15 corridors.

The Monument contains the youngest and most geologically diverse section of basaltic lava terrain found on the Eastern Snake River Plain, an extensive area of volcanic formations that reaches across southern Idaho east to Yellowstone National Park. It includes three distinct lava fields: Craters of the Moon, Kings Bowl, and Wapi. The Craters of the Moon Lava Field is the largest basaltic lava field of predominantly Holocene age (less than 10,000 years old) in the conterminous United States.

The Monument also protects most of the Great Rift area, which includes the numerous lava flows and other discharge from the Great Rift volcanic rift zone. It compares in significance to other volcanic rift zones such as those found in Hawaii and Iceland. The Great Rift varies in width between 1 and 5 miles and extends for more than 50 miles.

Many features and structures associated with basaltic volcanism are represented in the Great Rift zone, including various kinds of lava flows, volcanic cones, and lava tubes. There are also lava-cave features such as lava stalactites and curbs, explosion pits, lava lakes, squeeze-ups, basalt mounds, an ash blanket, and low shield volcanoes. Some lava flows within the Great Rift zone diverged around areas of higher ground and rejoined downstream to form isolated islands of older terrain surrounded by new lava. These areas are called "kipukas." In many instances, the expanse of rugged lava surrounding these small pockets of soil has protected the kipukas from people, animals, and even exotic plants. As a result, these kipukas represent some of the last undisturbed vegetation communities on the Snake River Plain.

Young (dominantly Holocene) lava flows and other features cover about 450,000 acres of the Monument. The remaining 300,000 acres in the Monument are also volcanic in origin, but older in age and covered with a thicker mantle of soil. This older terrain supports a sagebrush (*Artemisia* spp.) steppe ecosystem consisting of diverse communities of grasses, sagebrush, and shrubs and provides habitat for a variety of wildlife. This area also includes lava tube caves, older volcanic formations, and volcanic buttes.

Approximately 70% of the Monument is in Wilderness Study Area status or designated Wilderness. The Craters of the Moon Wilderness, designated in 1970, is located south of U.S. Highway 20/26/93 (US 20/26/93) within the original Monument. A substantial portion of each of four Wilderness Study Areas within the Monument includes lava flows administered by the National Park Service.

Both the Great Rift zone and sagebrush steppe ecosystem contain a wealth of cultural resources dating back to the last volcanic eruptions, which were likely witnessed by the Shoshone people. Today, local tribes and communities, as well as visitors and other stakeholders, have an interest in the Monument.

FROM NORTH LAIDLAW BUTTE LAVA FLOWS EXTEND IN ALL DIRECTIONS.

Most visitor and educational opportunities are located near US 20/26/93 between the "gateway" communities of Carey and Arco in the north. In addition to guided walks and programs by BLM and NPS staff, the Monument has several self-interpreting trails with waysides and a 7-mile loop drive. Facilities include a visitor center complex, which consists of a campground, museum, and bookstore.

When the original NPS Monument was expanded in November 2000, lands managed by the Bureau of Land Management were included from three field offices of the Upper Snake River District (Burley, Idaho Falls, and Shoshone field offices). On October 1, 2004, Idaho BLM district boundaries were realigned and the Twin Falls District was created. As a result, the Craters of the Moon National Monument and Preserve lies entirely within the BLM Shoshone Field Office, which is now part of the Twin Falls District.

DIRECTION FOR THE PLAN

Monument purpose, significant features, and agency mission and mandates (laws) form the basis for management decisions and planning. Decisions about the management of resources are generally measured against these elements to determine activities that may be acceptable in the Monument.

PURPOSE

Purpose statements are the foundation for all subsequent decisions and qualify the language used in the proclamation and legislation to more clearly state why the Monument was established. They are the specific reasons why this area warrants National Monument status. Based upon the proclamations and legislation (see Appendix B), the purposes of Craters of the Moon National Monument and Preserve are as follows:

- Safeguard the volcanic features and geologic processes of the Great Rift.
- Provide scientific, educational, and interpretive opportunities for the public to foster an understanding and appreciation of the volcanic geology and associated natural phenomena.
- Maintain the wilderness character of the Craters of the Moon Wilderness Area and of the Wilderness Study Areas.
- Perpetuate the scenic vistas and great open western landscapes for future generations.
- Protect kipukas and remnant vegetation areas and preserve important habitat for Greater sage-grouse, a BLM sensitive species.
- Continue the historic and traditional human relationships with the land that have existed on much of this landscape for generations.

AN AERIAL VIEW OF CAREY KIPUKA.

SIGNIFICANCE

Significance statements are also drawn from the proclamations establishing Craters of the Moon National Monument, as well as other descriptive documents. Significance statements explain what resources and values warrant the area's designation as a National Monument. Craters of the Moon National Monument and Preserve is significant because of the following:

- It contains a remarkable and unusual diversity of exquisitely preserved volcanic features, including nearly all of the familiar features of purely basaltic volcanism — craters, cones, lava flows, caves, and fissures.
- It contains most of the Great Rift area — the deepest known land-based open volcanic rift, and the longest volcanic rift in the continental United States.
- It contains many diverse habitats for plants and animals as a result of a long history of volcanic deposition.
- Many of the more than 500 kipukas contain representative vegetative communities that have been largely undisturbed by human activity. These communities serve as key benchmarks for scientific study of long-term ecological changes to the plants and animals of sagebrush

steppe communities throughout the Snake River Plain.

- It contains the largest remaining land area within the Snake River Plain still retaining its wilderness character. The Craters of the Moon Wilderness Area and Wilderness Study Areas within the Monument encompass more than one-half million acres of undeveloped federal lands.
- It contains abundant sagebrush steppe communities that provide some of the best remaining Greater sage-grouse habitat and healthiest rangelands on the Snake River Plain.
- It is a valued western landscape of more than 750,000 acres that are characterized by a variety of scenery, broad open vistas, pristine air quality, and a rich human history.

MISSION GOALS

The following statements are general desired future conditions, or mission goals, for the Monument. These goals incorporate mandates required of Monument management and include input solicited from the public on how they would like to see this area managed.

- The Monument protects, restores, and monitors the geological features, the native biological communities, and the viewscape that characterize the Great Rift area.
- The public enjoys a range of recreational and educational opportunities compatible with protecting Monument resources.
- The Craters of the Moon Wilderness Area and the Wilderness Study Areas retain natural conditions and remarkable opportunities for solitude.
- The public has opportunities to learn about and appreciate the Monument's diverse history, prehistory, and important cultural resources.
- The livestock permittees work with the Bureau of Land Management to develop management actions to achieve sustainable, healthy rangelands.
- The public receives efficient and coordinated services from the National Park Service and the Bureau of Land Management.

POLICY AND PLANNING

BLM planning regulations and NPS directives require preparation of planning criteria to guide development of all resource management plans / general management plans. Planning criteria are the constraints, or ground rules, that guide and direct the development of the plan. They influence all aspects of the planning process, including inventory and data collection, formulation of alternatives, estimation of effects, and ultimately the selection of a preferred alternative. They ensure that plans are tailored to the identified issues and that unnecessary data collection and analyses are avoided. Planning criteria are based primarily on standards prescribed by applicable laws and regulations and agency guidance; consultation with federally recognized tribes; coordination with other federal, state, and local agencies; input from the public; analysis of information pertinent to the planning area; and professional judgment.

The National Park Service and the Bureau of Land Management jointly developed the planning criteria for this planning area (see Figure 2), although the authorities of each agency differ. Each agency's authorities have their origin in separate and different enabling legislation and proclamations. As a result, some planning criteria are specific to one agency or the other. Other laws, such as the Clean Water Act, apply equally to both agencies. A single set of planning criteria served to guide the development of a single Management Plan for the Craters of the Moon National Monument and Preserve. (See the Proposed Monument Management Plan / Final Environmental Impact Statement,

Appendix F, for more information on these planning criteria.)

BLM and NPS staff developed management alternatives for the Monument based upon public responses to newsletters and public meetings, as well as input from staffs of both agencies. National Environmental Policy Act (NEPA) regulations and BLM and NPS planning regulations require the formulation of a reasonable range of alternatives that seek to address identified planning issues and management concerns. Each alternative was evaluated to ensure that it would be consistent with the area's purpose and significance; the mission goals for the Monument; and current laws, regulations, and policy.

The four management alternatives developed for the Monument were:

Alternative A — No-action Alternative (required by NEPA) — retained current management of the Monument

Alternative B — Placed emphasis on a broad array of visitor experiences within the Monument

Alternative C — Placed emphasis on retention and enhancement of the Monument's primitive character

Alternative D — Placed emphasis on protection and restoration of physical and biological resources (the preferred alternative)

Each alternative had a somewhat different concept, defined in terms of area allocations into different management zones. Each alternative also varied somewhat in desired future conditions and management prescriptions for various resource topics. All alternatives provided the high degree of protection for Monument resources required by Proclamation 7373.

Planning provides an opportunity to create a vision and to define the Monument's role in relation to its national, historic, and communal settings. The planning process is designed to provide decision-makers with adequate information about resources, impacts, and costs. Analyzing the Monument in relation to its surrounding natural, historic, and communal setting, as well as future challenges, helped managers and staff understand how the Monument could interrelate with neighbors and others in systems that are ecologically, socially, and economically sustainable. Decisions made within this planning context are more likely to be successful over time and promote more efficient use of public funds.

The plan will now be implemented, subject to available funding and additional environmental analysis for site-specific actions. The most dynamic parts of resource management planning are the activity-level implementation plans that are prepared to implement the decisions in the Management Plan. These implementation plans may change as often as necessary to accommodate new information. Examples of implementation plans that may be necessary at the Monument are listed under "Future Planning Needs" in Chapter 3.

The "Management of Monument Resources" section in Chapter 2 is organized by resource topic. This guidance in essence is the selected Alternative (D), which represents the desired future conditions and management actions for each resource. Desired future condition statements describe the preferred long-term condition for specific resources or activities. Future decisions and actions by management will be judged by whether they further progress towards these desired conditions. Management actions describe specific activities that help to achieve the desired future conditions.

ORGANIZATION OF THE PLAN

This Management Plan contains three chapters:

Chapter 1 (this section) includes background information; plan direction; the purpose, significance, and mission of the Monument; an overview of the planning process; and the mission and objectives of the BLM's National Landscape Conservation System and the National Park System.

Chapter 2 contains resource- and program-specific desired future conditions and related management actions grouped by resource topic.

Chapter 3 includes information on how the Management Plan will be implemented. Topics covered include future planning needs; compliance responsibilities; relationship to other plans policies, and programs; evaluation of the plan; and future changes to the plan.

NATIONAL LANDSCAPE CONSERVATION SYSTEM

Craters of the Moon National Monument is a part of a larger system within the Bureau of Land Management — the National Landscape Conservation System (NLCS). The overarching mission of the National Landscape Conservation System is to conserve, protect, and restore nationally significant landscapes recognized for their outstanding cultural, ecological, and scientific values. The National Landscape Conservation System assembles BLM's premier conservation designations, including National Monuments, Wilderness, and Wilderness Study Areas, into an organized system to increase public awareness of the cultural, scientific, educational, ecological, and other values associated with these areas. An essential consideration in developing this Management Plan was that it be consistent with the overall vision of the Conservation System.

Five NLCS objectives help to achieve this vision:

- Above all, commit to conserving, protecting, and restoring special values of the landscape, as directed by BLM's organic act (Federal Land Policy and Management Act of 1976, as amended).
- Sustain local heritage and natural resources through cooperation with local communities and stakeholders.
- Continue to manage compatible uses and valid existing rights, consistent with the values for which the special area is federally recognized.
- Provide opportunities for public education and individual exploration of special landscapes.
- Foster and support scientific research to acquire a better understanding of how best to manage these landscapes.

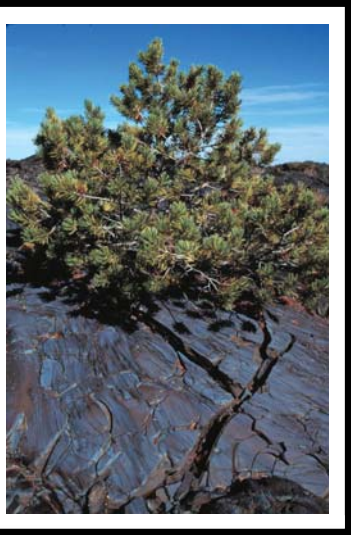
NATIONAL PARK SYSTEM

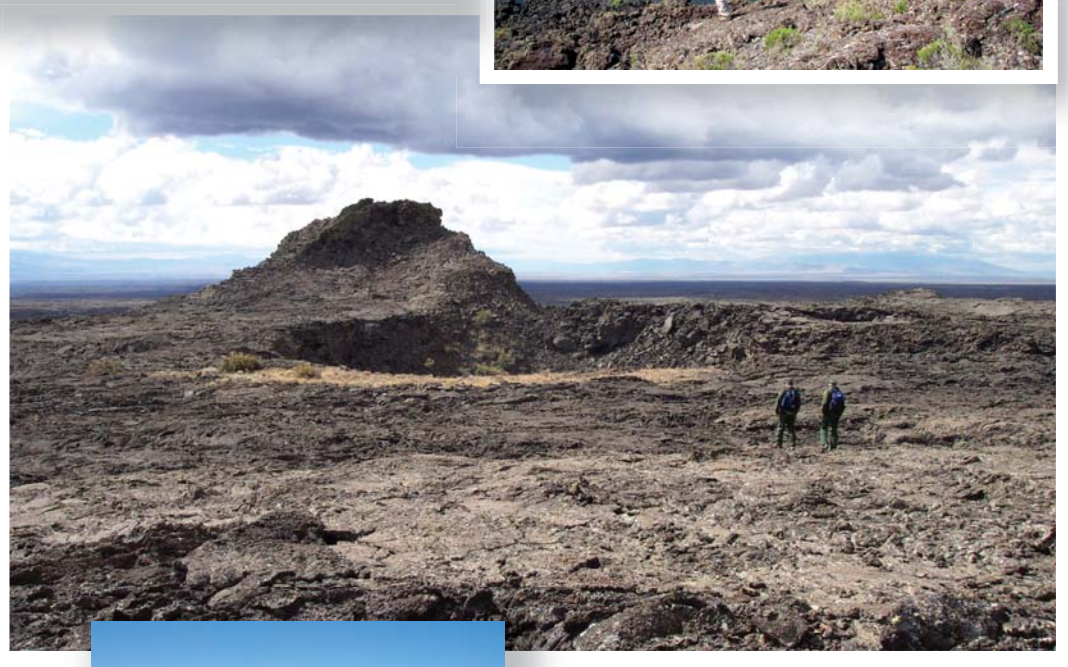
The original Craters of the Moon National Monument and Craters of the Moon National Preserve are units of the National Park System. The National Park System consists of more than 388 units, encompassing 84 million acres in 49 states, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands, which collectively represent the diverse natural and cultural heritage of our nation. All units of this system are managed according to the NPS Organic Act of 1916 and the NPS General Authorities Act of 1970, including amendments to the latter law enacted in 1978. The key management-related provision of the Organic Act is:

> [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 U.S. Code 1).

The fundamental purposes of these two national systems have been brought together at Craters of the Moon National Monument and Preserve to enhance protection of nationally significant natural and cultural resources while retaining many of the traditional uses of the land.





Chapter 2
THE PLAN

Chapter 2: THE PLAN

AREAS ZONED AS PRISTINE ARE UNDEVELOPED AND PROVIDE A WILD EXPERIENCE.

DEVELOPED TRAILS IN THE FRONTCOUNTRY ZONE PROVIDE ACCESS TO A VARIETY OF VOLCANIC FEATURES.

The key components of the Craters of the Moon National Monument and Preserve Management Plan are as follows:

- Promotes use of partnerships at off-site facilities such as visitor centers, state parks, and gateway communities to provide Monument information and interpretation.
- Emphasizes protection of vegetation resources in North Laidlaw Park.
- Maintains a road network suitable for aggressive fire management within the Monument.
- Encourages outfitter and guide services in the expanded portion of the Monument instead of new agency-provided services and facilities.
- Supports a large and proactive integrated weed management program.
- Proactively protects and restores sagebrush steppe communities.
- Continues to focus visitor experience within the Monument on the existing NPS lands and facilities at the north end of the Monument.

DESCRIPTION OF MANAGEMENT ZONES

All federal lands within the Monument are assigned to one of the four management zones (see Figure 3 and Table 1). The management zones — Frontcountry, Passage, Primitive, and Pristine — guide future management actions within the Monument.

Management zones are tools that help guide decision-making on appropriate visitor uses, facility development, and other uses. Management zones do not address natural and cultural resource management. Management zoning is established throughout the planning area to provide and maintain a range of recreation and access for different user-types with varying interests and abilities. Each separate zone has distinct settings to be provided and maintained. Physical settings consider the degree of naturalness and amount and type of facilities, as well as proximity to roads. Social settings consider the number of contacts with other people, the size of groups, and evidence of other users. Managerial settings consider the amount of visitor management used to achieve desired social and resource conditions, the compatibility of traditional land uses with the recreational environment, and the type of access and vehicle use allowed in the area.

Although different management emphasis will be applied in each of the management zones of the Monument, the actions of managers must always be consistent with the purposes for which the Monument was established, applicable laws, regulations and policies, and with the mission goals identified in Chapter 1.

TABLE 1. MANAGEMENT ZONES

	FRONTCOUNTRY ZONE	PASSAGE ZONE	PRIMITIVE ZONE	PRISTINE ZONE
Basic Concept	The frontcountry zone is defined by structures and grounds provided for visitor support services such as information, education, and recreation. Access will be easy and convenient, and the encounter rate very high. High maintenance and intervention will be required to accommodate concentrated visitor use. Challenge and adventure is less important compared to other zones. Zone corridor will be 660 feet wide along roads.	The passage zone is intended to accommodate the flow of people and vehicles from one place to another and to provide minimal accommodations such as parking, trailheads, primitive campsites, and information kiosks or signs for people preparing to venture into the Primitive and/or Pristine Zones of the Monument. Where the zone is only a narrow corridor following a road (660 feet wide), the expectation is that a particular road will be maintained to a consistent standard along the length of the corridor, normally a Class B or Class C road from one end of the corridor to the other.	The primitive zone provides an undeveloped, primitive, and self-directed visitor experience while accommodating motorized and mechanized access on designated routes. Facilities will be rare and provided only where essential for resource protection.	The pristine zone includes mostly lava flows, designated Wilderness, and Wilderness Study Areas. This zone provides an undeveloped, primitive, and self-directed visitor experience, generally without motorized or mechanical access. Facilities will be virtually nonexistent.
Visitor Experience	High chance for encounters with people.	Medium chance for encounters with people.	Low chance for encounters with people.	High chance for solitude.
	Travel on paved, improved, or maintained roads.	Travel on higher level of road maintenance than the Primitive Zone.	Travel on low-standard roads with challenging driving conditions.	Travel involves challenging conditions and no roads.
	Developed campgrounds.	Rustic, designated campsites.	No developed campsites; dispersed primitive camping.	No developed campsites; dispersed primitive camping.
	A high level of interpretation programs; informational exhibits.	Limited interpretation, wayside exhibits.	Minimal on-site interpretation.	No on-site interpretation.
	Diverse trail system, some paved.	Multiuse, maintained, and designated trails.	Low-standard multiuse trails with little or no maintenance.	Very few trails.
	Low chance for encounters with livestock or associated developments.	High chance for encounters with livestock or associated developments.	Medium chance for encounters with livestock or associated developments.	Low chance for encounters with livestock or associated developments.
	High level of contact with agency staff.	Low to moderate level of contact with agency staff.	Very low level of contact with agency staff.	Essentially no contact with agency staff.
	Typical visitor activities: sightseeing, driving, bicycling, walking, nature study, ranger-led programs, camping, and picnicking.	Typical visitor activities: driving, sightseeing, hiking, mountain biking, horseback riding, and dispersed camping.	Typical visitor activities require self-sufficiency: hiking, hunting, horseback riding, mountain biking, remote camping, and driving on unimproved roads.	Typical visitor activities require self-sufficiency and involve challenge, risk, and adventure: dispersed camping, backpacking, nature study, and hunting.
Access and Kinds of Development	Paved roads and high-standard gravel roads.	Class B-D roads. Some arterial roads would be regularly maintained to allow seasonal car, SUV, light truck passage.	Class C-D roads. Dirt roads, accessible seasonally only with high-clearance vehicles and off-highway vehicles.	No roads.
	Hardened and maintained pedestrian trails.	Trailheads; maintained motorized and non-motorized trails.	Low standard multiuse trails.	Very few trails; no motorized trails.
	Frequent signs for directions, safety, and interpretation.	Signs for directions, safety, resource protection, and interpretation.	Minimal signs for visitor safety and resource protection only.	Very few signs.
	Offices, utilities, maintenance facilities, storage areas, visitor center, employee housing, and restrooms.	Minimal administrative structures, vault toilets.	No buildings.	No buildings.

ROAD AND TRAIL CLASSIFICATIONS

Within the Monument, a "road" is defined as an established route capable of accommodating travel by a full-sized automobile or truck. Following other routes or establishing new routes with motorized or mechanized vehicles is considered "off-road" use, which is prohibited in the Monument. Following are four different road classifications and two trail classifications within the Monument:

Class A Roads generally are paved and have a surface of asphalt, concrete, or similar continuous material. In addition to US Highway 20/26/93 (US 20/26/93), the only Class A roads are the loop drive, spur roads, and associated parking areas in the original NPS Monument. Class A roads are only found in the Frontcountry Zone.

Class B Roads are improved roads constructed with a natural or aggregate surface, and they may have berms, ditches, or culverts. Regular maintenance allows passage by standard passenger and commercial vehicles such as cars, light trucks, and some heavy trucks. Seasonal conditions and lack of snow removal may render these roads impassable. Class B roads are found primarily in the Passage Zone.

Class C Roads have a natural surface and may be either constructed or established over time by repeated passage of vehicles. The natural surface may be dirt, sand, or rock. A minimal amount of maintenance, if any at all, is limited primarily to spot surface grading to allow vehicle passage within the original road corridor. Maintenance on these roads is performed only as necessary, not in accordance with any regular schedule. Class C roads accommodate a much smaller range of vehicles than Class B roads, usually high-clearance two-wheel-drive and four-wheel-drive vehicles. Seasonal conditions or wet weather may render these roads impassable at any time. Class C roads are found primarily in the Passage and Primitive Zones.

Class D Roads are primitive roads that were not constructed but have been established over time by the passage of motorized vehicles. These roads receive no maintenance or grading. However, management retains the authority to perform occasional emergency repairs or maintenance as necessary for administrative purposes and general resource protection. These roads are generally referred to as "two-tracks" or a set of two ruts with vegetation growing in between the wheel ruts. The condition of these roads varies from sometimes passable by a passenger car to only suitable for high-clearance four-wheel-drive vehicles. Seasonal conditions or wet weather may render these roads impassable at any time. Class D roads are found primarily in the Primitive Zone.

Class D Roads and other existing roads include only those roads in existence as of the date of Monument Proclamation 7373 and shown on Figure 4. Any routes created by cross-country vehicle or mechanical use since the date of Proclamation 7373 are considered illegal and will be closed.

MANY ROADS WITHIN THE MONUMENT ARE PRIMITIVE DIRT TRACTS CLASSIFIED AS CLASS D ROADS.

TABLE 2. ROAD AND TRAIL INVENTORY BY MANAGEMENT ZONE

Road Classification	MANAGEMENT ZONES*				
	Frontcountry	Passage	Primitive	Pristine	Total Miles
Class A	30	0	0	0	30
Class B	0	46	11	0	57
Class C	2	34	321	2	359
Class D	0	2	141	26	169
Class 1 Trails	7	0	1	6	14
Total Miles	**39**	**82**	**474**	**34****	**629**

*Approximate miles of existing roads and trails within each zone rounded to the nearest whole number.

**To be closed.

Class 1 Trails are restricted to non-motorized/non-mechanized travel (wheelchairs are allowed). Examples of permitted forms of travel include foot travel, pack animal, and horseback. Examples of prohibited forms of travel on Class 1 trails include mountain bikes and all motorized vehicles. Class 1 trails may be further restricted, for example, to foot travel only.

Class 2 Trails are open to motorized/mechanized travel in addition to foot travel, pack animal, horseback, and other forms of passage. Examples of prohibited forms of travel include any vehicle with a footprint wider than an 18-inch tread (all-terrain vehicles, four-wheelers, and four-wheel-drive vehicles). Class 2 Trails can only be created from decommissioned roads that will no longer be open to use by full-sized vehicles. No new Class 2 Trails will be created in any other manner.

Table 2 summarizes where the various types of roads would fall within the management zones.

BOUNDARIES

MONUMENT BOUNDARIES

The original Craters of the Moon National Monument is an area of 53,420 acres, with all federal lands administered by the National Park Service. Proclamation 7373 expanded the boundaries by adding to Craters of the Moon National Monument all lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the map entitled "Craters of the Moon National Monument Boundary Enlargement," which is included as part of Appendix B.

In a memorandum from the Secretary of the Interior (memo from the Secretary of the Interior dated November 24, 2000), the Bureau of Land Management was instructed to complete a metes and bounds description of the Monument boundary. A cadastral survey of the external monument boundary was completed in 2001. Based on that survey, the total area encompassed by the Monument boundary is 753,333 acres including 738,680 acres of federal land, 8,157 acres of state land, and 6,642 acres of private land. State and private lands within the Monument boundary are not affected by this plan.

NATIONAL PRESERVE BOUNDARIES

Proclamation 7373 states that the National Park Service shall have primary management authority over the portion of the Monument that includes the exposed lava flows. This land area was described as including approximately 410,000 acres and is specifically designated as a unit of the National Park System "Craters of the Moon National Preserve" by Public Law 107-213 on August 21, 2002.

Proclamation 7373 describes the boundary between the NPS- and BLM-administered lands as being the edge of exposed lava fields, an irregular natural feature. When a determination of the National Preserve boundary within the greater Monument area is required, the line will generally be described by the edge of the brown-colored shading for lava flows on the most recent U.S. Geological Survey 7.5-minute series topographic quadrangle maps available on the date of the Proclamation 7373.

BOUNDARY MODIFICATIONS

Potential boundary modifications are examined to identify potential additional lands with significant resources or opportunities, or which are critical to fulfilling the Monument's mission. The agencies referred to previous studies of boundary modifications for Craters of the Moon, including the Reconnaissance Survey — Expansion of Craters of the Moon National Monument (1989) and Management Alternatives — Expansion of Craters of the Moon National Monument (1990), and concluded that no additional recommendation for boundary adjustments needed to be proposed in this plan. However, when the Bureau of Land Management develops the Shoshone Resource Management Plan, areas such as Sand Butte (identified by the public for inclusion within the Monument) will be examined to determine if additional protection is warranted.

Based on these criteria, eight areas have been identified for potential boundary modifications and are described in Appendix C. All resolve potential conflicts with existing grazing use by transferring small tracts within the National Preserve to the BLM Monument where grazing is authorized.

MANAGEMENT OF MONUMENT RESOURCES

Laws, regulations, and policies provide the legal basis for management. These can expressly mandate certain things and prohibit others. Such legal guidance leaves certain decisions up to the discretion of the agencies. This section describes these discretionary decisions, made by the Bureau of Land Management and National Park Service, regarding future management of natural and cultural resources, development, and recreational and non-recreational uses within the Monument.

Organized by resource topic, this section includes a brief summary on the status of the resource in the Monument, the desired condition of each resource in the monument, and specific management actions identified to maintain or achieve these desired conditions. In addition to resources, topics include the recreational experience of visitors to the Monument, facilities such as roads and campgrounds, and uses such as livestock grazing.

Desired condition statements describe what the status of the resource or recreational experience should be, which may or may not currently be the case. Management actions maintain the resource condition at the desired condition or help move it closer to the desired condition.

NATURAL RESOURCES

NATURAL RESOURCES — GENERAL

The awesome effects of volcanism are evident throughout the Monument. During the past 15,000 years, lava eruptions created a rugged but scenic landscape that has forced animals and plants to adapt, and people to endure, detour, or ponder. Located on the Snake River Plain, a volcanic terrain spanning southern Idaho, the Monument encompasses the Great Rift volcanic rift zone. In places, this plain is 60 miles wide, with basalt lava deposits more than 10,000 feet deep in some locations. Eruptions 2,000 years ago at the Craters of the Moon and the Wapi Lava Fields are among the most recent volcanic activity to take place anywhere in this immense geographic area.

The protection, study, and appreciation of the Monument's unique natural features in this remote and often harsh environment are the overriding purposes of the Monument as directed by Proclamation 7373. To that end, basic and applied scientific research, resource inventories, and monitoring of resource conditions play important roles in the identification, characterization, and interpretation of the Monument's resources.

Today the Monument provides unique opportunities for visitors to encounter plants and animals in various lava habitats, enjoy hiking on a number of trails, or simply partake in the solitude and beauty of this incredible place.

Desired Future Conditions:

Resource inventories and surveys documenting the condition and extent of natural resources including geologic features and processes, kipukas, and sensitive species are given sufficient emphasis to enable completion during the life of the plan.

Monitoring programs are developed and implemented to track changes in the condition of key resources serving as "vital signs" of ecosystem health or to fulfill other purposes of enabling proclamations and laws.

Management Actions:

NRES-1: Resource inventories, surveys, and monitoring programs will be provided for and implemented.

NRES-2: Proactive management activities will be undertaken to mitigate potential effects of public use.

NRES-3: Information gained will be disseminated to the public and used in management decisions.

NRES-4: The agencies will seek opportunities with the tribes and state and federal agencies for partnering in long-term monitoring of the Monument's natural resources.

GEOLOGICAL RESOURCES

The purpose and significance of the Monument tie directly to its volcanic geology. Volcanism has generated an array of features and habitats that make the Monument a recognized outdoor laboratory. As a result, the Monument draws scientists and visitors from around the world to study and experience the diverse volcanic terrain.

The Monument is in the Snake River Basin-High Desert (Omernik 1986) and is comprised of three geologically young (Late Pleistocene-Holocene) lava fields that lie along the Great Rift. The Great Rift volcanic rift zone, which varies in width between approximately 1 and 5 miles, is a belt of open cracks, eruptive

fissures, shield volcanoes, and cinder cones. It begins north of the Monument, approximately 6 miles from the topographic edge of the Snake River Plain, in the vent area of the Lava Creek flows located in the southern Pioneer Mountains (Kuntz et al. 1992). The Great Rift extends southeasterly from the Lava Creek vents for more than 50 miles to somewhere beneath the Wapi Lava Field (Kuntz et al. 1982).

The Craters of the Moon Lava Field is the northernmost and largest of the three young lava fields. Kings Bowl Lava Field is the smallest and lies between Craters of the Moon Lava Field and the Wapi Lava Field. The rest of the Monument is composed of Pleistocene-age pahoehoe and a'a flows, near-vent tephra deposits, cinder cones, lava cones, and shield volcanoes (Kuntz et al. 1988). These older areas are mantled with loess deposits (windblown silt) and in some places by windblown sand. During the Holocene (last 10,000 years), the most volcanic activity of any of the Eastern Snake River Plain basaltic rift systems was exhibited by these three lava fields associated with the Great Rift (Hughes et al. 1999).

Kings Bowl Lava Field formed approximately 2,200 years ago during a single burst of eruptive activity that may have lasted as little as six hours (Kuntz et al. 1992). Kings Bowl has a central eruptive fissure approximately 4 miles long, flanked by two sets of non-eruptive fissures. The dominant feature is a bowl, 280 feet long, 100 feet wide, and 100 feet deep, produced when lava came into contact with groundwater, causing a steam or phreatic explosion.

The Craters of the Moon Lava Field formed during eight eruptive periods with a recurrence interval averaging 2,000 years, and it has been more than 2,000 years since the last eruption. The constancy of the most recent eruptive periods suggests that slightly more than one cubic mile of lava will be erupted during the next eruption period.

PILLAR BUTTE IS THE HIGHEST POINT ON THE WAPI LAVA FIELD.

In the past, eruptions in the Craters of the Moon Lava Field have generally shifted to the segment of the Great Rift with the longest repose interval. The next eruptive period should begin along the central portion of the Great Rift in the Craters of the Moon Lava Field, but may include the northern part of the Monument (Kuntz et al. 1986). Initial flows, based on past performance, will probably be relatively nonexplosive and produce large-volume pahoehoe flows. Eruptions from potential vents on the northern part of the Great Rift may be comparatively explosive and may produce significant amounts of tephra, destroy cinder cones, and build new ones (Kuntz et al. 1986).

There are many different kinds of caves in the Monument. Shelly pahoehoe areas contain many small open tubes and blisters. There are thousands of these small open tubes and blisters in the Monument. Pahoehoe flows can travel more than 20 miles because the ceilings of lava tubes insulate them from heat loss and some of the tubes are greater than 30 feet in height. Some fissure caves associated with the Great Rift can be passable to hundreds of feet below the surface. The nature of flowing lava can produce shallow caves and

HUNDREDS OF LAVA TUBE CAVES OCCUR WITHIN THE MONUMENT.

overhangs at flow fronts as a result of inflation processes. Differential weathering of cinder layers on some cinder cones has also generated a few shallow caves. Some of these small caves are more than 10 feet deep.

These various types of caves in the Monument can be associated with archeological and paleontological features, and they can harbor wildlife such as the blind lava-tube beetle, bushy-tailed woodrats, and Townsend's big-eared bats. Deep cracks and fissures, including cracks with likely connections to lava tubes beneath, and the entrances to caves often create or provide microenvironments or microhabitats. Some of these microenvironments support impressive moss, algal, or lichen communities and even ferns. People are attracted to caves, and some of the easily accessed caves in the Monument now contain considerable graffiti (e.g., Lariat Cave), litter, and other forms of vandalism.

Desired Future Conditions:

Natural processes remain the dominant agents of change to geologic resources within the Primitive and Pristine Zones.

Unique or representative geologic features within Frontcountry and Passage Zones are identified and documented and have protective strategies implemented to minimize any adverse effects from improved public access to the areas.

Knowledge and understanding of geologic resources and process are sufficient to interpret the interrelationships between geology and biotic communities.

Resource inventories and surveys that document the condition and extent of geologic features (including caves and paleontological resources) and also the geologic processes are sufficiently completed to provide scientifically defensible management decisions.

Disturbed or degraded geologic features are identified and restored when feasible.

Geologic knowledge and understanding are effectively shared with the public in order to stimulate appreciation and protection of the geologic resources.

Management Actions:

GEOL-1: When developing any visitor access within the Frontcountry and Passage Zones, the least impacting methods will be utilized to facilitate visitor access while also protecting geologic features.

GEOL-2: Steps will be taken to protect geological features from damage resulting from unrestricted public access and/or poorly designed or constructed public facilities.

GEOL-3: Threats to unique or outstanding examples of geologic features, including paleontological and cave resources, will be identified and mitigated as appropriate.

GEOL-4: Prior to authorizing surface-disturbing activities, areas will be surveyed for unique, rare, or special geologic resources including fossils.

GEOL-5: A cave management plan will be developed to meet Federal Cave Resources and Protection Act requirements.

GEOL-6: An intensive restoration program will be initiated to remove graffiti from caves and foster public understanding of the need for cave resource protection.

GEOL-7: Public access to caves and other geological features that are experiencing recreational use-related damage will be controlled, and damaged geological features will be restored as needed and when feasible.

SOILS

The soils of the Monument area reflect the differences and interactions between parent material, topography, vegetation, climate, and time. The most notable differences in soils involve the presence or absence of more recent volcanic materials and the degree of soil development on volcanic substrates.

The basalt flows that are visible on the surface of the majority of the Snake River Plain began approximately 2 million years ago, during the Pleistocene, and continued until approximately 2,000 years ago. The younger or more recent lava flows occupy two-thirds of the Monument. The soils on the younger basalt flows and cinder beds are limited to the initial decomposition of rock and cinders and deposition of windblown loess within crevices, cracks, and fissures. Plants can establish and grow in little to no soil. As time progresses, soil development continues and more vegetation establishes.

Sagebrush steppe, mountain areas, and kipukas within the Monument have deeper, well-formed soils derived from weathering geologic parent materials within the Basin and Range Province — sedimentary, igneous, and silica-rich lava rocks deposited during a sequence of geologic events that began almost 600 million years ago. The high desert environment results in lighter colored soils with low organic matter content. Soil textures in the Monument range from fine to coarse; however, most of the soils in the Monument area are silt loam to sandy loam in texture and vary in depth. They are moderately drained to well drained, except where clay horizons are present. Soils that are disturbed, not properly vegetated, or located on steep slopes are susceptible to water and wind erosion.

Biological soil crusts are a feature common to nearly all plant communities in arid and semiarid regions throughout the world (Belnap et al. 2001). The development of biological soil crusts is dependent on a number of factors, including soil texture and chemistry, annual precipitation amount and timing, associated vegetation, and disturbance history. Biological soil crusts have not been observed as a highly conspicuous element in the Monument, which could be due to any one of these factors.

Desired Future Conditions:

Soils are stable and functional. The amount of bare mineral soil and cover of perennial vegetation, litter, and biological soil crust are within 10% of that expected for the ecological site.

Management Actions:

SOIL-1: Soils will be protected from accelerated or unnatural erosion from ground-disturbing activities. For example, post-fire stabilization efforts will protect erosion-prone soils through natural and assisted revegetation.

SOIL-2: The potential for, or presence, extent and condition of, biological soil crusts will be investigated to provide specific management guidance.

LIMBER PINE

SOIL-3: Biological soil crusts will be considered in management decisions where appropriate.

VEGETATION, INCLUDING SPECIAL STATUS SPECIES, AND FIRE MANAGEMENT

Although some of the younger lava flows are devoid of vegetation, there is a surprising diversity of plants and plant communities in the Monument (see Figure 5). The type and density of vegetation varies widely, depending on the availability of soil. The lavas and kipukas (islands of vegetation surrounded by younger lava flows) show a full range of ecological succession — from pioneer plants, such as lichens and mosses on the basalt surfaces, to complex mid- to late- seral plant communities in the kipukas and rangelands bordering the lava flows. The rough topography of the lava flows creates numerous microsites where soil and water accumulate to support plants that would normally occur in higher precipitation zones.

Limber pine (*Pinus flexilis)* stands occur on the cinder cones and lava flows in the northern part of the Monument. A transition between limber pine and juniper (*Juniperus* spp.) vegetation types occurs between Blacktail Butte and the original Monument. This ecotone normally occurs only in montane regions and is thus an unusual feature for the lava flows. Quaking aspen (*Populus tremuloides*) and Douglas-fir (*Pseudotsuga menziesii*) stands are found on some north-facing slopes in the northern portion of the Monument. Riparian and wetland habitats are directly influenced by the watersheds of the Pioneer Mountains and are limited to the northern periphery of the Monument due to the geology, topography, and climate of this Basin and Range Province.

LOW ELEVATION SAGEBRUSH STEPPE

Early successional plant communities on the cinder cones produce stunning spring wildflower displays. Areas with greater soil development support the sagebrush steppe vegetation that typifies the Snake River Plain. Sagebrush steppe is found on approximately 60% of the Monument and covers the more developed soils of the rangelands, kipukas, cinder cones, older lava flows, and the foothills of the Pioneer Mountains. This once was the most common vegetation throughout the Snake River Plain, as well as in the Intermountain West and Upper Columbia River Basin. However, fire, agriculture, and livestock grazing have modified composition and reduced the extent of this vegetation type throughout these regions (Blaisdell et al. 1982; Whisenant 1990; Bunting et al. 2002).

Sagebrush steppe, which is the dominant vegetation in the Monument, appears to be a monotonous landscape; however, there is a range of plant and community types occurring over an elevation gradient. Many factors influence the diversity, density, cover, distribution, and health of this high desert sagebrush steppe, including differences in soil depth and development; the precipitation gradient ranging from 8 to 16 inches; the elevation gradient ranging from 4,000 to 7,500 feet between the southern and northern ends of the Monument; historical and current land management; invasive species; and fire frequency. In turn, vegetation structure and composition influence the ability of the plant community to (1) resist invasive species infestation; (2) its susceptibility to, as well as recovery from, fire; and (3) land management goals, decisions, and practices.

Understory components in the sagebrush steppe complex vary in type and abundance, but common species include Sandberg bluegrass (*Poa secunda*), Idaho fescue (*Festuca idahoensis*), needle-grasses (*Stipa* spp.), bluebunch wheatgrass (*Pseudoroegneria spicata*), and the exotic annual cheatgrass. Forbs such as buckwheats (*Eriogonum* spp.), arrowleaf balsamroot (*Balsamorhiza sagittata*), lupine *(Lupinus* spp.), phlox (*Phlox* spp.), and milkvetches (*Astragalus* spp.) are also commonly found growing in these vegetation types. Both diversity and abundance of herbaceous plants increase with increasing elevation and moisture in the Monument (Hironaka et al. 1983).

The variation of sagebrush steppe communities influences the multiple values and uses of this landscape in the Monument. These areas are valued as crucial winter range habitat for mule deer and pronghorn, essential habitat for sagebrush-obligate wildlife such as Greater sage-grouse, important watersheds, sources of forage for livestock, and enjoyable recreational sites. There is a range of conditions, primarily due to relative isolation and past and present land uses.

The Monument contains more than 500 kipukas, many of which have not been grazed by domestic livestock and have seen little in the way of other human-related disturbances. While fire, livestock grazing, recreation, or cheatgrass invasion have altered some of the kipukas, others that are protected by new rough lavas offer some of the best remaining examples of native sagebrush steppe for the Snake River Plain. They are valuable as examples of range conditions in the absence of domestic livestock, and offer an opportunity to observe climax vegetation, as well as successional processes associated with natural disturbances such as fire. Four of these areas — Carey Kipuka, Brass Cap Kipuka, Sand Kipuka, and Big Juniper Kipuka — were designated as Research Natural Areas for their long-term value as reference areas. Brass Cap, Sand, and Big Juniper Kipukas were formerly managed by the Bureau of Land Management; all four are currently under NPS management.

CHEATGRASS HAS INVADED EXTENSIVE AREAS OF SAGEBRUSH STEPPE HABITAT.

There are no proposed or listed threatened or endangered plants known within the Monument. However, two BLM sensitive plants are known to occur within the Monument. Obscure phacelia (*Phacelia inconspicua*) is one of Idaho's most rare plants, with only six occurrences (population areas) known statewide. This species is also listed as endangered in Nevada. It is a diminutive annual that occurs on north- and east-facing slopes of volcanic-based mountains and buttes. Picabo milkvetch (*Astragalus oniciformis*) is a perennial species that is narrowly endemic to stable, sandy soils near the foothills of the Pioneer Mountains and in the central portion of the northern Snake River Plain.

Fire plays a key role in determining the diversity and condition of vegetation communities. Large tracts of sagebrush have been lost due to extensive wildfires, and fires have perpetuated exotic annual grasslands. However, fire also plays an important role in the maintenance of some vegetation types, including aspen and mountain shrub.

Between 1970 and 2005, more than 300,000 acres have burned in wildfires within the boundary of the expanded Monument, primarily on BLM-administered land. Nearly a third of this acreage

THE 2006 SHALE BUTTE FIRE IN LOW ELEVATION SAGEBRUSH STEPPE.

has burned two or more times. About half of Laidlaw Park and Paddelford Flat and nearly all of Little Park have remained unburned in the last decade. Relatively small fires have burned on vegetated lava and in kipukas, notably Little Prairie in 1992 (1,900 acres) and Echo Crater in 2000 (632 acres). Overall, fires within the original NPS Monument boundaries represent less than 10% of the total area burned since 1970.

The length and timing of the fire season is highly dependent on annual weather and fuel conditions. Generally, the season can extend from mid-May through mid-October. Warm, dry, and windy weather associated with thunderstorm cells can result in lightning activity with or without rain. Ignition of vegetation can occur from natural sources, primarily lightning, or from human sources such as vehicles, campfires, or cigarettes.

Fire management in the Monument is directed by the Fire Management Plan for the South Central Idaho Fire Planning Unit (USDI 2005), and the NPS Craters of the Moon National Monument Wildland Fire Management Plan (USDI NPS 2000a) within the original Monument boundaries. Under these plans, all wildfires are suppressed except for naturally ignited fires in designated wilderness, which may be managed for resource benefit (also known as wildland fire use).

Federal wildland fire policy (USDI and USDA 1995; USDI et al. 2001; USDI BLM 2003) focuses on protecting sensitive resources while using fire along with other treatments (such as herbicides and seeding) to achieve desired future conditions for vegetation resources. Currently all federal land management agencies are implementing, or preparing to implement, this policy through a cohesive strategy (Laverty and Williams 2000). This strategy presents guidelines for reducing wildland fire risk to human communities and to restore and maintain ecosystem health within fire-prone areas.

The cohesive strategy is based on the concept of restoring vegetation composition and structure (and thus fire regimes) to historical levels. As part of this process, three fire condition classes (FCC1 through 3) have been identified to help clarify the degree to which a particular vegetation community departs from its historic fire regime, with FCC1 having the least departure and FCC3 having the greatest. These ratings, along with recent inventories, were used to categorize vegetation conditions within the Monument and prioritize areas for fuels reduction and restoration projects (see Figure 6 and Table 3). In general, FCC3 corresponds with poor biotic integrity, FCC2 with fair biotic integrity, and FCC1 with good biotic integrity.

Ten species of weeds designated as noxious by Idaho State Law (State of Idaho 2001) have been identified in the

CONTROL OF NOXIOUS WEEDS REQUIRES CONTINUOUS CONTROL EFFORTS.

TABLE 3. APPROXIMATE ACREAGE OF EACH VEGETATION TYPE IN THE MONUMENT AND PERCENTAGE THAT OCCURS IN EACH FIRE CONDITION CLASS

VEGETATION TYPE	APPROXIMATE ACREAGE IN MONUMENT	% FIRE CONDITION CLASS 1	% FIRE CONDITION CLASS 2	% FIRE CONDITION CLASS 3
Low-Elevation Sagebrush Steppe	157,000	40	20	40
Annual Grassland (exotic)	31,000	0	0	100
Perennial Grassland (seeding and native)	153,000	10	90	0
Mid-Elevation Sagebrush Steppe	9,400	0	100	0
Lava (bare and vegetated)	399,000	100	0	0
Mountain Shrub	400	50	50	0
Aspen	60	0	100	0
Conifer (Douglas fir)	140	50	50	0
Riparian	670	90	10	0

RUSH SKELETON WEED IS A NEW INVADER OF THE MONUMENT.

Monument: spotted knapweed, diffuse knapweed, Russian knapweed, rush skeletonweed, leafy spurge, Canada thistle, musk thistle, Scotch thistle, dalmation toadflax, and field bindweed. Most of the noxious weeds occur in areas particularly susceptible to invasion by exotics — previously disturbed areas such as road rights-of-way, intensively grazed areas, and wildland fire burns.

Other invasive exotic species such as cheatgrass are as much of a concern as state-listed noxious weeds. Cheatgrass is extremely competitive and readily invades and dominates disturbed land. It is also a common component of undisturbed or otherwise healthy sagebrush steppe in an arid environment. Cheatgrass has been documented in several kipukas. This annual grass outcompetes native vegetation and perpetuates a frequent fire regime that further discourages regrowth of native species and encourages more cheatgrass. This has been a key management concern for the Bureau of Land Management and has driven the development of more effective disturbed land rehabilitation techniques.

Both the Bureau of Land Management and the National Park Service have implemented nationwide policies against invasive exotic species through integrated weed management programs. Selective herbicide programs to control these species are in effect. Limited biological control agents have been released. The priority species discussed have been targeted specifically for mapping, treatment, and prevention programs. Education and public awareness are emphasized by both agencies. Involvement in cooperative weed management areas has resulted in strong community commitment and cost-effective management of noxious weeds.

Desired Future Conditions:

The high ecological condition of the vegetation of North Laidlaw Park and Bowl Crater is maintained.

There is no net loss, and preferably a net gain, of sagebrush steppe communities over the life of the plan.

Native plant communities sustain biodiversity and provide habitat for native wildlife.

Woodland communities (e.g., limber pine, aspen, and juniper) are maintained as healthy mixed-age communities within their natural range and distribution.

Natural ecological processes are the dominant factor in determining the composition and distribution of plant communities in the Preserve and Wilderness areas.

Continuity of habitat for special status species and general wildlife are emphasized.

Preventing or limiting the spread of noxious weeds using integrated weed management perpetuates the natural condition and biodiversity of the planning area.

The areas dominated by invasive annual species (cheatgrass and other similar plants) are minimized.

Kipukas in the Pristine Zone are free of noxious weeds.

Sustainable forage is available for livestock and wildlife.

All plant communities are in or making progress towards Fire Condition Class 1 (see Table 3).

Fire is allowed to function as a natural process in the Wilderness and Preserve.

Management Actions:

VEG-1: To protect vegetation resources, no new livestock developments will be permitted in North Laidlaw Park pasture and Bowl Crater allotment unless they result in a net benefit to those resources identified as needing improvement or protection.

VEG-2: Existing sagebrush steppe communities will be protected to prevent loss of shrub cover and managed to promote a diverse, desirable grass and forb understory.

VEG-3: Annual grasslands and highly degraded sagebrush steppe communities will be restored to achieve a mosaic of shrubs, forbs, and grasses capable of sustaining native animal populations.

VEG-4: Restoration projects will be prioritized relative to locations of key Greater sage-grouse habitats and population strongholds. Emphasis will be on projects that restore annual grasslands and degraded sagebrush steppe communities, as well as enlarging and connecting habitats in good condition.

VEG-5: National and Idaho state habitat guidelines for Greater sage-grouse and sagebrush steppe obligates developed by interagency working groups regarding composition and structure of sagebrush habitats on a landscape scale will be adopted to guide sagebrush steppe management.

VEG-6: Current science and best available technologies and plant materials will be considered in analysis and implementation of all restoration projects. Restoration treatments may be active or passive and may include but are not limited to the following: prescribed fire, thinning, mowing, herbicide treatment, seeding, temporary removal of livestock and/or changes in grazing regimes or facilities, and road closures.

VEG-7: Areas classified as poor to fair biotic integrity will be highest priority for restoration treatments (see Figure 6; see also Jurs and Sands 2004).

VEG-8: Aggressive protection of existing sagebrush steppe communities and proactive restoration of areas with poor to fair biotic

integrity through both active and passive means (see Figure 6) will be emphasized.

VEG-9: Approximately 80,000 acres of BLM-administered land (11% of the entire Monument) will be restored. About 31,000 acres of annual grassland and 49,000 acres of highly degraded low elevation sagebrush steppe (poor to fair biotic integrity) will be treated to control cheatgrass and restore big sagebrush cover with a perennial understory.

VEG-10: All special status species in the Monument will be inventoried with monitoring plans established, particularly when and where adverse impacts may occur.

VEG-11: Actions and stipulations necessary to protect special status species and their habitats will be made part of land use authorizations (e.g., limiting fragmentation of special status species populations when considering road maintenance) and fire planning.

VEG-12: Use of native plants will be emphasized in rehabilitation and restoration projects, and only native plants will be used for rehabilitation or restoration projects within the Pristine Zone. Integrated weed management principles will be used to

- detect and eradicate all new infestations of noxious weeds;
- control existing infestations; and
- prevent the establishment and spread of weeds within and adjacent to the planning area.

VEG-13: Weed infestations in wilderness areas will be controlled by methods consistent with minimum tool requirements and integrated weed management principles, including prevention of disturbance activities, use of cultural and mechanical methods to control or physically remove noxious weeds, and selective application of herbicides and possibly biological controls.

MONITORING OF VEGETATION ALLOWS MANAGERS TO DETERMINE WHETHER DESIRED CONDITIONS ARE BEING ACHIEVED.

VEG-14: Integrated weed management principles will be applied proactively throughout all zones. This program will emphasize protection of weed-free areas and aggressive detection and control of noxious or highly invasive exotic weeds and will include an analysis of the trade-offs involved in herbicide use versus non-chemical methods of weed control.

VEG-15: Only certified weed-free hay, straw, and mulch will be permitted within the Monument.

VEG-16: Wildland fire will be suppressed to protect life and property, healthy sagebrush steppe communities, recent rehabilitation and restoration projects, cultural sites, and the Little Cottonwood Creek watershed.

VEG-17: Fire will be managed to maximize protection and restoration of sagebrush steppe in the Passage and Primitive Zones.

VEG-18: Wildland fire use will be allowed in the Wilderness and Preserve except when incompatible with resource management objectives

or there is danger to life or property.

VEG-19: Limited prescribed fire (<500 acres) will be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood watershed.

VEG-20: In the event of wildland fire, burned areas will be rehabilitated when necessary to restore the appropriate mosaic of sagebrush species and subspecies, along with a diverse perennial understory, and to suppress invasive and noxious weeds.

VEG-21: The cooperative arrangement between the Bureau of Land Management and the National Park Service related to fire management will continue, including cooperative agreements with local fire departments and rural fire districts.

VEG-22: The Bureau of Land Management and the National Park Service will develop a joint fire management implementation plan for the Monument.

VEG-23: The network of main arterial roads will be managed to support access for wildland fire suppression.

WATER RESOURCES

Surface water resources are limited in the Monument. Stream channels are largely nonexistent within the exposed lava flows, and streams draining the Pioneer Mountains rapidly become subterranean once they encounter the lava flows. There are several small perennial streams in the Pioneer Mountains at the north end of the Monument. The entire watersheds of Little Cottonwood and Leech Creeks are in the Monument. Very short segments of the Little Wood River, Big Cottonwood Creek, Fish Creek, and Huff Creek fall just within the Monument boundaries.

The slopes of the Pioneer Mountains contain numerous perennial and ephemeral springs that feed small creeks and marsh wetlands. Just north of the Craters of the Moon Lava Field is a small hot springs complex. Parts of Lava Lake and Huff Lake are also in Monument boundaries. Dozens of groundwater-fed pools exist in the lava flows near Carey Lake marsh. Seasonal playa lakes are scattered throughout the sagebrush steppe desert. Many of these playas have been developed by the Bureau of Land Management to create reservoirs, which increases their water holding capacity and longevity. Numerous caves within the Monument lava flows contain year-round ice deposits, which produce melt water during the summer.

Steep-sided canyons with high gradient channels and a narrow floodplain characterize the watershed of Little Cottonwood and Leech Creeks. Mean discharge rates for both streams are less than 1 cubic foot per second. Streamwater quality in Little Cottonwood and Leech Creeks has been monitored and has generally been found to be good, with no violations of Idaho state standards for temperature, dissolved oxygen, and turbidity (Falter and Freitag 1996).

The state granted the National Park Service federal reserved water rights within the original Monument in 1998. The rights provide for domestic, irrigation, or industrial use within the Monument, as well as in-stream flow rights on areas including Little Cottonwood and Leech Creeks (Hurlbutt 1998). The Bureau of Land Management has 337 filed water right claims on 18 springs, 192 playa lakes, and 127 reservoirs within the Monument. Priority dates of the water rights claims are as early as 1926.

Many of the water resources in the Monument are used in a variety of ways —

GROUND WATER HAS CREATED WATER HOLES WITHIN THE LAVA FLOWS NEAR CAREY LAKE.

drinking water for the visitor center and campground, irrigation water for farms, livestock watering sites, and recreational opportunities like bird watching. Human use and activities may alter water and associated resources. Playas and reservoirs developed by the Bureau of Land Management are an integral part of this semiarid ecosystem, and they often are the only source of water for wildlife and livestock.

Desired Future Conditions:

Riparian areas and wetlands within the planning area are maintained, restored, or enhanced so that they provide diverse and healthy habitat and water quality conditions for riparian and wetland obligates and other wildlife species.

Little Cottonwood watershed yields sufficient safe drinking water for current public and administrative uses in the visitor center complex.

Management Actions:

WATER-1: No additional playas will be modified or developed.

WATER-2: Playas will be evaluated for restoration on a case-by-case basis.

WATER-3: The agencies will work with appropriate state authorities to obtain water resources needed for Monument purposes.

WILDLIFE, INCLUDING SPECIAL STATUS SPECIES

During some portion of each year, about 200 species of birds, 60 species of mammals, 10 species of reptiles, and at least three species of amphibians can be found in the Monument. (See the Proposed Monument Management Plan / Final Environmental Impact Statement, Appendixes D and E, for more information on these species.) Limited surveys in the late 1960s identified more than 2,000 species of insects (Horning and Barr 1970).

Sagebrush steppe communities comprise much of the wildlife habitat in the Monument. Sagebrush obligates that occur in the Monument include the sage sparrow, black-throated sparrow, Brewer's sparrow, sage thrasher, Greater sage-grouse, pygmy rabbit, sagebrush vole, and sagebrush lizard. Some species, such as Brewer's sparrows, are at their highest densities statewide in ungrazed portions of the Monument (Bart 2001).

Extensive lava flows also serve as habitat for numerous animal species. At least seven species of bats, several species of rodents, and several species of cave invertebrates use lava tubes and flows in the Monument. The flow surfaces also are used by many species of vertebrates and invertebrates, and several species are dependent on the lava structures. Species such as pika, woodrats, skinks, and rock wrens are found primarily on the rock surfaces. Several snake and bat species are dependent on cavities in the lava for hibernation sites. Two of the three known bat maternity colonies of Townsend's big-eared bat in Idaho are found in the Monument lava tube caves (Pierson et al. 1999).

Six species of large mammals are known to inhabit the Monument — mule deer, pronghorn, elk, cougar, black bear, and moose. Most are widespread throughout the Snake River Plain and Pioneer Mountains and regularly can be found in the Monument.

Special status species are those listed as endangered or threatened under the Endangered Species Act; candidates or species proposed for listing under the act; species listed by the Idaho Department of Fish and Game as endangered, threatened, or species of special concern; and/or species listed by the Bureau of Land Management as sensitive. The Bureau of Land Management manages all species identified as sensitive to minimize the need for future listing as threatened or endangered under the Endangered Species Act. The National Park Service strives to manage its lands to protect any federally listed, state-listed, or BLM-listed species.

The U.S. Fish and Wildlife Service has provided a list of endangered, threatened, proposed, and/or candidate species that may be present in the area of the Monument (see Table 4). According to this list, threatened and endangered animal species that could potentially occur in the Monument area are Canada lynx (*Lynx canadensis*), gray wolf (*Canis lupus*), bald eagle (*Haliaeetus leucocephalus*), bull trout (*Salvelinus confluentus*), Bliss Rapids snail (*Taylorconcha serpenticola*), Utah valvata snail (*Valvata utahensis*), and Snake River physa (*Physa natricina*). However, sufficient habitat for Canada lynx, bull trout, and the snails is not available. The Monument area is not in a lynx analysis unit because it lacks suitable habitat for the species. There is not adequate surface water present in the Monument area for the survival of bull trout or the snails, all of which require substantial riverine habitat.

Greater sage-grouse (*Centrocercus urophasianus*) is a BLM sensitive species. Since 1950, 148 Greater sage-grouse leks have been documented on BLM-administered land in the Monument. Between 1979 and 1983, 83 leks were active, and between 1999 and 2003, there were 53 active leks. These observations (made by the Idaho Department of Fish and Game personnel) indicate a 36% decrease in Greater sage-grouse leks over the past 25 years.

Pygmy rabbits have been documented in several areas of the Monument. Records ranging from the 1930s through 2003 indicate locations from the southernmost areas to the original Monument lands (Hoffman 1988). Pygmy rabbit populations have experienced severe declines throughout their range, including in Idaho. The rabbits generally prefer mature sagebrush stands with a dense canopy cover (Gabler et al. 2001). However, there are few surveys for the species in southern Idaho, and the distribution and status of the species is not well understood.

The Monument contains hundreds of caves and several cave-related species of concern, including seven species of bats that are U.S. Fish and Wildlife Service species of concern, Idaho species of special concern, or BLM sensitive species. As of 1999, three maternity colonies of

Townsend's big-eared bat (*Corynorhinus townsendii*) have been identified in Idaho (Pierson et al. 1999), with two occurring in the Monument. Numerous hibernacula have been identified in the Monument for this and other bat species. Six other cave roosting bat species that are classified as sensitive or of concern are found in the Monument (see Table 4; Keller 1996). In addition to bats, other cave species are of concern, including the blind cave leiodid beetle (*Glavcicavicola bathyscioides*). Two of the four known worldwide sites for this species are in the Monument (Idaho Conservation Data Center 2002).

Desired Future Conditions:

Habitat within the planning area supports a diverse range of native wildlife species and gives the public high-quality opportunities for wildlife-based recreation.

Table 4. Special Status Animal Species in the Monument

SPECIES	STATUS		
	Federal	BLM	Idaho
MAMMALS			
Gray wolf (*Canis lupus*)	T		
Townsends's big-eared bat (*Corynorhinus townsendii*)	I	S	S
Western small-footed myotis (*Myotis ciliolabrum*)	I	W	
Long-eared myotis (*Myotis evotis*)		W	
Fringed myotis (*Myotis thysanodes*)		S	S
Long-legged myotis (*Myotis volans*)	I	W	
Yuma myotis (*Myotis yumanensis*)	I	W	
Western pipistrelle (*Pipstrellus hesperus*)	I	W	S
Pygmy rabbit (*Brachylagus idahoensis*)	I	S	S
Kit fox (*Vulpes macrotis*)	I	S	
Piute ground squirrel (*Spermophilis mollis*)		S	
BIRDS			
White-faced Ibis (*Plegadis chihi*)	I	S	
Bald eagle (*Haliaeetus leucocephalus*)	T		
Northern goshawk (*Accipiter gentilis*)	I	S	S
Ferruginous hawk (*Buteo regalis*)	I	S	
Swainson's hawk (*Buteo swainsoni*)		W	
Prairie falcon (*Falco mexicanus*)		S	
Peregrine falcon (*Falco peregrinus*)			E
Dusky grouse (*Dendrogapus obscurus)*		W	
Greater sage-grouse (*Centrocercus urophasianus*)	I	S	
Columbian sharp-tailed grouse (*Tympanuchus phasianellus columbianus*)	I	S	S
Wilsons's phalarope (*Phalaropus bicolor*)		W	
Long-billed curlew (*Numenius americanus*)	I	W	
Black tern (*Chlidonias niger*)			S
Short-eared owl (*Asio flammeus*)		W	
Western burrowing owl (*Athene cunicularia*)	I	W	S
Calliope hummingbird (*Stellula calliope*)		S	
Lewis' woodpecker (*Melanerpes lewis*)		S	

Table 4. Special Status Animal Species in the Monument

Red-naped sapsucker (*Sphyrapicus nuchalis*)		W	
Williamson's sapsucker (*Sphyrapicus thryoideus*)		S	
Olive-sided flycatcher (*Contopus borealis*)		S	
Loggerhead shrike (*Lanias ludovicianus*)	I	S	S
Cordilleran flycatcher (*Empidonax occidentalis*)		W	
Hammond's flycatcher (*Empidonax hammondii*)		S	
Willow flycatcher (*Empidonax traillii*)		S	
Pinyon jay (*Gymnorhinus cyanocephalus*)		W	
Sage thrasher (*Oreoscoptes montanus)*		W	
Green-tailed towhee (*Pipilo chlorurus*)		W	
Grasshopper sparrow (*Ammodramus savannarum*)		W	
Brewer's sparrow (*Spizella breweri*)		S	
Sage sparrow (*Amphispiza belli*)		S	
Black-throated sparrow (*Amphispiza bilincata*)		S	
Brewer's blackbird (*Euphagus cyanocephalus*)		W	
Cassin's finch (*Carposdacus cassinii*)		W	
REPTILES & AMPHIBIANS			
Western night snake (*Hypsiglena torquata*)		S	
Western toad (*Bufo boreas*)	I	S	S
Short-horned lizard (*Phrynosoma douglassi*)	I	S	
INVERTEBRATES			
Idaho dunes tiger beetle (*Cicindela arenicola*)		S	
Blind cave leiodid beetle (*Glacicavicola bathysciodes*)	I	S	S
Idaho pointheaded grasshopper (*Arolophitus pulchellus*)	I	S	

Federal Designations:
T = Federally Listed as Threatened
I = Species of Concern

BLM
S = Bureau of Land Management Sensitive Species: In this listing, all species without other current status but formerly federal candidates or state species of concern; additionally all species with either federal or sate status should also be considered BLM Sensitive Species.
W = Watch list species: Species that are not BLM Sensitive Species but current population or habitat information suggests that the species may warrant sensitive species status in the future.

Idaho Species of Special Concern: (Native species that are either low in numbers, limited in distribution, or have suffered significant habitat losses)
E = Endangered
S = Special Concern

Habitat for migratory birds, including forage, water, cover, structure, and security, is available within the Monument to support healthy populations of resident and migrant species.

Greater sage-grouse restoration habitat (R1 & R2) will achieve significant progress towards reclassification as Key habitat. (See glossary for definitions and details.)

High-quality habitats for sagebrush obligate species are provided.

Species composition in key Greater sage-grouse habitat will reflect site potential.

Management Actions:

WLIFE-1: Inventory and monitoring of wildlife will emphasize species that are regionally or nationally important.

WLIFE-2: A monitoring program will be established to detect species populations in decline and species as indicators of the health of the ecosystem, and to record the presence of species of special concern.

WLIFE-3: The National Park Service, in consultation with the state and tribes, will designate areas within the Preserve and periods of time when no hunting will be permitted for protection of the area's resources.

WLIFE-4: On all NPS-administered lands, predator control will not be authorized by the Park Service except on a case-by-case basis.

WLIFE-5: Native animal species identified as pests will be managed in accordance with the applicable BLM or NPS management policies depending upon the administrative area in which the pest occurs.

WLIFE-6: All special status species in the Monument will be inventoried with monitoring plans established, particularly when and where adverse impacts may occur.

WLIFE-7: Actions and stipulations necessary to protect special status species and their habitats will be made part of land use authorizations (e.g., limiting fragmentation of special status species populations when considering road maintenance) and fire planning.

WLIFE-8: Active and historic leks will be protected from disturbance during the Greater sage-grouse breeding season. Some examples of potential protective measures as presented in the Idaho Sage-grouse Advisory Committee's 2006 Conservation Plan for the Greater Sage-grouse in Idaho include the following:

- Apply use restrictions where needed and appropriate on existing roads or trails near occupied leks to minimize nonessential activity between 6:00 PM to 9:00 AM (in general this guideline should be applied from approximately March 15 through May 1).
- Avoid human activities such as fence maintenance or construction or any project or related work at or near (1 km or 0.6 mile) occupied leks that results in or will likely result in disturbance to lekking birds, between 6:00 PM to 9:00 AM (in general this guideline should be applied from approximately March 15 through May 1).
- Avoid creating unnecessary disturbances related to livestock management activities near occupied leks whenever possible.

- Improve the dissemination of information to elementary and high school students, hunters, resource user-groups, and others to increase their understanding of Greater sage-grouse and sagebrush steppe conservation issues.
- Monitor leks in a manner that minimizes disturbance to Greater sage-grouse following established protocol (Idaho Sage-grouse Advisory Committee 2006, Sections 5.2.1.1 and 5.2.1.2).

Note: Road closures or restrictions during the Greater sage-grouse breeding season will not apply to agency (BLM and NPS) vehicles, including Idaho Department of Fish and Game vehicles and personnel who conduct necessary Greater sage-grouse inventory and monitoring.

WLIFE-9: Consistent with Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (USDI BLM 1997) determinations, livestock grazing management will be modified as necessary to ensure that key Greater sage-grouse habitat achieves site potential.

WLIFE-10: The Bureau of Land Management will continue to hold annual meetings and coordinate closely with U.S. Department of Agriculture, Wildlife Services Program, and livestock lessees to reduce livestock losses. The Bureau of Land Management will encourage using non-lethal methods, education, and the targeting of specific offending animals for lethal methods. These procedures will be implemented to protect both public safety and the natural resources for which the Monument was designated.

AIR QUALITY

The Monument is within one of the cleanest air regions of the country. While generally well below the national average for most air pollutants, some pollutants, such as ozone, are currently trending upwards. Air quality varies, depending on the location within the unit, the pollutant being measured, the season and time of day, wind direction, and climatic factors. Clean air greatly enhances the understanding and appreciation of the Monument's geologic resources by allowing clear views of distant landscape features.

The Craters of the Moon National Wilderness Area (43,243 acres) within the Monument is a mandatory Class I area, as defined in Clean Air Act (42 U.S. Code Sections 7401-7671q; as amended in 1990, Public Law 101-549). Congress created a Prevention of Significant Deterioration (PSD) section, the purpose of which is "to preserve, protect, and enhance the air quality in national parks, national wilderness areas and other areas of special national or regional natural, recreational, scenic, or historic value." Specifically, the PSD section reflected the law's intention that, among the clean air regions of the country, certain areas — the Class I areas — deserve the highest level of air quality protection. The impairment of visibility within Class I areas was a major concern addressed in the Clean Air Act. Because of the Class I designation the National Park Service has operated an extensive air quality monitoring program at the Monument for more than 25 years.

The rest of the Monument is a Class II area (including the Wilderness Study Areas). Class II areas also have limits on

increases of particulate matter and sulfur dioxide above baseline concentrations. The allowable increases for Class II areas are higher than those established for Class I areas.

Desired Future Conditions:

Air quality related values, particularly visibility, within the Class I Craters of the Moon Wilderness Area are not degraded and adverse impacts do not occur.

Air quality parameters that negatively affect human health, visibility, or biological diversity remain at or below current levels.

Management Actions:

The agencies will work proactively with surrounding communities, land management agencies, and the Idaho Department of Environmental Quality to limit increases of particulate matter and sulfur dioxide, which could reduce visibility, throughout the entire Monument.

MONITORING OF AIR QUALITY HAS BEEN AN ONGOING ACTIVITY IN THE MONUMENT SINCE 1980.

CULTURAL RESOURCES

ARCHEOLOGICAL AND HISTORICAL RESOURCES

Both the National Park Service and the Bureau of Land Management are responsible for identifying, protecting, managing, and enhancing archeological, historic, architectural, and traditional lifeway values located on their lands, as well as those that might be affected by BLM or NPS undertakings on non-federal lands. The National Park Service and the Bureau of Land Management both manage archeological remains, historic values, and traditional cultural properties important to federally recognized Native American tribes.

There are more than 500 known, recorded cultural resources sites in the Monument, representing a variety of types and chronological periods, dating from at least 8,000 years old to the present. Identified prehistoric sites include lithic scatters, rock shelters, rock structures and piles, and pictographs. Near the north end of the Monument there may be stone tool quarry sites yet undocumented. These remains mainly represent activities in the area before European contact in the 1800s.

The Monument contains portions of Goodale's Cutoff, which was an alternate route of the Oregon Trail that skirted the northern edge of the Craters of the Moon Lava Field. Portions of Goodale's Cutoff from US 20/26/93 in Butte County west to Blaine County are on the National Register of Historic Places. Historic sites in the Monument include portions of the historic trail, as well as sheepherder camps, cairns, and dumps. A few stock-raising homestead claims were filed in the Monument in the 1890s and early 1900s, but the environment proved too harsh for them to succeed and most were canceled. Virtually no visible physical evidence of these endeavors remains (Louter 1995). During the early days of Euro-American settlement in southern Idaho, sheep and

cattle grazing were the predominant economic pursuit in this area. During the late 19th and 20th centuries, silver, gold, and lead mining also took place in the mountains just north of the Monument.

The Monument headquarters complex, including the visitor center, employee residences, and maintenance buildings, was recently determined to be eligible for nomination to the National Register of Historic Places (USDI NPS 2000b). The eligibility is based on the continued integrity of the modern architectural design with grouping of public and administrative facilities in a headquarters area. This approach typified the NPS Mission 66 Program of the late 1950s and early 1960s (Allaback 2000). Mission 66 was a 10-year development program designed to upgrade facilities throughout the National Park System. The current NPS visitor center and headquarters complex was designed and constructed during the Mission 66 era of National Park development. The concept of a single complex incorporating public facilities, interpretive programs, and administrative functions originated during the Mission 66 Program.

Cultural resources are generally identified through field inventories conducted by qualified professionals in compliance with Section 106 of the National Historic Preservation Act of 1966 or under the authority of Section 110 of that act. Interviews and historical records can also be used to identify archeological, historical, and traditional lifeway values. David Louter (1995) completed the Craters of the Moon National Monument: Historic Context Statement.

Three types of inventories — Class I, II, and III — are conducted to identify and assess cultural values on BLM lands. A Class I inventory, a literature review, was completed for the BLM portion of the Monument in 1982, as part of a larger study that included the Boise and Shoshone management areas. Since then, several smaller Class III intensive inventories have been completed in the Monument to fulfill Section 106 responsibilities. These inventories were associated with project activities where sites needed to be identified and evaluated to protect significant values and minimize effects on these values. No Class II inventories have been conducted in the Monument. No formal inventories for traditional cultural properties of importance to tribes have been completed for the Monument.

Over the years, several different universities have also conducted Class III inventories on the Monument, unassociated with any specific development project, expanding the information base. It is estimated that less than 5% of the Monument has been intensively inventoried for cultural resources. No systematic inventory of the caves associated with the lava flows has been completed. There may be many important cultural resources associated with the lava tubes, as well as the harder to reach kipukas, which have not been recorded by archeologists because of their remote nature.

Early surveys in the 1960s suggested that there was not a great deal of prehistoric use in this area, but more recent surveys on the adjacent BLM lands would seem to indicate otherwise. These early surveys were concentrated in areas archeologists deemed likely because they contained known water sources. We now know that Native Americans used this area much more than archeologists originally believed. Data from recent nearby fire rehabilitation surveys indicate a rather high density of prehistoric sites in association with the lava flows. Therefore, it is believed that there is a significant prehistoric cultural component associated with the Monument area, in addition to the well-documented historic component.

Cultural resource conditions and trends within the Monument vary considerably because of the variability of terrain and geomorphology, access and visibility, and past and current land use. Exposed

artifacts and features on the ground surface can be disturbed by elements such as wind and water erosion, animal and human intrusion, and development and maintenance activities. Based on limited site monitoring and documentation, the trend of site conditions within the Monument is considered stable in most areas. Vandalism and unauthorized collection at sites constitutes the main source of cultural resource degradation.

Looting of archeological sites has been occurring in the Monument for some time, especially in the remote, hard-to-reach kipukas. With the advent of Internet auctions, illegal artifact collection is becoming more profitable than ever. As long as there is a market, looting will continue to be a problem.

It is likely there are many sites in the interior of the lavas that are unknown at present, and they might lead to clues needed to understand just what prehistoric people were doing in this area thousands of years ago. Undisturbed caves also may hold a fascinating record of the Monument's early natural history in the form of fossilized skeletal material of Pleistocene mammals. Other caves on the Snake River Plain have produced fossil remains of mammoth, grizzly bear, bison, musk ox, and camel.

Desired Future Conditions:

The extent and condition of cultural resources and traditional cultural properties are documented and adverse effects are avoided.

The agencies maintain a single, consolidated cultural resource database.

Archeological resources either listed in or eligible to be listed in the National Register of Historic Places (national register) are protected in an undisturbed condition unless it is determined through appropriate consultation that disturbance or natural deterioration is unavoidable.

THIS ENTRANCE TO BAKER CAVE HAS BEEN PARTIALLY BLOCKED BY THE ROCKS ON THE RIGHT, CAREFULLY PLACED THERE BY HUMANS SOME 700 TO 1,000 YEARS AGO.

The qualities that contribute to the eligibility for listing or listing of prehistoric/historic structures and historic trails in the national register are preserved and protected in accordance with the Secretary of the Interior's Standards, unless it is determined through appropriate consultation that disturbance or natural deterioration is unavoidable.

Management Actions:

CULT-1: A comprehensive Archeological Overview and Assessment of known and potential archeological resources (baseline research report) within the planning area will be completed.

CULT-2: A Cultural Resource Management Plan that describes how specific sites will be managed, defines what areas need additional inventory, and designates potential use categories for sites will be completed for the Monument.

CULT-3: Measures such as access limitations and periodic monitoring will be identified to proactively manage and protect cultural resources, including traditional cultural properties.

CULT-4: Projects will be planned and designed so as to avoid

adversely impacting cultural resources where possible. The Bureau of Land Management and the National Park Service will consult with Tribes and the Idaho State Historic Preservation Officer to develop alternatives to avoid, minimize, or mitigate any potential adverse effects.

CULT-5: Through consultation with the Idaho State Historic Preservation Officer, areas for Section 110 cultural resource inventories will be prioritized.

CULT-6: A proactive Section 110 inventory will be conducted as funding allows, expanding the cultural resource database for the Monument.

CULT-7: A minimum of 10% of the Monument will be inventoried (Section 110 National Historic Preservation Act) for cultural resources over the life of the plan. The focus of the Section 110 inventory will be in the Primitive and Passage Zones.

CULT-8: The significance of known archeological and historic resources, structures, and landscapes will be evaluated and documented, in conjunction with the Idaho State Historic Preservation Officer, for listing in the national register.

CULT-9: Activities that may affect the Goodale's Cutoff of the Oregon Trail, the NPS headquarters/visitor center Mission 66-era area, or other properties listed or eligible for the national register will be undertaken in consultation with the Idaho State Historic Preservation Officer.

CULT-10: At-risk national register eligible sites will be monitored for vandalism or other disturbances and protected/stabilized as necessary.

CULT-11: National register eligible properties will be monitored periodically, and steps will be taken to stabilize any property found to be deteriorating and to limit access as needed.

CULT-12: The agencies will pursue more public education and interpretation off site, with increased monitoring and protection for those sites at risk.

MUSEUM COLLECTIONS

The Monument's museum collections include objects, specimens, and archival and manuscript collections that serve as scientific and historical documentation of the Monument's purpose and resources. Museum collections are currently stored at the NPS visitor center in a dedicated storage facility. There are no Native American Graves Protection and Repatriation Act materials in the existing museum collections from the Monument and Preserve. In the event that materials are inadvertently discovered or encountered during authorized archeological excavations, the affiliated tribes would be contacted immediately and the procedures outlined in the act would be followed.

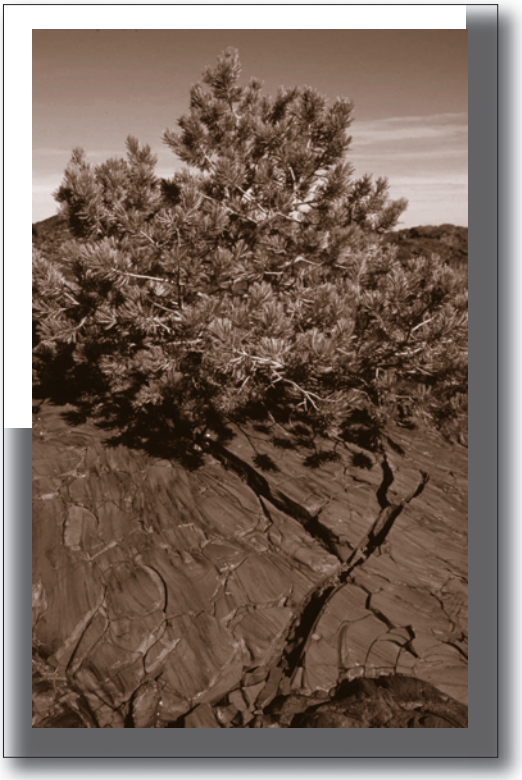
Desired Future Conditions:

Museum collections (prehistoric and historic objects, works of art, historic documents, and natural history scientific specimens) are maintained according to NPS museum management program requirements.

Management Actions:

MUSE-1: Monument collections will be accessible for legitimate research and educational purposes.

MUSE-2: All resource management records directly associated with museum objects will be managed as museum property. These and other resource management records will be preserved as part of the archival and manuscript collection because they document and provide an information base for the continuing management of the Monument's resources.



LIMBER PINE IN PAHOEHOE LAVA.

NATIVE AMERICAN RIGHTS AND INTERESTS AND ETHNOGRAPHIC RESOURCES

Native Americans inhabited southern Idaho, including the present-day Monument lands, for thousands of years prior to European contact. Ethnographic information suggests that aboriginal populations constantly traversed the Snake River Plain during their seasonal subsistence rounds, moving to the Camas Prairie in the spring and then further into the mountains for the summer. In the fall, they would return to the Snake River for the winter (Steward 1938, Liljeblad 1957, 1960, Murphy and Murphy 1960). According to Shoshone-Bannock tribal legends and information, Indians traveled throughout the Salmon River Basin following subsistence resources based on the seasons. Some bands traveled to the Camas Prairie area to gather plants, others traveled to buffalo country, and others went to the Salmon and Snake Rivers for fish. The different bands of Shoshone, Bannock, and Paiute all have their place names for specific areas and locations within this region, which includes the Great Rift area. Indians have always utilized the unique features of the Great Rift area for various uses, and they continue to hold this area sacred and important. This ancient way of life was dismantled when large numbers of immigrants seeking land sought to displace the tribes. During the 1850s and 1860s, treaties were negotiated with the tribes in the northwestern United States in part to acquire Indian lands for homesteading.

On July 3, 1868, the Eastern Band of Shoshone and Bannock Tribes and the United States signed the Treaty with the Eastern Band Shoshone and Bannock, commonly referred to as the Fort Bridger Treaty (15 Statute 673). In the Fort Bridger Treaty, the tribes relinquished claims on approximately 20 million acres to the United States. The Treaty retains the tribes' rights to hunt, fish, and gather natural resources, and provides other associated rights necessary to effectuate these rights on open and unoccupied lands of

the United States. The Shoshone-Bannock Tribes have a long, rich, historical association with the Monument, and their use of those trust resources continues today.

The agencies also maintain a trust relationship with the Shoshone-Paiute Tribe of the Duck Valley Reservation, which was established by Executive Order in 1877. Western Shoshone, Northern Paiute, and some Northern Shoshone people were relocated to the remote Duck Valley Reservation, which lies in northeastern Nevada and southwestern Idaho. These people once roamed much of Nevada, Oregon, and southern Idaho. The Shoshone-Paiute never formally ceded any of their territory to the U.S. government through treaty. Today, agency consultation and coordination with the Shoshone-Paiute takes place in monthly meetings with tribal representatives using a process known as Wing and Roots.

The Bureau of Land Management and National Park Service have a unique relationship with federally recognized Native American tribes and are responsible for maintaining a formal government-to-government relationship with tribal leadership. As outlined in treaties, executive orders, legislation, and federal policies, this relationship focuses on ensuring that the rights and/or interests of tribes are considered and protected. This includes consulting with tribal representatives and identifying and protecting important archeological, religious, and/or sacred sites, as well as providing tribal members appropriate access to these sites. Also included are provisions for reasonable access for tribal members to gather and harvest plant, animal, and aquatic resources on certain state and federal lands where these activities are not otherwise prohibited.

No specific sacred sites or traditional cultural properties within the Monument have been identified by the Shoshone-Bannock Tribes or Shoshone-Paiute Tribes, but there are oral histories documenting the use of the area by tribal members. It is possible tribal members still visit the isolated areas of the Monument for spiritual purposes today. The local tribes generally do not disclose sacred site locations to federal agencies. Not knowing the location of these sacred areas makes it difficult for land managers to assess the impacts of federal actions on them. Continued consultation with tribes is the best way to maintain an open dialog so tribal members can voice their concerns should a federal action threaten a sacred site or traditional use area.

Desired Future Conditions:

Traditional cultural properties of Native American tribes and access to those properties are preserved within the Monument for the use and benefit of current and future tribal members.

For Native American tribes that have ties to this land as part of their ancestral homeland, the Monument holds meaning and value and is a place where treaty rights and religious/sacred traditions may be practiced in a manner supportive of the purpose of the Monument.

Agencies and tribes maintain a government-to-government relationship, and the agencies routinely consult on matters involving the treaty interests and/or rights of the tribes.

Tribal oral history will be considered and incorporated into interpretive materials, as well as resource management.

Management Actions:

NAAM-1: Native American tribes that have expressed an interest in traditional cultural properties within the Monument will be consulted on a regular basis regarding the management of those properties.

NAAM-2: Handling of Native American Graves Protection and Repatriation Act materials will be addressed as a component of a Cultural Resources Management Plan.

NAAM-3: Should any Native American Graves Protection and Repatriation Act materials ever be inadvertently discovered within the Monument, the agencies will follow the tribal consultation procedures outlined in the act regarding their treatment.

NAAM-4: The agencies in consultation with the tribes will identify protection measures for places of traditional cultural importance to Native Americans to preserve the integrity and use of these areas as described in National Register Bulletin 38.

NAAM-5: Agencies will consult with associated Native American tribes to develop and accomplish the programs of the Monument in a way that respects their beliefs, traditions, and other cultural values.

NAAM-6: Agencies will consult with Native American tribes prior to taking actions that will affect natural and cultural resources that are of interest and concern to them.

NAAM-7: Hunting, gathering, and use of certain natural resources as sacred objects for religious use will continue on the Preserve and expanded areas of the Monument.

FOR THE NATIVE AMERICAN TRIBES ASSOCIATED WITH CRATERS OF THE MOON, THE ROOTS OF BITTERROOT (LEWISIA REDIVIVA) ARE AN IMPORTANT TRADITIONAL FOOD.

LAND USE AND TRANSPORTATION

TRAVEL AND ACCESS

One of the most important issues to be considered in this planning effort is the amount and type of access to and within the Monument. This plan characterizes the existing road and trail network using the best available data on current condition and historical maintenance practices.

With the exception of road closures implicit in the application of Pristine Zone areas, decisions affecting the status or condition of all roads and trails within the Monument will be made in a follow-up travel management implementation-level plan. As stated in the Desired Future Conditions section below, there will be a net decrease in road mileage within the Monument. All travel and access will be limited to the existing roads and trails. The existing roads and trails were evaluated by agency staff and organized into the following classification system to provide for a reasonable baseline data set to be used within the context of a more specific travel management plan to follow.

Class A — paved surface roads

Class B — improved, maintained, constructed roads with natural or aggregate surface

Class C — roads constructed or established through use with a natural surface and little or no maintenance

Class D — primitive roads established through use with no maintenance

Class 1 Trail — restricted to non-motorized/non-mechanized travel; wheelchairs allowed

Class 2 Trail — open to motorized/mechanized travel with a footprint no wider than an 18-inch tread

Table 5 summarizes the current status of roads and their designated classes in the monument.

Desired Future Conditions:

There is a net decrease in road mileage within the Monument.

TABLE 5. ROADS WITHIN THE MONUMENT

ROADS WITHIN THE MONUMENT	MILES	MAINTENANCE
Class A	30	Idaho Transportation Department maintains 21 miles; NPS maintains 9 miles.
Class B	58	BLM maintains 28 miles; remaining 30 miles maintained by Blaine (28) and Butte (2) Counties.
Class C	367	BLM maintains 365 miles, NPS maintains 1 mile, Blaine County maintains 1 mile.
Class D	173	Not maintained.
Arco-Minidoka Road	69	BLM maintains 15 Class B miles and 25 Class C miles; remaining 29 miles maintained by Butte (24) and Blaine (5) Counties.
Carey-Kimama Road	40	BLM maintains 15 miles (all Class B); remaining 25 miles maintained by Blaine (12) and Lincoln (13) Counties.

The road system in the planning area provides access for visitors, permittees, non-federal landowners, and administrative needs while protecting those resources and values the Monument was established to preserve.

The agencies coordinate road management inside and outside of the Monument in a cooperative fashion with local government agencies so that the transportation system is managed in a comprehensive, logical manner.

The agencies also work cooperatively with local government agencies to provide appropriate access to the Monument and private land within the Monument.

The road system within the planning area supports efficient response time for fire suppression activities.

Most management direction related to travel and access is covered by management zone allocation.

Management Actions:

ROAD-1: All lands except for the existing roads shown on Figure 4 are designated as "closed" to vehicle use. Off-highway vehicle (OHV) use is "limited" to existing roads shown on Figure 4 unless and until such roads are closed, converted to Class II Trails, or are further limited by operation of this plan or by the forthcoming travel management plan. (OHV designations do not apply to specifically authorized administrative use.)

ROAD-2: All land within the Monument other than designated roads and trails will be designated "closed" for off-highway vehicle (OHV) and mechanized vehicle use.

ROAD-3: The agencies will prepare an implementation-level travel management plan showing road and trail classifications, standards, restrictions, and closures. Current road standards and classifications will be in effect until the travel plan is approved.

ROAD-4: The agencies will prepare guidelines and procedures for authorization of emergency and administrative off-road travel.

ROAD-5: The agencies will prepare a travel map showing allowable uses, road and trail classifications, and standards and restrictions.

ROAD-6: No motorized vehicle roads or trails will be permitted within the Pristine Zone.

ROAD-7: The agencies will close and rehabilitate all routes established in Wilderness Study Areas that were not identified in the wilderness inventory as "existing ways."

ROAD-8: All roads and trails shown on Figure 4 within the BLM-administered portions of Monument will be designated "limited" for OHV/motorized vehicle use unless further limited or closed in the forthcoming travel management plan.

ROAD-9: All authorized roads on NPS-administered portions of the Monument and Preserve will be open only to bicycles and highway licensed motorized vehicle travel and will be designated as "park roads."

ROAD-10: The agencies may close individual roads and trails temporarily or permanently to protect resources on a case-by-case basis.

ROAD-11: Snowmobile use on BLM-administered portions of the Monument will be addressed

in an upcoming travel management plan.

ROAD-12: The agencies will seek local jurisdiction concurrence (county or highway district) for any change in the commitment to future maintenance for any roadway under that entity's jurisdiction.

ROAD-13: Existing Class B and C roads will remain open, but maintenance will be driven by natural resource management needs, primarily fire suppression, weed management, and restoration activities.

ROAD-14: A Class B standard will be allowed on the Arco-Minidoka Road through the Monument should the adjacent road segments outside the Monument be upgraded.

ROAD-15: Selected Class D roads in the Primitive Zone could be converted to trails or closed for resource protection. Class D roads in the Pristine Zone could be converted to Class I trails where resource protection needs dictate.

ROAD-16: Temporary improvements to existing Class C and D roads could be authorized in the Passage and Primitive Zones to facilitate fire suppression and restoration activities or other management actions aimed at natural resource protection.

ROAD-17: In cooperation with the counties, the agencies will maintain the primary access roads to provide better access for fire management.

ROAD-18: Redundant, unnecessary, or unused roads will be closed as determined by management after completing a travel management plan.

LIVESTOCK GRAZING IS AUTHORIZED ON MOST OF THE BLM MONUMENT.

LIVESTOCK GRAZING

The proclamation expanding the Monument states:

> Laws, regulations, and policies followed by the Bureau of Land Management in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the Bureau of Land Management.
>
> Proclamation 7373

The Monument is cooperatively managed by the National Park Service and the Bureau of Land Management. The National Park Service administers 465,047 acres, or 62% of the Monument, and that area is not available for livestock use. These areas consist primarily of exposed lava flows, which are mostly devoid of available forage and/or inaccessible to livestock; therefore, prohibiting grazing in these areas has little to no impact on the livestock industry.

Three BLM field offices (Idaho Falls, Burley, and Shoshone) in the Idaho Falls and Twin Falls Districts administer livestock use on the 286,487 acres (including BLM, private, and state lands) in the Monument. Sheep and/or cattle graze these lands, which are divided into management units known as allotments. Grazing permits are awarded to permittees by allotment. These permits, or leases,

convey no right, title, or interest in the land or resources. Although the proclamation specifically mentions livestock grazing, it does not establish the practice as a "right" or convey to it any new status. There are an additional 1,800 acres of BLM-administered land adjacent to privately owned agriculture fields and NPS-administered lava that are designated not available for grazing.

Grazing systems, or acceptable grazing practices, for allotments are detailed in Allotment Management Plans. Grazing systems result from certain decisions and agreements and are subject to standards and guidelines, as are adjustments made to stocking rates. Animal unit months (AUMs) reflect current authorizations and are not a mandated level of use.

Desired Future Conditions:

Sustainable rangeland ecosystems are healthy; public rangelands are maintained or restored to meet Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (USDI BLM 1997).

Livestock forage is provided on a sustainable basis for the life of the plan, consistent with other resource objectives and with public land use allocations.

Livestock developments are consistent with the desired future conditions for natural, cultural, and visual resources.

Management Actions:

GRAZ-1: Nine allotment boundaries will be altered to accurately reflect the NPS/BLM boundary. There will be no change in AUM preferences actually available for grazing. (See Appendix F of the Proposed Monument Management Plan / Final Environmental Impact Statement [USDI NPS and BLM 2005] for additional details.)

GRAZ-2: BLM land available for livestock use totals approximately 273,000 acres. BLM land not available for livestock use totals approximately 1,800 acres. NPS land not available for livestock use totals approximately 465,000 acres.

GRAZ-3: Permitted livestock use totals 36,965 animal unit months. The current livestock use authorizations will be maintained until Idaho Standards for Rangeland Health evaluations or similar NEPA-compliant decisions identify the need for adjustments in livestock use to meet standards, vegetation, livestock, or resource objectives.

GRAZ-4: Use of existing livestock developments in Primitive and Pristine Zones may continue. The Bureau of Land Management may remove developments if they are no longer serving a useful purpose or resource objectives warrant their removal. Sites will be restored.

GRAZ-5: The Brigham Point and Paddelford Flat sheep trails across NPS land will be evaluated for future use.

GRAZ-6: There will be no new livestock developments permitted in North Laidlaw Park pasture and Bowl Crater allotment unless they result in a net benefit to those resources identified as needing improvement or protection.

THE MONUMENT VISITOR CENTER HOUSES INTERPRETIVE EXHIBITS, MUSEUM COLLECTIONS AND ADMINISTRATIVE OFFICES.

FACILITIES

Administrative and visitor facilities in the Monument are concentrated in an area of about 90 acres adjacent to US 20/26/93 in the north area of the Monument. These are the visitor center/administrative building, maintenance shop, five residential buildings, the entrance station, paved parking areas and roads, a campground, a campsite, and related utilities. The visitor center (which also serves as the NPS administrative headquarters), the maintenance building, and five residential buildings were built in the late 1950s as part of the NPS Mission 66 Program.

The visitor center building contains a lobby with book displays, sales, and an information desk; a small exhibit room; and public restrooms. The administrative office area of the building originally consisted of six rooms serving as offices and shared work areas. Renovation of the building and additions of 1,800 square feet for staff work area and curatorial space and 450 square feet for a multipurpose audiovisual room were completed in 2005.

The maintenance building provides limited area for its intended purposes, since parts of the building have been converted to offices for maintenance staff and storage of supplies. One of the residential buildings has been converted to staff offices. The campground contains more than 50 campsites, a 130-seat amphitheater, and three restrooms. An entrance station where visitors are contacted before entering the paved loop drive is adjacent to the campground. North of the highway is a public group campsite. In this vicinity are the Monument's potable water wells and delivery systems and underground water storage reservoirs.

A 7-mile paved loop drive with short spur roads, pullouts, and parking areas gives visitors access to scenic vistas, hiking trailheads, and other attractions. Vault toilets are available at three of the parking areas.

Kings Bowl was once a developed site. From the mid-1960s to late-1980s, private operators under permits from the Bureau of Land Management operated a concession at the site with a developed trail/tunnel system into Crystal Ice Cave, a parking and picnicking area, a trailer pad, a generator building, and a small concession stand. All of the aboveground facilities have been removed because of safety concerns. A small parking area and remnants of footpaths and vehicle trails remain. In 2002 the National Park Service and Bureau of Land Management installed a series of waysides and signs in the area to convey important safety and resource protection messages to people who might visit this site.

Desired Future Conditions:

Visitor and administrative facilities within the Frontcountry Zone of the NPS Monument meet visitors' needs.

The agencies cooperate with gateway communities in providing information and services to visitors at sites outside the Monument.

Location of agency facilities and staffing levels promotes efficiency of operations and public needs.

Principles of sustainable and universal design are incorporated into all facilities and operations.

Off-site facilities for new visitor services are emphasized.

Management Actions:

FAC-1: Existing paved road system and parking areas will be modified to address safety and maintenance concerns.

FAC-2: BLM fire stations at Carey and Kimama will include Monument information. There will be informational kiosks located along roads leading into the Monument.

FAC-3: Opportunities for sharing BLM and NPS facilities and staff will be evaluated.

FAC-4: Signs and wayside exhibits previously approved for visitor safety and resources protection will be installed at Kings Bowl.

FAC-5: Monument informational materials will be provided for display or distribution at non-agency sites in communities surrounding the Monument.

FAC-6: Partnerships will be encouraged in developing new visitor information facilities in gateway communities.

FAC-7: The Bureau of Land Management and National Park Service will become involved with other agencies and the private sector in seeking opportunities for visitor information centers in communities along the interstate corridor.

LANDS AND REALTY

The planning area encompasses approximately 753,333 acres (see Table 6 and Figure 7). Private and state land within the Monument boundary is not part of the Monument and is not subject to the direction in this plan. Most of the private land holdings in the planning area were obtained through agricultural entries such as the Desert Land Act, the Carey Act, the Reclamation Homestead Act, and the Stock Raising Homestead Act. There were no pending agricultural entries in the Monument on the date of Proclamation 7373. The private and state land inholdings are used for grazing and contain related developments such as fences, wells, corrals, camp trailers, and seedings. There are no houses, cabins, or other permanent human dwellings on the private or state land.

The agencies will consider acquiring private and state land in the Monument through exchange, purchase, or donation. Acquisitions of private land will only be initiated by the private landowners as a willing seller. Private or state land acquired by the agencies will automatically become part of the Monument and subject to the direction in this plan.

Proclamation 7373 withdrew all federal land within the Monument and Preserve from all forms of entry, location, selection, sale, and other forms of disposition. Therefore, the agencies cannot exchange, sell, or dispose of any federal land in the Monument except for extremely rare situations that would further the protective purposes of the Monument. This withdrawal includes the disposal of land to local governments for public purposes and community expansion.

Lands and realty authorizations fall into two broad categories — valid existing rights and other valid but lesser interests. Proclamation 7373 states that: "The establishment of this monument is subject to valid existing rights." Valid existing rights within the Monument include highway rights-of-way, powerlines, phone lines, a seismic station, a snow fence, a well, and mineral material sites (see Table 7 and Figure 8).

Other existing authorizations in the Monument are three Free Use permits for mineral materials (see the "Mineral Materials" section, below) and 14 easements held by the Bureau of Land Management across state and private land. At the time of Proclamation 7373, there

TABLE 6. LANDOWNERSHIP

LAND STATUS	ACRES*	% OF MONUMENT
NPS Lands	465,047	61
Original Monument	53,420	7
National Preserve	411,627	54
BLM Lands	273,488	37
Federal Total	738,535	98
State Total	8,157	1
Private Total	6,642	1
Grand Total	**753,334**	**100**

*Inconsistencies with acreage figures referenced in other documents will exist as a result of updates to data, differing projections, or changes in calculation techniques.

TABLE 7. VALID EXISTING RIGHTS

LOCATION ON FIGURE 6	CASE TYPE	CUSTOMER NAME	CASE FILE NUMBER	SIZE IN ACRES	EXPIRATION DATE
1	Federal Aid Highway 93	ITD[a]	IDI-001314	94	Perpetuity
2	ROW[b] Powerline	Lost River Electric Cooperative	IDI-002855	19	12/16/2019
3	ROW Observation Well	USGS[c]	IDI-012671	10	12/02/2009
4	ROW Telephone Line	ATC Communications	IDI-020118	6	08/08/2012
5	ROW Seismic Station	DOE[d]	IDI-028657	<1	04/16/2012
6	ROW Snow Fence	ITD	IDI-032380	14	09/09/2017
7	ROW Mineral Material Site	ITD	IDI-006614	109	Perpetuity
8	ROW Observation Wells	BOR[e]	IDI-0008954	4	Perpetuity
9	Emergency Airstrip Lease	Idaho Division of Aeronautics	IDI-0010307	43	03/05/2013
10	Emergency Airstrip Lease	Idaho Division of Aeronautics	IDI-0010310	40	09/19/2013
11	Federal Aid Highway 93	ITD	IDBL-0047476	87	Perpetuity
12	ROW Mineral Material Sites	ITD	IDBL-0047852	156	Perpetuity
13	Federal Aid Highway 93	ITD	IDBL-0049776	373	Perpetuity
14	ROW Mineral Material Site	ITD	IDBL-0052624	40	Perpetuity
15	Federal Aid Highway 93	ITD	IDBL-0052700	141	Perpetuity
16	Federal Aid Highway 93	ITD	IDBL-0053778	28	Perpetuity
17	ROW Mineral Material Sites	ITD	IDBL-0053709	7	Perpetuity

a. Idaho Transportation Department; b. right-of-way; c U.S. Geological Survey; d. Department of Energy; e. Bureau of Reclamation

were no other pending lands and realty cases or applications such as rights-of-way, land use permits, exchange or sale proposals, or trespass cases.

Desired Future Conditions:

Existing access to private lands is maintained, consistent with applicable laws, while minimizing environmental impacts.

Valid existing rights are protected.

Management Actions:

LANDS-1: Private or state lands within the Monument boundary acquired by the agencies will automatically become part of the Monument and subject to the direction in this plan.

LANDS-2: The agencies will pursue acquisition or exchange for private inholdings within the Monument based on initiation by willing seller.

LANDS-3: The agencies will pursue an exchange with Idaho Department of Lands for state lands located in and near the Monument.

LANDS-4: Action on applications for new discretionary land use authorizations will be guided by existing NPS and BLM policies.

MINERAL MATERIALS

The proclamation expanding the Monument withdrew all federal lands and interests in lands within the Monument from entry, location, selection, sale, lease, or other dispositions (except for exchanges that would further the protective purposes of the Monument) under the public land laws, including the mineral leasing and mining laws. Thus, new federal mineral leases or prospecting permits may not be issued, nor may new mining claims be located within the Monument. No mining claims existed in the Monument on the date of Proclamation 7373.

There are no known natural gas, oil, or mineral deposits within the Monument boundaries. The general area has moderate potential for developable geothermal resources (Kuntz et al. 1979, Ridenour 1979). Active mining claims for locatable minerals, primarily gold, exist just north of the Monument in the Pioneer Mountain foothills. The National Park Service has rehabilitated two old abandoned gold mine adits in the northern portion of the original Monument. The Bureau of Land Management processed several applications for geothermal leases in the 1970s and issued one lease, which was relinquished in 1982.

There are three Free Use Permits for pumice/cinders on BLM lands in the Monument. Butte County and Blaine County use these sites as a material source for gravel road maintenance. Free Use Permits authorize use only by state or local governments. These material sites are not available to the general public or commercial parties.

The amount of suitable road surface material available within the Monument is essentially unlimited. However, Proclamation 7373 and agency policy restricts extraction of mineral materials to valid existing rights and administrative uses only. Cinders are generally considered to be an undesirable material for road maintenance because they are not very durable compared to gravel. Cinders are very light, which reduces transportation costs. High quality crushed gravel is available outside the Monument, but at a substantially higher cost than the readily available cinders.

The Idaho Transportation Department also holds three right-of-way grants for five pumice/cinder material sites in the Monument. These right-of-way grants are valid existing rights unaffected by Proclamation 7373. The former General

Land Office granted these rights-of-way in the 1940s during the construction of US 20/26/93.

Desired Future Conditions:

Material sites (sites excavated for gravel, cinder, and other materials) are reclaimed and restored where feasible when no longer in use.

Current BLM reclamation requirements at material sites include: sloping of all pits to a natural contour and appearance; replacement of stockpiled topsoil and reseeding with recommended seed mix; reduction or removal of all vertical slopes and removal of all overhangs; scarification and rehabilitation of all created roads used to access the site; and other stipulations as agreed upon by the Bureau of Land Management and applicant at the time that the use was permitted and included in the mining and reclamation plan for mineral material disposal. Although complete restoration may not be practical, feasible, or desirable, reclamation of a mineral material site in the Monument shall be deemed successful when the site has been stabilized and revegetated, and it blends into the surrounding landscape.

Management Actions:

MINE-1: Existing authorization for material sites within the Monument will continue for the term of the authorization.

MINE-2: A Material Sites Reclamation Plan will be prepared.

MINE-3: New materials sites will not be developed except for Monument administrative purposes.

MINE-4: Agencies will consult with Idaho Transportation Department on relinquishment of three right-of-way grants for material sites along US 93.

MINE-5: Information will be provided on BLM areas outside the Monument where casual collection is appropriate and permitted for materials similar to those found in the Monument.

WILDERNESS AND WILDERNESS STUDY AREAS (WSAS)

Congressional designation of the 43,243-acre Craters of the Moon National Wilderness Area was enacted on October 23, 1970, making the Monument and Petrified Forest National Park the first units within the National Park System with designated wilderness areas (PL 91-504). The Craters of the Moon Wilderness is entirely within the original Monument (see Figure 9). All but the north end of the wilderness boundary is adjacent to lands inventoried by the Bureau of Land Management as the Great Rift Wilderness Study Area in 1980 (USDI BLM 1980a, 1980b). When designated, the wilderness boundary was offset one-eighth of a mile (660 feet) inside the Monument boundary. This "buffer" area was intended to permit administrative vehicle access for firefighting and other management needs (U.S. House of Representatives 1970). Since the narrow buffer area does not contain roads and consists largely of impassable lava flows, it never has been used for such purposes.

Wilderness Study Areas are lands identified through the BLM wilderness inventory process as possessing wilderness characteristics (defined by the Wilderness Act of September 3, 1964, 16 U.S. Code 1131). Wilderness Study Area lands are designated in BLM land use plans and managed under the BLM "Interim Management Policy for Lands under Wilderness Review, Handbook H8550-1," so as not to impair their suitability for wilderness designation (USDI BLM 1995).

Four Wilderness Study Areas have been designated within the boundaries of the Monument (see Table 8 and Figure 9). Eighty-four percent of the Wilderness Study Areas are within the National Preserve; the rest is managed by the Bureau of Land Management. The 381,800-acre Great Rift Wilderness Study Area was designated in 1980 (USDI BLM 1980a, 1980b). The Great Rift Wilderness Study Area encompasses most of the Craters of the Moon and Wapi Lava Fields, along with parts of the surrounding sagebrush grasslands. The Raven's Eye Wilderness Study Area covers 68,300 acres of the western part of the Craters of the Moon Lava Field, with 66% of the area within the Monument. The Little Deer Wilderness Study Area takes in 35,200 acres of a narrow extension of the Craters of the Moon Lava Field and adjacent sagebrush grasslands. The 9,700-acre Bear Den Butte Wilderness Study Area is centered on a narrow finger of the Craters of the Moon Lava Field, which extends into Laidlaw Park. The Raven's Eye, Little Deer, and Bear Den Butte Wilderness Study Areas were designated in 1986 (USDI BLM 1987).

Presidential Proclamation 7373 transferred portions of the four Wilderness Study Areas to the National Park Service in 2000. The proclamation directed the following:

> Wilderness Study Areas included in the Monument will continue to be managed under Section 603(c) of the Federal Land Policy and Management Act of 1976 (43 U.S. Code 17011782).

BLACKTAIL BUTTE.

Section 603(c) requires that Wilderness Study Areas be managed to maintain their suitability for wilderness designation and prevent unnecessary or undue degradation. BLM wilderness inventory procedures (USDI BLM 2001b) define roads as routes improved and maintained by mechanical means to ensure relatively regular and continuous use. A route maintained solely by the passage of vehicles is defined as a vehicle way. Numerous vehicle ways exist within the Wilderness Study Areas. The BLM Interim Management Policy for Lands under Wilderness Review (USDI BLM 1995) permits continued motorized travel on those ways recorded during the wilderness inventory. Additional vehicle routes created after the

TABLE 8. SUMMARY OF WILDERNESS STUDY AREAS

WIL ERNESS STUDY AREA	AREA WITHIN MONUMENT (ACRES*)	NPS AREA (ACRES*)	BLM AREA (ACRES*)	TOTAL WSA AREA (ACRES)	AREA WITHIN MONUMENT RECOMMEN ED SUITABLE BY THE BUREAU OF LAN MANAGEMENT (ACRES)
Great Rift	381,100	335,000	46,000	381,800	322,450
Raven's Eye	45,400	37,000	8,400	68,300	67,110
Little Deer	35,100	21,300	13,800	35,200	0
Bear Den Butte	9,700	4,300	5,400	9,700	0

*Acreage within the monument has been rounded to the nearest hundred acres.

inventory are not authorized, and motorized vehicle use of such routes is prohibited.

Desired Future Conditions:

Natural conditions in Wilderness and Wilderness Study Areas, including air quality, dark night skies, and natural quiet, are substantially free of human influences.

Air quality degradation and adverse impacts to air quality related values, particularly visibility, within the Class I air quality Craters of the Moon Wilderness Area, do not occur.

Future generations enjoy the enduring wilderness resources of the Craters of the Moon Wilderness, including its conservation, scientific, cultural, educational, and recreational benefits.

Wilderness Study Areas retain the wilderness values identified in the wilderness inventory and study process.

Management Actions:

WILD-1: NPS and BLM staff will develop a joint Wilderness / Wilderness Study Area Management Plan following completion of this plan. No additional wildlife water developments or other habitat manipulations will be undertaken to manage wildlife populations in Wilderness, Wilderness Study Areas, or the Preserve.

WILD-2: As part of the joint Wilderness / Wilderness Study Area Management Plan, and consistent with current guidance on inventorying for and management to protect or enhance wilderness characteristics, the agencies may conduct additional inventory, consider citizen proposals, and consider protections of lands with wilderness characteristics.

WILD-3: Minimum requirement analysis will precede any proposed management activities within designated wilderness areas and Wilderness Study Areas managed by the National Park Service. BLM-administered Wilderness Study Areas will continue to be managed under the guidance in the Interim Management Policy for Lands under Wilderness Review. Should those portions of the Great Rift Wilderness Study Area adjacent to the original Monument be designated as wilderness, the 660-foot strip of non-wilderness between the Craters of the Moon Wilderness boundary and the original Monument boundary should be designated as wilderness as well.

WILD-4: Use of aircraft to survey and monitor wildlife populations could be continued, but flights will be scheduled to avoid high visitor use periods. Any landing of aircraft or dropping of supplies from aircraft in wilderness or Wilderness Study Areas will be consistent with a minimum requirement and minimum tool analysis.

WILD-5: Ways or travel routes within Wilderness Study Areas not identified during wilderness inventories will be closed to motorized vehicles and rehabilitated.

WILD-6: Should Congress release any Wilderness Study Area from WSA status, then the area will be managed under the direction of this land use plan.

VISITOR EXPERIENCE

INTERPRETATION/ VISITOR UNDERSTANDING

The interpretive program at the Monument focuses on providing an educational experience to the widest possible variety of visitors. Major target audiences are summer visitors, school students, visitors from local communities, and winter visitors. Other groups are backcountry travelers, hunters, and people planning visits to the Monument. Programs to best meet the needs of these groups are regularly scheduled walks and talks during summer, school group orientations and teacher workshops in spring and fall, special topic weekend programs, and winter ecology workshops.

Interpretive waysides, informational kiosks, press releases, publications, and agency websites also provide for the informational and interpretive needs of the public. Visitors unable to attend or take advantage of the various scheduled interpretive programs have an excellent opportunity to learn about the Monument through these other venues.

Interpretive themes are important ideas, stories, and concepts that are presented to visitors in exhibits, publications, and programs. With the development of the Long-Range Interpretive Plan for the Monument (see "Future Planning Needs" in Chapter 3), the following interpretive themes will be addressed:

- The Monument provides opportunities for people to explore a remarkably well preserved volcanic landscape.
- The Great Rift and its associated features are only the most recent reminders of an awesome series of geologic events that began to shape the Snake River Plain 16 million years ago.
- The geology of Craters of the Moon has created unique and unexpected habitats that provide for the survival of a surprising diversity of plant and animal species. This vast lava and sagebrush plain also provides for critical human needs throughout this desert region.
- Searing lava flows that initially destroyed everything in their path today protect the last islands of intact sagebrush steppe communities on the Snake River Plain.
- Craters of the Moon contains vast areas that are managed to preserve their wilderness characteristics.
- For thousands of years people have avoided, endured, and pondered this vast western landscape.

Desired Future Conditions:

The Monument builds and maintains positive relationships with visitor user groups and educational organizations.

The public perceives the Monument as a single entity, and its management as a model of public service.

The public understands and appreciates the area's natural and cultural resources, including its history and uses.

The public has access to Monument information and learning opportunities, both on- and off-site.

Information/orientation materials such as travel maps, safety bulletins, resource information, and recreation information are available.

Visitors are offered a variety of interpretive media within the Frontcountry Zone.

Management Actions:

VISIT-1: A Long-Range Interpretive Plan for the Monument will be developed.

VISIT-2: Both agencies will coordinate services to meet the needs of permittees, visitors, students, educators, interest groups, and the general public.

VISIT-3: Monument staff will continue to promote visitor safety and resource protection. Designated roads, trails, and facilities will be maintained, and new facilities will be provided as appropriate in the Frontcountry Zone for resource protection and visitor enjoyment.

VISIT-4: Developed facilities such as the visitor center at the original NPS Monument will continue to be provided. Informational/orientation materials dealing with recreation, maps, safety, and resource concerns will be posted on kiosks located at all primary backcountry access points surrounding the Monument and at the Carey and Kimama BLM fire stations.

VISIT-5: Interpretive programs and the maintenance of exhibits and waysides will continue.

VISIT-6: Educational programs for schools will focus on programs on-site in the original NPS-administered Monument. A number of programs (summer and winter) aimed at special users will be presented each year.

VISIT-7: Educational programs will be expanded to off-site locations.

VISIT-8: A variety of interpretive media for on- and off-site use will continue to be developed.

VISIT-9: Interpretive signs will be provided along the US 20/26/93 corridor.

VISIT-10: Interpretation outside the Frontcountry Zone will emphasize publications, websites, exhibits, and other off-site interpretive media.

VISIT-11: Interpretive emphasis will be on providing new interpretive and educational materials and programs outside the expanded portion of the Monument and in partnering communities and facilities.

VISIT-12: A variety of portable media (maps, tapes, guidebooks, etc.) will be developed to interpret the expanded portion of the Monument.

VISIT-13: Informational/orientation materials dealing with recreation, maps, safety, and resource concerns will be available in gateway communities. Visitor center(s) operated in cooperation with local partners will be proposed within the I-84 corridor.

VISIT-14: Commercial outfitters and guides will be encouraged to offer a range of guided experiences. Visitors who might not otherwise have the proper knowledge, vehicles, or preparation to experience the interior of the Monument will then have a viable option that will not require a lot of road, trail, and facility improvement.

VISIT-15: Safety and resource protection will be emphasized at access points.

RECREATION

Visitation to the original NPS Monument averages 200,000 people per year, with peak visitation on summer weekends. Many visitors are on vacations that include Yellowstone and Grand Teton National Parks to the east and Sun Valley and the Sawtooth National Recreation Area to the west (USDI NPS 1990). Commonly, visitors spend less than 3 hours at the Monument; 5% remain overnight. The typical visitor will stop and tour the visitor center, then sightsee along the 7-mile paved loop drive, taking advantage of photographic opportunities and often having a picnic before leaving.

School groups represent an important visitor group. More than 100 school groups comprising more than 3,000 students visit the Monument each year. Teachers who have attended one of the Monument-provided teacher orientation workshops lead many of these groups.

Commercial tours also come to the Monument through the primary visitation season. Commercial tour numbers vary from year to year, but the average is between 30 and 40 tour buses each year.

Winter visitation is low, but winter attracts local and regional visitors familiar with the quality cross-country skiing and snowshoeing opportunities. The loop drive is closed to vehicle traffic and groomed for skiing in winter. The National Park Service has also offered winter ecology programs for the past few years; these are always well attended.

Visitation to the expanded parts of the Monument during the last 10 years averaged approximately 20,000 visits per year, according to BLM's Recreation Management Information System (RMIS). Some popular sites are Pillar Butte, Wood Road Kipuka, Bear Park, Snowdrift Crater, Kings Bowl, and Bear Trap Cave. No visitor facilities are available at any of the sites, but all receive day use and

GUIDED INTERPRETIVE WALKS ARE SCHEDULED THROUGHOUT THE SUMMER MONTHS.

occasional overnight camping. Recreational activities in the expanded part of the Monument, in order of popularity, are hunting; driving for pleasure; geologic exploration including caving, lava hiking and sightseeing; hiking; primitive camping; photography; horseback riding; and mountain biking.

Commercial Outfitters and Guide Services. There is currently one temporary special use permit issued for guided tours within the Monument. In 2004 there were no tours conducted under the two existing hunting outfitter permits issued for Hunting Units 52A and 68 (one in each unit) within the Monument, and past use of these permits has been quite low as well. Although some interest in commercial outfitter and guide permits has been expressed, the agencies do not foresee a dramatic increase in demand for these permits over the life of the plan.

Hunting. The Idaho Fish and Game Commission sets hunting seasons and other regulations for hunting in Idaho. Most of the Monument and Preserve is within Idaho Fish and Game Hunting Unit 52A (see Figure 10). The southern part of the area, including all of the Wapi Lava Field, is included in Unit 68. A very small portion of the northern edge of the Monument and Preserve falls within Units 49 and 50. The length of season and number of available controlled-hunt tags vary annually on the basis of wildlife population levels and other factors.

BLM's Recreation Management Information System and Idaho Department of Fish and Game estimates indicate that Greater sage-grouse hunting and open mule deer hunting attract the highest number of hunters in the Monument. The open seasons for archery (antelope, elk, and deer), other small game (rabbits, upland birds), predators, and unprotected species, along with the controlled seasons (draw tags) for antelope, elk, and deer, account for a much smaller portion of hunting use.

Almost all hunting has historically been in the BLM portions of the Monument. Hunting occurs in what is now the NPS Preserve, although hunting has never been authorized in the original NPS Monument. The exposed lava flows in the NPS Preserve can be used for a quality hunt for a few hunters who seek the challenge. The very small amount of hunting by members of the Shoshone-Bannock Tribes that takes place in the Monument is considered a treaty right and is not considered a recreational hunting experience.

Motorized and Mechanized Recreation. OHV (off-highway vehicle) use in the Monument includes off-highway motorcycles, all-terrain vehicles, and snowmobiles. Most OHV use in the Monument takes place during hunting seasons or in association with other land uses like livestock operations. The amount of OHV-specific recreation activity in the Monument is quite small (Recreation Management Information System estimates less than 5,000 visits per year). Most OHV activity takes place on the road network, since no trails have been designated for motorized use.

A small amount of mountain biking occurs in the expanded Monument. This small but growing recreational use is confined primarily to the existing road network, because no designated trails for mountain biking exist. In the area of the original Monument, mountain bike permits are available for riding along portions of Goodale's Cutoff. Bicycle use occurs on the 7-mile loop drive and other areas. No OHV use is permitted within the original Monument.

Hiking and Horseback Riding. Most hikers hike on designated trails in the original Monument. Hiking trails to features of interest in the original Monument are the North Crater Flow, Devils Orchard, Inferno Cone, the Big Craters/Spatter Cones area, Tree Molds, and the Caves Area. Hikers in the non-wilderness part of the original Monument regularly see other

visitors, because the area is highly used. Opportunities for solitude are limited; however, the Craters of the Moon Wilderness offers outstanding opportunities for self-directed hiking, with an excellent chance to experience solitude.

Wilderness use is extremely light, with an average of 130 overnight backpackers per year (based on backcountry permits issued 1990 through 2002). Backpacking parties usually consist of fewer than four persons, and they seldom stay out more than two nights (USDI NPS 1990). All water must be packed into the backcountry. Exact numbers of day users are unavailable. Some constructed hiking trails exist at the Crystal Ice Caves/Kings Bowl area (Recreation Management Information System estimates 1,000 visits).

Horseback riding in the original Monument is limited to the Craters of the Moon Wilderness Trail by permit only. No other designated trails currently exist for horseback riding.

Camping. In the original Monument, more than 50 developed campsites with water, restrooms, charcoal grills, and picnic tables are available on a first-come-first-served basis. Most campers stay only one night. The campground is rarely full, with the exception of several weekends during the summer, generally around holidays.

Caving. Tens of thousands visit the Caves Area in the developed portion of the Monument each year. Although dispersed caving does not draw large numbers of visitors, it is an important and unique recreation opportunity at the Monument. Opportunities exist for recreational cave experiences throughout the Monument, ranging from hiking a paved trail to an easily accessible lava tube such as Indian Tunnel, to visiting a remote wild cave somewhere in the expanded portion of the Monument, to the potential to actually discover a previously unknown cave.

Health and Safety. Several factors are involved in health and safety concerns for Monument visitors and surrounding communities. These factors include road standards and levels of maintenance, extreme weather, wildfires, caves/fissures, lava terrain, livestock, and snakes.

Desired Future Conditions:

Opportunities are available for diverse recreational experiences, consistent with the intent of Monument proclamations and applicable laws.

The area continues to offer a range of opportunities for discovery.

The public enjoys opportunities for self-discovery and primitive type recreational experiences.

Unsigned and self-directed motorized recreation opportunities are available.

Within the Pristine Zone, public opportunities to experience solitude, natural quiet/night sky, and views of landscapes remain substantially free of human influence.

Commercial outfitters and guide services provide opportunities for visitors to experience and learn about the resources, reducing the need for development and agency staffing.

Public awareness of responsible low-impact recreational use reduces or eliminates the need for restrictive management policies.

Responsible low-impact recreational use allows for relatively unrestricted recreational opportunities throughout much of the Monument.

Public awareness of area hazards, along with an attitude of self-reliance and personal safety, substantially reduces the need for restrictive management policies.

Impacts associated with recreational uses do not adversely affect the physical and visual integrity of geologic features or the biological integrity of the ecosystem.

The National Park Service, the Bureau of Land Management, and external partners provide the public accurate and consistent information on recreational opportunities throughout the Monument.

Partnerships with off-site facilities, such as visitor centers and state parks, provide Monument information and interpretation.

Management Actions:

REC-1: The current Idaho State Comprehensive Outdoor Recreation and Tourism Plan and the Idaho outdoor recreation demand assessment will be utilized in implementation-level planning to assist managers in understanding the recreational use patterns, trends, and recreational facilities needed for the area.

REC-2: Implementation-level planning will make determinations as to where specific trails, trailhead facilities, and/or number of primitive campsites will be needed or desired within the Passage Zone.

REC-3: Resources and areas most vulnerable to vandalism, theft, and/or recreational use impacts will be inventoried.

REC-4: The agencies, in consultation with the state, could designate areas within the Preserve and periods of time when no hunting and/or use of firearms will be permitted for reasons of public safety, administration, and/or public use and enjoyment.

REC-5: Information/orientation materials such as travel maps, safety bulletins, resource information, and recreation information will be conveniently available.

REC-6: Permits will continue to be required for overnight camping in the Wilderness and/or biking or hiking in the original Monument area north of US 20/26/93.

REC-7: Applications for permitted outfitters and guide services will be encouraged.

REC-8: Should permitted outfitter, guide, or similar NPS concession use numbers of the Monument reach 2,000 annual user days in the expanded portion of the Monument, BLM and/or NPS staff will prepare an implementation level plan for the management of these services. This plan will include use allocations and limits for a variety of recreational experiences, such as geology tours, nature walks, bird/wildlife watching, or horseback riding.

REC-9: No wood fires will be permitted within the original Monument (campground sites provide grills for charcoal cooking only; wood fires are permitted at group campsites).

REC-10: No hunting will be allowed in the NPS Monument.

REC-11: Programs will promote wilderness and backcountry ethics.

REC-12: The agencies will continue to provide and promote

cross-country skiing and snowshoeing activities along the 7-mile loop drive in the northern end of the Monument.

REC-13: Leave-No-Trace and Tread Lightly programs will be promoted with staff and the public.

REC-14: Up to six locations could be developed for camping in the Passage Zone.

REC-15: The Bureau of Land Management and the National Park Service will actively seek potential partnerships with off-site Monument information and interpretation.

VISUAL RESOURCES

Viewscape. Perpetuating scenic vistas and open western landscapes for future generations is one of the purposes identified for the Monument. The visual resources of the Monument represent a remnant of the undeveloped American West and one of the few remaining great expanses of sagebrush steppe. The contrasting lava flows were described in the 1924 Presidential Proclamation originally establishing the Monument as a "weird and scenic landscape peculiar to itself." This creates a viewscape unique in North America.

The gray-green sagebrush steppe and black lava fields abut the high Pioneer Mountains to the north. Across the Monument, 3,500 feet of vertical relief present visitors with enormous panoramic views to the south. On a clear day, the Grand Tetons, 140 miles to the east, can be seen from the Monument. One of the nation's clearest airsheds enhances these long, uninterrupted vistas.

The Monument contains numerous striking volcanic features such as pahoehoe and a'a lava flows, cinder cones, spatter ramparts, and enormous lava fields. Low shield volcanoes and cinder cones (known locally as "buttes") rise up throughout the entire Monument landscape. The exposed lava varies in color, while shapes and textures of the flows add scenic variety on a smaller scale. Nearly barren of vegetation, the most recent lavas at times flowed around kipukas, which offer some visual relief from the continuous lava. Expansive sagebrush steppe and grasslands, as well as the different ages and types of lava surfaces, support a remarkable variety of plant and animal communities that add to the visual diversity of the Monument.

Visual Resource Management. Visual Resource Management (VRM) is a standard tool used by the Bureau of Land Management to identify and protect visual values on public lands (USDI BLM 1986a, 1986b). A VRM inventory of the Monument area was completed in 1989, including an evaluation of scenic quality, identification of viewsheds, and key observation points for visitors (see Figure 11). This inventory data was analyzed and presented as visual resource classes. This Plan places all public land into one of four VRM management classes. VRM classes provide standards for planning, designing, and evaluating future management projects. The four VRM management class designations are as follows:

Class I — The objective of this class is to preserve the existing character of the landscape. Any contrast created within the characteristic landscape must not attract attention. This classification is applied to visual Areas of Critical Environmental Concern (ACEC), Wilderness and Wilderness Study Areas, Wild and Scenic Rivers, and other similar situations.

Class II — The objective of this class is to retain the existing character of the landscape. Changes in any of the basic visual elements caused by management activity should not be evident in the landscape. A contrast may be seen but should not attract attention.

Class III — The objective of this class is to partially retain the existing character of the landscape. Contrasts to the basic elements caused by a management activity may be evident and begin to attract attention in the landscape. The changes, however, should remain subordinate in the existing landscape.

Class IV — The objective of this class is to provide for management activities that require major modification of the existing character of the landscape. Contrasts may attract attention and be a dominant feature in the landscape in terms of scale. However, the change should be compatible with the basic element of the landscape.

Desired Future Conditions:

Existing opportunities to experience solitude, dark night sky, and views of landscapes remain substantially free of human intrusions.

A primitive and natural visual setting is retained.

The visual integrity of the Goodale's Cutoff historic trail corridor remains protected.

Management activities meet or exceed adopted Visual Resource Management (VRM) classes.

Management Actions:

VRM-1: BLM and NPS managers should seek the cooperation of visitors, neighbors, and local government agencies to prevent or minimize impacts and prevent the loss of western landscape vistas and natural dark conditions.

VRM-2: Existing waste dumps will be inventoried and cleaned up.

VRM-3: VRM inventory classes will be designated as management classes as shown in Figure 11.

SOUNDSCAPES

The Monument is a quiet place. "Natural quiet" refers to the state of having only natural sources of sound — for example, wind, rustling leaves, water, and animal calls. Most of the Monument is not subject to modern sources of unnatural sound intrusion, or noise. The only major noise producers are highway traffic from outside the Monument, the railroad near the southern edge of the Monument, and aircraft overflights.

Desired Future Conditions:

Aircraft noise impacts are minimized.

Existing opportunities to experience solitude and natural quiet remain substantially free of human intrusions.

Management Actions:

SOUND-1: Aircraft landings associated with commercial air tours will not be authorized within the Pristine Zone.

SOUND-2: The agencies will coordinate with the Department of Defense, Federal Aviation Administration, and the Idaho Department of Aeronautics regarding noise impacts.

SOCIAL AND ECONOMIC CONDITIONS

A look at economic change in each of the five counties within the planning area shows that the economies of even adjacent counties can be very different. While some typify changes that are occurring in many areas of the western United States, others retain high levels of more traditional economic sectors or reflect unique histories. Blaine and Minidoka Counties, for example, follow widespread patterns of economic change in that the services and professional and non-labor income (income derived from investments, retirement, social security, etc.) categories have shown the most significant growth. Despite this similarity, these two counties are at the high (Blaine) and low (Minidoka) ends of the spectrum in terms of per capita income, housing values, and educational attainment.

The Monument contributes to the local economy through its employment of 21 part- or full-time workers and administrators and approximately 10 to 20 seasonal employees who live in various communities around the Monument. The National Park Service also uses concession contracts and commercial use authorizations (formerly incidental business permits) to manage commercial activities within its units. Currently, the only concession contract is issued to the nonprofit Craters of the Moon Natural History Association. This contract allows the association to offer convenience items such as sunscreen, film, and soft drinks, as well as books and educational materials, for purchase by visitors in the NPS visitor center. There are no current commercial use licenses or incidental business permits issued for activities on NPS lands in the Monument. The Idaho Department of Fish and Game offers commercial use licenses on BLM-administered land.

Desired Future Conditions:

Gateway and other nearby communities benefit economically and socially from the presence of the Monument.

Management Actions:

SOCIO-1: An intergovernmental coordinating group will be considered to ensure consistency of this plan with other state and local plans.

SOCIO-2: The agencies will participate with interested communities in their planning for accommodating Monument visitors through their communities.

RESEARCH

All of the proclamations associated with Craters of the Moon National Monument focus on the unique geologic resources of the Monument. The protection, study, and appreciation of the Monument's unique geologic features are perhaps the overriding purposes of the Monument. Both agencies acknowledge the need for scientific study of the Monument's remote and often harsh environment. However, restrictions on surface disturbance and cross-country travel can constrain geologic research. Basic research plays an important role in the identification, characterization, and interpretation of the Monument's resources.

BLM and NPS staff have been working with the U. S. Geological Survey to pursue ongoing research involving geologic mapping geochemistry, geophysics, geomorphology, seismology, geomagnetism, geodesy, tectonics, earthquake hazards, volcanic hazards, and climate change.

The agencies have engaged in numerous partnerships with a variety of academic organizations, professional societies, clubs, and hobby organizations who have expressed interest in the Monument's unique geologic resources. These organizations include three separate Grottos (chapters) associated with the National Speleological Society.

The National Park Service has a long-term air quality monitoring program in place. Both agencies will strive to continue and expand climatic and air quality research and monitoring. The Idaho National Energy and Environmental Laboratory is an important partner in these activities.

The Monument contains several ongoing archeological scientific studies. The agencies will continue established relationships with academic institutions for these challenge cost share research projects. Inventory, characterization, and protection of cultural resources are a high priority for both agencies. The potential for additional discoveries of significant cultural and paleontological resources is high. Investigations will conform to policy guidelines for surface disturbance within Wilderness Study Areas and minimize surface disturbance elsewhere

The lava flows at Craters of the Moon create many unique opportunities for the study of isolated, relatively undisturbed native plant communities. The proclamation describes kipukas as important comparative benchmarks relative to human-altered plant communities in the Snake River Plain. The Monument has been the site of many vegetative studies and research projects. Several studies involving rare plants, natural fire, fire rehabilitation, and grazing are in progress.

The Monument is also a remnant stronghold for Greater sage-grouse and is particularly suited for the study of healthy Greater sage-grouse populations. The agencies will continue to encourage both population and habitat research in cooperation with the Idaho Department of Fish and Game.

STUDENTS CAN SERVE AS CITIZEN SCIENTISTS IN RESEARCH PROJECTS.

Several potential partners have expressed an interest in biological science at the Monument including Idaho's Conservation Data Center, the Idaho Rangeland Resource Commission, universities, and the Biological Division of the U.S. Geological Survey. Both agencies actively encourage appropriate and needed biological research in cooperation with these partners to fulfill this important aspect of Monument designation.

Desired Future Conditions:

The findings of scientific research enhance management decisions and increase public appreciation and understanding of Monument resources.

The research community and the Monument staff view the Monument as a productive outdoor laboratory.

Management Actions:

RSEAR-1: To maintain a complete record of research activities and research and specimen collecting, permits will be required for all projects. Standard operating procedures for the NPS permit process will be incorporated for the entire Monument.

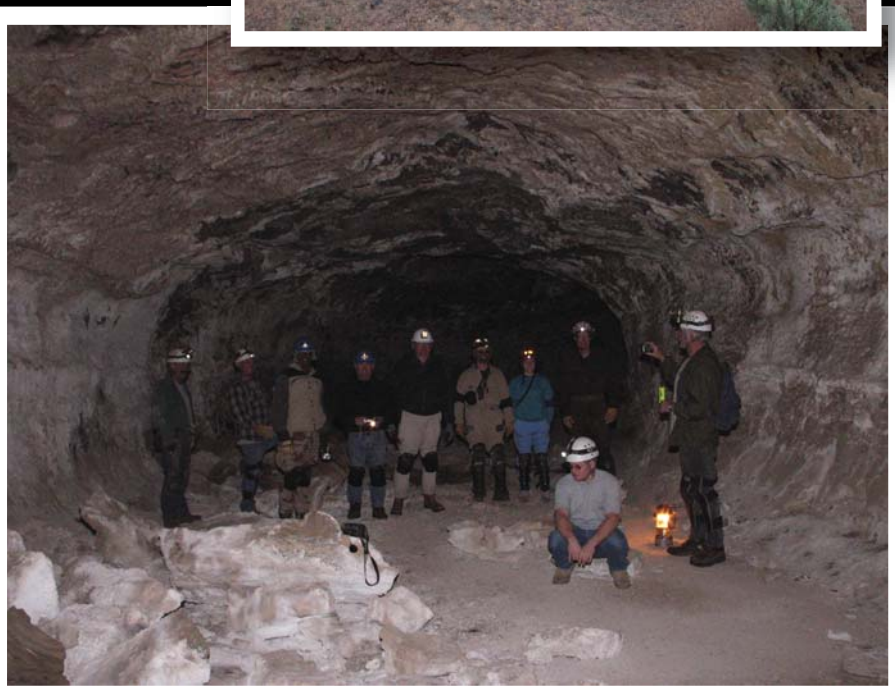
RSEAR-2: The agencies will coordinate the review and approval of research applications to confirm adherence to each agency's policy and to ensure compatibility with the purposes of the Monument.

RSEAR-3: Varying means, including interdisciplinary and interagency research projects, will emphasize the use of the Monument as a productive outdoor laboratory.

RSEAR-4: BLM and NPS staff will facilitate the transfer of research information to the public.

RSEAR-5: To the extent they are available, NPS and BLM facilities and staff assistance may be made available to qualified researchers and educational institutions conducting authorized studies or field classes.

RSEAR-6: The agencies will work with interested partners in sponsoring a symposium or similar forum for sharing information on past research and helping identify future research needs and opportunities.



Chapter 3
THE IMPLEMENTATION

Chapter 3: IMPLEMENTATION

The broad direction provided in this Monument Management Plan meets the requirements of proclamations and laws specifically related to the Monument, as well as the Federal Land Policy and Management Act, the NPS Organic Act, applicable regulations, and agency policies. This Management Plan describes the resource conditions and visitor experiences to be achieved within the Monument. Implementation of the Management Plan will involve the completion of many specific activities to meet these objectives. Over the life of this Management Plan, BLM and NPS staff will prepare new implementation plans or amend existing plans with detailed information for specific topics. This chapter provides the framework to guide implementation of the decisions contained in this Management Plan. This chapter also includes information on the process to amend this Management Plan in the future as resource conditions or uses change or additional information becomes available.

IMPLEMENTATION STRATEGY

An implementation strategy will be completed. The implementation strategy outlines priorities and the resources needed during the first years of implementation of this Management Plan. This strategy should also contain a schedule for the development of the following priority implementation plans.

- Comprehensive Travel Management Plan
- NPS Resource Stewardship Strategy
- Fire Management Plan
- Wilderness / Wilderness Study Area Management Plan
- Long-Range Interpretive Plan
- Cave Management Plan
- Cultural Resources Management Plan
- Integrated Pest Management Plan(s)
- Kings Bowl Development Concept Plan
- Volcanic Hazards Analysis and Response Plan
- Sign Plan

See the section on "Future Planning Needs" below for further information about each of these implementation plans. The implementation strategy will also contain cost estimates for the first five years of this Management Plan, a schedule of implementation actions, and strategies for funding implementation of this Management Plan.

FUTURE PLANNING NEEDS

The more specific actions required to attain the goals and desired conditions defined in this Management Plan are accomplished through implementation plans. BLM and NPS staff will prepare new or amend preexisting activity-level implementation plans for specific topics, tasks, and activities. These activity-level plans are subject to further public review as required by the law, regulation, and policy, such as the National Environmental Policy Act. The following descriptions include further information about each of these priority implementation plans.

TRAVEL MANAGEMENT PLAN

Proclamation 7373 requires that a transportation plan be prepared that addresses the actions, including closures or travel restrictions, necessary to protect the "objects" identified in the Monument proclamations. The management zones, road and trail classification system, and other provisions of this Management Plan

provide the framework for developing a Comprehensive Travel Management Plan. The agencies intend that this will be the first implementation-level plan to be prepared for the Monument. In addition to identifying potential road closures or travel restrictions, the plan would include specific standards for road maintenance and/or improvement and would include a published map/brochure designed for public use, showing road standards, maintenance levels, and appropriate uses.

NPS RESOURCE STEWARDSHIP STRATEGY

This NPS document establishes long-term resources management objectives, documents progress towards those objectives, and serves as a guideline for funding specific resource projects.

FIRE MANAGEMENT PLAN

Management actions analyzed in this Management Plan; and the Wildland Fire Management Plan (USDI NPS 2000a) would be incorporated into an implementation plan to guide suppression efforts and proactive fuels and restoration treatments. The Fire Management Plan would detail management goals and constraints within specific fire management areas. Although these goals and constraints would comply with broad direction set forth in this Monument Management Plan, the Fire Management Plan would be a dynamic document that would be updated regularly to best protect Monument resources.

WILDERNESS / WILDERNESS STUDY AREA MANAGEMENT PLAN

This plan would guide the preservation, management, and use of the designated Wilderness and Wilderness Study Areas. One of the principal purposes is to establish indicators, standards, conditions, and thresholds beyond which management actions would be taken to reduce human impacts on wilderness resources. The current NPS Backcountry / Wilderness Management Plan is no longer adequate because it does not incorporate the Wilderness Study Areas.

LONG-RANGE INTERPRETIVE PLAN

This plan would identify the primary stories or interpretive themes needed to provide each visitor with an opportunity to develop an understanding of the Monument. Interpretation is a process of education designed to stimulate curiosity and convey messages to the visiting public. This plan would guide the future development of interpretive facilities and programs such as signs, waysides, brochures, guided walks, and oral presentations.

CAVE MANAGEMENT PLAN

This plan would meet the requirements of the Federal Cave Resources Protection Act to perpetuate the natural systems associated with caves. This plan would build on the existing Cave Management Program (USDI NPS 1993) and the Cave Resources Management Plan (USDI BLM 1999).

CULTURAL RESOURCES MANAGEMENT PLAN

This plan would guide the preservation, management, and use of cultural resources. The plan would also include a Native American Graves and Repatriation Act (NAGPRA) Action Plan to address inadvertent discovery of NAGPRA materials within the Monument.

INTEGRATED PEST MANAGEMENT PLAN(S)

This plan would provide guidance related to potential pests, monitoring indicators, action thresholds, and treatment methods to address pest issues within the Monument. Among these issues are invasive exotic plants, grasshoppers, and large predators. This plan would be accomplished cooperatively with the U.S. Department of Agriculture.

KINGS BOWL DEVELOPMENT CONCEPT PLAN

This Monument Management Plan identifies the level of development in the Kings Bowl area. A Development Concept Plan would allow the agencies to examine in greater detail options for protecting the area while accommodating public access and use.

VOLCANIC HAZARDS ANALYSIS AND RESPONSE PLAN

No contingency planning has ever been done for the advent of renewed volcanic eruptions. No flow routing modeling has been done to help predict where lava would go and how far it would travel based on possible eruption sites and volumes. This plan would provide the necessary information for risk management contingency planning.

SIGN PLAN

This plan would document the location and condition of current Monument signs for administrative purposes. The plan will also recommend strategies for more effective communication with the visiting public through common design standards for signs throughout the Monument.

ENVIRONMENTAL COMPLIANCE RESPONSIBILITIES

Every action taken or implementation plan proposed by the Bureau of Land Management or National Park Service that could affect natural and cultural resources or the quality of the human environment is subject to laws and regulations designed to protect and enhance the environment. These laws and regulations constitute the Monument's environmental compliance responsibilities. Examples of various laws and regulations that apply include the following:

- National Environmental Policy Act of 1969, as amended (Public Law 91-190, as amended; 16 U.S.C. 4321-4347)
- The Wilderness Act of 1964 (Public Law 88-577; 16 U.S.C. 1131-1136)
- Endangered Species Act of 1973, as amended (Public Law 93-205; 16 U.S.C. 1531-1544)
- Antiquities Act of 1906 (Public Law 59-209; 16 U.S.C. 431-433)
- National Historic Preservation Act of 1966 (Public Law 89-665 as amended; Public Law 102-575; 16 U.S.C. 470)
- Archeological Resources Protection Act of 1979 (Public Law 96-95; 16 U.S.C. 470)
- Native American Graves Protection and Repatriation Act of 1990 (Public Law 101-601; 25 U.S.C. 3001)

CONSULTATION, COORDINATION AND COLLABORATION

Proclamation 7373, which enlarged the boundaries of the Monument in 2000, directed that the

> *National Park Service and the Bureau of Land Management manage the Monument cooperatively and shall prepare an agreement to share, consistent with applicable laws, whatever resources are necessary to properly manage the Monument.*

The Secretary of the Interior tasked both agencies to complete a combined management plan that would meet the legal, regulatory, and policy requirements of both agencies.

In the spirit of this collaboration, a planning team was formed to complete a Management Plan for the entire Monument area. With both BLM and

NPS staff, this team worked cooperatively to compile and release the Draft Monument Management Plan / Draft Environmental Impact Statement, analyze public comments, prepare the Proposed Plan / Final Environmental Impact Statement, and release this Monument Management Plan. Each agency's authorities have their origin in different enabling legislation and proclamations, and as a result, some management guidance and decisions are specific to one agency or the other.

Public involvement, consultation, and coordination have been integral parts of the planning process leading to this Monument Management Plan. A public participation plan and schedule were prepared and implemented during the preparation of the plan. Public involvement methods included Federal Register notices, news releases, public meetings and workshops, presentations at special interest group meetings, individual meetings with interested publics, newsletter mailings, and website postings.

Consultation with federally recognized Native American tribes (North American Indians or tribes) is mandated. The agencies have a trust responsibility to maintain government-to-government consultation and coordination with federally recognized tribes. Compliance with all federal laws regarding the protection of tribal cultural interests and cultural resource concerns was carried out in consultation with all affected tribes, in this case the Shoshone-Bannock Tribe and the Shoshone-Paiute Tribe.

Although the Bureau of Land Management and the National Park Service retain responsibility and authority for respective land management decisions, these decisions are more meaningful, effective, and enduring if made in a collaborative and open process. Therefore, close working relationships among management and regulatory agencies need to be developed and maintained. In addition, others outside of the Bureau of Land Management of National Park Service (Resource Advisory Committees, state and local agencies, universities, volunteers, etc.) should be involved in subsequent analysis, monitoring, evaluation, research, and adaptive management processes.

RELATIONSHIP TO OTHER PLANS, POLICIES, AND PROGRAMS

This Management Plan seeks to define what resource conditions and visitor experiences should be achieved and maintained over time to realize the Monument purposes. The planning process considered various approaches to use, management, and development, some of which may represent competing interests for the same resource base. Ultimately, the Management Plan serves to define the desired future conditions that reflect the concerns and needs of the Bureau of Land Management, the National Park Service, and the public.

As previously described, this Management Plan replaces the four previous BLM land use plans and a previous NPS general management plan, and it serves as a combined resource management plan / general management plan for the Monument. As such, it covers a broad area; addresses a wide range of programs, concerns, and resources; and must, therefore, function at a general level. The plan focuses on what conditions should exist rather than specifics on how to achieve those conditions.

The following explains the relationship between this Management Plan and existing BLM and NPS plans, policies, or programs. Other relevant plans, policies, or programs that were incorporated into the preparation of this document are listed also.

RELATIONSHIP TO CURRENT BLM PLANS AND POLICIES

The following current BLM land use plans have been considered in the development of this Management Plan. For Monument lands, this Monument Management Plan supersedes the direction in these land use plans.

Monument Resource Management Plan / Environmental Impact Statement (EIS) and Amendments: The 1985 Monument Resource Management Plan is the comprehensive framework for managing approximately 1,179,000 acres of public land north of the Snake River in south-central Idaho. Resource management plans make resource allocations, resolve conflicts between competing uses, and ensure management of the public lands in accordance with the principles of multiple use and sustained yield. The Monument Resource Management Plan covered approximately 60% of the lands within the Monument.

Big Lost Management Framework Plan, Grazing EIS, and Amendments: This 1983 Management Framework Plan provides management direction for more than 300,000 acres of public land north of US 20/26/93 in central Idaho. Management framework plans predate resource management plans in the BLM land use planning system. Management framework plans make management decisions and land use allocations by watershed-based planning units. The Big Lost Management Framework Plan covered less than 5% of the Monument.

Big Desert Management Framework Plan, Grazing EIS, and Amendments: This 1981 plan covers an area west of Idaho Falls in southeastern Idaho and includes 1,162,463 acres of public land including approximately 30% of land now within the Monument.

Sun Valley Management Framework Plan, Grazing EIS, and Amendments: This 1981 plan covers approximately 245,000 acres of public land in the northern portion of the BLM Shoshone Field Office including less than 5% the lands now within the Monument.

Great Rift Proposed Wilderness EIS: This 1980 plan recommended that 341,000 acres of the Great Rift Wilderness Study Area be designated as part of the National Wilderness Preservation System. The entire Great Rift Wilderness Study Area lies entirely within the Monument.

Interior Columbia Basin Ecosystem Management Project: The Interior Columbia Basin Ecosystem Management Project (ICBEMP) was based on Presidential direction to develop a scientifically sound, ecosystem-based strategy for managing the 64 million acres of public lands administered by the U. S. Forest Service and the Bureau of Land Management within the Columbia River Basin and portions of the Klamath and Great Basins in Oregon. A Final EIS and Proposed Decision were published in December 2000. No Record of Decision has been signed, nor is one expected.

Public lands administered by the Bureau of Land Management and the National Park Service within the Craters of the Moon National Monument planning area are covered by the ICBEMP analysis. The BLM state directors and U.S. Forest Service regional foresters are completing the project through the use of the Interior Columbia Basin Strategy. A 2003 Interagency Memorandum of Understanding directs the Bureau of Land Management to implement this Strategy to guide the amendment and revision of resource management plans throughout the Interior Columbia River Basin. The Strategy directs the use of the findings of the ICBEMP science, new information, and the best available science in developing land use plans and implementing resource management projects, including consultation and participation in plan and project design. The ICBEMP analysis and

findings have been incorporated into this Monument Management Plan.

RELATIONSHIP TO CURRENT NPS PLANS AND POLICIES

NPS plans and studies used to develop this document are listed in the bibliography. The plans listed below directly influenced the development of this Monument Management Plan.

NPS Management Policies 2001: These policies are revised at appropriate intervals to consolidate agency policy decisions or to respond to new laws and technologies, new understandings of park resources and the factors that affect them, or changes in American society.

1992 Craters of the Moon General Management Plan: The 1992 General Management Plan was the guiding document for the original NPS Monument.

1996 Resource Management Plan: NPS resource management plans provided a long-range comprehensive strategy for natural and cultural resource management. The strategy describes a program of activities to achieve desired future conditions.

Wildland Fire Management Plan: The Wildland Fire Management Plan provides fire management direction for the original NPS Monument, but not the Preserve.

Fiscal Year 2000–2005 Strategic Plan for Craters of the Moon National Monument and Preserve: NPS strategic plans contain the mission statement and goals, describe strategies to accomplish goals, and identify external factors that could significantly affect achievement of goals.

1993 Cave Management Program: The 1993 Cave Management Program provides management guidelines for cave resources within the original NPS Monument.

1989 (revised 1996) Backcountry / Wilderness Management Plan: This plan provides management guidelines for recreational use of the backcountry and wilderness of the original NPS Monument.

RELATIONSHIP TO OTHER PLANS AND POLICIES

Fire Management Planning: The National Fire Plan is an agreement between the U.S. Forest Service and the Department of the Interior to help protect communities and natural resources as well as the lives of firefighters and the public. The federal wildland fire management agencies worked closely with states, tribes, local governments, and interested publics to prepare the 10-Year Comprehensive Strategy, completed in August 2001. This strategy outlines a comprehensive approach to the management of wildland fire, hazardous fuels, and ecosystem restoration and rehabilitation on federal and adjacent state, tribal, and private forest and range lands in the United States.

An implementation plan was signed in June 2002 to provide consistent and standard direction to implement the common purposes of the 10-Year Comprehensive Strategy and the National Fire Plan. The Bureau of Land Management and the National Park Service incorporated guidance from the National Fire Plan and 10-Year Comprehensive Strategy in this Monument Management Plan.

PLAN EVALUATION

Evaluations review implementation of this Monument Management Plan at several levels to see whether management goals and objectives are being met and to determine whether management direction is sound. Evaluation also determines if management actions are consistent with thresholds established for the achievement of the objectives. If they are not, evaluation identifies the reasons. The

conclusions are then used to make recommendations on whether to continue current management guidelines, to make changes in management practices to meet plan goals and objectives, or to amend the plan objectives or decision to better meet the capabilities of the land and the intent of the legislation.

Reviews of the evaluation process will be periodically scheduled to ensure the following:

- Monitoring data is effectively used in the evaluation process.
- Evaluations are conducted at intervals that allow for adjustments to be made in management direction before crises develop.
- Management plan evaluations will typically be conducted every five years to assess the progress toward achieving broad-scale objectives and desired future conditions.
- The evaluation process will review progress toward Management Plan implementation as well as new, scientific research; monitoring data; and other information on changed resource or social circumstances that that needs to be considered in future management. The evaluation may conclude any of the following:
  - Management actions are moving resources toward the desired objectives. In this case, management actions are affirmed and may not need to be adjusted.
  - Further research needs to be initiated or actions must be adjusted to more efficiently achieve objectives of the Management Plan. If new information or research demonstrates better ways to achieve plan objectives, changes in activity planning and project implementation may be made.
  - The objectives should be altered based on the new information. If the new information indicates that plan objectives should be reconsidered, a plan amendment may be required that will reexamine desired future conditions and ways to reach those conditions.

CHANGING THE PLAN

During the lifespan of this Monument Management Plan, it is anticipated that occasional changes will be needed because of new information, changes in resource uses, new legislation, or other factors. All changes to the Management Plan will be documented in a manner that allows tracking. Changes to the Management Plan fall into one of the following two categories — maintenance or an amendment.

MAINTENANCE

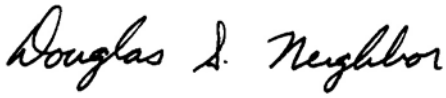
Maintenance will be limited to minor corrections to improve the clarity of the text, update text or map information, or eliminate errors. Maintenance actions will not change the intent of goals, objectives, or decisions. Maintenance actions are not subject to the requirements of the National Environmental Policy Act and do not require public involvement.

AMENDMENT

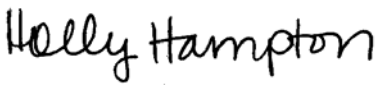
Changes that modify the intent of goals, objectives, or decisions or add new decisions require an amendment to the plan. Amendments may be the result of periodic evaluations that recommend changes to the plan, external factors including new legislation, or proposals from external parties. The amendment process would include public involvement, coordination, and environmental analysis similar to that used in the preparation of this Monument Management Plan. The level of environmental analysis would be appropriate to the level of potential impacts expected to be caused by the proposed amendment and could include preparation of an environmental impact statement.

Moon National Monument and Preserve as a valued resource that has been entrusted to our care by the American people and in a manner which deserves your continued trust.

Sincerely,



Doug Neighbor
Superintendent
Craters of the Moon National Monument
and Preserve
National Park Service



Holly Hampton
Monument Manager
Craters of the Moon National Monument
Bureau of Land Management

APPENDIXES

APPENDIX A: RECORD OF DECISION

UNITED STATES DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
And
BUREAU OF LAND MANAGEMENT

RECORD OF DECISION

INTRODUCTION

The Department of the Interior, National Park Service (NPS) and Bureau of Land Management (BLM), prepared this Record of Decision (ROD) on the *Proposed Management Plan/Final Environmental Impact Statement for the Craters of the Moon National Monument and Preserve, Idaho* (henceforth, Proposed Plan/Final EIS). This Record of Decision includes a statement of the decisions made, synopses of other alternatives considered, the basis for the decision, a description of the environmentally preferable alternative, a discussion of non-impairment of National Park System resources or values, a listing of actions designed to minimize environmental harm, and an overview of public involvement in the decision-making process.

BACKGROUND

The Craters of the Moon National Monument and Preserve encompasses approximately 738,000 acres of BLM- and NPS-administered federal land, 8,000 acres of state land, and 7,000 acres of private land. The decisions made through this planning process apply only to the federal land within the Monument boundary, referred to as "the planning area".

On November 9, 2000, Presidential Proclamation 7373 expanded Craters of the Moon National Monument from roughly 54,000 acres to approximately 753,000 acres, including the 738,000 acres of federal land. The President signed this proclamation to ensure protection of the Great Rift volcanic rift zone and its associated features. The Proclamation also placed the lands under the administration of both the National Park Service (NPS) and the Bureau of Land Management (BLM), with each agency having primary management authority over separate portions. In addition, on August 21, 2002, Public Law (PL) 107-213, 116 Statute [Stat.] 1052 designated the NPS portion of the expanded Monument as a National Preserve. While BLM and NPS operate under different laws, regulations and policies which apply to different portions of the planning area, the proposed plan provides a jointly developed framework for cooperative management of the area. From this point forward in this document the Craters of the Moon National Monument and Preserve will simply be referred to as the Monument.

DECISION

The decision of the NPS and BLM is to adopt Alternative D from the Proposed Plan/Final EIS, with modifications noted below, as the Monument Management Plan. Each agency's approval applies only to those portions of the Monument for which it has statutory authority. This Record of Decision (ROD) and the Monument Management Plan (MMP) will provide the overall resource management direction of BLM and NPS administered lands in the planning area. Overall management of the Monument will emphasize the cooperative efforts of both agencies in planning and cost effective operations by sharing resources and providing service to the public.

The Monument Management Plan was prepared by the BLM and NPS in accordance with BLM planning regulations (43 Code of Federal Regulations [CFR] 1610) and NPS directives (Director's Order #2). An environmental impact statement (EIS) was prepared for the Monument Management Plan in accordance with the National Environmental Policy Act of 1969 (NEPA). The EIS assessed the possible environmental and social effects of implementing the Monument Management Plan and other alternatives. The Monument Management Plan is nearly identical to the Proposed Management Plan/Final EIS published in August 2005, which was a refinement of the Preferred Alternative (Alternative D) from the Draft Management Plan/EIS published in March 2004. Specific management decisions for BLM and NPS administered lands in the planning area are provided in the Monument Management Plan.

Management zone prescriptions only apply to federal lands within the Monument boundaries. Any areas outside of the Monument boundary, and labeled in the Proposed Management Plan (Figure 9, page 65) as Passage or Frontcountry Zones, will be described in the final Monument Management Plan as travel access corridors. These corridors will have road standards similar to the Frontcountry (Class A - paved) and Passage (Class B- graded with improved surface) Management Zones described in the Proposed Management Plan (pages 29 and 151).

Agency Specific Decisions

BLM Decisions: Livestock grazing is an activity that is only authorized on the BLM portions of the Monument. All decisions regarding management of livestock grazing pertain only to BLM-administered lands.

NPS Decisions: Decisions affirming that implementation of the Monument Management Plan will not result in impairment of National Park System resources and values within Craters of the Moon National Monument and Preserve. NPS decisions related to management of wildlife and hunting are in accord with the National Park Service Organic Act and 116 Statute [Stat.] 1052.

Joint Agency Decisions: These decisions pertain to all other aspects of the Monument Management Plan.

All land use plan decisions are identified in the Monument Management Plan. Land use plan decisions include:

- Goals, objectives, standards, and guidelines that define desired future conditions;
- Management actions which enhance reaching or maintaining desired future conditions.
- Land use allocations such as withdrawals and special management area designations;
- Visual resource management (VRM) classifications; land tenure; and
- Allowable uses and restrictions pertaining to vehicles; minerals; vegetation treatment; and protection of Monument resources including vegetation, wildlife, cultural and geologic resources.

The Proposed Plan emphasizes protection and restoration of physical and biological resources and processes. All Management Zones must meet the purpose and significance of the Monument and comply with Proclamation 7373. The Proposed Plan draws primarily upon the Alternative D presented in the Draft Plan/DEIS, but includes more acreage in the Pristine Zone and reduces acreage in the Passage Zone, especially in Laidlaw Park. These changes were made in response to public comments

and agency review incorporating some portions of the management zoning proposed in Alternatives B and C. Alternative D emphasizes a proactive Integrated Weed Management program using all available tools. It prescribes the most extensive fire management program to restore sagebrush steppe. Alternative D places a greater emphasis than the other alternatives on promoting partnerships at existing facilities outside the Monument, such as visitor centers, state parks, and gateway communities.

A 30-day protest period was provided by the BLM on the land use plan decisions in the Proposed Management Plan in accordance with 43 CFR Part 1610.5-2. Three protest letters were received. Two of the protests were subsequently withdrawn following clarification of language in the Proposed Plan. Resolutions to the protests resulted in minor editing and clarification of the MMP, and did not result in the necessity for more analysis or repeat publication of the Proposed Plan/FEIS for additional public review and protest. The agreed upon language follows:

1. Management Zones – All Management Zones must meet the purpose and significance of the Monument and comply with Proclamation 7373. The Monument Management Plan will contain language similar to the following language from page 27 of the Proposed Plan/FEIS:

   > While a different emphasis would be given to various zoned portions of the Monument, the intent is to always be consistent with the purposes for which the Monument was established and with the mission goals identified in the Introduction to this document.

2. Recreational Development of Geologic Features – To clarify the meaning of the word "modified" with respect to geologic features in the Front Country and Passage Zones (Geological Resources, Management Action 1, page 31 in the Proposed Plan), the Monument Management Plan will include additional language describing the intent to minimize necessary hardening or development impacts that result from facilitating visitor access. The additional language will specifically include "*least impacting"* qualifier language.

3. Limited OHV Designation – To clarify the status of available roads and trails for off-road vehicle (or OHV) use, in accordance with BLM regulation, the Monument Management Plan will state:

   > All lands except for the existing roads shown on Figure 16 in the Proposed Plan are designated as "Closed" to use by off-road vehicles. Off-road vehicle use is "Limited" to existing roads shown on Figure 16, unless and until such roads are closed, converted to Class II Trails or are further limited by operation of this plan or by the forthcoming Comprehensive Travel Management Plan. (OHV designations do not apply to specifically authorized administrative use.)

4. Acquired Lands – To clarify that any Federal acquired lands within the Monument and Preserve boundary will fall under the direction of the Monument Management Plan, a management action will be added to the Monument Management Plan stating:

   > Private or state land within the Monument boundary acquired by the agencies would automatically become part of the Monument and subject to the direction in this plan.

5. Material Sites – Language will be added to the Monument Management Plan clarifying reclamation requirements and describing when complete restoration may not be practical, feasible or desirable.

6. Recreation Desired Future Condition – In the Monument Management Plan, the bolded language below will be added to the quoted DFC statement from page 41 of the Proposed Plan:

   Impacts associated with recreational uses do not adversely affect the physical and visual integrity of geologic features **or the biological integrity of the ecosystem.**

7. Herbicide Use to Control Weeds – The Monument Management Plan will clarify that Integrated Weed Management principles include an analysis of the tradeoffs involved in herbicide use versus non-chemical methods of weed control. The definition of Integrated Weed Management in the Glossary of the Monument Management Plan will be expanded and constitute a separate definition from Integrated Pest Management.

8. Protection of sage-grouse leks – For purposes of clarification, *a non-exclusive list of* examples of potential protective measures will be added to Wildlife Management Action 2 (page 64 in the Proposed Plan). The Monument Management Plan will note that the list is non-exclusive in nature.

9. Comprehensive Travel Management Plan – The Comprehensive Travel Management Plan (TMP) will be the first implementation level plan completed and it will be the top implementation planning priority. The Comprehensive TMP will utilize criteria for determining closures or limitations on use of existing roads, which will include, at a minimum, answers to the following:

   - What is the road used for?
     Does its purpose justify potential threats to the resources for which the Monument was established?
     Is this road adequate to provide access for all of its intended purposes?
   - Who needs access to this road?
     Is it appropriate to limit access to roads based on intended uses?
     Limited to administrative uses including fire suppression, restoration activities, livestock management, research activities
     Possible further restriction on types of travel
     Recreational use restrictions for ATVs, snowmobiles, horses, mountain bikes
   - What options do we have to address issues related to roads?
     Access restrictions
     Conversion to Trails
     Road/Trail Closures
     Consideration for upgrades if necessary

   The NEPA Analysis which accompanies the Comprehensive TMP will include, at a minimum, cumulative effects assessments of road density and fragmentation of sage grouse habitat.

10. Laidlaw Park – There will be no new livestock developments permitted in theNorth Laidlaw Pasture or Bowl Crater, unless such developments can be shown to provide a net benefit to the objects identified in Proclamation 7373.

11. Protection of Land with Wilderness Characteristics – Description of theWilderness/ Wilderness Study Area Management Plan (see Proposed Plan pg. 16) to be completed will include the following language:

As part of this implementation plan, and consistent with current guidance on inventorying for and management to protect or enhance wilderness characteristics, the agencies may conduct additional inventory, consider citizen proposals, and consider protections of lands with wilderness characteristics.

12. Class 2 Trails – The definition of Class 2 Trails will include a statement that:

    Class 2 Trails can only be created from decommissioned roads that will no longer be open to use by full-sized vehicles. No new Class 2 Trails will be created in any other manner.

13. Class D/Class C User-created Roads – To clarify that only user-created roads in existence as of the date of the Monument Proclamation and included in the map on Figure 16 of the Proposed Plan/FEIS, the Monument Management Plan will contain language specifying that:

    Class D Roads and other existing roads include only those roads in existence as of the date of Monument Proclamation 7373 and shown on Figure 16. Any routes created by cross-country vehicle or mechanical use since the date of Proclamation 7373 are considered illegal and will be closed.

After consideration of all points raised in the remaining protest, the BLM Director concluded that the Craters of the Moon (CRMO) planning team and decision-makers, including the Idaho State Director, followed all applicable laws, regulations, policies and pertinent process and resource considerations in developing the proposed plan.

Governor's Consistency Review

A letter was also received from Idaho Governor Dirk Kempthorne in support of a feasibility study of a proposed upgrade of the Arco-Minidoka Road. The National Park Service and the Bureau of Land Management will continue to be engaged in public discussions regarding any upgrade to the Arco-Minidoka Road. The Monument Management Plan is limited to management of the federally-administered lands within the Monument and Preserve boundary. Figure 9, page 65, of the Proposed Plan and Final EIS, features a dashed yellow line indicating a potential passage zone along this portion of the Arco-Minidoka Road through the Monument. The third bullet on page 67 of the Proposed Plan/FEIS under the heading "Travel and Access" Management Actions will be changed in the final version of the Monument Management Plan to read:

Allow for a Class B standard on the Arco-Minidoka Road through the Monument should the adjacent roads outside the Monument be upgraded.

This Record of Decision describes the land use plan decisions for the Monument. It is effective on the date it is signed.

OTHER ALTERNATIVES ANALYZED

Three other alternatives were analyzed in detail in the Proposed Management Plan/FEIS. General management themes for each alternative analyzed in detail are described below.

Alternative A, the No Action Alternative, proposes no major changes in resource management, visitor programs, or facilities. It depicts current management under the agencies' five existing management plans, as modified by Proclamation 7373, Public Law 107-213, and the agencies' Interim Management Guidelines. Alternative A also serves as a baseline for comparison with the other three alternatives. The management zones depicted in Alternative A represent the planning team's assessment of current conditions. In other words, the management zones were mapped based on actual, existing conditions in 2003.

Alternative B emphasizes a broad array of visitor experiences within the Monument. Alternative B provides the largest amount of multiple-use trail opportunities; improved access both inside and outside the Monument; and extensive educational, informational, and directional signs and interpretive support facilities throughout the Monument. This alternative also allocates large areas in the Passage Zone to allow for potential new developments like designated rustic campsites, high standard motorized and non-motorized trail networks, and a relatively high standard road system that provides easier access to many areas of the Monument. Alternative B also includes suggested management direction for access roads outside of the Monument.

Alternative C emphasizes the Monument's primitive character. This alternative contains the smallest number of visitor facilities. Management actions that influence resource conditions are as "light handed" and non-intrusive as possible, including weed control and sagebrush steppe restoration. Alternative C allocates the largest acreage of all the alternatives in the Pristine Zone and the least acreage in the Passage Zone, and it would result in the fewest miles of maintained roads. Under this alternative, new interpretive facilities would primarily be located outside the Monument. This alternative includes an 11,000-acre Area of Critical Environmental Concern designation in North Laidlaw Park to provide special protective management for native sagebrush steppe.

Environmentally Preferred Alternative

Records of Decision are required under Council on Environmental Quality regulations to identify the environmentally preferable alternative. Environmentally preferable is defined as "the alternative that will promote the national environmental policy as expressed in §101 of the National Environmental Policy Act." Section 101 states, "…it is the continuing responsibility of the federal government to…

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

In comparison with the other alternatives analyzed, Alternative D, also selected as the decision, best meets the national environmental goals identified above. Alternative D provides a high level of protection of natural and cultural resources, while providing for a wide range of neutral and beneficial uses of the environment. This alternative surpasses the other alternatives in realizing the full range of national environmental policy goals in Section 101.

Goals related to public enjoyment, understanding and appreciation of the Monument resources would be achieved through existing on-site programs and facilities, as well as expanded programs and facilities located off site and through authorized licensed guide operations. Livestock grazing, a traditional land use on BLM lands prior to Monument expansion would continue on BLM administered lands in all the alternatives considered with only minor changes among alternatives.

FINDINGS ON IMPAIRMENT OF NATIONAL PARK SYSTEM RESOURCES AND VALUES

The National Park Service may not allow the impairment of National Park System resources and values unless directly and specifically provided for by legislation or proclamation establishing the park. Impairment that is prohibited by the NPS Organic Act and the General Authorities Act is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. In determining whether impairment would occur, NPS managers examine the duration, severity and magnitude of the impact; the resources and values affected; and direct, indirect, and cumulative effects of the action. According to NPS policy, "An impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is: a) Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; b) Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or c) Identified as a goal in the park's general management plan or other relevant NPS planning documents."

This policy does not prohibit all impacts to National Park System resources and values. The National Park Service has the discretion to allow impacts to resources and values when necessary and appropriate to fulfill the purposes of a park, so long as the impacts do not constitute an impairment. Moreover, an impact is less likely to constitute an impairment if it is an unavoidable result, which cannot be further mitigated, of an action necessary to preserve or restore the integrity of park resources or values.

After analyzing the environmental impacts described in the Proposed Management Plan/Final Environmental Impact Statement and public comments received, the National Park Service has determined that implementation of the preferred alternative will not constitute an impairment to resources and values of National Park System lands within Craters of the Moon National Monument and Preserve. The actions in the proposed plan are intended to protect and enhance the Monument and Preserve's natural and cultural resources, and provide for high-quality visitor experiences. Overall, the proposed plan will have beneficial effects on air and water resources, soils and vegetation, wildlife and cultural resources.

No major adverse impacts to National Park System lands within the Monument and Preserve (hereafter referred to as the park) resources or the range of visitor experiences and no irreversible commitments of resources are expected. While the proposed plan will have some adverse effects on park resources and visitor experiences, most of these impacts will be site-specific, minor to moderate, short-term impacts. None of the impacts of this alternative will adversely affect resources or values to

a degree that will prevent the National Park Service from fulfilling the purposes of the park, threaten the natural integrity of the park, or eliminate opportunities for people to enjoy the park.

MANAGEMENT CONSIDERATIONS

Rationale for the Decision

In reaching the decision to approve the modifications to the Proposed Plan/FEIS, the NPS and BLM considered the purposes for which Craters of the Moon National Monument and Preserve was established, and other laws and policies that apply to lands in Craters of the Moon, including the NPS Organic Act, the Federal Land Policy and Management Act, the Wilderness Act, National Environmental Policy Act, and the *NPS Management Policies*. The agencies also carefully considered public comments received during the planning process.

Based on the input received during the planning process, there was both support and opposition to certain components of the proposed plan. No formal comments were received from Federal or State agencies or Tribal governments indicating the proposed plan was inconsistent with other existing plans or policies. The majority of comments received on the proposed plan related to transportation, grazing management, wilderness, Wilderness Study Areas (WSAs), and wildlife.

Compared to the alternatives considered, the proposed plan best protects Monument resources while providing a range of quality visitor experiences. The proposed plan will have both positive and negative impacts on the Monument's natural resources, but most of the negative impacts will be minor and localized. The proposed plan will continue to provide a variety of outdoor recreational opportunities, ranging from pristine and remote backcountry to accessible sites with amenities such as restrooms, campsites, trails, and interpretive media. New management zones provide a framework for determining appropriate public uses and administrative practices. A major element of the proposed plan is an emphasis on resource protection and restoration when appropriate. Management actions include aggressive suppression of wildland fires to protect most existing sagebrush steppe, expanded noxious weed prevention and control, and enforcement of the prohibition on off-road vehicle travel. Active restoration of degraded sagebrush steppe habitat will benefit a variety of wildlife including the Greater sage grouse.

The proposed plan provides greater protection of natural and cultural resources, including Wilderness and Wilderness Study Areas, than Alternatives A or B through expansion of the pristine management zone to include Wilderness Study Areas. The proposed plan provides for a greater level of vegetation treatment for proactive restoration and post-fire rehabilitation than Alternatives A or B and for more immediate habitat improvement than would be possible in Alternative C.

ACTIONS DESIGNED TO AVOID OR MINIMIZE ENVIRONMENTAL HARM

In order to minimize impacts from implementation of the decisions contained in the Monument Management Plan, actions identified in Appendix A of the Record of Decision will be applied. All practicable means to avoid or minimize environmental harm have been adopted.

PLAN MONITORING

The BLM planning regulations (43 CFR 1610.4-9) call for the monitoring of Management Plans on a continual basis with a formal evaluation done at periodic intervals. Implementation of the Craters of the Moon National Monument and Preserve MMP will be monitored over time. Plan evaluations will occur at about five-year intervals. Activity-level planning and proposed projects will be evaluated

relative to consistency with MMP objectives. Projects will be monitored to determine their effectiveness regarding meeting or progressing towards meeting objectives. This evaluation process is described in more detail in the monitoring sections of the MMP.

PUBLIC INVOLVEMENT

The NPS and BLM provided a number of opportunities for the public to participate in the Craters of the Moon National Monument and Preserve planning process. The Notice of Intent (NOI) to jointly prepare a land use plan and the associated EIS for the Craters of the Moon National Monument and Preserve was published in the Federal Register on April 24, 2002. The NOI initiated the public scoping process by inviting participation in identifying planning issues and developing planning criteria.

Information about the Monument planning process and opportunities for involvement were posted on websites for the National Park Service (www.nps.gov/crmo) and the Bureau of Land Management (www.id.blm.gov/planning/index.htm). Comments were accepted by mail and via e-mail. Local and regional newspapers and radio stations throughout the planning area were used to disseminate information on the Management Plan scoping and planning process.

Approximately 1,500 copies of a newsletter describing the scoping period were distributed in April 2002. Eight scoping open house meetings were held in June 2002 with a total of 166 individuals attending. Input from the open houses and one hundred and sixty-nine letters received by the end of the scoping period identified six major categories of issues: development, transportation and access, visitor use, authorized uses, natural and cultural uses, and general. In the fall of 2002 a second newsletter sent out to approximately 850 individuals and organizations described the issues identified during scoping. A third newsletter sent to the public in January 2003 and three public workshops held in February identified a number of preliminary alternatives to be analyzed in the draft EIS. The newsletter and preliminary alternatives workshops resulted in 160 letters and over 2,500 e-mails from individuals and groups.

Throughout the process formal government-to-government consultation with the Shoshone-Bannock and Shoshone-Paiute tribes was conducted to solicit their input. Consultation with the Idaho State Historic Preservation Officer regarding the management plan's affects on cultural resources listed on or eligible for the National Register of Historic Places continued during the planning process. Consultation with the U.S. Fish and Wildlife Service regarding species listed in accordance with the Endangered Species Act, resulted in the Service's concurrence that the plan is not likely to adversely affect any endangered species.

The Notice of Availability for the Draft Plan/DEIS was published on April 30, 2004, and the document was filed with the U.S. Environmental Protection Agency (EPA). The EPA announced the availability of the Draft Plan/DEIS for public review and comment in the Federal Register on April 30, 2004. This announcement began a 90-day comment period, which ended on July 29, 2004. Four public open house meetings attended by 75 persons were held in May 2004 to help answer any questions about the Draft Plan/DEIS. The 90-day comment period resulted in 153 letters with 570 substantive comments. In addition, 975 e-mail letters were received. Letters were received from twenty-five government organizations, twelve private organizations, and one hundred and sixteen individuals. A summary of the key topics of the comments is presented in Chapter Five of the Proposed Plan and Final Environmental Impact Statement.

The Notice of Availability of the Proposed Management Plan and Final Environmental Impact Statement was published in the Federal Register on August 26, 2005. The 30-day "no action" period ended on September 26, 2005. Copies of the Proposed Plan/FEIS (printed or on Compact Disk) were

mailed to all persons or organizations that had participated during the planning process. The complete document was also made available on both agencies' websites.

Public Participation in Implementation

Land use plans or General Management Plans and planning decisions are the basis for every on-the-ground action the BLM and NPS undertakes. They provide a framework to guide subsequent actions or plan implementation decisions. Implementation decisions are generally site-specific land management projects or actions designed to meet direction in the planning documents and decisions.

Following signing of this Record of Decision, an implementation strategy or "business plan" will be developed, allowing opportunities to determine future implementation priorities. As each project is considered, the public will be given the opportunity to be involved in the project level planning. Each project will be subject to additional site specific NEPA analysis and documentation, associated Tribal consultation, agency and public involvement, and appropriate National Historic Preservation Act consultation.

The highest planning priority for NPS is updating the current fire management plan to include the NPS-managed Preserve. NPS personnel will work closely with BLM-Shoshone Fire Staff to insure goals and objectives for fire management activities are similar along agency boundaries. The NPS Fire Management Plan revision will include "Wildland Fire Use" in Preserve wilderness study areas where it is appropriate. All NPS wildland fire use projects will be managed under a strict set of guidelines to minimize negative impacts. Wildland fire rehabilitation efforts, within the Preserve, will follow protocols for NPS-administered lands. In the future, subsequent fire management planning for the Monument and Preserve will address both BLM and NPS-administered lands as one unit.

CONCLUSION AND APPROVAL

Among the alternatives considered, the selected plan best protects Monument resources while also providing a range of quality visitor experiences, meets the BLM and NPS goals, statutory and policy requirements for managing the Craters of the Moon National Monument and Preserve, and meets national environmental policy goals. The selected plan will not result in the impairment of National Park System resources and values. Having considered a full range of alternatives, associated resource impacts and public comments, we adopt the Monument Management Plan as it applies to the respective agencies areas of jurisdiction. As a delegated EIS, the officials responsible for approving the Plan are the Idaho State Director, Bureau of Land Management, and the Regional Director, Pacific West Region, National Park Service. Subsequently, the officials responsible for implementation are the BLM Monument Manager and the NPS Superintendent for Craters of the Moon National Monument and Preserve.

Approved: _____ **Date:** 9/7/06

Bud C. Cribley,
Acting State Director, Idaho, Bureau of Land Management

Approved: _____ **Date:** 9/12/06

Jonathan B. Jarvis,
Regional Director, Pacific West Region, National Park Service

APPENDIX A

ACTIONS DESIGNED TO AVOID OR MINIMIZE ENVIRONMENTAL HARM

The following management actions will be used by NPS and BLM during implementation of the Monument Management Plan to avoid or minimize potential impacts to natural and cultural resources.

Natural Resources

Geological Resources and Caves

Significant cave resources in the Monument would be identified and protected. Prior to any ground disturbing activity, areas would be surveyed for unique, rare, or special geologic resources, including fossils. BLM would identify significant caves on federal land and restrict or regulate use according to the Federal Caves Resource Protection Act (FCRPA) of 1988. All caves on NPS-managed land are considered "significant" and in accordance with NPS policies would be protected to the greatest extent possible with current funding and staffing levels. Threats to unique or representative geologic resources would be identified and mitigated according to NPS and BLM management policies.

Soils and Water

Whenever possible, new development by NPS would be carried out on previously disturbed sites or in carefully selected sites with as small a footprint as possible. During design and construction, Monument staff would identify areas to be avoided.

Soil erosion and associated water quality impacts would be minimized by limiting the time that soil would be left exposed and by using, when possible, various erosion control measures such as the placement of silt fencing, retention and replacement of topsoil, revegetation of sites with native species, and selective scheduling of construction activities. Conserving topsoil from major construction sites would minimize potential compaction and erosion of bare soil. The use of conserved topsoil would help preserve the microorganisms and seeds of native plants. Topsoil should be re-spread as close to the original location as possible and supplemented with scarification, mulching, seeding, and/or planting with species native to the immediate area. This would reduce construction scars and erosion. In an effort to control the spread of exotic plant species, only certified weed-free hay, straw, or mulch would be used.

All new major construction by NPS would be completed using sustainable practices, such as the use of environmentally friendly materials and efficient utility systems. Components of such projects would be assessed for visual quality. Utilities and support functions such as water, sewer, electricity, and roads would be evaluated and designed to mitigate visual impact.

Vegetation, including Special Status Species, and Fire Management

Monument staff would survey proposed development sites and project areas for special status plants. New development would be relocated or project design modified if special status plant populations are present. Similarly, new trails, roads, and campsites would be located to avoid impacts to special status plant populations.

Damage to natural and cultural resources by fire suppression, prescribed fire, or restoration treatment operations will be avoided by following the operational protocols in Appendix J. Areas burned by wildland fire will be examined and the need for treatment under Emergency Stabilization and Rehabilitation (ESR) will be determined. The Normal Fire Rehabilitation Plan for the Shoshone and

Burley Field offices (USDI BLM 2005) will be used to guide ESR treatments on BLM-administered lands. Revegetation efforts would emulate the natural form, spacing, abundance, and diversity of native plant communities and would use native species whenever feasible.

To help minimize the spread of non-native plants, Monument managers would allow only the use of weed-free materials and equipment for operations. A variety of measures to prevent weed introduction and spread within the Monument would be implemented. These measures would include: cleaning vehicles and equipment that may have been used in weed-infested areas prior to entry into the Monument; identifying, treating and posting weed locations; and educating staff, livestock permittees, visitors, and contractors.

Trails in the NPS-managed portion of the Monument would be monitored for signs of disturbance of native vegetation. To control potential impacts on plants from trail erosion or social trails, sustainable, low-impact barriers would be used, and disturbed areas would be revegetated with native plants

Wildlife and Special Status Species

A variety of techniques would be employed to reduce the impacts on wildlife, such as visitor education programs and restrictions on visitor activities. NPS, in conjunction with the State of Idaho, would designate areas within the Preserve and periods of time when no hunting would be permitted for reasons of public safety, protection of the areas' resources, administration, or public use and enjoyment.

Special status species in the Monument and Preserve would continue to be inventoried. Actions and stipulations necessary to protect special status species and their habitats would be made part of use authorizations and fire planning.

Air Quality

Dust control measures would be used during construction activities, and all construction machinery would be required to meet air emission standards. Appropriate smoke management controls will be incorporated in plans for prescribed fire operations to protect the air quality related values of Class 1 air sheds.

Cultural Resources

In accordance with agency policies and procedures, the Monument and Preserve would continue to protect cultural resources to the greatest extent possible with available funding and staff levels. Disturbing these resources would be avoided whenever possible. Where avoidance or preservation cannot be achieved, mitigation would be carried out under the guidance of the procedures of the Advisory Council on Historic Preservation (36 Code of Federal Regulations [CFR] 800).

Before any land-modifying activity, a professional archaeologist would inspect the present ground surface of the proposed development site and the immediate vicinity for the presence of cultural remains, both prehistoric and historic. Should newly discovered or previously unrecorded cultural remains be located, additional investigations would be accomplished prior to earth-disturbing activities.

Through consultation with the Idaho State Historic Preservation Office (SHPO), areas for Section 110 cultural resource inventories would be prioritized. At-risk sites eligible for the National Register of Historic Places (NRHP) would be monitored for vandalism. A Cultural Resource Management Plan (CRMP), which describes how specific sites would be managed, defines what areas need additional inventory, and designates potential-use categories for sites, would be completed for the Monument.

Should Native American Graves Protection and Repatriation Act (NAGPRA) materials be inadvertently discovered within the Monument, the agencies would follow the tribal consultation procedures outlined in the NAGPRA of 1990. All preservation, rehabilitation and restoration efforts for historic structures would be carried out in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings.

Wilderness

Minimum requirement analysis will precede any proposed management activities within designated wilderness areas and WSAs managed by the National Park Service. Bureau of Land Management-administered WSAs will continue to be managed under Interim Management Policy for Lands Under Wilderness Review. (See Appendix B, page 352 of the Proposed Management Plan and Final EIS.)

Proclamation 1694

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA
A PROCLAMATION
[No. 1694—May 2, 1924—43 Stat. 1947]

WHEREAS, there is located in townships one south, one and two north, ranges twenty-four and twenty-five east of the Boise Meridian in Butte and Blaine Counties, Idaho, an area which contains a remarkable fissure eruption together with its associated volcanic cones, craters, rifts, lava flows, caves, natural bridges, and other phenomena characteristic of volcanic action which are of unusual scientific value and general interest; and

WHEREAS, this area contains many curious and unusual phenomena of great educational value and has a weird and scenic landscape peculiar to itself; and

WHEREAS, it appears that the public interest would be promoted by reserving these volcanic features as a National Monument, together with as much land as may be needed for the protection thereof.

NOW, THEREFORE, I, Calvin Coolidge, President of the United States of America, by authority of the power in me vested by section two of the act of Congress entitled, "An Act for the preservation of American antiquities," approved June eighth, nineteen hundred and six (34 Stat., 225) do proclaim that there is here by reserved from all forms of appropriation under the public land laws, subject to all valid existing claims, and set apart as a National Monument all that piece or parcel of land in the Counties of Butte and Blaine, State of Idaho, shown as the Craters of the Moon National Monument upon the diagram hereto annexed and made a part hereof.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy or remove any feature of this Monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management and control of this Monument as provided in the act of Congress entitled "An Act to establish a National Park Service and for other purposes," approved August twenty-fifth, nineteen hundred and sixteen (39 Stat., 535) and Acts additional thereto or amendatory thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

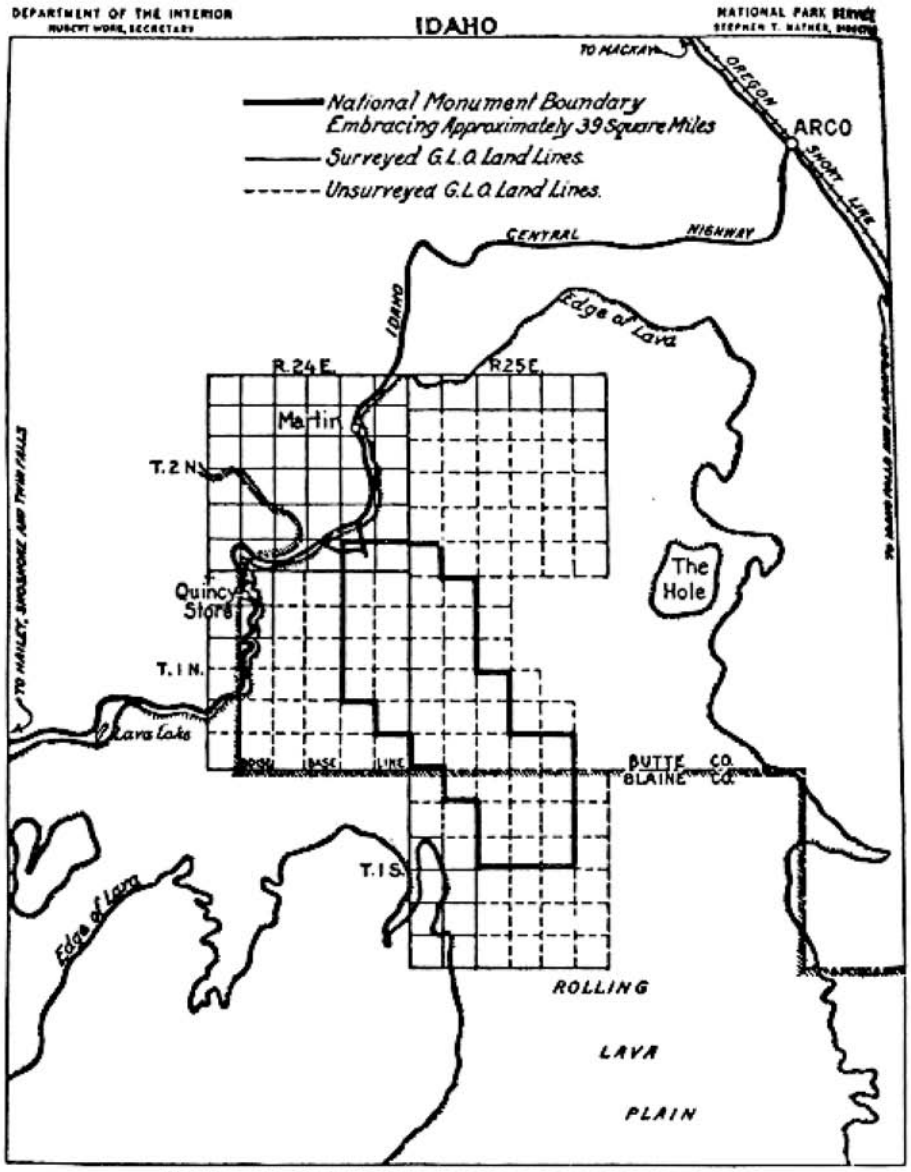
DONE in the City of Washington this 2d day of May in the year of our Lord one thousand nine hundred and twenty-four and of the Independence of the United States of America the one hundred and forty-eighth.

[SEAL]

CALVIN COOLIDGE

By the President:

CHARLES E. HUGHES,
Secretary of State.



CRATERS OF THE MOON NATIONAL MONUMENT

Proclamation 1843

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA
A PROCLAMATION
[No. 1843—July 23, 1928—45 Stat. 2959]

WHEREAS, it appears that the public interest would be promoted by adding to the Craters of the Moon National Monument in the State of Idaho, certain adjoining lands for the purpose of including within said monument certain springs for water supply and additional features of scientific interest located thereon.

NOW, THEREFORE, I, Calvin Coolidge, President of the United States of America, by authority of the power in me vested by section two of the act of Congress entitled, "An Act for the Preservation of American antiquities", approved June eighth, nineteen hundred and six (34 Stat, 225), do proclaim that Sections sixteen, twenty-one, twenty-two, twenty-five, twenty-six, twenty-seven, and thirty-four in Township two North, Range twenty-four East; Unsurveyed Sections twenty-seven, twenty-eight, twenty-nine, thirty, thirty-two, thirty-three and thirty-four in Township two North, Range twenty- twenty-seven, thirty-four, thirty-five and thirty-six in Township one North, five East; Unsurveyed Sections three, ten, fifteen, twenty-two, twenty-six, Range twenty-four East; Unsurveyed Sections three, four, nineteen, fifteen, sixteen, twenty-two, twenty-three, twenty-four, twenty-five, twenty-six, twenty-seven and thirty-six in Township one North, Range twenty-five East; Unsurveyed Sections one, twelve, thirteen and the north half of Sections twenty-one, twenty-two, twenty-three and twenty-four in Township one South, Range twenty-five East; all Boise Meridian, Idaho; are hereby reserved from all forms of appropriation under the public land laws, subject to all valid existing claims, and set apart as an addition to the Craters of the Moon National Monument and that the boundaries of the said National Monument are now as shown on the diagram hereto annexed and made a part hereof.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy or remove any feature of this Monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this Monument as provided in the Act of Congress entitled "An Act to establish a National Park Service and for other purposes," approved August twenty-fifth, nineteen hundred and sixteen (39 Stat., 535) and Acts additional thereto or amendatory thereof.

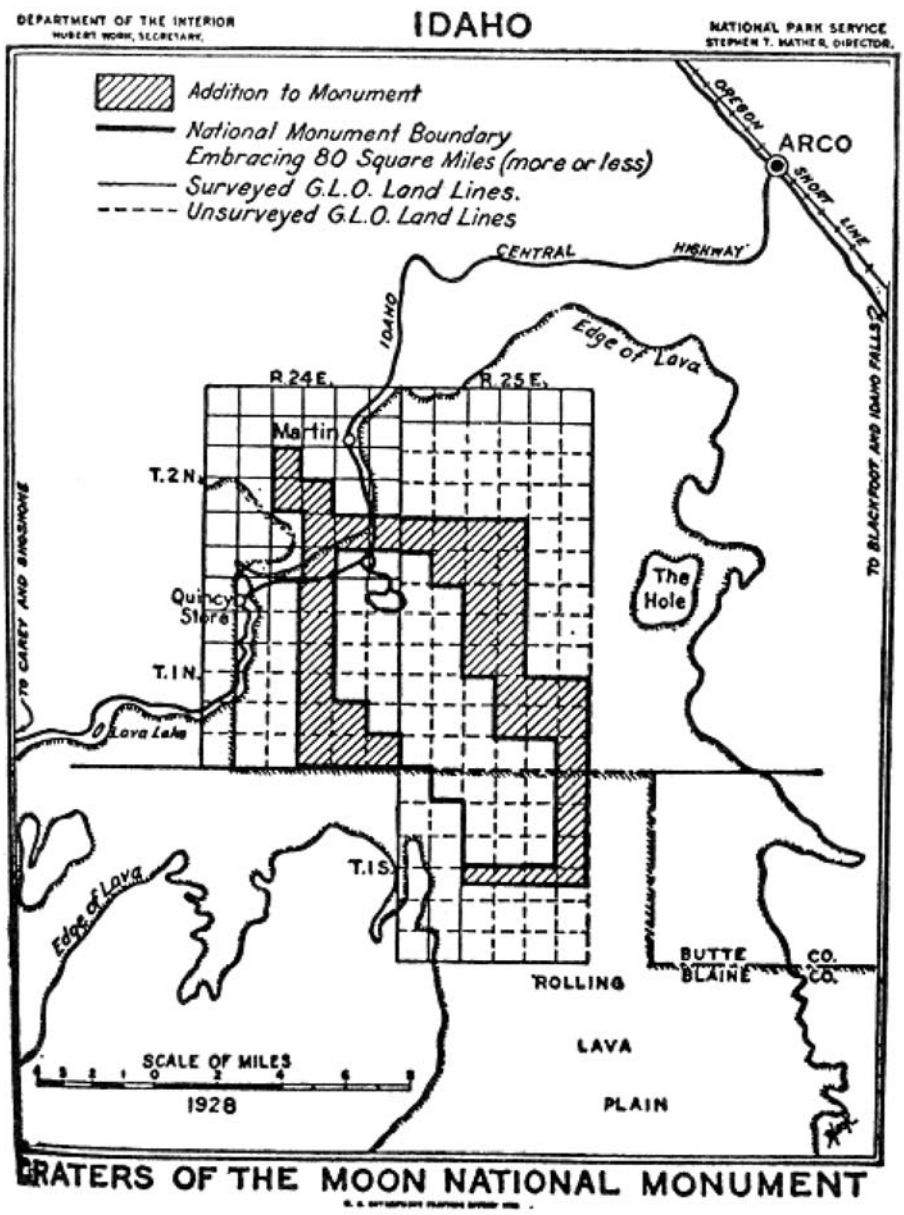
IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 23 day of July in the year of our Lord one thousand nine hundred and twenty-eight and of the Independence of the United States of America the one hundred and fifty-third.

[SEAL]

CALVIN COOLIDGE.

By the President:
FRANK B. KELLOGG,
Secretary of State.



CRATERS OF THE MOON NATIONAL MONUMENT

Proclamation 1916

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA
A PROCLAMATION
[No. 1916—July 9, 1930—46 Stat. 3029]

WHEREAS lot 1, section 28, township 2 north, range 24 east, Boise meridian, Idaho, is bounded on the north and east by the Craters of the Moon National Monument; and

WHEREAS said lot 1, Section 28, contains a spring which is needed to furnish the said monument with an adequate water supply; and

WHEREAS said lot 1, section 28, is vacant unappropriated public land of the United States;

NOW, THEREFORE, I, Herbert Hoover, President of the United States of America, do proclaim that the lands herein after described shall be, and are hereby, added to and included within the Craters of the Moon National Monument, and as part of said monument shall be, and are hereby, made subject to the provisions of the act of August 25, 1916 (39 Stat. 535), entitled "An act to establish a national park service, and for other purposes and all acts supplementary there to and amendatory thereof and all other laws and rules and regulations applicable to, and extending over, the said monument:

BOISE MERIDIAN

In township 2 north, range 24 east, lot 1, section 28.

Nothing herein shall affect any existing valid claim, location, or entry on said lands made under the land laws of the United States whether for homestead, mineral, right of way, or any other purposes whatsoever, or shall affect the right of any such claimant, locator, or entryman to the full use and enjoyment of his land.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 9th day of July, in the year of our Lord nineteen hundred and thirty, and of the Independence of the [SEAL] United States of America the one hundred and fifty-fifth.

HERBERT HOOVER.

By the President:
HENERY L. STIMSON,
Secretary of State.

House Resolution 15877

February 21, 1931.
[H. R. 15877.1]
[Public, No. 714.1

CHAP. 272. —An Act To authorize exchanges of land with owners of private-land holdings within the Craters of the Moon National Monument.

Craters of the Moon National Monument, Idaho.
Acceptance of lands in, authorzed.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior be, and he is hereby, authorized in his discretion to accept on behalf of the United States complete title to any or all of the following-described lands held in private ownership within the boundaries of the Craters of the Moon National Monument, Idaho: Southeast quarter southwest quarter, section 22; northeast quarter northwest quarter, southwest quarter northwest quarter, west half northeast quarter, section 27; northwest quarter northwest quarter section 26, township 2 north, range 24 east, Boise meridian, Idaho, and in exchange therefor may patent not to exceed an equal value of land to be selected from the following-described tracts of reserved public land, subject to any valid and existing entries under any law; Northwest quarter northwest quarter, section 2; northwest quarter northeast quarter, southeast quarter, northwest quarter southwest quarter, southeast quarter southwest quarter, section 3; northeast quarter northwest quarter section 9; northwest quarter, west half northeast quarter, section 10, township 1 north, range 23 east; and south half southwest quarter, west half southeast quarter, southeast quarter southeast quarter, section 26; northeast quarter, east half northwest quarter, south half southeast quarter, northeast quarter southeast quarter, north half southwest quarter, southwest quarter southwest quarter, section 35, township 2 north, range 23, Boise meridian, Idaho: *Provided,* That If lands sufficient to equal the value of the lands within the monument offered in exchange are not available within the area herein described, then in addition the Secretary may patent public land in the State of Idaho, surveyed and nonmineral in character, sufficient to equal such value. Before any exchange hereunder is effected notice of the contemplated exchange, reciting the lands selected, shall be published once each week for four successive weeks in some newspaper of general circulation in the county or counties where the lands proposed to be selected are located.

Description

Proviso.
Lands offered in exchange

Publication required.

Value ascertained.

Sec. 2. That the value of the lands within said monument offered for exchange, and the value of the lands of the United States to be selected therefor, shall be ascertained in such manner as the Secretary of the Interior may direct; and the owners of such privately owned lands within said monument shall, before the exchange is effective, furnish the Secretary of the interior evidence satisfactory to him of title to the patented lands offered in exchange; and lands conveyed to the United States under this Act shall be and remain a part of the Craters of the Moon National Monument.

Title.

Approved, February 21, 1931.

House Resolution 7930

74TH CONGRESS. SESS. II. CHS. 527-530. JUNE 5, 1936.

[CHAPTER 527.}

June 5, 1936.
[H. R. 7930]
Public. No. 668.

AN ACT

To eliminate certain lands from the Craters of the Moon National Monument, Idaho.

Craters of the Moon National Monument, Idaho. Lands eliminated from.

Be it enacted by the Senate and House of; Representatives of the United States of America in Congress assembled, That the north half and north half of the south half section 16, township 2 north, range 24 east, Boise meridian, Idaho, be, and the same hereby, eliminated from the Craters of the Moon National Monument.

Approved, June 5, 1936

Proclamation 2499

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA
A PROCLAMATION
[No. 2499—July 18, 1941—55 Stat. 1660]

WHEREAS it appears that certain public land which is now a part of the Craters of the Moon National Monument in the State of Idaho, established by proclamation of May 2, 1924, 43 Stat. 1947, and enlarged by proclamations of July 23, 1928, 45 Stat. 2959, and July 9, 1930, 46 Stat. 3029, is not necessary for the proper care and management of the objects of scientific interest situated on the lands within the said monument; and

WHEREAS it appears that such land is needed for the construction of Idaho State Highway No. 22, by the State of Idaho:

NOW, THEREFORE, I, Franklin D. Roosevelt, President of the United States of America, under and by virtue of the authority vested in me by section 2 of the act of June 8, 1906, c. 3060, 34 Stat. 225, U. S. C., title 16, sec. 431, do proclaim that a strip of land situated in section 3, Township 1 North, Range 24 East, and sections 25, 34, 35 and 36, Township 2 North, Range 24 East, Boise Meridian, Butte County, Idaho, as shown on a map prepared by the Department of Public Works, Bureau of Highways, State of Idaho, on file in the General Land Office, Department of the Interior, bearing the title

"FAP 128-E(1)
Map showing right-of-way across
Craters of the Moon National
Monument – Butte County – Idaho
February 1941 – Scale 1 in = 400 ft"

is hereby excluded from the Craters of the Moon National Monument.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 18th day of July in the year of our Lord nineteen hundred and forty-one, and of the Independence of the United States the one hundred sixty-sixth.

[SEAL]

FRANKLIN D. ROOSEVELT.

By the President:
SUMNER WELLES,
Acting Secretary of State.

Proclamation 3506

Presidential Documents

From Federal Register of Nov. 22, 1962

Title 3—THE PRESIDENT
Proclamation 3506
ADDITION TO THE CRATERS OF THE MOON NATIONAL MONUMENT, IDAHO
By the President of the United States of America
A Proclamation

WHEREAS the Craters of the Moon National Monument, Idaho, established by Proclamation No. 1694 of May 2, 1924, was reserved and set apart as an area that contains a remarkable fissure eruption together with its associated volcanic cones, craters, rifts, lava flows, caves, natural bridges, and other phenomena characteristic of volcanic action that are of unusual scientific value; and

WHEREAS it appears that it would be in the public interest to add to the Craters o the Moon National Monument a 180-acre kipuka, a term of Hawaiian origin for an island of vegetation completely surrounded by lava, that is scientifically valuable for ecological studies because it contains a mature, native sagebrush-grassland association which has been undisturbed by man or domestic livestock; and to add to the monument the intervening lands between the kipuka and the present monument boundaries:

NOW, THEREFORE, I, JOHN F. KENNEDY, President of the United States of America, by virtue of the authority vested in me by Section 2 of the Act of June 8, 1906 (34 Stat. 225; 16 U.S.C. 431), and subject to valid existing rights do proclaim that the following-described lands are hereby added to and reserved as a part of the Craters of the Moon National Monument:

BOISE MERIDIAN, IDAHO

T. 1 S., R. 24 E.
sec. 3, W-1/2
All of section 4, 5, 8, 9, 17, 18 and 19
sec. 10, W-1/2
sec. 20, W-1/2 and W-1/2 E-1/2
sec. 29, NW-1/4 and W-1/2 NE-1/4
sec. 30, NE-1/4;
comprising 5,360 acres, more or less.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy or remove any of the features or objects of this monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this nineteenth day of November in the year of our Lord nineteen hundred and sixty-two, and of the Independence of the United States of America the one hundred and eighty-seventh.

[SEAL]

JOHN F. KENNEDY

By the President
DEAN RUSK
Secretary of State.

Omnibus Parks and Public Lands Management Act of 1996

Public Law 104-333
104th Congress

An Act

To provide for the administration of certain Presidio properties at minimal cost to <<NOTE: Nov. 12, 1996 - [H.R. 4236]>> the Federal taxpayer, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, <<NOTE: Omnibus Parks and Public Lands Management Act of 1996. 16 USC 1 note.>>

SEC. 205. CRATERS OF THE MOON NATIONAL MONUMENT BOUNDARY ADJUSTMENT.

(a) Boundary Revision.—The boundary of Craters of the Moon National Monument, Idaho, is revised to add approximately 210 acres and to delete approximately 315 acres as generally depicted on the map entitled "Craters of the Moon National Monument, Idaho, Proposed 1987 Boundary Adjustment'', numbered 131-80,008, and dated October 1987, which map shall be on file and available for public inspection in the office of the National Park Service, Department of the Interior.

(b) Administration and Acquisition.—Federal lands and interests therein deleted from the boundary of the national monument by this section shall be administered by the Secretary of the Interior through the Bureau of Land Management in accordance with the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.), and Federal lands and interests therein added to the national monument by this section shall be administered by the Secretary as part of the national monument, subject to the laws and regulations applicable thereto. The Secretary is authorized to acquire private lands and interests therein within the boundary of the national monument by donation, purchase with donated or appropriated funds, or exchange, and when acquired they shall be administered by the Secretary as part of the national monument, subject to the laws and regulations applicable thereto.

Federal Register

Wednesday,
November 15, 2000

Part VII

The President

Federal Register
Vol. 65, No. 221
Wednesday, November 15, 2000

Presidential Documents

Title 3—

The President

Proclamation 7373 of November 9, 2000

Boundary Enlargement of the Craters of the Moon National Monument

By the President of the United States of America

A Proclamation

The Craters of the Moon National Monument was established on May 2, 1924 (Presidential Proclamation 1694), for the purpose of protecting the unusual landscape of the Craters of the Moon lava field. This ''lunar'' landscape was thought to resemble that of the Moon and was described in the Proclamation as ''weird and scenic landscape peculiar to itself.'' The unusual scientific value of the expanded monument is the great diversity of exquisitely preserved volcanic features within a relatively small area. The expanded monument includes almost all the features of basaltic volcanism, including the craters, cones, lava flows, caves, and fissures of the 65-mile-long Great Rift, a geological feature that is comparable to the great rift zones of Iceland and Hawaii. It comprises the most diverse and geologically recent part of the lava terrain that covers the southern Snake River Plain, a broad lava plain made up of innumerable basalt lava flows that erupted during the past 5 million years.

Since 1924, the monument has been expanded and boundary adjustments made through four presidential proclamations issued pursuant to the Antiquities Act (34 Stat. 225, 16 U.S.C. 431). Presidential Proclamation 1843 of July 23, 1928, expanded the monument to include certain springs for water supply and additional features of scientific interest. Presidential Proclamation 1916 of July 9, 1930, Presidential Proclamation 2499 of July 18, 1941, and Presidential Proclamation 3506 of November 19, 1962, made further adjustments to the boundaries. In 1996, a minor boundary adjustment was made by section 205 of the Omnibus Parks and Public Lands Management Act of 1996 (Public Law 104–333, 110 Stat. 4093, 4106).

This Proclamation enlarges the boundary to assure protection of the entire Great Rift volcanic zone and associated lava features, all objects of scientific interest. The Craters of the Moon, Open Crack, Kings Bowl, and Wapi crack sets and the associated Craters of the Moon, Kings Bowl, and Wapi lava fields constitute this volcanic rift zone system. Craters of the Moon is the largest basaltic volcanic field of dominantly Holocene age (less than 10,000 years old) in the conterminous United States. Each of the past eruptive episodes lasted up to several hundred years in duration and was separated from other eruptive episodes by quiet periods of several hundred years to about 3,000 years. The first eruptive episode began about 15,000 years ago and the latest ended about 2,100 years ago.

Craters of the Moon holds the most diverse and youngest part of the lava terrain that covers the southern Snake River Plain of Idaho, a broad plain made up of innumerable basalt lava flows during the past 5 million years. The most recent eruptions at the Craters of the Moon took place about 2,100 years ago and were likely witnessed by the Shoshone people, whose legend speaks of a serpent on a mountain who, angered by lightening, coiled around and squeezed the mountain until the rocks crumbled and melted, fire shot from cracks, and liquid rock flowed from the fissures as the mountain exploded. The volcanic field now lies dormant, in the latest of a series of quiet periods that separate the eight eruptive episodes

during which the 60 lava flows and 25 cinder cones of this composite volcanic field were formed. Some of the lava flows traveled distances of as much as 43 miles from their vents, and some flows diverged around areas of higher ground and rejoined downstream to form isolated islands of older terrain surrounded by new lava. These areas are called ''kipukas.''

The kipukas provide a window on vegetative communities of the past that have been erased from most of the Snake River Plain. In many instances, the expanse of rugged lava surrounding the small pocket of soils has protected the kipukas from people, animals, and even exotic plants. As a result, these kipukas represent some of the last nearly pristine and undisturbed vegetation in the Snake River Plain, including 700-year-old juniper trees and relict stands of sagebrush that are essential habitat for sensitive sage grouse populations. These tracts of relict vegetation are remarkable benchmarks that aid in the scientific study of changes to vegetative communities from recent human activity as well as the role of natural fire in the sagebrush steppe ecosystem.

The Kings Bowl lava field and the Wapi lava field are included in the enlarged monument. The Kings Bowl field erupted during a single fissure eruption on the southern part of the Great Rift about 2,250 years ago. This eruption probably lasted only a few hours to a few days. The field preserves explosion pits, lava lakes, squeeze-ups, basalt mounds, and an ash blanket. The Wapi field probably formed from a fissure eruption simultaneously with the eruption of the Kings Bowl field. With more prolonged activity over a period of months to a few years, the Wapi field formed a low shield volcano. The Bear Trap lava tube, located between the Craters of the Moon and the Wapi lava fields, is a cave system more than 15 miles long. The lava tube is remarkable for its length and for the number of well preserved lava-cave features, such as lava stalactites and curbs, the latter marking high stands of the flowing lava forever frozen on the lava tube walls. The lava tubes and pit craters of the monument are known for their unusual preservation of winter ice and snow into the hot summer months, due to shielding from the sun and the insulating properties of the basalt.

Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), authorizes the President, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.

WHEREAS it appears that it would be in the public interest to reserve such lands as an addition to the Craters of the Moon National Monument:

NOW, THEREFORE, I, William J. Clinton, President of the United States of America, by the authority vested in me by section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), do proclaim that there are hereby set apart and reserved as an addition to the Craters of the Moon National Monument, for the purpose of protecting the objects identified above, all lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the map entitled ''Craters of the Moon National Monument Boundary Enlargement'' attached to and forming a part of this proclamation. The Federal land and interests in land reserved consist of approximately 661,287 acres, which is the smallest area compatible with the proper care and management of the objects to be protected.

All Federal lands and interests in lands within the boundaries of this monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale, or leasing or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating

to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument. For the purpose of protecting the objects identified above, the Secretary shall prohibit all motorized and mechanized vehicle use off road, except for emergency or authorized administrative purposes.

Lands and interests in lands within the proposed monument not owned by the United States shall be reserved as a part of the monument upon acquisition of title thereto by the United States.

The Secretary of the Interior shall prepare a transportation plan that addresses the actions, including road closures or travel restrictions, necessary to protect the objects identified in this proclamation.

The Secretary of the Interior shall manage the area being added to the monument through the Bureau of Land Management and the National Park Service, pursuant to legal authorities, to implement the purposes of this proclamation. The National Park Service and the Bureau of Land Management shall manage the monument cooperatively and shall prepare an agreement to share, consistent with applicable laws, whatever resources are necessary to manage properly the monument; however, the National Park Service shall have primary management authority over the portion of the monument that includes the exposed lava flows, and shall manage the area under the same laws and regulations that apply to the current monument. The Bureau of Land Management shall have primary management authority over the remaining portion of the monument, as indicated on the map entitled, ''Craters of the Moon National Monument Boundary Enlargement.''

Wilderness Study Areas included in the monument will continue to be managed under section 603(c) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701–1782).

The establishment of this monument is subject to valid existing rights.

Nothing in this proclamation shall be deemed to enlarge or diminish the jurisdiction of the State of Idaho with respect to fish and wildlife management.

This proclamation does not reserve water as a matter of Federal law. Nothing in this reservation shall be construed as a relinquishment or reduction of any water use or rights reserved or appropriated by the United States on or before the date of this proclamation. The Secretary shall work with appropriate State authorities to ensure that water resources needed for monument purposes are available.

Nothing in this proclamation shall be deemed to enlarge or diminish the rights of any Indian tribe.

Laws, regulations, and policies followed by the Bureau of Land Management in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the monument administered by the Bureau of Land Management.

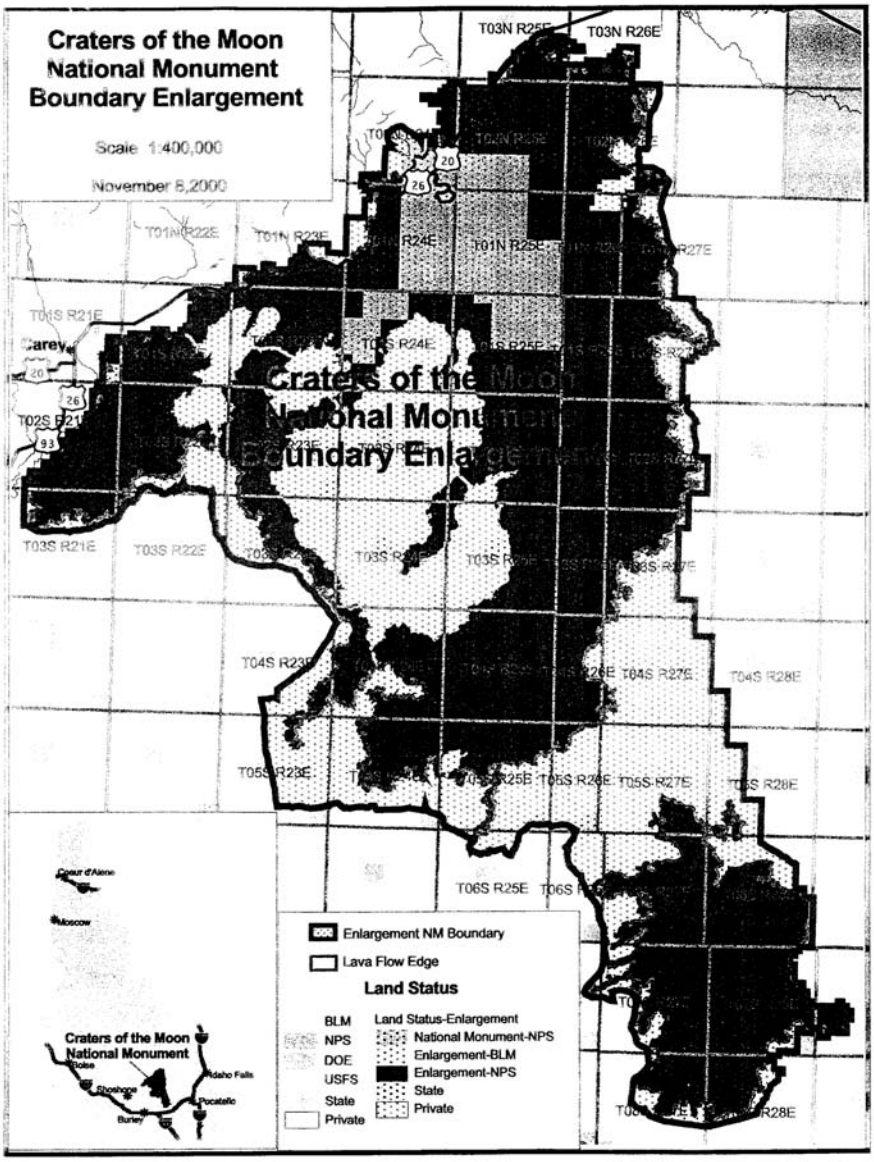
Nothing in this proclamation shall be deemed to revoke any existing withdrawal, reservation, or appropriation; however, the national monument shall be the dominant reservation.

Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this ninth day of November, in the year of our Lord two thousand, and of the Independence of the United States of America the two hundred and twenty-fifth.

William J. Clinton

Billing code 3195–01–P



[FR Doc. 00–29452
Filed 11–14–00; 8:46 am]
Billing code 3195–01–C

Federal Legislation PL 107-213

Public Law 107-213
107th Congress

An Act

To redesignate certain lands within the Craters of the Moon National Monument, and for other purposes. <<NOTE: Aug. 21, 2002 - [H.R. 601]>>

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

SECTION 1. <<NOTE: 16 USC 431 note, 698w.>> SPECIAL MANAGEMENT REQUIREMENTS FOR FEDERAL LANDS RECENTLY ADDED TO CRATERS OF THE MOON NATIONAL MONUMENT, IDAHO.

(a) Redesignation.—The approximately 410,000 acres of land added to the Craters of the Moon National Monument by Presidential Proclamation 7373 of November 9, 2000, and identified on the map accompanying the Proclamation for administration by the National Park Service, shall, on and after the date of enactment of this Act, be known as the ``Craters of the Moon National Preserve''.

(b) Administration.—

(1) In general.—Except as provided by paragraph (2), the Craters of the Moon National Preserve shall be administered in accordance with—

(A) Presidential Proclamation 7373 of November 9, 2000;

(B) the Act of June 8, 1906, (commonly referred to as the "Antiquities Act"; 34 Stat. 225; 16 U.S.C. 431); and

(C) the laws 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 (16 U.S.C. 1 et seq.).

(2) Hunting.—The Secretary of the Interior shall permit hunting on lands within the Craters of the Moon National Preserve in accordance with the applicable laws of the United States and the State of Idaho. The Secretary, in consultation with the State of Idaho, may designate zones where, and establish periods when, no hunting may be permitted for reasons of public safety, protection of the area's resources, administration, or public use and enjoyment. Except in emergencies, any regulations prescribing such restrictions relating to hunting shall be put into effect only after consultation with the State of Idaho.

Approved August 21, 2002.

LEGISLATIVE HISTORY—H.R. 601:

– –

HOUSE REPORTS: No. 107-34 (Comm. on Resources).
SENATE REPORTS: No. 107-181 (Comm. on Energy and Natural Resources).
CONGRESSIONAL RECORD:

Vol. 147 (2001): May 1, considered and passed House.
Vol. 148 (2002): Aug. 1, considered and passed Senate.

Wilderness Designation
Public Law 91-504

An Act to designate certain lands as wilderness. (84 Stat. 1104)

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

* * * * * * *

DESIGNATION OF WILDERNESS AREAS WITHIN NATIONAL PARKS AND MONUMENTS

SEC. 2. In accordance with Section 3(c) of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1132(c)), the following lands are hereby designated as wilderness:

(a) certain lands in the Craters of the Moon National Monument, which comprise about forty-three thousand two hundred and forty-three acres and which are depicted on a map entitled "Wilderness Plan, Craters of the Moon National Monument, Idaho", numbered 131-91,000 and dated March 1970, which shall be known as the "Craters of the Moon National Wilderness Area";

SEC. 4. As soon as practicable after this Act takes effect, a map and a legal description of each wilderness area shall be filed with the Interior and Insular Affairs Committees of the United States Senate and the House of Representatives, and such description shall have the same force and effect as if included in this Act: *Provided however,* That correction of clerical and typographical errors in such legal description and map may be made.

SEC. 5. Wilderness areas designated by or pursuant to this Act shall be administered in accordance with the provisions of the Wilderness Act governing areas designated by that Act as wilderness areas, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this Act, and any reference to the Secretary of Agriculture shall be deemed to be a reference to the Secretary who has administrative jurisdiction over the area.

Approved October 23, 1970.

APPENDIX C: BOUNDARY ADJUSTMENTS

The boundary of a national monument may be modified only as authorized by law. This appendix describes four minor proposed changes to the external boundary of the Monument and three proposed changes to the boundary between NPS and BLM lands within the Monument. The agencies are recommending these boundary modifications for the reasons described below. Congress would have to pass legislation authorizing a modification, and the President would need to sign that legislation for the modification to be authorized by law.

As part of the planning process, the Agencies have identified and evaluated boundary adjustments that may be necessary or desirable in order to carry out the purposes of the Craters of the Moon National Monument and Preserve. Boundary adjustments have been recommended to:

- Protect significant resources and values, or to enhance opportunities for public enjoyment related to Monument purposes;

- Address operational and management issues, such as the need for access or the need for boundaries to correspond to logical boundary delineations such as topographic or other natural features or roads; or

- Otherwise protect Monument resources that are critical to fulfilling Monument purposes.

All recommendations for boundary changes have met the following two criteria:

- The added lands will be feasible to administer, considering their size, configuration, and ownership, and hazardous substances, costs, the views of and impacts on local communities and surrounding jurisdictions, and other factors such as the presence of exotic species; and

- Other alternatives for management and resource protection are not adequate.

These criteria apply conversely to recommendations for the deletion of lands from the authorized boundaries of the Monument. For example, before recommending the deletion of land, a finding was made that the land did not include a significant resource, value, or opportunity for public enjoyment related to the purposes of the Monument. Full consideration was given to present and future needs before a recommendation was made to delete lands from the authorized boundaries of the Monument.

Boundary adjustments essentially fall into three distinct categories: (1) technical revisions; (2) minor revisions based upon statutorily defined criteria; and (3) revisions to include adjacent real property acquired by donation, purchased with donated funds, transferred from any other federal agency, or obtained by exchange. Adjacent real property is considered to be land located contiguous to, but outside the boundary of the Monument. The modifications proposed here are technical and minor.

The following is a list of recommended boundary modifications including legal description, approximate acreage, and a brief summary of the justification for each proposed change. See Figure C-1 (A through E) for specific locations.

1) T2N, R24E, Sec 24 — Approximately 90 acres
   a. Recommended transfer of management from NPS to BLM to provide for the continuation of historic grazing. With the expansion of the Monument, the NPS has assumed management of all lava covered lands within the Monument (indicated by the dark brown coloring on 7.5 minute USGS color maps). The NPS management boundary would be moved eastward from the lava edge illustrated on the USGS 7.5 minute map to the first road. This adjustment would be bounded at the southern end by the Craters of the Moon Wilderness Area. A closer evaluation of this particular site revealed relatively low evidence of lava and/or unique features. As such, this land can be more closely identified with most other BLM managed portions of the Monument and should be managed accordingly.
2) T2N, R24E, Sec 11 — Approximately 120 acres
   a. Recommended transfer of management from NPS to BLM to provide for the continuation of historic grazing. With the expansion of the Monument, the NPS has assumed management of all lava covered lands within the Monument (indicated by the dark brown coloring on 7.5 minute USGS color maps). The NPS management boundary would be moved eastward from the lava edge illustrated on the USGS 7.5 minute map to the first road. A closer evaluation of this particular site revealed relatively low evidence of lava and/or unique features. As such, this land can be more closely identified with most other BLM managed portions of the Monument and should be managed accordingly.
3) T2N, R25E, Sec 5 — Approximately 1 acre
   a. Recommended inclusion of land in the Monument from the BLM to expand the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This would provide for a more consistent and manageable boundary.
4) T2N, R25E, Sec 5 — Approximately 60 acres
   a. Recommended deletion of land from the Monument to adjust the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This would provide for a more consistent and manageable boundary. This land does not provide exceptional opportunities for public enjoyment, nor does it contain features for which the Monument was established to protect.
   b. It would also eliminate a mineral material site from the Monument.
5) T3N, R25E, Sec 27 — Approximately 2 acres
   a. Recommended deletion of land from the Monument to adjust the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This would provide for a more consistent and manageable boundary.
6) T3N, R25E, Sec 27 — Approximately 3 acres
   a. Recommended deletion of land from the Monument to adjust the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This would provide for a more consistent and manageable boundary.
7) T5S, R28E, Sec 36 — Approximately 230 acres
   a. Recommended transfer of management from NPS to BLM to provide for the continuation of historic grazing. With the expansion of the Monument, the NPS has assumed management of all lava covered lands within the Monument (indicated by the dark brown coloring on 7.5 minute USGS color maps). A closer evaluation of this particular site revealed relatively low evidence of lava and/or unique features. As such, this land can be more closely identified with most other BLM managed portions of the Monument and should be managed accordingly.
8) T1S, R22E, Sec 5 — Approximately 2 acres
   a. Recommended adjustment of the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This would provide for a more consistent and manageable boundary.

The agencies have consulted with the relative interests to arrive at these proposals which are consistent with enabling Legislation, the Proclamations, and current management guidelines. The agencies received no other proposals for boundary modifications during the scoping for the Draft Plan / DEIS.

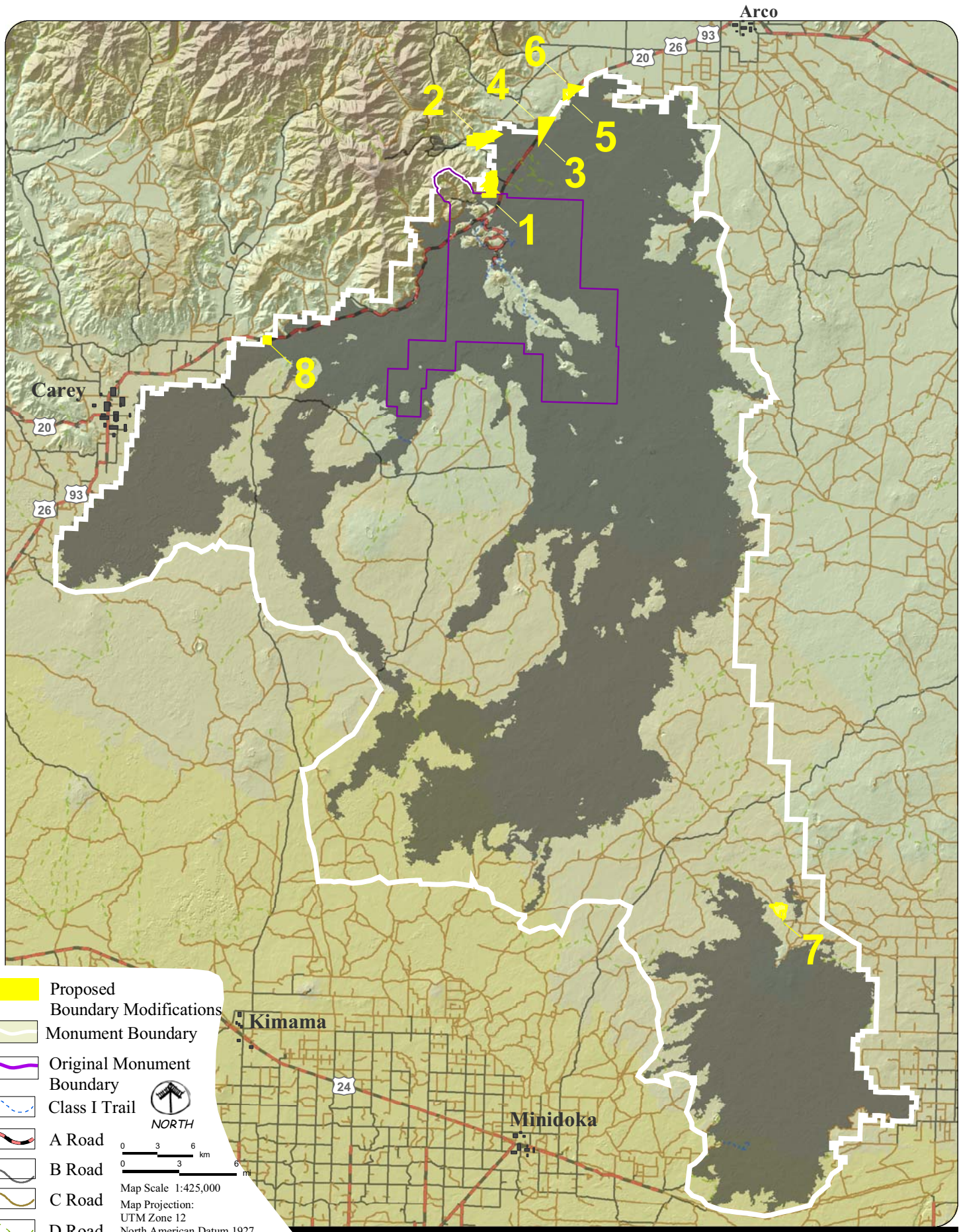


FIGURE C1-A

PROPOSED BOUNDARY MODIFICATIONS

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

* Proposed boundary modifications have been oversized for graphic presentation and are not to scale.

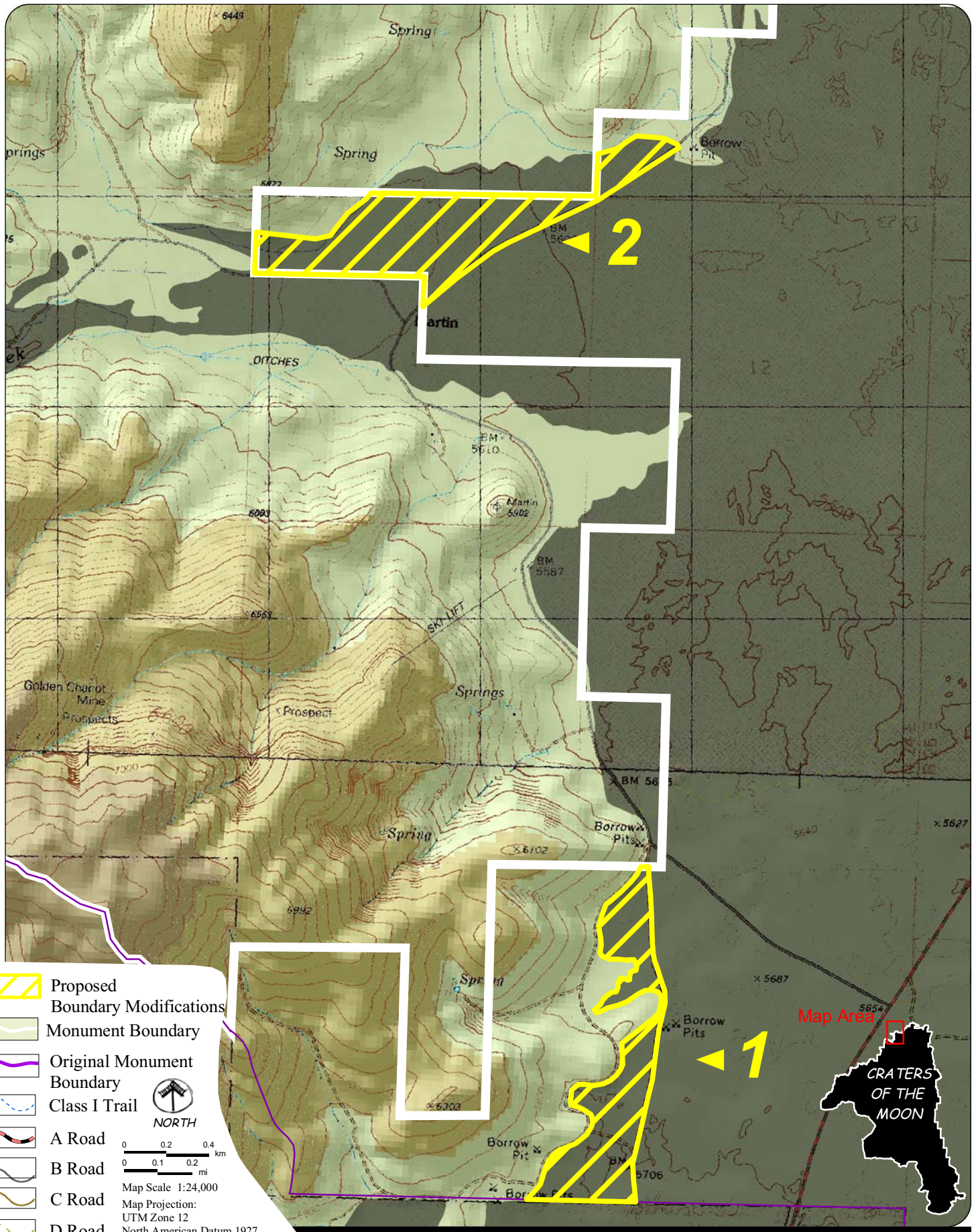


FIGURE C1-B

PROPOSED BOUNDARY MODIFICATIONS

Craters of the Moon National Monument & Preserve

U.S. Department of the Interior * National Park Service * Bureau of Land Management

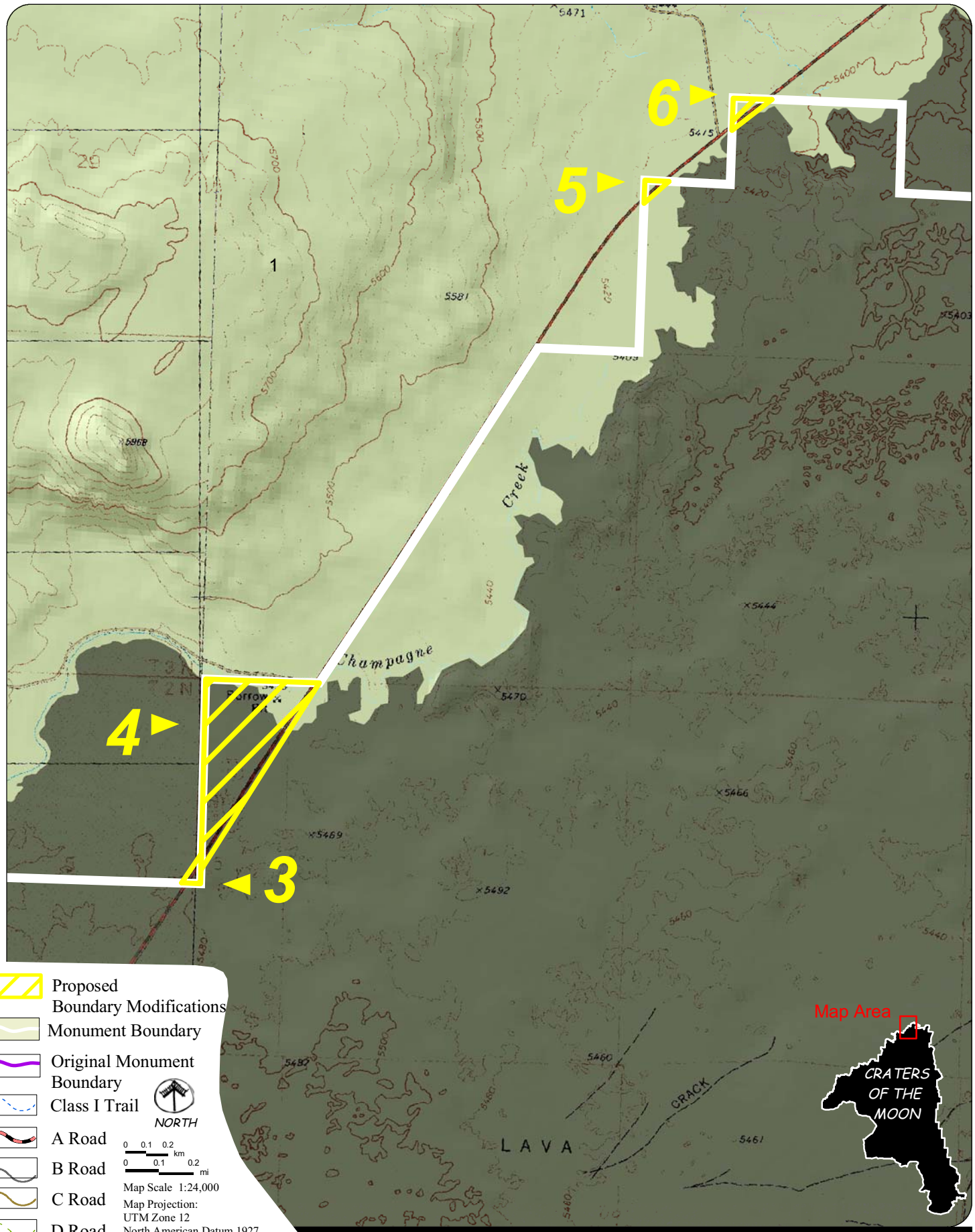


FIGURE C1-C

PROPOSED BOUNDARY MODIFICATIONS

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

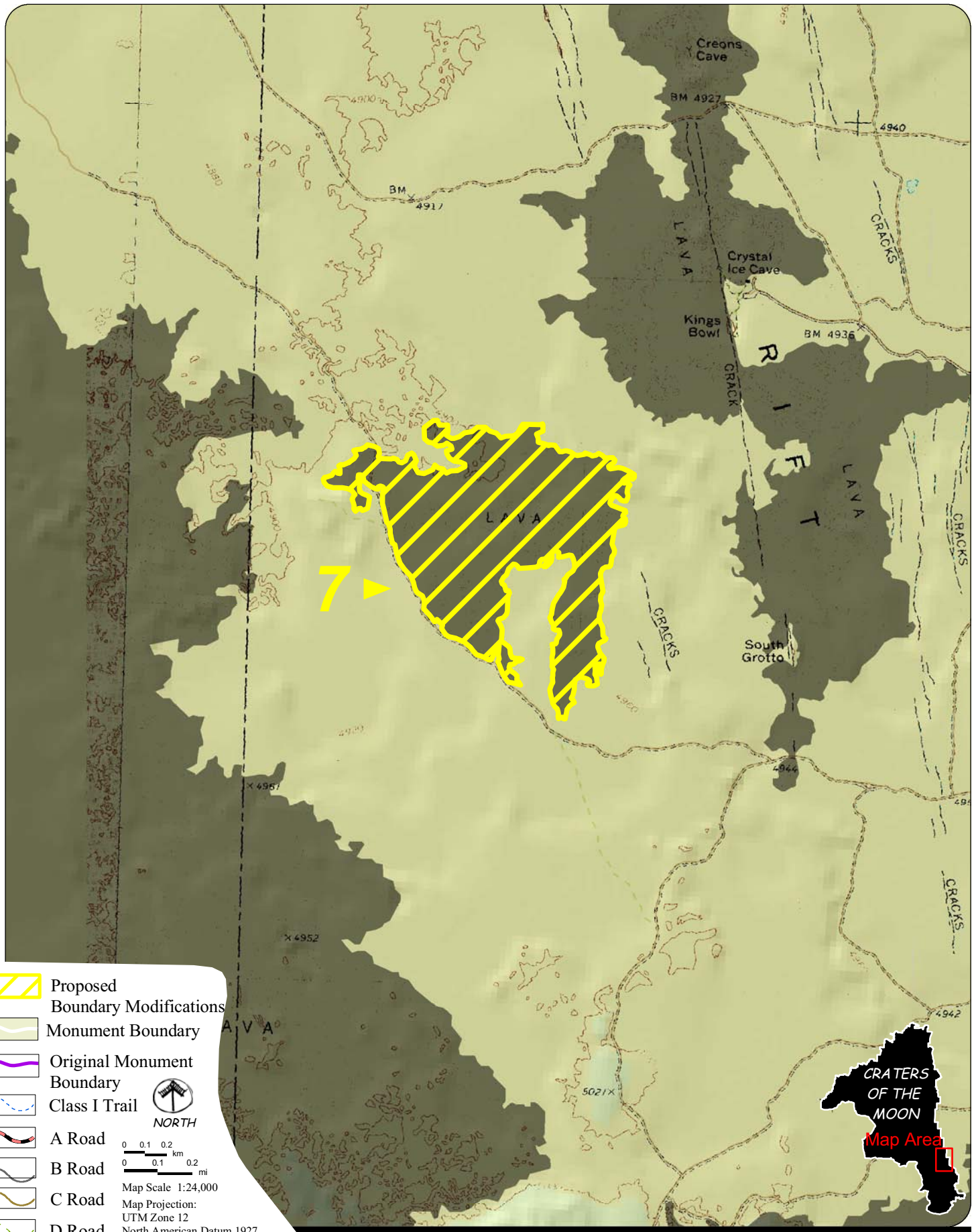


FIGURE C1-D

PROPOSED BOUNDARY MODIFICATIONS

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

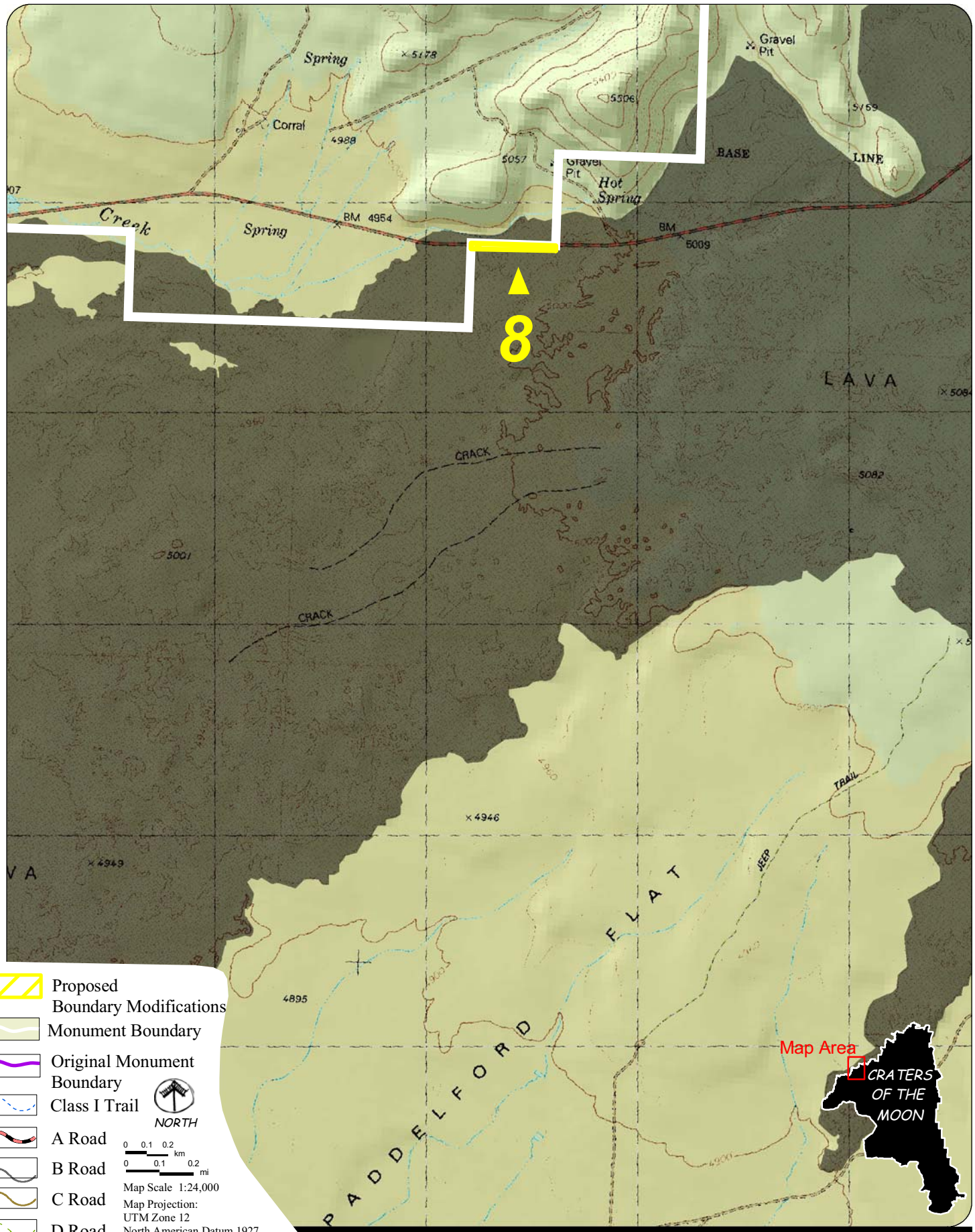


FIGURE C1-E

PROPOSED BOUNDARY MODIFICATIONS

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

GLOSSARY, BIBLIOGRAPHY, LIST OF PREPARERS, AND INDEX

GLOSSARY

a'a: A Hawaiian term for basaltic lava flows that are typically rough and jagged with a clinkery surface.

Allotment: An area allocated for livestock use by one or more qualified grazing permittees including prescribed numbers and kinds of livestock under one plan of management.

Animal Unit Month (AUM): The amount of forage required to sustain one mature cow or the equivalent (e.g., five sheep or five goats), based on an average daily forage consumption of 26 pounds of dry matter per day.

Area of Critical Environmental Concern (ACEC): An area of public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources; or other natural systems or processes, or to protect humans from natural hazards.

Biological Soil Crust: A complex mosaic of mosses, lichens, algai, cyanobacteria, and fungi that occupies the soil surface in arid and semiarid plant communities. These organisms weave through the soil and essentially glue the surface particles together, forming a protective coating against erosive forces.

Candidate Species: Species not protected under the Endangered Species Act but under consideration by the U.S. Fish and Wildlife Service for inclusion on the list of federally threatened or endangered species.

Climax Vegetation: The final vegetation community and highest ecological development of a plant community that emerges after a series of successive vegetational stages. The climax community perpetuates itself indefinitely unless disturbed by outside forces.

Cultural Resource: The fragile and nonrenewable remains of human activity that are found in historic districts, sites, buildings, and artifacts and that are important in past and present human events.

Desired Future Condition: Used to describe the future condition of resources to meet management objectives. Desired future condition is based on ecological, social, and economic considerations during the land and resource management planning process.

Diversity (Species): (1) The absolute number of species in a community, species richness; and (2) a measure of the number of species and their relative abundance in a community; low diversity refers to few species or unequal abundance, high diversity to many species, or equal abundance.

Ecological Succession: An ecosystem's gradual evolution to a stable state or climax. If through the ability of its populations and elements, an ecosystem can absorb changes, it tends to persist and become stable through time.

Endangered Species: Any animal or plant species that is in danger of extinction throughout all of a significant portion of its range. These species are listed by the U.S. Fish and Wildlife Service under provisions of the Endangered Species Act.

Environmental Impact Statement (EIS): A detailed written statement that is required by the National Environmental Policy Act for a proposed major federal action significantly affecting the quality of the human environment. The findings from the document are published in a Record of Decision.

Ethnographic Resource: A site structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it.

Exotic Species: An animal or plant species that is not a part of an area's original fauna or flora.

Fire Condition Class (FCC): A classification for vegetation communities relative to the departure of the fire regime (frequency and severity of fire) from historic conditions. There are three fire condition classes ranging from FCC1 (low departure) to FCC3 (high departure).

FCC1 represents low departure from the historic fire regime. Key ecosystem components include a healthy mosaic of various successional stages for each vegetation type. For example, these components would include sagebrush steppe communities with native perennial grass and forb understories, or aspen or Douglas fir communities with trees of variable age, openings to allow tree regeneration, and an abundance of understory grasses and forbs.

FCC2 represents moderate departure from the historic fire regime, resulting in some risk of more frequent fire return intervals and/or greater levels of severity.

FCC3 represents high departure from the historic fire regime, resulting in high risk of resource loss due to frequent fire return intervals and/or high levels of severity. An example of FCC3 is an area that was formerly low-elevation sagebrush steppe that is currently dominated by an understory or monoculture of cheatgrass.

Fire Suppression: All work and activities associated with fire extinguishing operations, beginning with the discovery and continuing until the fire is completely extinguished.

Fissure Caves: A cave formed from a fissure, i.e., an elongated fracture or crack related to volcanic action.

Fissure/Vent: An elongate fracture or crack at the surface from which molten rock and volcanic gases escape onto surface.

Forb: A broad-leaved plant (herb) whose stem does not produce woody, persistent tissue and generally dies back at the end of each growing season, such as arrowleaf balsamroot.

Government-to-Government Consultation: The active, affirmative process between agencies of the federal government and tribal governments under the laws of the United States. Tribal governments are considered domestic sovereignties with primary and independent jurisdictions over tribal lands. Consultation consists of: (1) identifying and seeking input from appropriate Native American governing bodies, community groups and individuals; and (2) considering their interests as a necessary and integral part of the decision-making process. The aim of consultation is to involve affected Native Americans in the identification of issues and the definition of the range of acceptable management options.

Indicator: Components or attributes of an ecosystem that can be observed and/or measured that provides evidence of the function, productivity, health and/or condition of the ecosystem.

Inholding: A nonfederal parcel of land that is completely surrounded by federal land.

Integrated Pest Management (IPM): The use of all appropriate technologies and management techniques to bring about an effective degree of pest prevention and suppression in a cost-effective and environmentally sound manner.

Integrated Weed Management (IWM): A balanced approach to managing resources including the following processes: prevention, inventory, control, monitoring, and reporting. With IWM the actions include preventing weeds from invading; proper identification and knowledge of invasive weed species; inventory, mapping and monitoring of weed populations and damage. Weed control decisions are based on knowing potential damage, cost of control method, and environmental impact of the weed and control decision; using control strategies that may include a combination of methods to reduce the weed population to an acceptable level; and, evaluating the effectiveness and effects of management decisions.

Invasive Species: In this document, the definition for this term is "a plant or animal species (typically non-native) that rapidly spreads into or displaces a desirable native species or community." [Exception: An "invasive species," as defined in Executive Order 13112, is a species that is (1) non-native (or alien) to the ecosystem under consideration, and (2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive species can be plants, animals, and other organisms (e.g., microbes)].

Key Habitats: Key habitats contain generally large-scale, intact sagebrush steppe areas that provide Greater sage-grouse habitat during some portion of the year.

Source Habitat: Source habitats are a subset of Key habitat that support concentrated Greater sage-grouse populations. Source habitats are also commonly referred to as population strongholds. Data indicate that Greater sage-grouse populations in Source habitats have been generally stable or increasing since the drought of the early 1990s.

Isolated Habitat: Isolated habitats are a subset of Key habitat that support relatively small Greater sage-grouse populations. Isolated habitats are separated from other Key habitat by developed land or unsuitable habitat, such as farmland, forests, or grassland.

Kipuka: < kee' poo ka > Hawaiian word meaning "key", or opening such as for a door. A mound of older land, usually covered by vegetation, which is surrounded by a younger lava flow.

Lava Tube: Subterranean openings that form when the surface of flowing lava congeals forming a crust. Insulated from the cooling air, the lava underneath the solidified crust continues to flow. As the lava eruption ceases, the tube drains, and a large tubular cave may be left.

Lek: An assembly area where birds, especially Greater sage-grouse, carry on display and courtship behavior.

Limited Designation (motorized travel): BLM designation meaning that some restrictions apply to motorized travel on a specified route or in a specified area.

Lithic Scatter: Pertaining to or composed of stone scatter; a form of an archeological resource.

Litter: Dead plant or animal material on the soil surface.

Livestock Developments: Physical facilities, such as fences, water developments, and corrals that are used to handle and control livestock.

Management Framework Plan (MFP): Bureau of Land Management land use plan; predecessor to the Resource Management Plan (RMP).

Mineral Materials: Materials such as common varieties of sand, stone, gravel, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended.

Multiple Use Management: The definition of multiple use is defined in the Federal Land Policy and Management Act of 1976 as follows:

> The management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resource or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform with changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historic values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of the uses that will give the greatest economic return or the greatest output.

National Environmental Policy Act of 1969 (NEPA): The federal law that established a national policy for the environment and requires federal agencies to (1) become aware of the environmental ramifications of their proposed actions, (2) fully disclose to the public proposed federal actions and provide a mechanism for public input to federal decision-making, and (3) prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

National Register of Historic Places (NRHP): The official list, established by the National Historic Preservation Act, of the nation's cultural resources worthy of preservation. The national register lists archeological, historic, and architectural properties (districts, sites, buildings, structures, and objects) nominated for their local, state, or national significance by state and federal agencies and approved by the national register staff.

Native American Graves Protection and Repatriation Act (NAGPRA): Requires Federal Agencies to inventory human remains and associated funerary objects in existing federal museum collections and to provide culturally affiliated tribes with the inventory of collections. The act also requires repatriation, on request, to the culturally affiliated tribes.

Native American Tribe: Any indigenous cultural group in the conterminous United States that the Secretary of the Interior recognizes as possessing tribal status, i.e. federally recognized (listed annually in the Federal Register).

Native Species: Plants or animals indigenous to the area.

Noxious Weeds: According to the Federal Noxious Weed Act (Public Law 93-629), a weed that causes adverse effects on humans and their environment and is therefore detrimental to public health and the agriculture and commerce of the United States.

Pahoehoe: A Hawaiian term for a basaltic lava flow that has a smooth, billowy, or ropy surface.

Particulate Matter: Fine liquid or solid particles suspended in the air and consisting of dust, smoke, mist, fumes, and compounds containing sulfur, nitrogen, and metals, typically averaging one micron or smaller in diameter.

Permittee: A person or organization legally permitted to graze a specific number and class of livestock on designated areas of public land during specified seasons each year.

Phreatic: Of or relating to groundwater.

Pictograph: Aboriginally painted designs on natural rock surfaces.

Pioneer Plants: Those that establish themselves first on disturbed areas or bare soil.

Pleistocene Age: The latest major geological epoch from 11,000 to 2 million years ago, the time of human evolution. Also known as the "Ice Age" due to the multiple expansion and retreat of glaciers.

Prescribed Fire: Controlled application of fire to natural fuels under conditions of weather, fuel moisture, and soil moisture that would allow confinement of the fire to a predetermined area and, at the same time, would produce the intensity of heat and rate of spread required to accomplish certain planned benefits to one or more objectives to wildlife, livestock, and watershed values. The overall objectives are to employ fire scientifically to realize maximum net benefits at minimum environmental damage and acceptable cost.

Public Land: Any land or interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except for (1) land located on the Outer Continental Shelf and (2) land held for the benefit of American Indians, Aleuts, and Eskimos.

Rangeland: Land on which the potential natural vegetation is predominantly grasses, grass-like plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundra, and areas that support certain forb and shrub communities.

Record of Decision (ROD): A document signed by a responsible official recording a decision that was preceded by the preparation of an environment impact statement.

Restoration Habitats: Potential restoration habitats have the potential to provide Greater sage-grouse habitat in the future. These are sagebrush steppe that have been converted to grassland or woodland or are in the successional process of converting to woodland. These areas are located in close proximity to Key or Source habitats. Data indicate that Greater sage-grouse historically occupied these areas and may still utilize some sporadically, such as during migrations. Restoration habitats have a high likelihood of being reoccupied if habitat suitability improves. The following are potential restoration habitats:

- **Restoration Type 1 (R1):** Sagebrush-limited areas with acceptable understory conditions in terms of perennial grass species composition and may include native and seeded grass rangelands. These are important areas to protect from wildfire and encourage sagebrush establishment and retention. Inexpensive management treatments may be needed (e.g., sagebrush and/or forb seedings).
- **Restoration Type 2 (R2):** Existing sagebrush cover in these areas may or may not be adequate to meet the needs of Greater sage-grouse, but understory herbaceous conditions are poor. Undesirable plants such as cheatgrass, medusa head rye, or other exotics are common to dominant.
- **Restoration Type 3 (R3):** Key or Source habitat with juniper or other conifer encroachment. Sagebrush is usually present but is being threatened or reduced by conifer expansion. Opportunities exist for improving habitat through appropriate fire management response, prescribed fire, or chemical or mechanical means.

Rift Zone: Area characterized by an open volcanic fissure.

Right-of-Way (ROW): A permit or an easement that authorizes the use of public land for certain specified purposes, commonly for pipelines, roads, telephone lines, electric lines, and reservoirs. It is also the reference to the land covered by such an easement or permit.

Sacred Site: Any specific, discrete, narrowly delineated location on federal land that is identified by a Native American tribe, or Native American individual determined to be appropriately authoritative representative of a Native American religion, as sacred by virtue of its established religious significance to, or ceremonial use by, a Native American religion.

Sagebrush Obligates: Species restricted to sagebrush habitats during the breeding season or year-round.

Sagebrush Steppe Community: A semi-arid plant community that is characterized by a predominance of big sagebrush and other sagebrush species, plus grasses and forbs.

Section 106 Consultation: Also known as the 36 CFR 800 process. Discussions between a federal agency official and the Advisory Council on Historic Preservation, State Historic Preservation Officer, and other interested parties concerning historic properties that could be affected by a specific undertaking. Section 106 is the portion of the National Historic Preservation Act that outlines the procedure. The procedure is codified in 36 CFR 800.

Section 110: The section of the National Historic Preservation Act that requires federal agencies to complete cultural resources surveys and reports for all its lands and existing projects.

Sensitive Species: Plant and animal species not yet officially listed but that are undergoing status review for listing on the U.S. Fish and Wildlife Service official threatened and endangered list; species whose populations are small and widely dispersed or restricted to a few localities; and species whose numbers are declining so rapidly that official listing may be necessary.

Shield Volcano: A broad, gently sloping volcano that has a flattened dome shape, not unlike that of a knight's shield. Shield volcanoes usually cover a large area and form from overlapping and interfingering, low viscosity lava flows.

Spatter: An accumulation of very fluid pyroclasts (ejected material).

Special Status Species: Wildlife and plant species that are either federally listed as threatened or endangered, proposed threatened or endangered, candidate species, state-listed as threatened or endangered, or listed by a Bureau of Land Management State Director as sensitive or determined priority.

Successional Stage: A stage of development of a plant community with another. Conditions of the prior plant community (or successional stage) create conditions that are favorable for the establishment of the next stage.

Threatened and Endangered Species: As defined in the Endangered Species Act of 1973, as amended (Public Law 93-205; 87 Stat. 884), an endangered species means "any species which is in danger of extinction throughout all or a significant portion of its range" and threatened species means "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Whether a species is threatened or endangered is determined by the following factors: (1) present or threatened destruction, modification, or curtailment of its habitat or range; (2) over-utilization for commercial, sporting, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; or (5) other natural or human-made factors.

Traditional Lifeway Values: Values that are important for maintaining a group's traditional system of religious belief, cultural practice, or social interaction.

Traditional Cultural Properties: A cultural property that is eligible for inclusion in the National Register of Historic Places because of its association with a living community's cultural practices or beliefs that (a) are rooted in that community's history and (b) are important in maintaining the community's continuing cultural identity.

Treaty: A formal agreement between the United States and one or more Native American tribes. Typically, these arrangements ceded lands to the United States, reserving certain rights, privileges, and/or lands to the Native American signatories.

Tree Mold: A tree mold or lava tree forms when lava flows around a tree and chills, leaving behind a "mold" of the space occupied by the tree, or impression of the charred wood. Tree molds can also be horizontal if the tree was knocked down by the lava flow.

Trust Responsibility (also referred to as fiduciary responsibility): The trust responsibility of the United States, executed through the Secretary of the Interior, to uphold obligations of the federal government to federally recognized Native American tribes.

Understory: Herbaceous plant components, including grasses and forbs, which grow beneath the overstory in stand of woody shrubs; or the herbaceous and woody shrubs growing beneath the overstory in a stand of trees.

Valid Existing Rights: Locatable mineral development rights that existed when the Federal Land Policy and Management Act (FLPMA) was enacted on October 21, 1976. Some areas are segregated from entry and location under the Mining Law to protect certain values or allow certain uses. Mining claims that existed as of the effective date of the segregation may still be valid if they can meet the test of discovery of a valuable mineral required under the Mining Law. Determining the validity of mining claims located in segregated lands requires the Bureau of Land Management to conduct a validity examination and is called a "valid existing right" determination.

Way: A road-like feature created and used by vehicles having four or more wheels, but not declared a road by the owner and that receives no maintenance to guarantee regular and continuous use.

Wetland: Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and which under normal circumstances support a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wilderness Area: An area of federal land designated by the United States Congress and defined by the Wilderness Act of 1964 as a place "where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." Designation is aimed at ensuring that these lands are preserved and protected in their natural condition. Wilderness areas, which are generally at least 5,000 acres or more in size, offer outstanding opportunities for solitude or a primitive and unconfined type of recreation; such areas may also contain ecological, geological, or other features that have scientific, scenic, or historical value.

Wilderness Inventory: A written description of resource information and accompanying map of those public lands that meet the wilderness criteria as established under Section 603(a) of the Federal Land Policy and Management Act and Section 2(c) of the Wilderness Act.

Wilderness Study Area (WSA): An area designated by a federal agency as having wilderness characteristics, thus making it worthy of consideration by Congress for wilderness designation.

Wildfire: An unwanted wildland fire, regardless of ignition source, which is unplanned, has escaped control, or does not meet management objectives and therefore requires a suppression response.

Wildland Fire Use (also called "Wildland Fire for Resource Benefit"): A naturally ignited fire allowed to burn under designated conditions to meet resource management objectives.

Withdrawal: Removal or "withholding" of public lands from operation of some or all of the public land laws (settlement, sale, mining, and or mineral leasing). An action that restricts the use or disposal of public lands, segregating the land from the operation of some or all of the public land and/or mineral laws and holding it for a specific public purpose. Withdrawals may also be used to transfer jurisdiction of management to other federal agencies.

BIBLIOGRAPHY

Allaback, Sarah. 2000. Mission 66 Visitor Centers: The History of a Building Type. United States Department of the Interior, National Park Service, Cultural Resources Stewardship and Partnerships, Park Historic Structures and Cultural Landscapes Program. Washington, D.C.

Bart, John. 2001. Personal communication. USGS Wildlife Section.

Belnap, J., J. H. Kaltenecker, R. Rosentreter, J. Williams, S. Leonard, and D. Eldridge. 2001. Biological Soil Crusts: Ecology and Management. Technical Reference TR-1730-2. U.S. Department of the Interior, Bureau of Land Management, Denver, Colorado. 110 pp.

Blaisdell, J. P., R. B. Murray, and E. D. McArthur. 1982. Managing Intermountain Rangelands - Sagebrush-Grass Ranges. USDA Intermountain Forest and Range Experiment Station General Technical Report INT-134. 41pp.

Bunting, S. C., J. L. Kingery, M. A. Hemstrom, M. A. Schroeder, R. A. Gravenmier, and W. J. Hann. 2002. Altered Rangeland Ecosystems in the Interior Columbia Basin. USDA, Forest Service Pacific Research Station General Technical Report. PNW-GTR-553. 20pp.

Falter, M. C. and R. J. Freitag. 1996. Baseline Study of Water Resources on Craters of the Moon National Monument, Idaho. Technical Report NPS/CCSOUI/NRTR-96/06.

Gabler. K. L., L. T. Heady, and J. W. Laundre. 2001. A habitat suitability model for pygmy rabbits (Brachylagus idahoensis) in southeastern Idaho. Western North American Naturalist 61(4):480-489.

Hironaka, M., M. A. Fosberg, A. H. Winward. 1983. Sagebrush-grass Habitat Types of Southern Idaho. Forest, Wildlife, and Range Experiment Station. University of Idaho, Moscow, Idaho. Bulletin No. 35.

Hoffman, Roger A. 1988. Craters of the Moon National Monument Base-line Inventory and Monitoring (Wildlife) Final Report, Report B-88. University of Idaho, Cooperative Park Studies Unit. Moscow, Idaho.

Horning, D. S., Jr., and W. F. Barr. 1970. Insects of Craters of the Moon National Monument, Idaho. University of Idaho College of Agriculture, Miscellaneous Series No. 8. 118 pp.

Hughes, S. S., R. P. Smith, W. R. Hackett, and S. R. Anderson. 1999. Mafic Volcanism and Environmental Geology of the Eastern Snake River Plain, Idaho, in Hughes, S. S. and G. D. Thackray, eds., Guidebook to the Geology of Eastern Idaho: Idaho Museum of Natural History, p. 143-168.

Hurlbutt, D. C. 1998. Order of Partial Decree, Water Right Nos. 34-13586, 34-13587, 34-12383/36-15342, 34-12384/36-15343. 34-12385/36-15344, 34-12386, 34-12387, 34-12388, 34-12389, 3615345, and 36-15346, Presiding Judge, Snake River Basin Adjudication, Fifth Judicial District for the State of Idaho.

Idaho Conservation Data Center. 2002. Glacicvicola bathysciodes species account. <http://fishandgame.idaho.gov/tech/CDC/spp_accounts_invertebrates/glabat.cfm>.

Idaho Sage-grouse Advisory Committee. 2006. Conservation Plan for the Greater Sage-grouse in Idaho.

Jurs, L. P. and A. R. Sands. 2004. An inventory, assessment, and recommended management of shrub steppe vegetation in Laidlaw Park, Little Park, and Paddelford Flat, Craters of the Moon National Monument and Preserve. Unpublished report on file, BLM Shoshone Field Office, Shoshone, Idaho. 45 pp. plus appendices.

Keller, B. 1996. A netting survey of water and cave areas used by bats at Craters of the Moon National Monument, Butte County, Idaho. Unpublished report from Idaho Museum of Natural History.

Kuntz, M. A., D. E. Champion, R. H. Lefebvre, L. A. McBroome, D. R. Mabey, W. D. Stanley, H. R. Covington, J. Ridenhour, and R. B. Stotelmeyer. 1980. Geological and geophysical investigations, and mineral resources potential of the proposed Great Rift Wilderness Area, Idaho. U.S. Geological Survey OFR 80-475.

Kuntz, M. A., D. E. Champion, E. C. Spiker, and R. H. Lefebvre. 1986. Contrasting magma types and steady-state, volume predictable, basaltic volcanism along the Great Rift, Idaho: Geological Society of America Bulletin, 97:579-594.

Kuntz, M. A., D. E. Champion, E. C. Spiker, R. H. Lefebvre, and L. A. McBroome. 1982. The Great Rift and the evolution of the Craters of the Moon lava field, Idaho, in Bonnichsen, B. and Breckenridge, eds., Ceonozoic Geology of Idaho: Idaho Bureau of Mines and Geology Bulletin 26, p. 423-437.

Kuntz, M., D. E. Champion, R. Lefebvre, and H. R. Covington. 1988. Geologic Map of the Craters of the Moon, Kings Bowl, and Wapi lava fields, and the Great Rift volcanic rift zone, south-central Idaho: United States Geological Survey Miscellaneous Investigations Series Map I-1632.

Kuntz, M. A., H. R. Covington, and L. J. Schorr. 1992. An overview of basaltic volcanism of the eastern Snake River Plain, Idaho, in Link, P. K., M. A. Kuntz, and L. B. Platt, eds., Regional Geology of Eastern Idaho and Western Wyoming: Geological Society of America Memoir 179.

Laverty, L. and J. Williams. 2000. Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy. The Forest Service Management Response to the General Accounting Office Report GAO/RCED-99-65. October 13.

Liljeblad, Sven. 1957. Indian Peoples in Idaho. Idaho State College, Pocatello, Idaho.

Liljeblad, Sven. 1960. Indians of Idaho: A Condensed History of Peoples who lived here for more than a Hundred Centuries, Idaho Historical Series 3, Idaho Historical Society, Boise, Idaho.

Louter, D. 1995. Craters of the Moon National Monument Historic Context Statements. National Park Service, Pacific Northwest Region. Seattle, Washington.

Murphy, Robert F. and Yolanda Murphy. 1960. Shoshone-Bannock Subsistence and Society, University of California Anthropological Records 16(7): 293-338. Berkeley, California.

Omernik, J. M. 1986. Map-Ecoregions of the United States, Corvallis Environmental Research Laboratory, U.S. Environmental Protection Agency.

Pierson, E., M. C. Wackenhut, J. S. Altenbach, P. Bradley, P. Call, et al. 1999. Species conservation assessment strategy for Townsend's big-eared bat (Corynorhinus townsendii). Idaho Conservation Effort, Idaho Dept. of Fish and Game, Boise, Idaho.

Ridenour, J. 1979. Mineral Resources of the Wapi Lava Flow, Addition to the Grassland Kipuka Instant Wilderness Study Area, Blaine and Power Counties, Idaho. U.S. Bureau of Mines.

State of Idaho, Department of Agriculture. 2001. Noxious Weed Rules. Section 22-2403, Idaho Code. IDAPA, Title 06, Chapter 22.

Steward, J. H. 1938. Basin-Plateau Aborigial Sociopolitical Groups. Bureau of American Ethnology Bulletin 120. Washington. Reprinted: 1970, University of Utah Press, Salt Lake City.

Treaty with the Eastern Band Shoshoni and Bannock 1868, commonly referred to as the Fort Bridger Treaty (15 Statute 673).

U.S. Department of the Interior and U.S. Department of Agriculture. 1995. Federal Wildland Fire Management Policy & Program Review. 1995. Final Report. December 18. 45p.

U.S. Department of the Interior, Bureau of Land Management. 1980a. Great Rift Proposed Wilderness, Draft Environmental Impact Statement.

U.S. Department of the Interior, Bureau of Land Management. 1980b. Final Environmental Impact Statement: Great Rift Wilderness. Bureau of Land Management, Idaho Falls District, Idaho Falls, Idaho. pp. 83.

U.S. Department of the Interior, Bureau of Land Management. 1981a. Big Desert management framework plan. Shoshone, Idaho.

U.S. Department of the Interior, Bureau of Land Management. 1981b. Sun Valley management framework plan. Idaho Falls, Idaho.

U.S. Department of the Interior, Bureau of Land Management. 1983. Big Lost management framework plan. Idaho Falls, Idaho.

U.S. Department of the Interior, Bureau of Land Management. 1985. Monument resource management plan. Shoshone, Idaho.

U.S. Department of the Interior, Bureau of Land Management. 1986a. H-8410-1-Visual Resource Inventory. BLM Handbook.

U.S. Department of the Interior, Bureau of Land Management. 1986b. H-8431-1-Visual Resource Contrast Rating. BLM Handbook.

U.S. Department of the Interior, Bureau of Land Management. 1987. Final Environmental Impact Statement, Monument Wilderness Study, Shoshone District Office, Shoshone Idaho.

U.S. Department of the Interior, Bureau of Land Management. 1995. H-8550-1-Interim Management Policy for Lands under Wilderness Review. BLM Handbook.

U.S. Department of the Interior, Bureau of Land Management. 1997. Final Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management. BLM Idaho State Office. Boise, Idaho.

U.S. Department of the Interior, Bureau of Land Management. 1999. Cave resources management plan. Upper Snake River District, Idaho. 42 pp.

U.S. Department of the Interior, Bureau of Land Management. 2001. H-6310-1-Wilderness Inventory and Study Procedures. BLM Handbook.

U.S. Department of the Interior, Bureau of Land Management. 2003. Office of Fire and Aviation Instruction Memorandum No. 2003-038 Attachment 1. Bureau of Land Management Fire Management Plan Interim Guidance. Washington D.C. 26 pp

U.S. Department of the Interior, Bureau of Land Management. 2004. Draft Fire, Fuels, and Related Vegetation Management Direction Plan Amendment and Environmental Impact Statement. Upper Snake River District. Idaho Falls, Idaho.

U.S. Department of the Interior, Bureau of Land Management. 2005. Fire Management Plan for the Twin Falls District, South Central Idaho Fire Planning Unit. 266 pp.

U.S. Department of the Interior, Department of Agriculture, Department of Energy, Department of Commerce, Environmental Protection Agency, Department of Defense, Federal Emergency Management Agency, and National Association of State Foresters. 2001. Review and Update of the 1995 Federal Wildland Fire Management Policy. January. 45p.

U.S. Department of the Interior, National Park Service. 1989. Reconnaissance Survey / Expansion of Craters of the Moon National Monument, Idaho. NPS Study Team, Denver Service Center (DSC), p. 31.

U.S. Department of the Interior, National Park Service. 1990. Management Alternatives and Reconnaissance Survey / Expansion of Craters of the Moon National Monument, Idaho. NPS Study Team, Denver Service Center (DSC), 49 pp.

U.S. Department of the Interior, National Park Service. 1992. General Management Plan (GMP), Craters of the Moon National Monument, Idaho. NPS Study Team, Denver Service Center (DSC), 87pp. June.

U.S. Department of the Interior, National Park Service. 1993. Cave Management Program Craters of the Moon National Monument, Idaho.

U.S. Department of the Interior, National Park Service. 1996. Craters of the Moon National Monument Wilderness Management Plan.

U.S. Department of the Interior, National Park Service. 2000a. Craters of the Moon National Monument Wildland Fire Management Plan and Environmental Assessment. 86 pp.

U.S. Department of the Interior, National Park Service. 2000b. National Register of Historic Places Registration Form - Headquarters Area Craters of the Moon National Monument. Columbia Cascades Support Office, Seattle Washington.

U.S. Department of the Interior, National Park Service. 2001. Management Policies. Washington, D.C. Available on the Internet at <http://www.nps.gov/refdesk/mp>.

U.S. Department of the Interior, National Park Service. 2003. Interim Final Guidance on Assessing Impacts and Impairment to Natural Resources. Natural Resource Program. April.

U.S. Department of the Interior, National Park Service and Bureau of Land Management. 2005. Craters of the Moon National Monument and Preserve, Idaho, Proposed Management Plan / Final Environmental Impact Statement.

U.S. Department of the Interior. 2000. News Release: "Babbitt Releases Craters of the Moon Expansion Map," including Consensus Management Points for Craters of the Moon National Monument Proposed Expansion. May 23.

U.S. House of Representatives. 1970. Hearings before the Subcommittees on Public Lands and National Parks and Recreation of the Committee on Interior and Insular Affairs, House of Representatives, Ninety-first Congress, HR 16821, HR 16822, and SB 1732, Bills to Designate Certain Lands in Craters of the Moon National Monument in Idaho as Wilderness. pp 508-509. June 26.

Whisenant, S.G. 1990. Changing fire frequencies on Idaho's Snake River Plains: ecological and management implications. Pages 4-10 in McArthur, E.D., E.M. Romney, S.D. Smith, and P.T. Tueller, Comps. Proceedings - Symposium on cheatgrass invasion, Shrub die-off, and other aspects of shrub biology and management. General Technical Report INT-276. U.S. Department of Agriculture, Forest Service, Ogden, Utah.

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INDEX

As the nation's principal conservation agency, the Department of the Interior has 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 historical 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.

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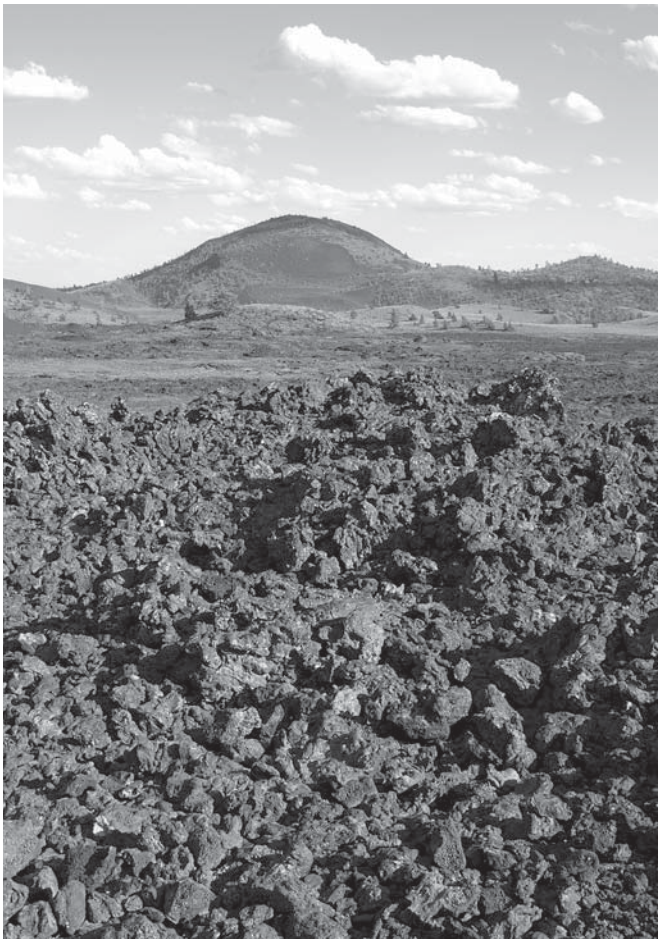

FIGURES 1-11

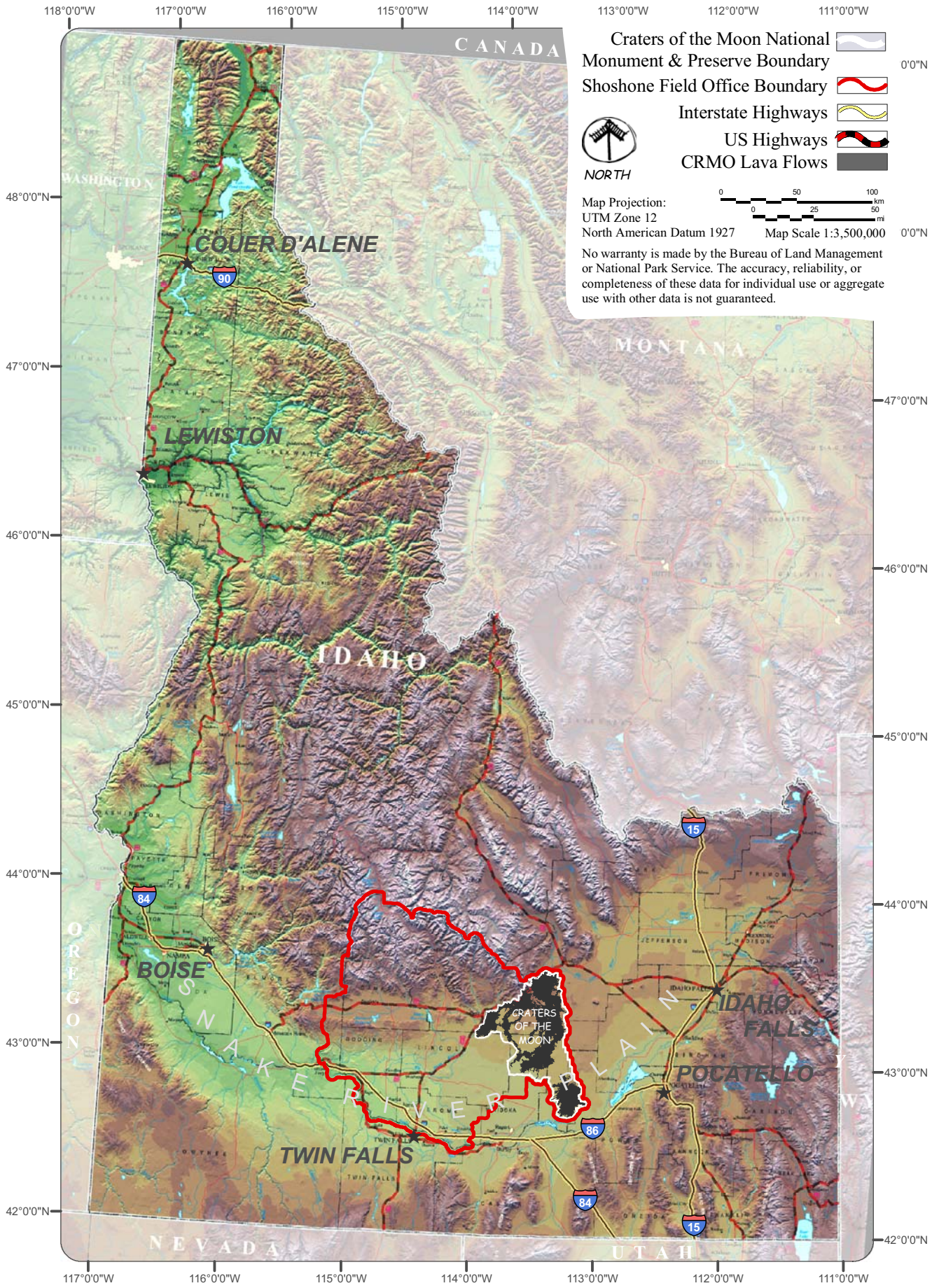

FIGURE 1

REGIONAL LOCATION

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

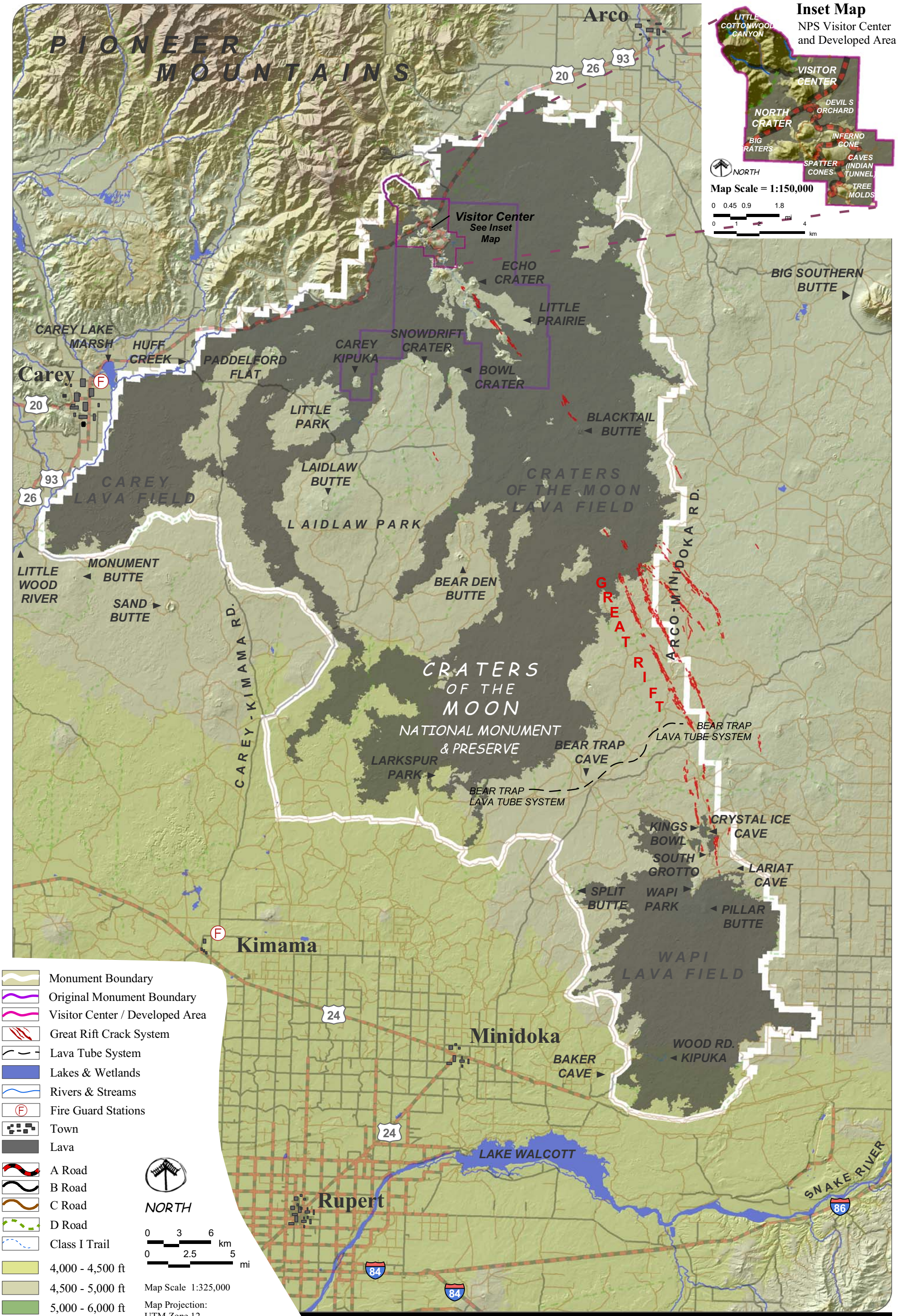

FIGURE 2

PLANNING AREA

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

Zone Allocation:

Frontcountry Zone	2,300 acres	(0.3 % of Monument)
Passage Zone	6,700 acres	(0.9 % of Monument)
Primitive Zone	218,700 acres	(29.1 % of Monument)
Pristine Zone	518,300 acres	(68.8% of Monument)

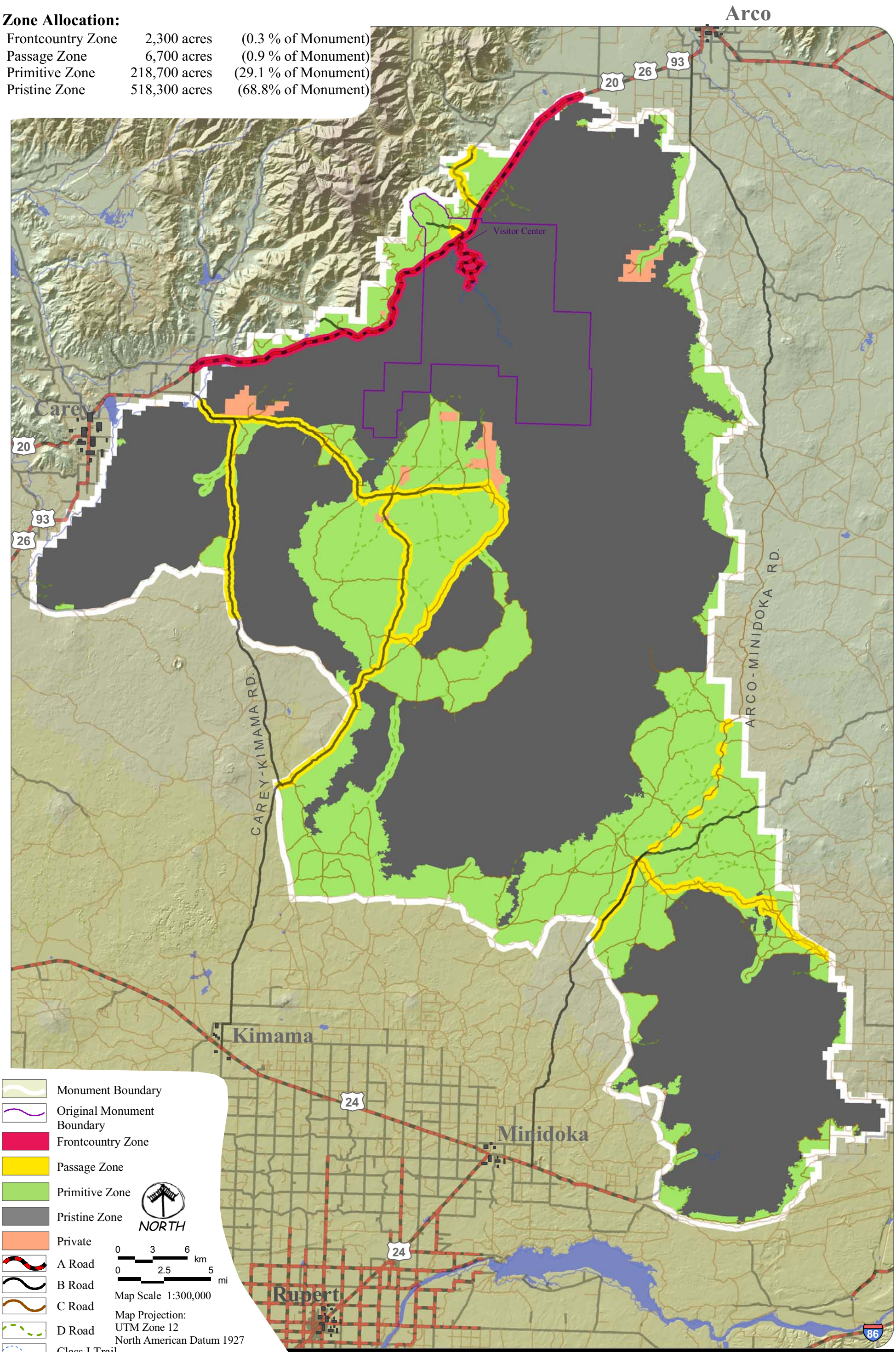

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FIGURE 3

THE PLAN

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

* Frontcountry and Passage Zone polygons have been oversized for graphic presentation and are not to scale. See Zone Descriptions for details on corridor sizes.

Arco
Visitor Center
Carey
20
93
26
CAREY - KIMAMA RD.
ARCO - MINIDOKA RD.
Kimama
24
Minidoka
Rupert
Original Monument Boundary
Monument Boundary
Historic Livestock Trails
County Roads
Class I Trail
A Road
B Road
C Road
D Road
Railroad
Streams
Lakes
Lava
Town
NORTH
0 2.5 5 km
0 2 4 mi
Map Scale 1:300,000
Map Projection:
UTM Zone 12
North American Datum 1927
No warranty is made by the Bureau of Land Management or National Park Serv
The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

FIGURE 4

TRAVEL & ACCESS

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

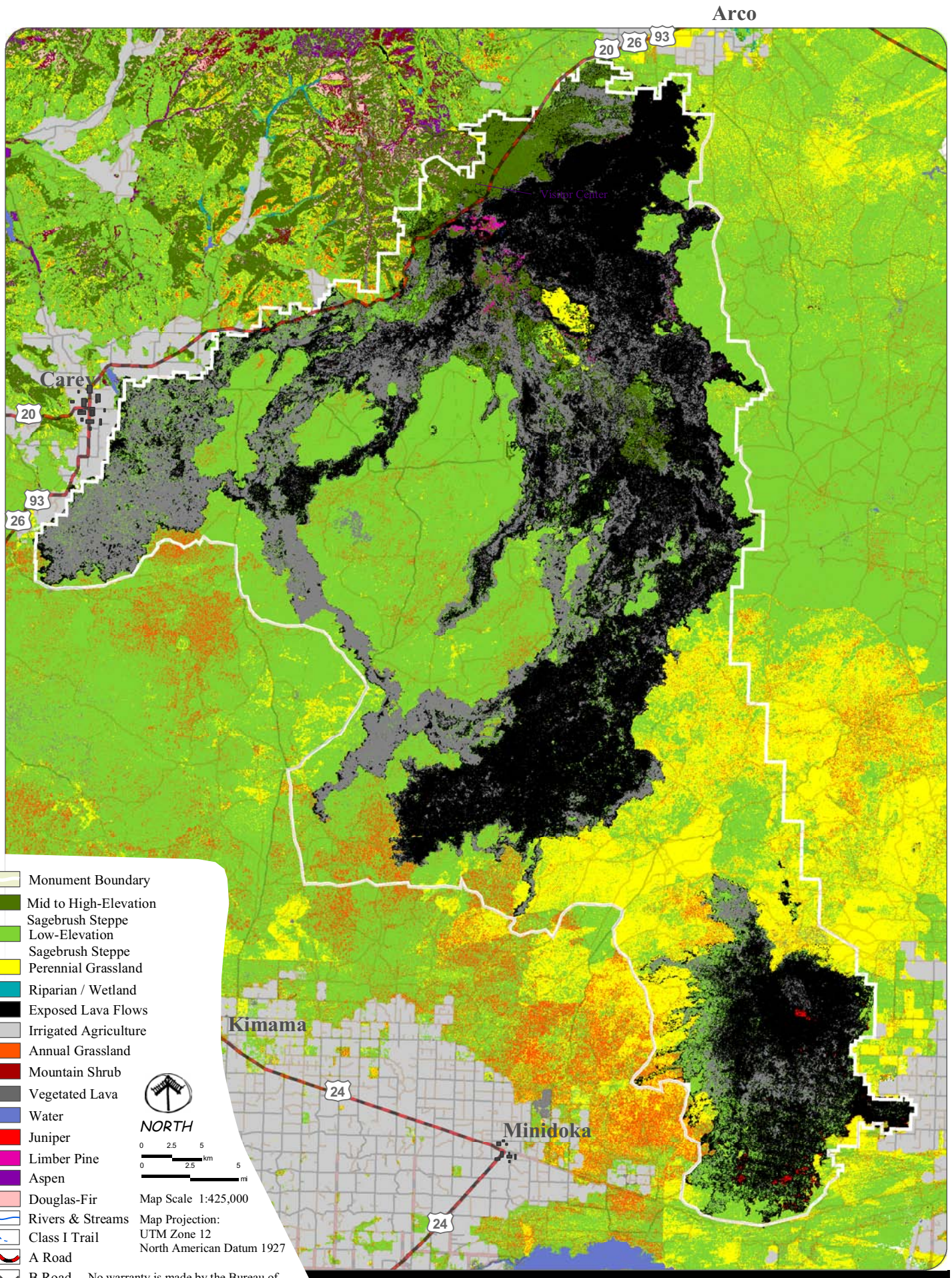


FIGURE 5

VEGETATION CLASSIFICATION

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

* These vegetation data were derived from 30m satelite imagery and is intended to provide a general frame of reference for vegetation distribution and diversity for the Monument *

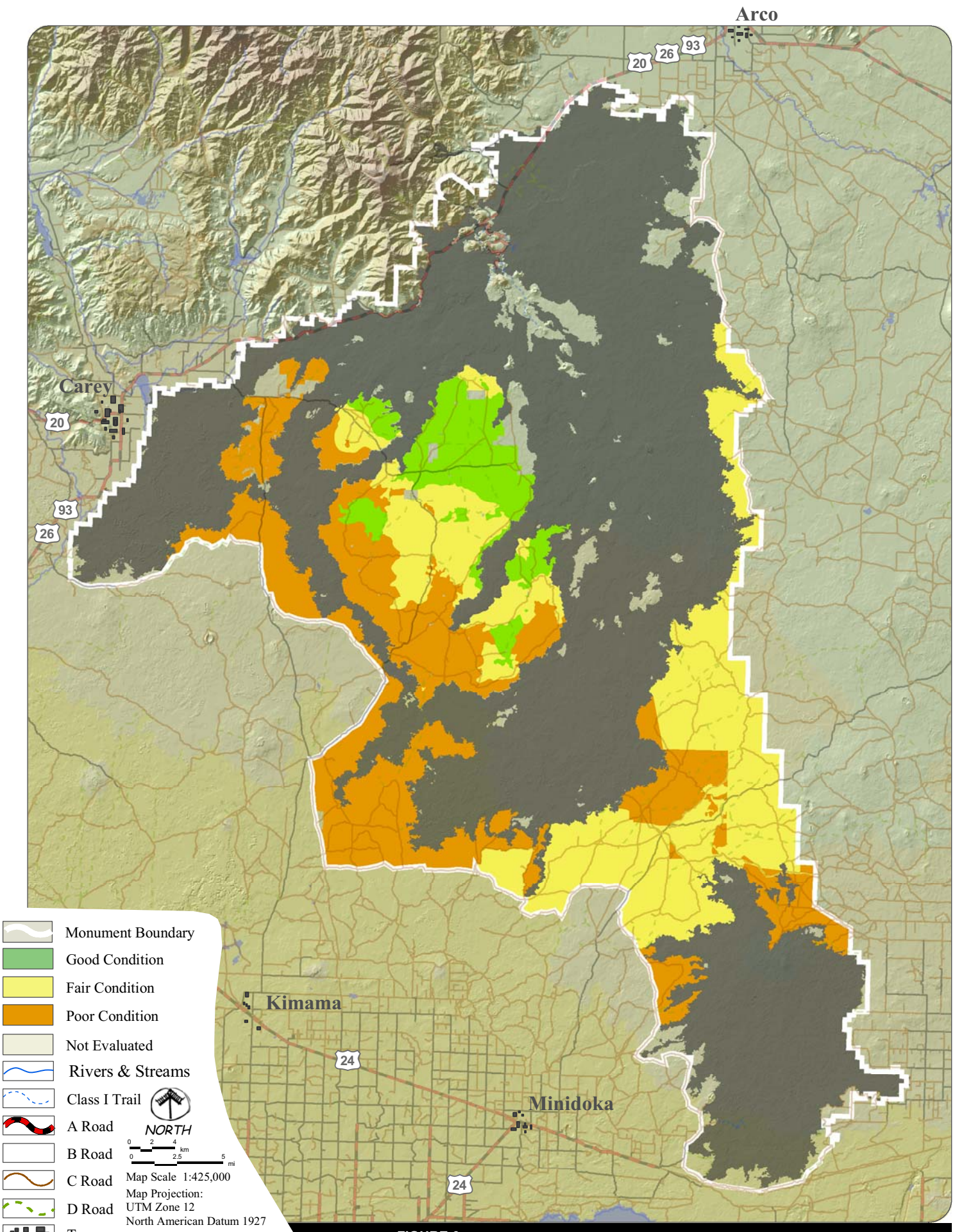


FIGURE 6

BIOTIC INTEGRITY

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

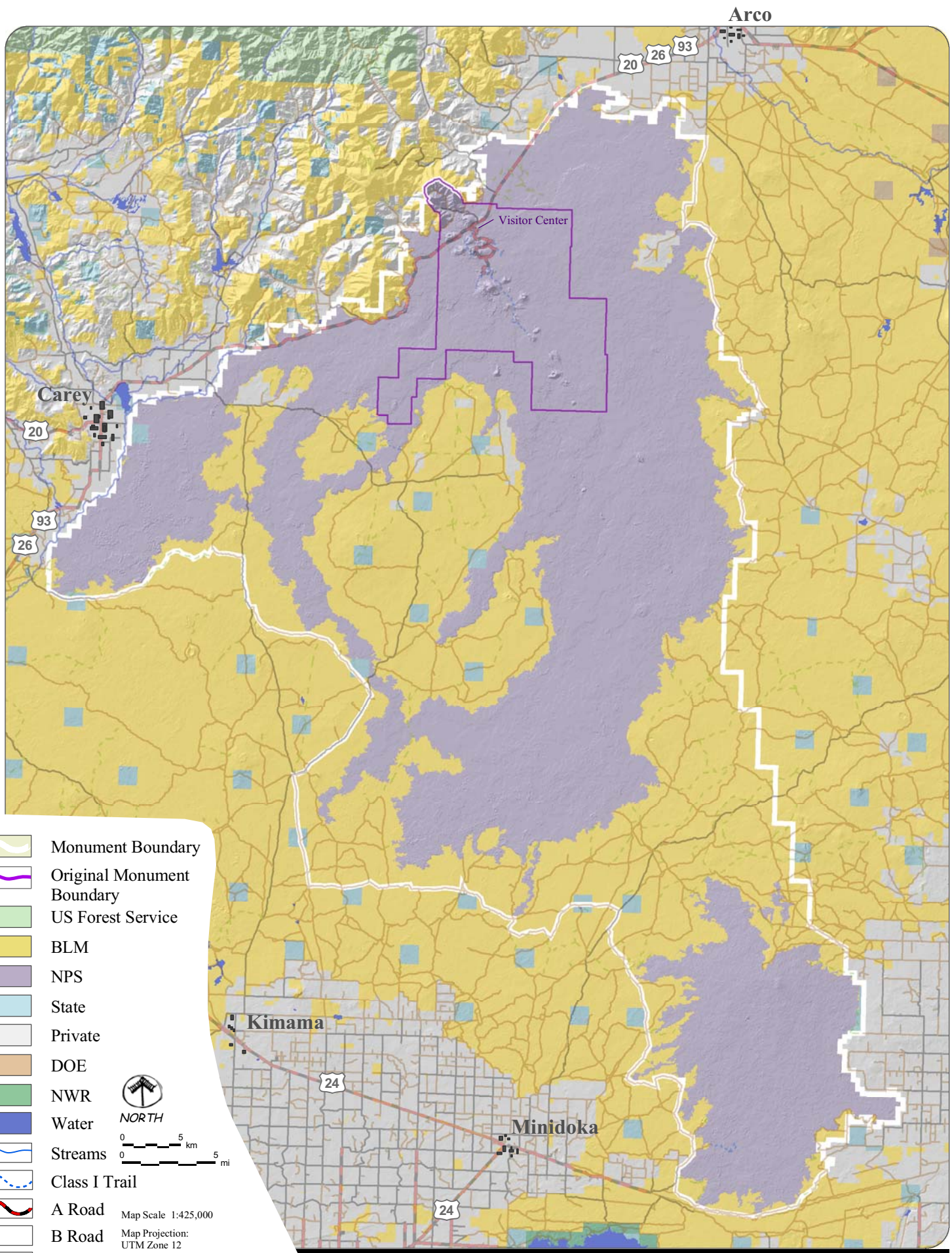
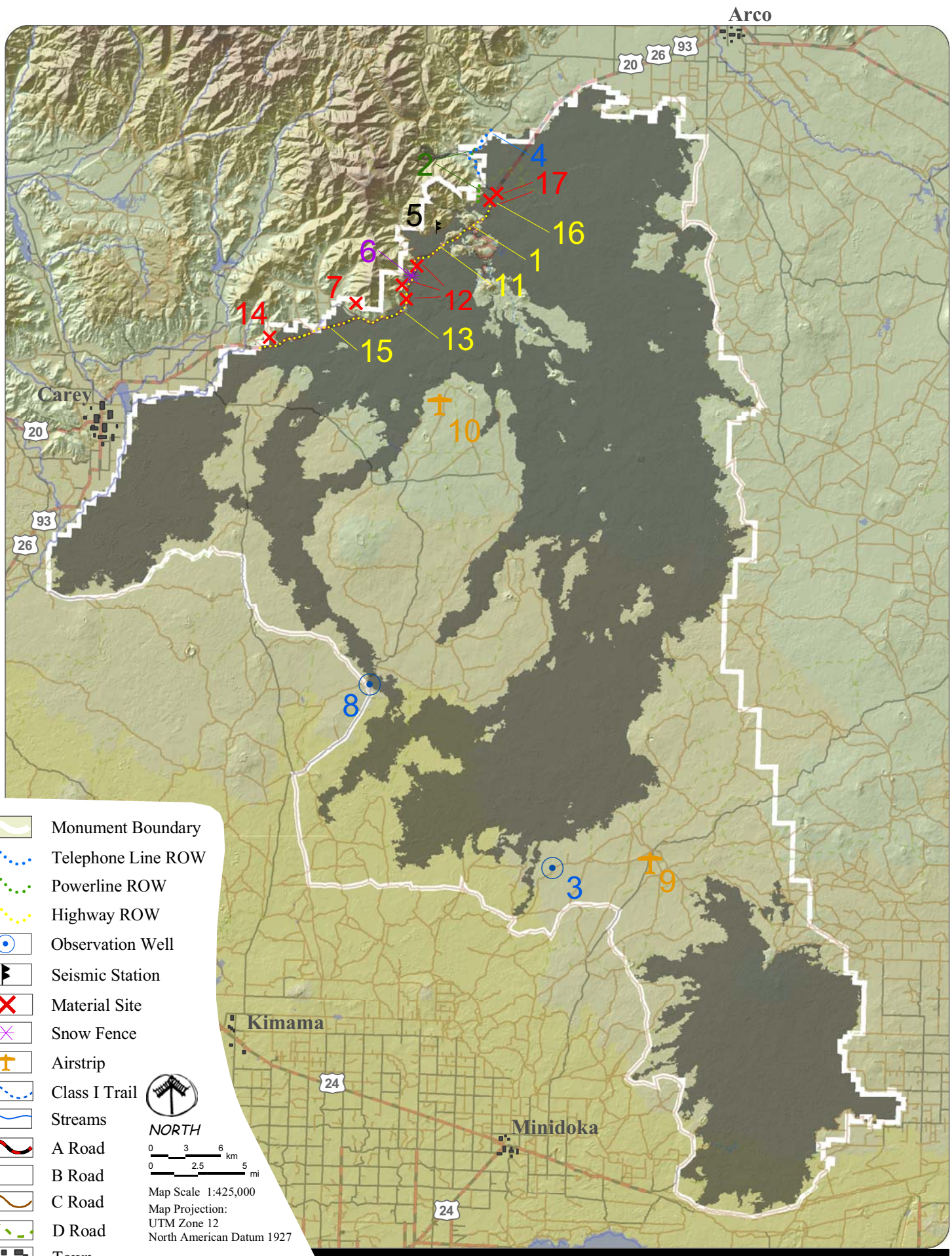


FIGURE 7

LAND STATUS

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management



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* The numbers associated with each unique feature in this map reference further descriptions found in Table 7 - Valid Existing Rights *

FIGURE 8

VALID EXISTING RIGHTS

Craters of the Moon National Monument & Preserve

U.S. Department of the Interior * National Park Service * Bureau of Land Management

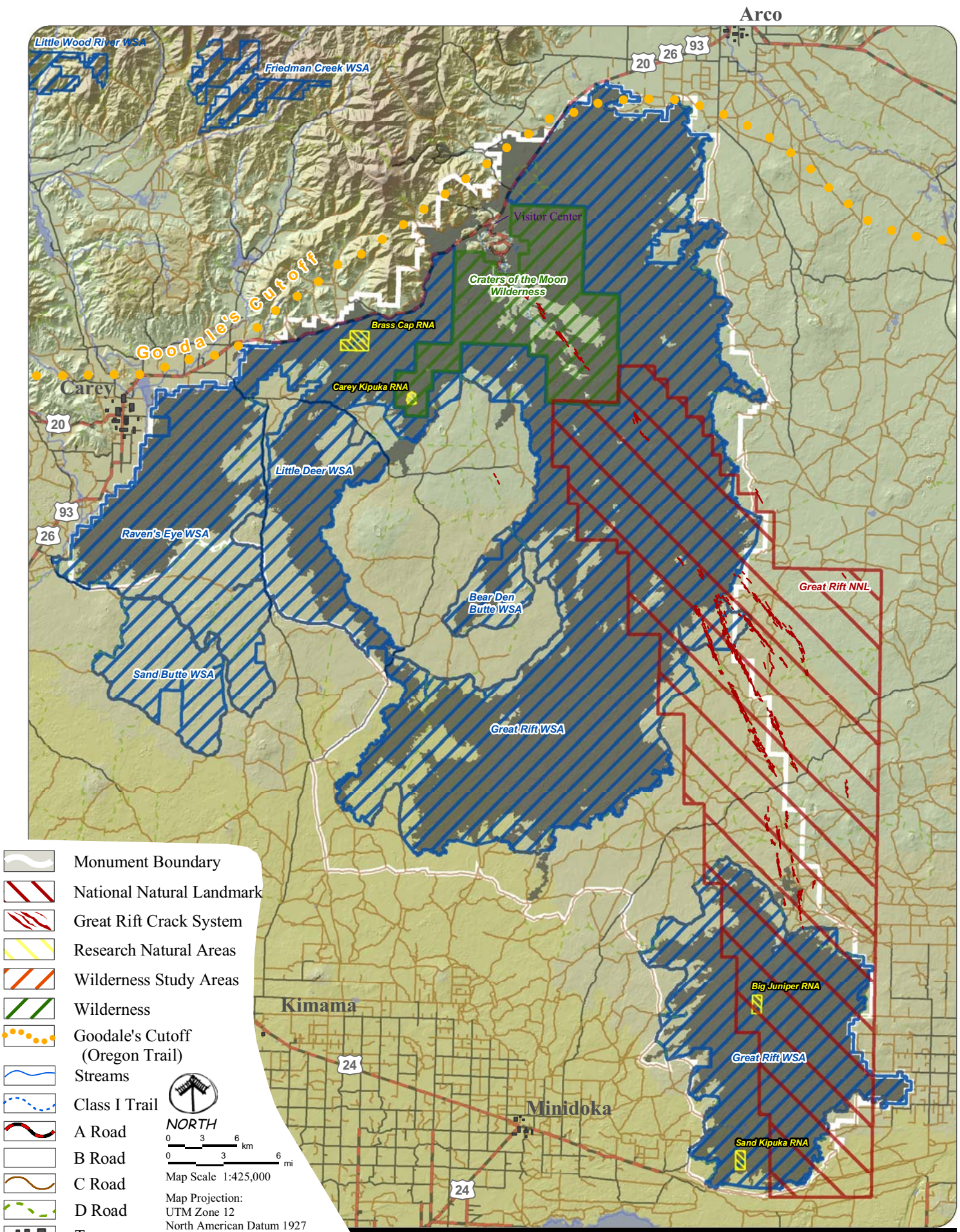

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FIGURE 9

SPECIAL DESIGNATION AREAS

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

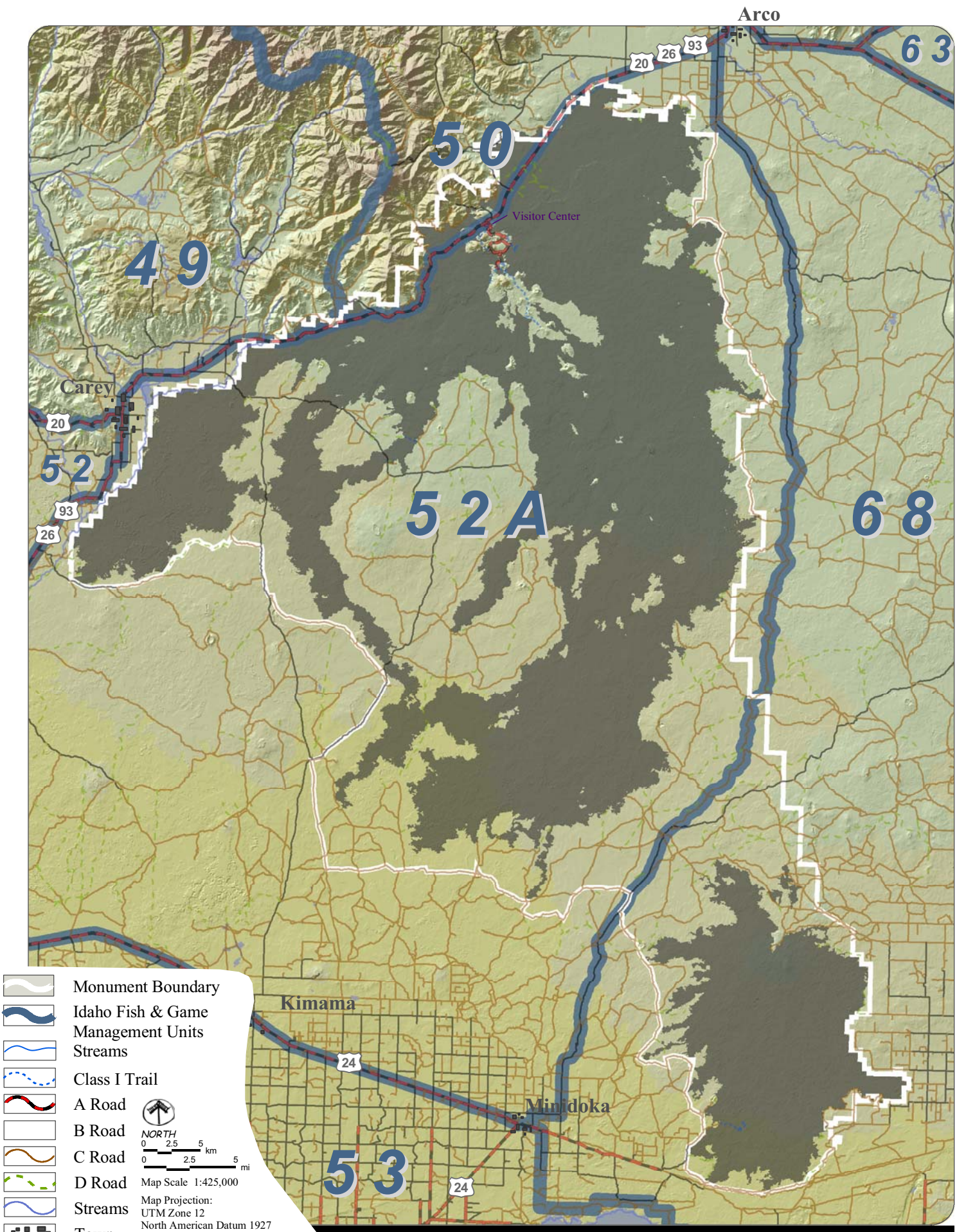

FIGURE 10

IDFG GAME MANAGEMENT UNITS

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

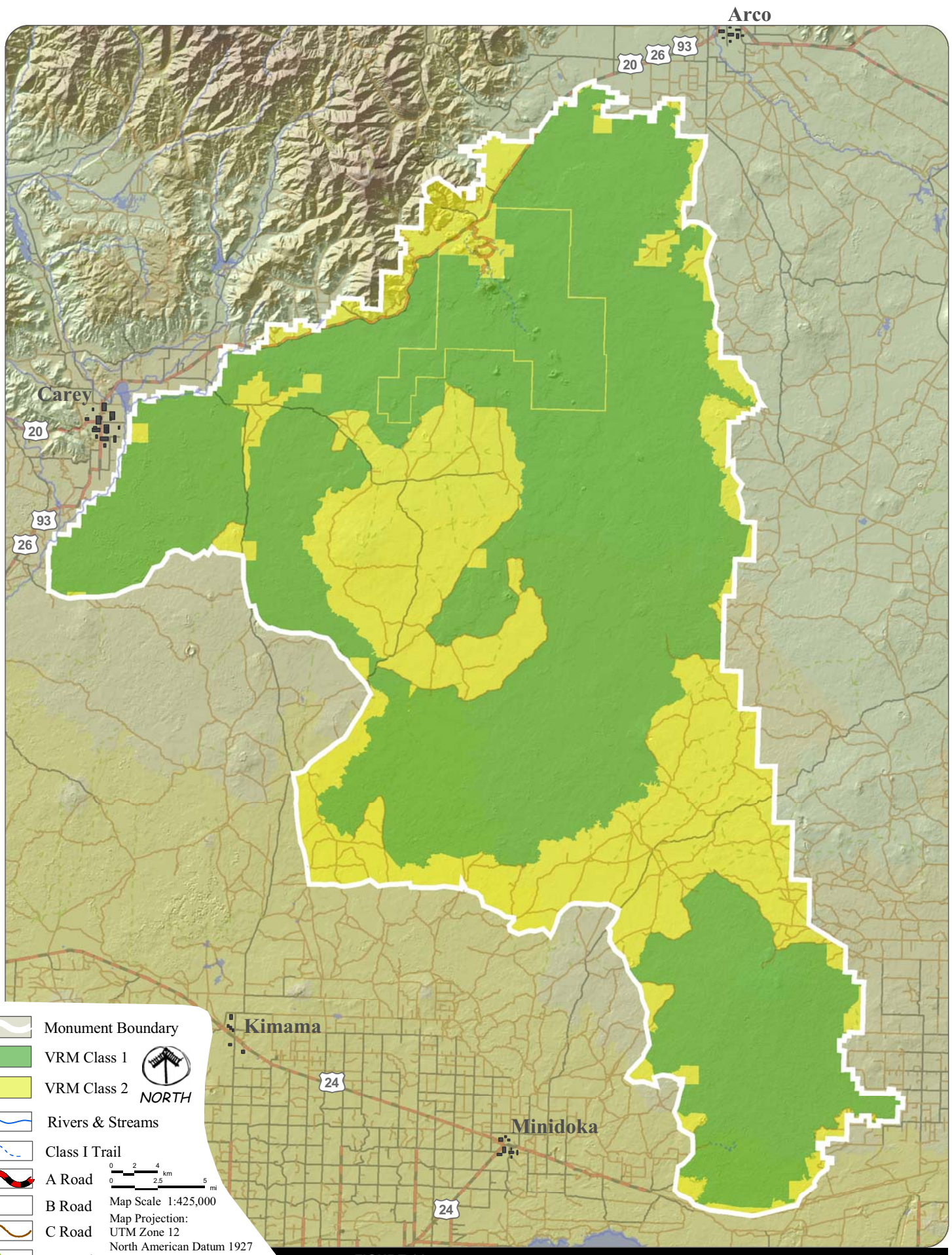

FIGURE 11

VISUAL RESOURCE MANAGEMENT CLASSIFICATION

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management