

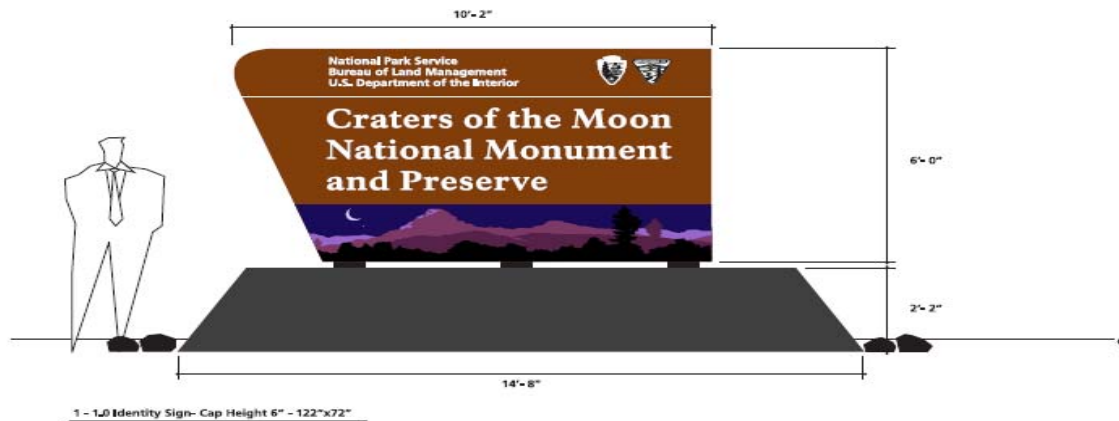
Craters of the Moon

National Park Service
U.S. Department of the Interior

Craters of the Moon
National Monument and Preserve



Entrance Sign Replacement Environmental Assessment



March 29, 2007

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U.S. Department of the Interior • National Park Service • Craters of the Moon National Monument and Preserve

Craters of the Moon Entrance Sign Environmental Assessment

Executive Summary

This Environmental Assessment (EA) describes the impacts associated with the proposed installation of new entrance signs and the construction of associated pullouts in Craters of the Moon National Monument and Preserve. The No Action Alternative (Alternative 1) describes the existing conditions associated with existing entrance signs. Alternative 2 describes the proposed replacement of these signs with new signs, pullouts and short, accessible trails at the new boundary. A summary of other alternatives considered but not fully analyzed is also provided.

This Environmental Assessment has been prepared to satisfy the requirements of the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, 42 U.S. C. 4321-4347, as amended), including the Council on Environmental Quality (CEQ) regulations found at 40 CFR 1500 -1508 and other applicable laws, National Park Service Management Policies (2000) and management directives. This Environmental Assessment facilitates compliance with Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, Clean Water Act, and the Clean Air Act enacted for the protection of the environment.

Alternative 1, the No Action (Continue Current Management) Alternative describes the continuation of existing management practices as they apply to Monument entrance signs. This alternative is used to as a baseline of current conditions to compare other alternatives.

The action alternative (Alternative 2) is based on the purpose and need for the project and conforms to existing planning documents, including the Craters of the Moon National Monument and Preserve Management Plan (NPS 2005) and other National Park Service and Monument policies and plans.

If reviewers do not identify significant environmental impacts, this Environmental Assessment will be used to prepare a Finding of No Significant Impact (FONSI), which requires approval of the National Park Service Regional Director for the Pacific West Region.

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I. Introduction

As noted in the Monument Management Plan (NPS 2005:3), Craters of the Moon National Monument, the first national monument in Idaho, was established on May 2, 1924 (Presidential Proclamation 1694) for the purpose of protecting 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 Monument was expanded and boundary adjustments made through five presidential proclamations issued pursuant to the Antiquities Act (34 Stat. 225, 16 U.S. Code [USC] 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, Section 205 of the Omnibus Parks and Public Lands Management Act of 1996 (PL 104-333, 110 Stat. 4093, 4106) made a minor boundary adjustment to the Monument (NPS 2005:3).

Presidential Proclamation 7373 of November 9, 2000, expanded the boundary to 737,680 acres of federal land (from about 53,400 acres) to include many more of the area’s volcanic features. It also enlarged the Monument’s administration by adding the efforts of the BLM to those of the NPS, all under the direction of the Secretary of the Interior. Federal legislation (PL 107-213, 116 Stat. 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, and allowed for hunting on lands that were closed to this activity by the November 2000 Proclamation (NPS 2005:4).

Craters of the Moon National Monument and Preserve is located in south central Idaho (Figure 1) in Blaine, Butte, Lincoln, Minidoka, and Power Counties. It is within approximately a one-hour drive of Twin Falls, Idaho Falls, Pocatello, and other population centers along the Interstate 84 (I-84), I-86, and I-15 corridors (NPS 2005:4).

Craters of the Moon National Monument and Preserve contains 752,490 acres, including 8,250 acres of state land, and 6,560 acres of private land. The current federal land portion of the Monument and Preserve encompasses 737,680 acres of federal lands managed by the NPS and BLM. The former Craters of the Moon National Monument contained 53,420 acres of federal land managed by the NPS (NPS 2005:23).

A. Scope of this Environmental Assessment

This Environmental Assessment has been prepared to satisfy the requirements of the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, 42 U.S. C. 4321-4347, as amended), including the Council on Environmental Quality (CEQ) regulations found at 40 CFR 1500 -1508 and other applicable laws, National Park Service Management Policies (2006) and management directives. This Environmental Assessment facilitates compliance with Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, Clean Water Act, and the Clean Air Act enacted for the protection of the environment.

NEPA requires the documentation and evaluation of potential impacts resulting from federal actions. Federal actions may include projects financed, assisted, conducted, regulated or approved by a federal agency. An Environmental Assessment discloses the potential environmental consequences of implementing the proposed action and other reasonable and feasible alternatives. NEPA is intended to provide decision-makers with sound knowledge of the

environmental consequences of the alternatives available to them. In this case, the superintendent of Craters of the Moon National Monument and Preserve and the Pacific West Regional Director are faced with a decision regarding whether to relocate Monument entrance signs and to construct pullouts as described herein.

The purpose of this Environmental Assessment is to identify, evaluate and document the potential effects of the proposed construction of new boundary entrance signs and pullouts. Existing conditions described as the No Action Alternative (Alternative 1) constitute the baseline for evaluating the effects of the proposed rehabilitation.

An interdisciplinary team comprised of National Park Service staff, including natural and cultural resources and maintenance professionals determined the purpose and need for the project and identified the likely beneficial and adverse effects of the proposed actions compared to existing conditions as documented herein.

B. Park Purpose and Significance

Purpose

Based upon the Proclamations and Legislation for the Monument the Monument Management Plan (NPS 2005:7) characterizes the purposes of Craters of the Moon National Monument and Preserve:

- 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 (older vegetated terrain surrounded by lava flows) and remnant vegetation areas and preserve important habitat for 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.

Significance

According to the Monument Management Plan (NPS 2005: 7-11), Craters of the Moon National Monument and Preserve is significant because:

- 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.
- Many of the more than 400 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 over 500,000 acres of undeveloped federal lands.
- It is a valued western landscape of over 750,000 acres that are characterized by a variety of scenery, broad open vistas, and pristine air quality.
- It contains abundant sagebrush steppe communities that provide some of the best remaining sage-grouse habitat and healthiest rangelands on the Snake River Plain.

- It contains many diverse habitats for plants and animals as a result of a long history of volcanic deposition.

Mission Goals (Desired Future Conditions)

NPS mandates in combination with public and staff recommendations have result in the following desired future conditions established for Craters of the Moon National Monument and Preserve (NPS 2005: 11):

- 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 BLM to develop management actions to achieve sustainable, healthy rangelands.
- The public receives efficient and coordinated services from the NPS and BLM.

II. Purpose and Need

A. Purpose and Need

The purpose of the proposed project is to identify and mark the expanded boundary of Craters of the Moon National Monument and Preserve (Monument) for travelers along U.S. Highway 20/26/93 and to allow visitors the opportunity to take a scenic photograph from either the west (near Carey) or east (near Arco) boundary of this unit of the National Park System and the Bureau of Land Management's (BLM) National Landscape Conservation System (NLCS).

On November 9, 2000, President Bill Clinton signed a proclamation expanding Craters of the Moon National Monument from 53,420 acres to 737,680 acres (not including state and private lands within the boundary). In addition, the proclamation directed the NPS and BLM to manage the monument "cooperatively." Federal legislation (PL 107-213, 116 Stat.1052), on August 21, 2002, designated the area within the expanded NPS boundaries of Craters of the Moon National Monument as a National Preserve and allowed hunting within those lands designated as the Preserve. (Unless referenced otherwise, the term *Monument* as used in this document refers generically to all NPS and BLM lands within Craters of the Moon National Monument and Preserve).

Shortly after the boundary expansion, small wood highway signs were erected near the new Monument boundary along U.S. Highway 20/26/93. In an attempt to develop a unified sign design that would provide a consistent, professional look across the whole Monument, the NPS and BLM undertook development of a sign plan beginning in 2004. Preliminary results from the sign plan include the design of monolithic signs for the major entrances to the Monument, as well as directional signage to the Monument's Visitor Center.

B. Background

Relationship to Laws, National Park Service Policy, and Monument Planning Documents

a. LAWS

National Park Service Organic Act (16 USC 1)

The key provision of the legislation establishing the National Park Service, referred to as the 1916 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.

1970 National Park Service General Authorities Act (as amended in 1978 – Redwood amendment)

This act prohibits the National Park Service from allowing any activities that would cause derogation of the values and purposes for which the parks have been established (except as directly and specifically provided by Congress in the enabling legislation for the parks). Therefore, all units are to be managed as national parks, based on their enabling legislation and

without regard for their individual titles. Parks also adhere to other applicable federal laws and regulations, such as the Endangered Species Act, the National Historic Preservation Act, the Wilderness Act, and the Wild and Scenic Rivers Act. To articulate its responsibilities under these laws and regulations, the National Park Service has established management policies for all units under its stewardship.

National Environmental Policy Act (NEPA) (42 USC 4341 et seq.)

NEPA requires the identification and documentation of the environmental consequences of federal actions. Regulations implementing NEPA are set for by the President's Council on Environmental Quality (40 CFR Parts 1500-1508). CEQ regulations establish the requirements and process for agencies to fulfill their obligations under the act.

Clean Water Act (CWA) (33 USC 1241 et seq.)

Under the Clean Water Act, it is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters, to enhance the quality of water resources, and to prevent, and control, and abate water pollution. Section 401 of the *Clean Water Act* as well as NPS policy requires analysis of impacts on water quality. *NPS Management Policies* (2006) provide direction for the preservation, use, and quality of water in national parks.

Clean Air Act (as amended) (42 USC 7401 et seq.)

The Clean Air Act states that park managers have an affirmative responsibility to protect park air quality related values (including visibility, plants, animals, soils, water quality, cultural resources and visitor health) from adverse air pollution impacts.

Endangered Species Act (16 USC 1531 et seq.)

The Endangered Species Act (ESA) requires federal agencies, in consultation with the Secretary of the Interior, to use their authorities in the furtherance of the purposes of the act and to carry out programs for the conservation of listed endangered and threatened species (16 USC 1535 Section 7(a)(1)). The ESA also directs federal agencies, in consultation with the Secretary of the Interior, to ensure that any action authorized, funded, or carried out by an agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat (16 USC 1535 Section 7(a)(2)). Consultation with the United States Fish and Wildlife Service (USFWS) is required if there is likely to be an effect.

National Historic Preservation Act (1966 as amended) (16 USC 470)

Section 106 of the National Historic Preservation Act (NHPA) directs federal agencies to take into account the effect of any undertaking [a federally funded or assisted project] on historic properties. "Historic property" is any district, building, structure, site, or object that is eligible for listing in the National Register of Historic Places because the property is significant at the national, state, or local level in American history, architecture, archeology, engineering, or culture. This section also provides the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) an opportunity to comment on the undertaking. The 1992 amendments to the act have further defined the roles of American Indian Tribes and the affected public in the Section 106 process. Section 10 of this act requires the ongoing documentation of historic resources by federal agencies.

b. POLICIES

National Park Service Management Policies (2006)

Management Policies governs the way park managers make decisions on a wide range of issues that come before them. *Management Policies* consolidates agency policy on a wide variety of laws, technology, resource management and other issues pertinent to management of the National Park System. Sections applicable to the proposed project are quoted below.

9.2.2 Trails and Walks

Trails and walks provide the only means of access into many areas within parks. These facilities will be planned and developed as integral parts of each park's transportation system and incorporate principles of universal design. Trails and walks will serve as management tools to help control the distribution and intensity of use. All trails and walks will be carefully situated, designed, and managed to

- reduce conflicts with automobiles and incompatible uses;
- allow for a satisfying park experience;
- allow accessibility by the greatest number of people; and
- protect park resources.

Heavily used trails and walks in developed areas may be surfaced as necessary for visitor safety, accessibility for persons with impaired mobility, resource protection, and/or erosion control. Surface materials should be carefully selected, taking into account factors such as the purpose and location of a trail or walk and the potential for erosion and other environmental impacts.

9.2.3 Traffic Signs and Markings

Signs will be limited to the minimum necessary to meet information, warning, and regulatory needs and to avoid confusion and visual intrusion. Signs should be planned to provide a pleasing, uniform appearance. Traffic signs and pavement markings on park roads will be consistent with the standards contained in the *Manual on Uniform Traffic Control Devices*, as supplemented by the NPS *Sign Manual*. All roadside signs and markings will conform to good traffic engineering practices. Park signs—especially those that display the NPS arrowhead—are an important part of the total identity system for the Park Service and must conform to the standards contained in Director's Order #52C: Park Signs.

9.2.4 Parking Areas

Parking areas and overlooks will be located to not unacceptably intrude, by sight, sound, or other impact, on park resources or values. When parking areas are deemed necessary, they will be limited to the smallest size appropriate, and they will be designed to harmoniously accommodate motor vehicles and other appropriate users. When large parking areas are needed, appropriate plantings and other design elements will be used to reduce negative visual and environmental impacts. When overflow parking is provided to meet peak visitation, it should be in areas that have been stabilized or are otherwise capable of withstanding the temporary impacts of parking without causing unacceptable impacts on park resources. Permanent parking areas will not normally be sized for the peak use day, but rather for the use anticipated on the average weekend day during the peak season of use.

9.3.1.1 Signs

Signs will be carefully planned and designed to fulfill their important roles of conveying an appropriate NPS and park image and providing information and orientation to visitors. Each park should have an approved parkwide sign plan based on Service-wide design criteria and tailored to meet individual park needs. Entrance and other key signs will be distinctively designed to reflect the character of the park while meeting Service-wide standards for consistency.

Signs will be held to the minimum number, size, and wording required to serve their intended functions and to minimally intrude upon the natural and historic settings. They will be placed where they do not interfere with park visitors' enjoyment and appreciation of park resources. Roadside information signs are subject to the standards established in the National Park Service *Sign Manual*. Interpretive signs will be guided by sign and wayside exhibit plans.

NPS Sign Standards (based on NPS 52C)

There are three types of signs in the NPS system: park entrance signs, motorist guidance signs and visitor information system signs. The first two are relevant to the proposed project.

Park Entrance Signs are perhaps the most important of all park signs. They welcome visitors as they arrive, providing a gateway that marks the beginning of their park experience. Entrance signs also help remind visitors that the place they are entering is one of many special places cared for by the National Park Service (http://www.hfc.nps.gov/uniguide/pages/ID_PI.html 2007).

Motorist Guidance Signs provide directions to motorist traveling to parks, or within parks. They also display traffic regulations (including parking control) and information about road hazards (<http://www.hfc.nps.gov/uniguide/pages/MG.html> 2007).

c. PLANS

National Park Service

Craters of the Moon National Monument and Preserve Management Plan (Monument Management Plan, Record of Decision) (NPS 2006)

The Monument Management Plan serves as the guiding management strategy for the Monument. It provides a framework for decision-making, including decisions regarding visitor use, the preservation of natural and cultural resources, development and park operations. Implementation plans, which provide more detailed strategies, tier off this plan. This plan replaced the 1992 Craters of the Moon General Management Plan as well as four BLM Land Use Plans.

Applicable portions of this plan include the park purpose and significance and desired future conditions (see *Chapter I: Introduction*) as well as the following sections.

Four management zones have been designated for the Monument and Preserve, including the Frontcountry Zone, Passage Zone, Primitive Zone and Pristine Zone (NPS 2005:29).

The proposed project sites are located within the Frontcountry Zone, which at 2,300 acres comprises 0.3 percent of the Monument and Preserve) (NPS 2005:43-45).

The Frontcountry Zone is 660 feet wide along major road corridors (Highway 20/26/93 and the Craters Loop Drive). It calls for "Frequent signs for directions, safety and interpretation" and includes "Typical visitor activities: sightseeing, driving, bicycling, walking, nature study, . . ." along with "A high level of interpretation programs; [and] informational exhibits"(NPS 2005:29).

Applicable Desired Future Conditions and Management Actions for Interpretation and Visitor Understanding (NPS 2005:40/54) that pertain to the proposed project include:

- The public perceives the Monument as a single entity. . .
- 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.
 - Existing roads, trails, and facilities would be maintained and new facilities would be provided as appropriate in the Frontcountry Zone for resource protection and visitor enjoyment.
- Increase opportunities for educational opportunities are created throughout the Monument.
 - Additional interpretive facilities would be provided along the corridor of US 20/26/93 and at significant sites within the Passage Zone.

Bureau of Land Management

The BLM was a joint-lead agency on the preparation of the Monument Management Plan. As a result, information from that document is applicable to not only the NPS but also the BLM.

Idaho Transportation Department Right-of Way

Because the proposed project area is within the Idaho Transportation Department right-of-way through the Monument and Preserve, the ITD requires a permit (for each county management area) to approve the proposed construction of the signs and pullouts. Under the terms of the permit, the proposed project would need to meet a variety of conditions, including distance from the centerline of the road, as well as state standards for pullouts, and Manual on Uniform Traffic Control Devices (MUTCD) standards for applicable signs, among other conditions (ITD 2006).

C. Public Participation

Public involvement is a key part of the National Environmental Policy Act process. In this part of the process, the general public, federal, state, local agencies and organizations are provided an opportunity to identify concerns and issues regarding the potential effects of proposed federal actions. The opportunity to provide input is called “scoping.”

Internal scoping is the effort to engage professional staff at the park and other National Park Service offices to provide information regarding proposed actions that may affect Monument resources. Craters of the Moon conducted internal scoping on January 16, 2007. A variety of comments were received from Monument staff regarding planning, maintenance, vegetation and wildlife.

Public scoping included a press release sent out on January 22, 2007 to the Monument’s standard press release mailing list. Information from the press release was published in the following newspapers: Idaho Statesman (1-23-07), Arco Advertiser, and heard on a local radio station.

During the public scoping process for this Environmental Assessment, which occurred from January 22, 2007 until February 22, 2007, no comment letters were received. One person called to request to be added to the mailing list.

This Environmental Assessment is being made available to the public, federal, state and local agencies and organizations through press releases distributed to a wide variety of news media, direct mailing, placement on the Monument’s website and announcements in press releases as well as in local public libraries (Arco, Hailey, Bellevue, Twin Falls and Boise, and the Community Library in Ketchum). Copies of the document may also be obtained from:

Mail:

Superintendent
Craters of the Moon National Monument and Preserve
P.O. Box 29
Arco, Idaho 83213

Phone: (208) 527-3257 or *Fax:* (208) 527-3073

Email: crmo_information@nps.gov

Responses to comments on the Environmental Assessment will be addressed through issuance of a Finding of No Significant Impact (FONSI) or a Notice of Intent to prepare an environmental impact statement as appropriate.

(For more information about specific agency and staff consultation, see the section in this document entitled *List of Persons and Agencies Consulted / Preparers*)

III. Alternatives

The Alternatives were developed from collaborative interdisciplinary analysis based on the expertise of interdisciplinary planning team members (National Park Service and Bureau of Land Management), as well as on internal and external scoping with Native American Tribes, federal, state and local agencies.

The following goals related to highway entrances for Craters of the Moon National Monument and Preserve guided development of the Alternatives:

- Mark the expanded boundary of the Monument;
- Provide visitors a safe opportunity to take a photograph to document their visit;
- Establish a sign standard that reflects both NPS and BLM design styles; and
- Provide for accessibility for persons with disabilities.

A. Alternative 1: No Action (Continue Current Management)

Under this Alternative, existing large wood entrance signs at the original Craters of the Moon National Monument boundaries would remain and would be repaired or replaced as needed. In addition, the existing laminated wood entrance signs on posts marking the expanded Craters of the Moon National Monument and Preserve boundary would remain. No new directional signs or pullouts would be established by the NPS or BLM along U.S. Highway 20/26/93 to mark the boundary expansion area. As a result, some visitors would continue to be confused about the boundary of the Monument and its relationship to NPS and BLM management, especially if they did not notice the small laminated wood signs with both the BLM shield and the NPS arrowhead currently marking the expanded boundary.

Existing rectangular entrance signs at the original Monument boundaries are approximately 12 feet long by 5 feet wide and sit on a rock-faced concrete base approximately 20 feet by 6 feet. They require occasional repair and cyclic repainting. In addition, NPS staff regularly check the signs and nearby roadsides for vandalism and trash.

B. Alternative 2: Replace Existing Entrance Signs at Craters of the Moon National Monument and Preserve and Improve Visitor Access Opportunities

Under this Alternative, the NPS would remove the existing Craters of the Moon National Monument entrance signs and replace them with new Craters of the Moon National Monument and Preserve entrance signs (Figure 1). The signs would mark the new boundary on the west along U.S. Highway 20/26/93 near Carey, Idaho and near Arco, Idaho (Figure 2). The sign near Carey would be located in Blaine County (100 feet west of mile marker 235, UTM E0274886, N 4804992), while the sign near Arco would be located in Butte County (UTM E0297715, N 4822425 Zone 12 North).

The signs would be located at least 50 feet from the centerline of the road. In addition, gravel pullouts would be constructed between the road edge and the signs within the ITD right-of-way. The pullouts would be approximately 150 feet long and 30 feet wide. The proposed distance of the signs from the centerline and the size of the pullouts would meet Idaho Transportation Department (ITD) criteria for their establishment. Figures 3, 4 and 5 show the proposed sites for the entrance signs.

Figure 1
Entrance Sign

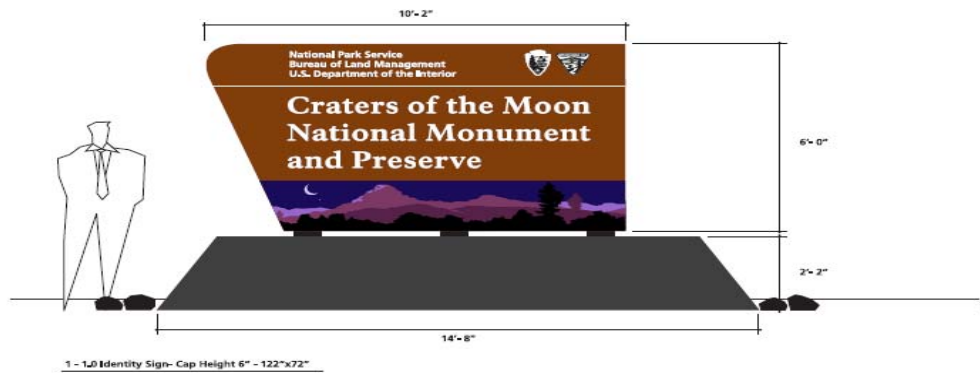
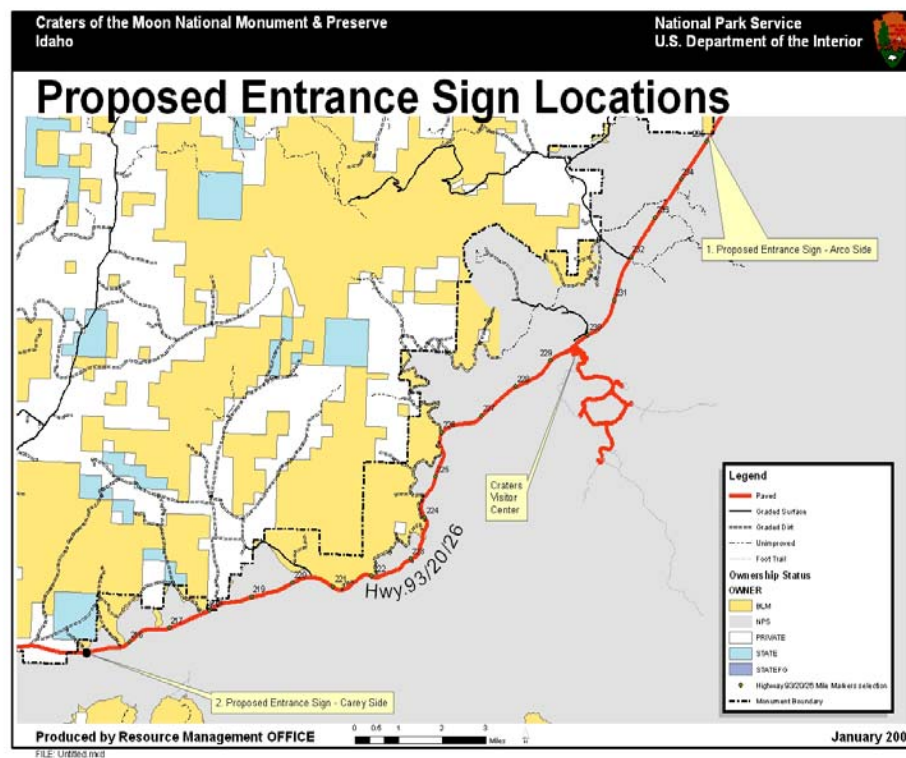


Figure 2
Proposed Entrance Sign Locations



Sign locations were selected based on the following key criteria: location on NPS or BLM land; location near the expanded Monument boundary; scenic view representative of the Monument in

the sign background; available sight distance sufficient to establish a safe visitor use pullout; suitable size for both passenger, recreational and truck vehicles; high potential for developing visitor access up to the sign; and recent disturbance evident (to minimize impacts on intact Monument resources).

Short trails would lead visitors to the signs to allow for a better photo-taking opportunity. (It is a common and time-honored tradition for many visitors to take a photograph at the entrance upon entering a new national park unit for the first time.) Access on both sides would be designed to be Americans with Disabilities Act (ADA) standards. The trail on the Blaine County side (near Carey) would be approximately 17 feet long and 40 inches wide. The trail on the Butte County side (closest to Arco) would be approximately 35 feet long and 40 inches wide. The trails may be hardened with concrete, or another suitable material, to enable the creation of a smooth, easily navigated trail surface that meets ADA standards.

The new signs were designed by the NPS Sign Program Manager in cooperation with the BLM. They combine NPS and BLM typefaces, the triangular edged BLM sign shape, shades of brown used by both agencies, as well as a color graphic developed for the BLM's designation of the area as part of the National Landscape Conservation System (NLCS) (Figure 1).

Unlike the current painted wood signs, the new entrance signs would be constructed of iron in two colors of brown; would identify both NPS and BLM in symbols and words; would have screw mount lettering; and would contain an inset color graphic of porcelain enamel. The signs would be mounted on a stained concrete base surrounded by local lava rock.

The new signs would be slightly larger than the current signs, with the concrete base approximately 17 feet, 9 inches long and 8 feet 8 inches wide, including the concrete footing beneath the sign, but visible at the surface. The sign would be 10 feet 2 inches wide at the top (longest part) by approximately six feet high.

Existing entrance signs and the current boundary marker signs would be removed and the sites rehabilitated.

In addition to the replacement of the entrance signs, additional directional signs would be installed along U.S. Highway 20/26/93 to direct visitors to the visitor center and loop road entrance. These signs would notify travelers when vehicles were 5 miles in each direction (east or west) from the visitor center, and then again when they were ¼ mile away from either direction.

Figure 3
Proposed West Entrance Sign Vicinity (view looking east)



Figure 4
Proposed West Entrance Sign Location (close up view looking east)



Figure 5
Proposed East Entrance Sign Location (view looking southwest)



C. Alternatives Considered But Rejected

Under the National Environmental Policy Act (NEPA) alternatives may be eliminated from detailed study based on the following reasons [40 CFR 1504.14 (a)] :

- Technical or economic infeasibility;
- Inability to meet project objectives or resolve need for the project;
- Duplicate other less environmentally damaging alternatives;
- Conflict with an up-to-date valid plan, statement of purpose and significance, or other policy; and therefore, would require a major change in that plan or policy to implement; and
- Environmental impacts too great.

The following alternatives or variations were considered during the design phase of the project, but because they did not meet one of the above criteria, they were rejected.

Install Entrance Signs in Different Locations Along U.S. Highway 20/26/93

Five other locations were considered. All would have had similar or greater impacts than the sites selected due to location in more intact areas. One site was initially selected but then rejected when it was found to be not located on existing NPS or BLM property, a key criterion.

Construct Entrance Signs without associated Turnouts

This alternative did not meet the goals or purpose and need for the project. Although it would mark the boundary for visitors, it would not provide a safe place for visitors to take a photograph,

particularly those visitors with large vehicles who needed not only adequate sight distance, but adequate space to stop along the high speed thoroughfare that is U.S. Highway 20/26/93.

D. Environmentally Preferred Alternative

In accordance with Director's Order-12, *Conservation Planning, Environmental Impact Analysis, and Decision-making* and CEQ (Council on Environmental Quality) requirements, the NPS is required to identify the "environmentally preferred alternative" in all environmental documents, including Environmental Assessments. The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act (NEPA) of 1969, which is guided by the CEQ). The CEQ (46 FR 18026 - 46 FR 18038) provides direction that the "environmentally preferable alternative is the alternative that would promote the national environmental policy as expressed in NEPA's Section 101," including:

- 1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- 2) Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- 3) Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- 4) 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;
- 5) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- 6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources (NEPA Section 101(b)).

Generally, these criteria mean the environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources (46 FR 18026 – 46 FR 18038).

Either Alternative 1 or 2 meets the criteria for the environmentally preferable alternative. Alternative 1 best meets the criteria because it would cause no additional impacts to Monument resources, while Alternative 2 best meets the criteria because it would increase visitor understanding of Monument resources while causing minimal impacts to Monument resources. Both Alternatives meet 1), 2), and 4) above, while Alternative 2 meets criterion 3) above more than Alternative 1. Criterion 4 is generally not applicable to the proposed project and Alternative 1 would best meet criterion 6 because it would not cause additional consumptive use of resources.

IV. Impact Topics and Methodology

A. Impact Topics Analyzed

Impacts of the alternatives on the following topics are presented in this Environmental Assessment: soils; vegetation; wildlife; prehistoric and historic archeological resources; and visitor experience.

PHYSICAL RESOURCES

Geology: *National Park Service Management Policies* (2006) call for analysis of geology and geological hazards should they be relevant.

Soils: *Management Policies* (NPS 2006) require the NPS to understand and preserve and to prevent, to the extent possible the unnatural erosion, physical removal, or contamination of the soil. The alternatives involve ground-disturbing activities with the potential for erosion or sedimentation impacts to occur. Therefore, soils are addressed as an impact topic.

BIOLOGICAL RESOURCES

Vegetation: The *National Environmental Policy Act* (NEPA) calls for examination of the impacts on the components of affected ecosystems. NPS policy is to protect the natural abundance and diversity of park native species and communities, including avoiding, minimizing or mitigating potential impacts from proposed projects. The alternatives described in this Environmental Assessment are likely to result in tree and other vegetation removal.

Wildlife: The *National Environmental Policy Act* (NEPA) calls for examination of the impacts on the components of affected ecosystems. NPS policy is to protect the natural abundance and diversity of park native species and communities, including avoiding, minimizing or mitigating potential impacts from proposed projects. More than 270 native species of terrestrial and aquatic vertebrates have been recorded in the park, including 60 mammals, 200 birds, and 13 species of amphibians and reptiles. Wildlife species may reside in or use the project area.

CULTURAL RESOURCES

Prehistoric and Historic Archeological Resources: Conformance with the *Archeological Resources Protection Act* and *National Historic Preservation Act* in protecting archeological resources is necessary.

RECREATIONAL / SOCIAL RESOURCES

Visitor Experience: Based on *Management Policies* (2006), impacts to visitors are considered with respect to park undertakings.

B. Impact Topics Dismissed From Further Consideration

The topics listed below either would not be affected or would be affected only negligibly by the alternatives evaluated in this Environmental Assessment. Therefore, these topics have been dismissed from further analysis. Negligible effects are effects that are localized effects that would not be detectable over existing conditions.

Land Use: Lands in the proposed project area are within Craters of the Moon National Monument and Preserve and are bordered nearby by private land. The State of Idaho has a right-of-way that encompasses U.S. Highway 20/26/93 and passes between NPS/BLM land on the north and south sides of the highway. Because the proposed project would be located within the State of Idaho easement, which is used for occasional and emergency stopping and it would not cause a change in existing land use practices. The Monument management zone for the project site is the Passage Zone, a zone that also encompasses the proposed changes, including information signs for visitors.

Air Quality: A portion of Craters of the Moon (National Wilderness Area) is in a mandatory Class I airshed under the Clean Air Act (1977). Class I areas are afforded the highest degree of protection under the Clean Air Act. This designation allows very little additional deterioration of air quality. The rest of the Monument is in a Class II area. Class II areas have limits on increases of particulate matter and sulfur dioxide above baseline conditions. Only negligible, temporary (during construction) air quality impacts would occur from the implementation of the alternatives described in this document. As required under mitigation measures for the Monument Management Plan (NPS 2005:75), dust control during construction activities would be implemented and all construction machinery would meet applicable air emission standards.

Water Resources: The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters, to enhance the quality of water resources, and to prevent, and control, and abate water pollution. *Management Policies* (NPS 2006) provide direction for the preservation, use, and quality of water in national parks.

The Clean Water Act is a national policy aimed at restoring, maintaining, and enhancing the chemical, physical, and biological integrity of the nation's waters and to prevent, control, and abate water pollution.

Water Quality: Section 401 of the *Clean Water Act* as well as NPS policy requires analysis of impacts on water quality. Construction will result in minor earth disturbing activities, which increases the potential for erosion and sedimentation to occur, however because there is no source of water in the vicinity and because sediment control measures would be implemented during construction, these impacts are considered negligible.

Water Quantity: The increased/decreased use of water to provide for public use may also have an impact on park resources, such as amphibians. There would be minimal temporary additional use of water during construction, a negligible impact.

Wetlands: Executive Order 11990 requires that impacts to wetlands be addressed. There are no wetlands in the proposed project area. No impacts on wetlands would occur.

Floodplains: Executive Order 11988 (Floodplain Management) requires an examination of impacts to floodplains and potential risk involved in placing facilities within floodplains. NPS Management Policies, DO-2 (Planning Guidelines), and DO-12 (Conservation Planning, Environmental Impact Analysis, and Decision Making) provide guidelines for proposals in floodplains. Executive Order 11988 requires that impacts to floodplains be addressed. There are no floodplains in the proposed project area. No impacts to floodplains would occur.

Special Status Species: The *Endangered Species Act* (ESA) requires an examination of impacts to all federally listed threatened or endangered species. NPS policy also requires an analysis of impacts to state-listed threatened or endangered species and federal candidate species. Under the ESA, the NPS is mandated to promote the conservation of all federal

threatened and endangered species and their critical habitats within the park boundary. *Management Policies* (NPS 2006) includes the additional stipulation to conserve and manage species proposed for listing. There would be no effect on any special status species as a result of the implementation of the proposed project under either Alternative. Greater sage-grouse (*Centrocercus urophasianus*) are being considered for federal listing and is a BLM sensitive species. No sage-grouse leks (nesting and brood-rearing area) are found in or near the proposed project area. There would be no effect on this species. Gray wolves are listed as threatened by the USFWS. Although gray wolves are occasionally seen near the northern Monument, no actions proposed herein would affect them.

Museum Collections: *Management Policies* (NPS 2006) and other cultural resources laws identify the need to evaluate effects on National Park Service Collections if applicable. Requirements for proper management of museum objects are defined in 36 CFR 79. The collections at Craters of the Moon would not be affected by the proposed project, except by the potential addition of material for the collections if any is found (see mitigation measures under *Archeological Resources* in the *Environmental Consequences* section).

Ethnography: Craters of the Moon and the surrounding area have a long history of use by prehistoric and contemporary Native Americans. Analysis of impacts to known resources is important under the *National Historic Preservation Act* and other laws. The National Park Service defines ethnographic resources as any “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” (NPS 1998:181). There would be no impacts on ethnographic resources because the proposed project occurs in a highly disturbed highway right-of-way corridor.

Historic Structures/Cultural Landscapes: Consideration of the impacts to cultural resources is required under provisions of Section 106 of the *National Historic Preservation Act of 1966*, as amended, and the 1995 *Programmatic agreement among the National Park Service, the National Conference of State Historic Preservation Officers, and the Advisory Council on Historic Preservation*. It is also required under *Management Policies* (2006). Federal land managing agencies are required to consider the effects proposed actions have on properties listed in, or eligible for inclusion in, the National Register of Historic Places (i.e., Historic Properties), and allow the Advisory Council on Historic Preservation a reasonable opportunity to comment. Agencies are required to consult with Federal, state, local, and tribal governments/organizations, identify historic properties, assess adverse effects to historic properties, and negate, minimize, or mitigate adverse effects to historic properties while engaged in any Federal or federally assisted undertaking (36 CFR Part 800). There are no historic properties in the project area. None would be affected by the proposed project under either alternative.

Wilderness: NPS wilderness management policies are based on provisions of the 1916 NPS Organic Act, the 1964 Wilderness Act, and legislation establishing individual units of the national park system. These policies establish consistent service-wide direction for the preservation, management, and use of wilderness and prohibit the construction of roads, buildings and other man-made improvements and the use of motorized vehicles in wilderness. All park management activities proposed within wilderness are subject to review following the minimum requirement concept and decision guidelines. The public purpose of wilderness in national parks includes the preservation of wilderness character and wilderness resources in an unimpaired condition, as well as for the purposes of recreational, scenic, scientific, education, conservation, and historical use.

Approximately 70 percent of the Monument is in Wilderness Study Area (WSA) 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 the four WSAs includes lava flows administered by the NPS (NPS 2005:6). There would be no impacts to wilderness from the implementation of the alternatives described herein. None of the proposed activity areas occur in Wilderness or Wilderness Study Areas.

Park Operations: Impacts to park operations are often considered in Environmental Assessments to disclose the degree to which proposed actions would change park management strategies and methods. There would be negligible impacts to park operations from replacing two entrance signs with two new signs located farther out from the core operations area. The signs have been designed to need minimal maintenance and to be easier to fix or replace should they be vandalized. Although there would be increased travel time to maintain the signs should Alternative 2 be selected for implementation, this travel time would be the same as that required to inspect portions of the boundary expansion area, a need that has occurred since the expansion occurred nearly seven years ago.

Socioeconomics: Socioeconomic impact analysis is required, as appropriate, under NEPA and NPS Management Policies pertaining to gateway communities. The local and regional economy and most business of the communities surrounding the park are based on tourism and resource use. Agriculture, manufacturing, professional services, and education also contribute to regional economies. There would be no measurable effects to regional or gateway community economies, or changes in visitor attendance or visitor spending patterns as a result of the implementation of the actions described herein.

Prime and Unique Farmlands: No unique agricultural soils are believed to exist in the vicinity of the project area due to its presence in a high desert arid environment, extensively covered with outcrops of lava rock.

Energy Consumption: Implementation of the proposed actions would not cause major increases or decreases in the overall consumption of electricity, propane, wood, fuel oil, gas or diesel associated with visitation or for park operations and maintenance.

Environmental Justice: Executive Order 12898 requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. This Executive Order does not apply to the subject of this Environmental Assessment. The actions evaluated in this Environmental Assessment would not adversely affect socially or economically disadvantaged populations.

C. Methodology

The National Environmental Policy Act (NEPA) requires that environmental documents disclose the environmental impacts of the proposed federal action, reasonable alternatives to that action, and any adverse environmental effects that cannot be avoided should the proposed action be implemented. This section analyzes the environmental impacts of project alternatives on affected park resources. These analyses provide the basis for comparing the effects of the alternatives. NEPA requires consideration of context, intensity and duration of impacts, indirect impacts, cumulative impacts, and measures to mitigate impacts. In addition to determining the environmental consequences of the preferred and other alternatives, *NPS Management Policies* (NPS 2006) and Director's Order-12, *Conservation Planning, Environmental Impact Analysis, and Decision-making* require analysis of potential effects to determine if actions would impair park resources.

ENVIRONMENTAL IMPACT ANALYSIS

The environmental consequences for each impact topic were defined based on the following information regarding context, type of impact, duration of impact, area of impact and the cumulative context. Unless otherwise stated in the resource section in Environmental Consequences, analysis is based on a qualitative assessment of impacts.

- ❖ **CONTEXT:** Setting within which impacts are analyzed – such as the project area or region, or for cultural resources – the area of potential effects.
- ❖ **TYPE OF IMPACT:** A measure of whether the impact will improve or harm the resource and whether that harm occurs immediately or at some later point in time.
 - **Beneficial:** Reduces or improves impact being discussed.
 - **Adverse:** Increases or results in impact being discussed.
 - **Direct:** Caused by and occurring at the same time and place as the action, including such impacts as animal and plant mortality, damage to cultural resources, etc.
 - **Indirect:** Caused by the action, but occurring later in time at another place or to another resource, including changes in species composition, vegetation structure, range of wildlife, offsite erosion or changes in general economic conditions tied to park activities.

Note: The type of impact is described in more detail preceding each resource section in Environmental Consequences below.

- ❖ **DURATION OF IMPACT:** Duration is a measure of the time period over which the effects of an impact persist. The duration of impacts evaluated in this Environmental Assessment may be one of the following:
 - **Short-term:** Often quickly reversible and associated with a specific event, one to five years
 - **Long-term:** Reversible over a much longer period, or may occur continuously based on normal activity, or for more than five years.
- ❖ **AREA OF IMPACT**
 - **Localized:** Detectable only in the vicinity of the activity
 - **Widespread:** Detectable on a landscape scale (beyond the affected site)
- ❖ **CUMULATIVE:** Cumulative impacts are the effects on the environment that would result from the incremental impacts of the action when added to other past, present and reasonably foreseeable future actions. Impacts are considered cumulative regardless of what agency or group (federal or non-federal) undertakes the action.

The Council on Environmental Quality (CEQ) describes a cumulative impact as follows (Regulation 1508.7):

A “Cumulative impact” is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The cumulative projects addressed in this analysis include past and present actions, as well as any planning or development activity currently being implemented or planned for implementation in the reasonably foreseeable future. Cumulative actions are evaluated in conjunction with the impacts of an alternative to determine if they have any additive effects on a particular resource. The projects considered in the cumulative impacts analysis include:

- Ongoing active and passive restoration treatments, including prescribed fire, thinning, mowing, herbicide treatment, seeding, etc. (NPS 2005:78).
- Integrated Weed Management to control and prevent noxious weeds (NPS 2005:78).

- Proposed replacement of interpretive waysides and other interpretive signs as part of the implementation of the Monument Sign plan (in process).

❖ **IMPACT MITIGATION**

- **Avoid** conducting management activities in an area of the affected resource
- **Minimize** the type, duration or intensity of the impact to an affected resource
- **Mitigate the impact by**
 - **Repairing** localized damage to the affected resource immediately after an adverse impact
 - **Rehabilitating** an affected resource with a combination of additional management activities
 - **Compensating** a major long-term adverse direct impact through additional strategies designed to improve an affected resource to the degree practicable.

All Impacts Except Cultural Resources

Note: Cultural Resources impact determinations are formally determined under the National Historic Preservation Act (Section 106), respectively (see below).

- **Negligible:** Measurable or anticipated degree of change would not be detectable or would be only slightly detectable. Localized or at the lowest level of detection.
- **Minor:** Measurable or anticipated degree of change would have a slight effect, causing a slightly noticeable change of approximately less than 20 percent compared to existing conditions, often localized.
- **Moderate:** Measurable or anticipated degree of change is readily apparent and appreciable and would be noticed by most people, with a change likely to be between 21 and 50 percent compared to existing conditions. Can be localized or widespread.
- **Major:** Measurable or anticipated degree of change would be substantial, causing a highly noticeable change of approximately greater than 50 percent compared to existing conditions. Often widespread.

Note: Cultural resources impacts are also initially characterized as noted above, however the conclusion follows the format below, and makes a formal determination of effect under Section 106 of the National Historic Preservation Act. In accordance with National Park Service Management Policies (2006), the analysis in this Environmental Assessment fulfills the responsibilities of the National Park Service under Section 106 of the National Historic Preservation Act.

Cultural Resources Impacts

No effect: There are no historic properties in the Area of Potential Effect (APE); or, there are historic properties in the APE, but the undertaking will have no impact on them.

No adverse effect: There will be an effect on the historic property by the undertaking, but the effect does not meet the criteria in 36 CFR Part 800.5(a)(1) and will not alter characteristics that make it eligible for listing on the National Register. The undertaking is modified or conditions are imposed to avoid or minimize adverse effects. This category of effects is encumbered with effects that may be considered beneficial under NEPA, such as restoration, stabilization, rehabilitation, and preservation projects. Under the terms of the 1999 PA, data recovery can mitigate affect to archaeological properties that are eligible for listing on the NR under criterion d. However, some archaeological sites are eligible as traditional cultural places under criterion A, and such mitigation may not be sufficient or appropriate.

Adverse effect: The undertaking will alter, directly or indirectly, the characteristics of the property making it eligible for listing on the National Register. An adverse effect may be resolved in accordance with the Stipulation VIII of 1999 Programmatic Agreement, or by developing a memorandum or program agreement in consultation with the SHPO, ACHP, American Indian tribes, other consulting parties, and the public to avoid, minimize, or mitigate the adverse effects (36 CFR Part 800.6(a)).

Significant Impact: An impact to a National Register historic property would be considered significant when an adverse effect cannot be resolved by agreement among SHPO, ACHP, American Indian tribes, other consulting and interested parties, and the public. The impact will diminish the integrity of location, design, setting, materials, workmanship, feeling or association characteristics that make the historic property eligible for inclusion in the National Register Historic Places. The resolution must be documented in a memorandum or programmatic agreement or the FONSI.

Impairment

In addition to determining the environmental consequences of the preferred and other alternatives, NPS Management Policies (NPS 2006) and Director's Order-12, Conservation Planning, Environmental Impact Analysis, and Decision-making, require analysis of potential effects to determine if actions would impair park resources. The following sections from Management Policies define impairment and highlight the difference between an impact and impairment.

1.4.3 The NPS Obligation to Conserve and Provide for Enjoyment of Park Resources and Values

The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. This mandate is independent of the separate prohibition on impairment and applies all the time with respect to all park resources and values, even when there is no risk that any park resources or values may be impaired. NPS managers must always seek ways to avoid, or to minimize to the greatest extent practicable, adverse impacts on park resources and values. The laws do give the Service the management discretion, however, to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, so long as the impact does not constitute impairment of the affected resources and values.

The fundamental purpose of all parks also includes providing for the enjoyment of park resources and values by the people of the United States. The enjoyment that is contemplated by the statute is broad; it is the enjoyment of all the people of the United States and includes enjoyment both by people who visit parks and by those who appreciate them from afar. It also includes deriving benefit (including scientific knowledge) and inspiration from parks, as well as other forms of enjoyment and inspiration. Congress, recognizing that the enjoyment by future generations of the national parks can be ensured only if the superb quality of park resources and values is left unimpaired, has provided that when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant. This is how courts have consistently interpreted the Organic Act.

1.4.4 The Prohibition on Impairment of Park Resources and Values

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

The impairment of park resources and values may not be allowed by the Service unless directly and specifically provided for by legislation or by the proclamation establishing the park. The

relevant legislation or proclamation must provide explicitly (not by implication or inference) for the activity, in terms that keep the Service from having the authority to manage the activity so as to avoid the impairment.

1.4.5 What Constitutes Impairment of Park Resources and Values

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

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

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

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

1.4.6 What Constitutes Park Resources and Values

The "park resources and values" that are subject to the no-impairment standard include:

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

1.4.7 Decision-making Requirements to Identify and Avoid Impairments

Before approving a proposed action that could lead to an impairment of park resources and values, an NPS decision-maker must consider the impacts of the proposed action and determine, in writing, that the activity will not lead to an impairment of park resources and values. If there would be impairment, the action must not be approved.

In this Environmental Assessment determinations of impairment are provided in the conclusion section under each applicable resource topic for each alternative. Impairment determinations, however, are not made for health and safety, visitor use, maintenance, operations, socio-economic resources and other non-natural or cultural resources topics.

Mitigation Measures Incorporated into the Action Alternative

The measures below, along with other measures listed under each resource section in *Environmental Consequences* have been developed to lessen the potential adverse effects of the action alternative.

The following measures are among those that would be incorporated into the implemented alternative (see resource impact sections below for additional measures):

- The proposed project areas would be located on previously disturbed sites and/or carefully selected sites with as small a footprint as possible (NPS 2005:74).
- Locating staging areas where they will minimize new disturbance of area soils and vegetation.
- Minimizing ground disturbance to the extent possible.
- Using only certified weed-free hay, straw or mulch to minimize the potential spread of exotic plants (NPS 2005:74).
- Inspecting and/or cleaning construction vehicles and equipment prior to entry into the Monument to ensure that they are free of weed seed (NPS 2005:75).
- Surveying project areas for sensitive species (NPS 2005:74) (none were found).
- Selecting the proposed project area to avoid known sage-grouse lek sites.
- Conducting proposed project work only during daylight hours.
- Immediate work stoppage and/or relocation to a non-sensitive area should unknown archeological resources be uncovered during construction to allow collection of soil samples and recordation. At this time, the Monument Cultural Resources Program Manager contacted, the site secured, and the Monument would consult with the State Historic Preservation Officer and tribal representatives according to 36 CFR 800.11.
- Distributing press releases to local media, and state highway information recordings to inform visitors about the project.
- Monitoring the new trail segments for signs of native vegetation disturbance (NPS 2005:75).
- Locating sustainable, low-impact barriers, if needed, to discourage off-trail use and to protect intact areas from disturbance (NPS 2005:75).

V. Affected Environment / Environmental Consequences

Information in this section is derived from a comprehensive review of existing information pertaining to the project area within the Monument. It includes information from the Monument Management Plan (NPS 2005), various natural and cultural resources management plans and other Monument planning documents. Specific sections from these documents are cited appropriately in the text and the bibliographic information placed in the *References* section of this document. Information in this section has been gained from research and analysis throughout the history of Craters of the Moon National Monument and Preserve.

A. Geology Affected Environment

The purpose and significance of the Monument tied directly to its unique 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 located in the Snake River Basin-High Desert (Omernik 1986 in NPS 2005) and is primarily comprised of three geologically young (Late Pleistocene-Holocene) lava fields that lie along the Great Rift. The Great Rift zone is a belt of open cracks, eruptive fissures, shield volcanoes, and cinder cones. The Monument protects most of the Great Rift area, which includes the numerous lava flows and other discharges 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 one and five miles and extends for more than 50 miles (NPS 2005:5).

Many features and structures associated with basaltic volcanism are represented in the Great Rift, 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 diverged around areas of higher ground and rejoined downstream to form isolated islands of older terrain surrounded by new lava. These areas with remnant vegetation 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 in the Snake River Plain (NPS 2005:5).

Young 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 are older and covered with a thicker mantle of soil. This older terrain supports a sagebrush steppe ecosystem consisting of diverse communities of grasses, sagebrush, and shrubs, and providing habitat for a variety of wildlife. This area also includes lava tube caves, older volcanic formations, and volcanic edifices locally referred to as buttes (NPS 2005:5-6).

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 significant in that it is the largest basaltic lava field of predominantly Holocene age (less than 10,000 years old) in the lower 48 states (Kuntz *et al.* 1992 in NPS 2005)(NPS 2005:5).

The proposed project sites occur in the Craters of the Moon Lava Field. This lava field contains a tremendous diversity of volcanic features, with nearly every type of feature associated with basaltic systems (Hughes *et al.* 1999). Contained within the Craters of the Moon Lava Field are

at least 60 lava flows, 25 tephra cones, and eight eruptive fissure systems aligned along the northern part of the Great Rift (Kuntz *et al.* 1992 in NPS 2005) (NPS 2005:105).

The western part of the proposed project area is located in the northern part of the Monument in the Carey lava flow and is comprised of Carey pahoehoe and a'a basalt-hawaiite flows from the Late Pleistocene. It is mapped as the Carey pahoehoe and a'a basalt flows (Kuntz *et al.* 1988). These flows are believed to have been erupted simultaneously with the Sunset flows (12,010 \pm 150 years old). A'a is common in the vicinity of the proposed portal site.

The eastern project area is located in the Craters of the Moon lava field and is comprised of Sunset pahoehoe and a'a basalt-hawaiite flows also from the Late Pleistocene. It has been dated at 12,010 \pm 150 years old and is chiefly a pahoehoe surface and tube fed basalt flow mapped as the Sunset pahoehoe flow (Kuntz *et al.* 1988). Inflation and deflation features are common to this high volume flow, such as, pressure ridges/elongate tumuli, pressure plateaus, tumuli, and collapse depressions. (Tumuli are elliptical domed structures created when the upward pressure of slow-moving molten lava within a flow swells or pushes the overlying crust upward.)

B. Soils Affected Environment

The soils of the Monument area are variable, reflecting the differences and interactions among parent material, topography, vegetation, climate, and time. The most significant differences involve the presence or absence of lava flows and the degree of soil development on volcanic substrates. The lava flows, which occupy two-thirds of the Monument, are made up of basalt lava rock. 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 (NPS 2005:110-11).

Sagebrush steppe, mountain areas, and kipukas within the Monument have deeper, well-formed soils. The high desert environment results in lighter colored soils with low organic matter content. 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 highly susceptible to water and wind erosion (NPS 2005:111).

Soil Origins

The soils in the Monument and surrounding area developed from rocks deposited during a sequence of geologic events that began almost 600 million years ago. During the latter part of the Tertiary Period, from about 16 million years ago, until recently in the Yellowstone area, explosive volcanic activity across the Snake River Plain deposited layers of pyroclastic tuffs and silica rich lavas. More recent basalt lava flows and windblown loess have subsequently covered these rhyolite rocks. The windblown dust (loess) from sources further west, weathering of rock and basic soil development processes have resulted in varying depths of soils on recent and older basalt flows in the Monument (NPS 2005:11).

Soil Types

Soil types in the project area fall into the following two types (NPS 2005:111-12):

- **Shallow Basalt Soils** – This is a complex of soils developed on the recent basalt flows. Due to the uneven, broken surface of the basalt, soil depths range from a few inches on exposed ridges to 6 or 8 feet on the lee sides of the ridges and in low-lying areas. The type of vegetation varies depending on soil depth and may include various types of shrubs including fern-bush, syringa, and mountain big sagebrush, with some low and Wyoming big sagebrush.
- **Loess Soils** – The loess soils are from glacial Snake River silts and lacustrine materials that have been windblown out of the Snake River drainage. Typical shrub vegetation

includes mountain big sagebrush, Wyoming big sagebrush, basin big sagebrush, or some three-tip sagebrush.

The Blaine County site is comprised of the Lava Flows complex containing predominantly unvegetated basalt rock and cinder (NPS 2005:111). In some areas there is virtually no soil development and very little soil deposition (loess). This site does not contain biological soil crusts (Wolken 2007).

The Butte County site is comprised of the Lava Flows-Cinderhurst Complex and contains some shallow soil development or deposition (loess – wind deposited silt loam) in cracks and depressions (NPS 2005:111). There is very little natural development of biological soil crusts, but the site does exhibit lichen growth on basalt rock.

According to Natural Resources Conservation Service (NRCS) data, the Lava Flow Complex has a seasonal high water table of greater than 60 inches. Other soil characteristics, including likely plant association, are not identified, given the miniscule amount of soil development or loess. The Cinderhurst Complex, however, notes the same seasonal high water table and a slope gradient of 2-15 percent with well drained soils and bedrock at 4-10 inches.

C. Impacts to Soils / Geology

Alternative 1 Soils Impacts

There would be no additional impacts to soils from the retention of the existing Monument entrance signs. Existing areas of impact would remain and would continue to be affected by visitors in the area. Observable changes in the area of impact would be small and would be negligible over time.

Alternative 1 Geology Impacts

There would be no additional impacts to geology from the retention of the existing Monument entrance signs. Existing impacts from visitors wandering around in the vicinity of the existing signs would continue, including occasional damage to fragile lava rock from trampling. These impacts are and would remain minor but long-term.

Alternative 2 Soils and Geology Impacts

Entrance Sign Installation and Maintenance

Both the Butte County and Blaine County sign locations would include the placement of Monument Entrance signs with a base measuring approximately 17 feet 9 inches long by 8 feet 8 inches wide (154 square feet). The Butte County sign would result in an impact area (for installation) of approximately 22 feet long by 12 feet wide (264 square feet); while the Blaine County sign location would result in an impact area of approximately 26 feet long by 15 feet wide (390 square feet). The differences in the impact area are primarily a result of the differences in the location of the sign associated with differences in local topography that translate to differences in the ability to access the site for construction.

Pullout Construction, Use and Maintenance

Both the Butte County and Blaine County pullouts adjacent to the proposed new Monument entrance signs would be approximately 150 feet long and 30 feet deep (measured from the existing edge of pavement) (4,500 square feet) and would require a construction impact area of approximately 170 feet by 35 feet (5,950 square feet). Approximately 20 cubic yards of material (including imported road fill and native rock and soil) would be excavated from the Butte County location and approximately 35 cubic yards (including imported road fill and native rock and soil) would be excavated from the Blaine County location.

Trail Construction, Use and Maintenance

The trail on the Butte County side would be approximately 35 feet long and 40 inches wide (117 square feet) and would require an overall impact area of approximately 45 feet long by 7 feet wide (315 square feet), including excavation of approximately 3 cubic yards and the addition of approximately 10 cubic yards to create a level surface for the trail.

The trail on the Blaine County side would be approximately 17 feet long and 40 inches wide (56 square feet) and would require an overall impact area of approximately 25 feet long and 7 feet wide (175 square feet), including excavation of approximately 2 cubic yards and the addition of approximately 3 cubic yards to create a level surface for the trail.

Differences in trail length are a result of the local topography and compliance with the Americans with Disabilities Act (ADA). ADA standards require gradients of ten percent or less which results in increasing the length of the trail over steeper terrain (Butte County side).

For the signs and trail, the ground surface would be covered with impermeable material comprising approximately 271 square feet on the Butte County side and 210 square feet on the Blaine County side. Additional surface area would be covered with permeable gravel for the pullouts and would comprise approximately 4,500 square feet at each location. Disturbance area for constructing the signs, trails and the pullouts would comprise an additional approximately 1,758 square feet in Butte County and 1,805 square feet in Blaine County. Altogether, about 0.15 acre would be disturbed in each location.

The disturbance of approximately 0.15 acre in each location (0.30 acre total) would comprise a negligible to moderate, localized, long-term adverse impact. Soils and rock would be affected wherever grading, excavation and/or fill is called for, including for signs, trails and pullouts. During these activities, soil and rock would be mixed, removed, and replaced with fill throughout the project areas, causing a minor, localized but long-term, adverse effect to the area's soil or rock profiles, with the greater degree of impact occurring in the limited areas (beyond the road edge) not previously disturbed by grading or construction. Effects associated with impervious surfacing, including the potential for increased runoff, would constitute only a small amount of each extent and would result in a minor, localized, long-term adverse effect.

Impact Avoidance, Minimization and Mitigation Measures

Measures that would be included in the proposed project (as appropriate to the alternative actions) to minimize impacts to soils and geology include:

- Locating the proposed project areas on previously disturbed sites and/or carefully selected sites with as small a footprint as possible (NPS 2005:74).
- Locating staging areas where they will minimize new disturbance of area soils and vegetation.
- Minimizing ground disturbance to the extent possible to retain the natural appearance of geologic materials and features.
- Minimizing soil erosion and associated water quality impacts by limiting the time that soil would be left exposed and by the use of erosion control measures (NPS 2005:74).
- Resurfacing materials, particularly at the site near Arco would be an appropriate mixture of large cobbles of basalt rock, soil, and excavated plant material.
- Salvaging topsoil, if any, and reusing it as close to the original location as possible. Where areas are to be revegetated, they would be resurfaced with appropriate amounts of salvaged basalt rock and soil and seeded or planted with species native to the immediate area in consultation with the Monument's Plant Ecologist (NPS 2005:74).
- Using geologic material as fill to the degree possible due to the overall lack of soil and soil development. Local geologic material would be used, as appropriate, for resurfacing areas adjacent to the parking area, trail and sign to mimic the surrounding rocky area.

- Discouraging establishment of undesirable plants, by avoiding the use of soil fill or surfacing in distinctly rocky, unvegetated areas (e.g. Blaine County site), except within the Idaho Transportation Department shoulder.
- Using only weed free fill and surfacing material.
- Directing contractor equipment access to reduce the overall footprint of disturbance.

Cumulative Impacts

Adverse impacts to soils and geology as a result of other past and ongoing actions include compaction, soil mixing, and soil loss from removal and erosion, and removal of rock from development and concentrated visitor use in the Monument, as well as from areas where soils have been disturbed and revegetation has not occurred naturally or been undertaken by the Monument. Other impacts include an overall decrease in soil infiltration, where hardening of surfaces (roads, walkways, buildings) has occurred. Some restoration and development projects (e.g. addition of new visitor service facilities, restoration of old roads or building sites) could occur within the Monument and project vicinity. These projects could contribute to both beneficial and adverse impacts to soils. Because most of the Monument continues to be undisturbed by human impacts, including designated wilderness and wilderness study areas, the amount of area affected by past and possible future projects is not substantial and soil and geology impacts therefore are minor when considered in a regional context. Impacts from the above actions, together with the impacts of Alternative 1 or 2, would continue to result in long-term minor adverse and negligible beneficial cumulative impacts to soils in the Monument. Alternative 1 would contribute an ongoing negligible, long-term, adverse increment to total cumulative effects on soils, while Alternative 2 would contribute localized negligible to minor adverse effects on soils and geology which would be permanently disturbed in a small area under the proposed actions.

Conclusion

Alternative 1 would continue to result in long-term negligible localized impacts to soils and minor impacts to geology. Taken together, the construction of the signs, trails and parking areas in Alternative 2 would result in negligible to moderate localized long-term impacts on soils and geology. Overall disturbance to the natural basalt surface structure would be limited in scale but because of the area's unique composition this disturbance would be virtually impossible to replace or recreate and is noticeable. Where black naturally weathered surfaces were exposed, they would lighten to reddish oxidized basalt because of disturbance. Some areas of native rock would be removed entirely by placement of the signs, trails and parking areas. There would be no significant impact and no impairment of soils or geology or associated values from the actions proposed in this Environmental Assessment.

D. Vegetation Affected Environment

Although the wide expanses of lava at first seem to be nearly devoid of vegetation, Monument vegetation is diverse, encompassing a wide variety of species and habitats. Because of the geology, topography and climate, the presence of vegetation is highly dependent on the availability and depth of soil. It varies from the unique kipukas (islands of vegetation surrounded by lava flows), to parks (large kipukas), to rangelands dominated by sagebrush, grasses and forbs that surround the edges of the lava flows to scattered limber pine (*Pinus flexilis*), to small stands of Douglas-fir (*Pseudotsuga menziesii*) and quaking aspen (*Populus tremuloides*) on some north facing slopes in the northern portion of the Monument (NPS 2005:112-113).

Five major vegetation types (including at least 35 different vegetation communities and 785 species of plants) have been identified in the Monument:

- Vegetated lava complex
- Sagebrush steppe complex
- Grasslands complex
- Mountain complex, and
- Cinder cone complex.

Sagebrush Steppe Complex

A portion of the proposed project area is within the sagebrush steppe complex. Sagebrush steppe is found over approximately 60 percent of the Monument, on the more developed soils of the rangelands, kipukas, cinder cones, older lava flows and in the foothills of the Pioneer Mountains. Although it was once more common, fire, agriculture and livestock grazing have reduced its extent and modified its composition (NPS 2005:113). Pre-settlement sagebrush steppe may be found in isolated kipukas that have not been subject to these practices. In fact, due to disturbance in southern Idaho by cultivation, fire and weed invasion, some of the sagebrush steppe communities in the Monument are the best remaining examples of this vegetation type in the Snake River Plain (NPS 2005:115).

Although sagebrush steppe appears to be a monotonous landscape, there is a remarkable diversity of plant and community types. Numerous factors influence the diversity, density, cover, distribution and health of this plant community, including differences in soil depth and development; precipitation (8-16 inches); elevation (4,000-7,500 feet); historical and current land management; the presence of invasive species; and fire frequency. Vegetation structure and composition in turn influence the ability of sagebrush steppe to resist invasive species invasion, as well as to recover from fire and land management practices (NPS 2005:115-116).

Three species of sagebrush dominate this vegetation type in the Monument: mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*), basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*) and Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*). Other co-dominants include low sagebrush, antelope bitterbrush (*Purshia tridentata*), three-tip sagebrush (*Artemisia tridentata* tripartita), rubber rabbitbrush (*Chrysothamnus nauseosus*) and green rabbitbrush (*Chrysothamnus viscidiflorus*). Forbs and grasses vary widely in sagebrush steppe, but often include Sandberg bluegrass (*Poa secunda*), Idaho fescue (*Festuca idahoensis*), needlegrasses, bluebunch wheatgrass (*Pseudoroegneria spicata*), buckwheats (*Eriogonum* sp.), arrowleaf balsamroot (*Balsamorhiza sagittata*), lupine (*Lupinus* sp.), phlox (*Phlox* sp.), and milk vetches (*Astragalus* sp.).

Vegetated Lava Complex

A portion of the proposed project area is within the vegetated lava complex. This vegetation type is found in approximately 53 percent of the Monument and contains both exposed (unvegetated) lava and vegetated lava. Exposed lava flows are generally devoid of trees, shrubs and forbs, but containing lichens and mosses. Vegetated lava is defined as lava fields that contain greater than five percent cover. Within it, plants occur as islands, pockets or clustered individuals in the lava flow. It primarily consists of early successional or adaptable plants that can grow in the limited windblown soil that occurs in cracks and crevices within the basalt.

Characteristic plants depend on the type of lava and the amount of soil and may include Penstemon (*Penstemon* sp.), gland cinquefoil (*Potentilla glandulosa*), fern-bush (*Chamaebatiaria millefolium*) and rock spirea (*Holodiscus dumosus*). Where soil development or deposition has occurred, trees or shrubs may be found.

Non-native Invasive Species

Ten plants state-listed noxious plant species are known to occur in the Monument. Disturbed areas, including road rights-of-way (and the proposed project area), are particularly susceptible to the invasion of these species. Most noxious weeds are found in these disturbed areas, intensively grazed areas and areas subject to frequent burning. Specifically, over 200 infestations of spotted and diffuse knapweed (*Centaurea maculosa* and *C. diffusa*) occur along U.S. Highway 20/26/93. NPS staff, in cooperation with LostRivers and Blaine County Cooperative Weed Management areas have mapped and continues to treat these areas. Other non-native invasive plants include: Russian knapweed (*Acroptilon repens*), rush skeletonweed (*Chondrilla juncea*), leafy spurge (*Euphorbia esula*), Canada thistle (*Cirsium arvense*), musk thistle (*Carduus nutans*), Scotch thistle (*Onopordum acanthium*), Dalmatian toadflax (*Linaria*

genistifolia ssp. *dalmatica*), and field bindweed (*Convolvulus arvensis*). Cheatgrass (*Bromus tectorum*), although not a state-listed noxious weed, is extremely competitive and readily invades and dominates disturbed areas.

Blaine County Site

The proposed entrance sign site in Blaine County, near Carey is predominantly unvegetated basalt and cinders. Due to limited soil deposition and development in block pahoehoe and a'a lava flows, very little vegetation is present outside the immediate Idaho Transportation Department shoulder (Wolken 2007). Where vegetation is present along the roadside, it is a mixture of seeded roadside species such as non-native crested wheatgrass (*Agropyron cristatum*) and other wheatgrass species (*Agropyron* and *Elymus* spp.). There is some natural establishment of native plants such as big sagebrush, rubber or green rabbitbrush, dusty maiden (*Chaenactis douglasii*) or silverleaf phacelia (*Phacelia hastata*). Invasive, non-native species such as cheatgrass and diffuse knapweed may also be present.

Butte County Site

The proposed entrance sign site in Butte County, near Arco contains low to moderate densities of vegetation from the Vegetated Lava Complex and Sagebrush Steppe Complex. The area is predominantly comprised of mountain big sagebrush / Sandberg bluegrass. It typically has less than 40 percent vegetation cover and between 50 and 90 percent bare soil, rock and litter. Other common plants include antelope bitterbrush, bluebunch wheatgrass (*Elymus spicatus*), bottlebrush squirreltail (*Elymus elymoides*), Indian ricegrass (*Stipa hymenoides*), lava phlox (*Leptodactylon pungens*), oval-leaf and sulfur flower buckwheats (*Eriogonum ovalifolium* and *E. umbellatum*), turpentine desert parsley (*Cymopterus terebenthinus*), Anderson's larkspur (*Delphinium andersonii*), tapertip hawksbeard (*Crepis acuminata*), prickly pear cactus (*Opuntia polyacantha*) and blue penstemon (*Penstemon cyaneus*).

The recently reconstructed portion of U.S. Highway 20/26/93 road shoulder was reseeded by the Idaho Transportation Department with native grasses, including bluebunch wheatgrass, Sandberg bluegrass, Indian ricegrass, and bottlebrush squirreltail. Many non-native plants, however, are also invading the recently disturbed roadside. Cheatgrass, spotted and diffuse knapweed have been noted.

E. Impacts to Vegetation

Alternative 1

There would be no additional impacts to vegetation as a result of the implementation of Alternative 1. Ongoing negligible localized impacts related to trampling in the vicinity of the existing signs would continue to occur due to the lack of official access trails to the signs.

Alternative 2

A small amount of vegetation would be affected by the removal of the former entrance signs and expanded boundary sign posts, comprising a localized negligible to minor adverse effect primarily from accessing the sign in both sites. In addition, a number of small shrubs and forbs would be removed to construct the new Monument Entrance Signs, which are located off the road in fairly intact vegetated areas covered by plants and rock, comprising both a short- and long-term, localized negligible to minor adverse effect. The short-term effect would occur in disturbance areas, whereas the long-term effect would occur in areas permanently covered by other surfacing (gravel pullouts, concrete sign bases, and cement trail). The plants described above for the Butte and Blaine county locations would likely be affected. In addition to shrubs and forbs, the rocks in both areas contain a variety of lichens that would also be affected by construction (cleared to make room for the sign bases and trail).

Altogether only a few shrubs would be removed at each construction location because much of the proposed impact area is already highly disturbed by road construction and lacks native

vegetation. Existing pullouts would be expanded and trails added. Because the project affects only a comparatively small area and disturbance associated with it would be small, rehabilitation would be fairly easy to accomplish, with collection of local native seed from area shrubs, grasses and forbs and salvage of small plants prior to construction from limited areas. A small amount of landscaping would occur in the vicinity of the signs to ensure that they retained the characteristic plant arrays that would make them visually appealing for visitors. Attention would be paid to minimizing the impact area around them so that their setting remains characteristic of the Monument landscape, one of the goals of the project. Without active replanting in the disturbance areas, it is likely that it would take between five and 30 years for native vegetation to attain its former quality. Because it is likely that non-native species (including noxious weeds) could invade the sites following disturbance, active monitoring and management of the sites would occur to minimize long-term effects.

Impact Avoidance, Minimization and Mitigation Measures

Measures that would be included in the proposed project (as appropriate to the alternative actions) to minimize impacts to vegetation include:

- Collecting seed from a shrubs, grasses and forbs coupled with seeding these species upon project completion.
- Salvaging small plants from construction limits for later reuse, particularly in landscaping the proposed sign locations.
- Using only certified weed-free hay, straw or mulch to minimize the potential spread of exotic plants (NPS 2005:74).
- Inspecting and/or cleaning construction vehicles and equipment prior to entry into the Monument to ensure that they are free of weed seed (NPS 2005:75).
- Surveying project areas for sensitive species (NPS 2005:74) (none were found).
- Emulating the natural form, spacing, abundance and diversity of native plant communities and using native species in any revegetation (NPS 2005:75).
- Monitoring the new sign, trail and pullout areas for noxious weeds and treating them upon discovery.
- Monitoring reseeded and revegetated areas for successful plant re-establishment.
- Monitoring areas for effects from trampling and mitigating potential impacts as appropriate (including through signs, barriers or other means).

Cumulative Impacts

Human activities, particularly associated with fire and grazing, along with a small contribution from visitor and administrative use, have altered the structure and composition of Monument plant communities. In contrast to broad scale changes in vegetation characteristics that have occurred as a result of disturbing natural ecological processes, compared to the amount of area preserved, relatively small patches and corridors of habitat have been lost in the Monument in areas that have been developed for visitor and administrative facilities, roads and trails. These impacts have resulted in changes to vegetation community size, integrity, function and characteristic wildlife. Past and reasonably foreseeable future actions would have both beneficial and adverse effects on vegetation. Activities such as restoration, non-native plant removal and rehabilitation would result in both beneficial and adverse effects, while additional development or redevelopment of visitor facilities would result in mostly adverse effects. The eventual restoration of nearly 80,000 acres of degraded sagebrush steppe, as called for in the Monument Management Plan (NPS 2005:94 *et seq.*) would result in long-term beneficial effects on vegetation and would overshadow the negligible to minor, localized adverse effects of the proposed construction of new entrance signs, pullouts and associated visitor use access trails. The proposed action under Alternative 2 would comprise only a very tiny portion of overall road rehabilitation now completed or being anticipated by the Idaho Transportation Department. The use of the areas as pullouts and for entrance sign construction is consistent with other areas used for signs and pullouts along U.S. Highway 20/26/93.

Conclusion

Alternative 1 would result in no new impacts to vegetation. Alternative 2 would result in localized, short- and long-term negligible to minor adverse effects, primarily from localized vegetation removal and the potential for trampling of vegetation near the proposed visitor use areas. There would be no significant impact to and no impairment of vegetation or associated values from the implementation of either Alternative 1 or 2 following the actions proposed in this Environmental Assessment.

F. Wildlife Affected Environment

Approximately 200 species of birds, 60 mammals, 10 reptiles and at least three amphibians are found in the Monument. In addition, more than 2,000 insect species have been identified (NPS 2005:131). Birds include northern harriers, American kestrels, common nighthawks, burrowing owls, golden eagles, common ravens, horned larks, lazuli buntings, savannah sparrows, rock wrens, and western meadowlarks. Large mammals include mule deer, pronghorn, elk, cougar, black bear and moose. Medium-sized mammals include red and kit foxes, coyotes and bobcats, badgers, raccoons, and yellow-bellied marmots. The Monument also provides habitat for a wide variety of bats. Small mammals include ground squirrels, pikas, chipmunks, deer mice, voles, and gophers. Reptiles include rubber boas, gopher snakes, night snakes, western skinks, short- and desert-horned lizards, and long-nosed leopard lizards. Amphibians include the boreal chorus frog and the Pacific tree frog (NPS 2005:132 *et seq.*).

Sagebrush steppe is a highly valued crucial winter range habitat for elk, mule deer and pronghorn; and is essential habitat for sagebrush-obligate species (restricted to sagebrush habitats year-round or during the breeding season) such as the greater sage-grouse, sage sparrow, black-throated sparrow, Brewer's sparrow, sage thrasher, sagebrush vole, pygmy rabbit, and the sagebrush lizard; as well as for watershed recharge; as a source of forage for livestock; and for recreation (NPS 2005:116 and 131).

In winter, the evergreen foliage of sagebrush often provides the only available green vegetation, and its protein level and digestibility are higher than that of most other shrubs and grasses (Peterson 1995 in NPS 2005:131). Pronghorn, pygmy rabbits and sage-grouse may exclusively eat sagebrush during the winter. Sagebrush also comprises a large portion of mule deer and elk diets. Sagebrush, which can be over five feet tall, also provides cover for mammals, such as fawns, pygmy rabbits, and grouse and often contains an understory of grasses favored by small mammals.

The Monument has adopted (as part of the Monument Management Plan) interagency habitat guidelines for sage-grouse and sagebrush steppe obligate species to guide sagebrush steppe management (NPS 2005:79). The primary goal of the Idaho Sage-grouse plan is to "maintain, improve, and where possible, increase sage-grouse populations and habitats in Idaho, while considering the predictability and long-term sustainability of a variety of other land uses."

G. Impacts to Wildlife

Alternative 1

There would be no new impacts to wildlife from the implementation of Alternative 1. Ongoing impacts related to the presence of the road would continue to cause localized long-term minor to moderate adverse effects, including from noise and disturbance and from direct mortality associated with wildlife-vehicle collisions.

Alternative 2

There would be a variety of negligible to minor short- and long-term impacts to wildlife. Some disturbance of nearby large- and medium-sized mammals using nearby habitat would be expected as a result of the noise and activity associated with construction activities; however noise from construction activities would be similar to ambient noise generated by passing large trucks. While deer and elk are occasionally seen in or around the area, the project is unlikely to affect them. Persistent, but temporary, disturbance of birds in the vicinity would also occur as a result of construction activities. During grading, some mortality of small mammals and soil-dwelling invertebrates could occur. There would be additional intermittent disturbance of wildlife habitat as human activity and presence in the area increases.

Much of the proposed area to be disturbed has not been suitable wildlife habitat for decades as a result of U.S. Highway 20/26/93 and under the proposed project would not again be suitable undisturbed wildlife habitat. Wildlife that is tolerant of human presence, however, would continue to inhabit and/or use the area. Overall, this project would have a very small footprint with negligible impact on most wildlife or wildlife habitat. Impacts would primarily be limited to increased human presence and its attendant effects on wildlife, including disturbance and occasional illegal feeding, a long-term negligible to minor impact.

Although the potential for impacts to the Greater Sage-grouse, associated with the construction of the signs, could also occur such impacts are unlikely due to the distance of the proposed construction from known leks. The Idaho Conservation Plan for Greater Sage-grouse (Idaho Sage-grouse Advisory Committee 2006) has identified artificial perches for birds of prey as a potential threat to sage-grouse and recommends that they be avoided in sage-grouse habitat in an effort to limit the effects of predation on this declining species. Although the signs once constructed may provide hunting perches for birds of prey, both locations are more than one mile from known lek sites and therefore from known concentrations of grouse. In addition, while six new signs would be constructed, four signs would be removed, including two similar entrance signs and two small pole signs.

Impact Avoidance, Minimization and Mitigation Measures

Measures that would be included in the proposed project (as appropriate to the alternative actions) to minimize impacts to wildlife include:

- Surveying the proposed project area for the presence of rare species (none were found).
- Selecting the proposed project area to avoid known sage-grouse lek sites.
- Checking the job site at the end of each day to remove trash, food, and food-related items remaining at the site and disposing of them in an appropriate receptacle.
- Conducting proposed project work only during daylight hours.

Cumulative Impacts

The combined effects of development in the Monument and in the surrounding area over time coupled with the purposeful eradication of many predator species during the 1800s and early 1900s throughout the west have likely contributed to low level or extirpated wildlife populations of some key species in the Monument. Past and reasonably foreseeable development projects planned for the Monument would result in additional negligible to minor cumulative effects to wildlife. The effects of existing development would continue to take a toll on wildlife primarily from collisions on the road as well as from occasional inappropriate wildlife-human interactions. The existence and maintenance of the road and other Monument developed areas under Alternatives 1-2 would continue to contribute to long-term negligible to minor adverse effects on wildlife increasing some species while decreasing the presence of others. Other Monument projects would also continue to have primarily short-term negligible to moderate impacts, with some minor long-term impacts on wildlife, where new development occurs. Because the proposed action under Alternative 2 would not result in major changes to the amount of existing developed area, it

would contribute localized negligible to minor short-term adverse effects from noise and activity during construction and long-term negligible effects from use.

As noted under *Vegetation*, the eventual restoration of nearly 80,000 acres of degraded sagebrush steppe, as called for in the Monument Management Plan (NPS 2005:94 *et seq.*) would result in long-term beneficial effects on wildlife associated with this habitat and would overshadow the negligible to minor adverse effects of the proposed construction of new entrance signs, pullouts and associated visitor use improvements.

Conclusion

There would be a variety of negligible to minor short- and long-term impacts to wildlife from the alteration of a small amount of generally poor quality wildlife habitat adjacent to the road edge. There would be no significant impact to and no impairment of wildlife or wildlife habitat values from the implementation of either Alternative 1 or 2 following the actions proposed in this Environmental Assessment.

H. Prehistoric and Historic Archeology Affected Environment

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 (NPS 2005:6). There are more than 500 known, recorded cultural resources sites in the Monument, representing a variety of types and chronological periods, with data from at least 8,000 years old to the present. Prehistoric sites include lithic scatters, rock shelters, rock structures and piles, and pictographs. Stone quarry tool sites may also be found.

A cultural resources records search for archaeological and historical information in the project area was made by the BLM Cultural Resources Specialist. No previously recorded cultural resources were discovered as a result of the records review (Cresswell 2007). Because the proposed actions involve construction of roadside pullouts within two previously disturbed highway right-of-way sections, no field surveys were determined necessary. Based on Cresswell (2007) it is highly unlikely that the proposed areas contain prehistoric resources.

Both sites are located near the historic route of Goodale's / Jeffrey's Cutoff, an alternate Oregon Trail route. At its nearest point, the Butte County site is one mile south of the historic route. This portion of the route is on the National Register of Historic Places. The Blaine County site is approximately 0.7 miles southeast of the historic route.

I. Impacts to Prehistoric and Historic Archeology

Alternatives 1 and 2

There would be no additional impacts to prehistoric or historic archeology from the implementation of Alternative 1. Ongoing impacts related to visitor use in the vicinity of the existing entrance signs would continue, however, no archeological resources are known from this location and as a result there would continue to be no effect on archeological resources from ongoing use and maintenance of these areas. No archaeological evidence has been found in or near the proposed new entrance sign/pullout locations as described under Alternative 2. Although there is excavation involved in the construction of the base for the sign and the pullouts, this excavation is not expected to disturb any previously unidentified archaeological resources due to its proximity in and near a highly disturbed road corridor. As a result there would be no effect on known archaeological resources under Alternative 2.

The historic route of Goodale's Cutoff is visible from the Butte County site but at a distance of one mile the entrance sign will be almost invisible, a negligible impact. Like existing vehicle traffic on

the highway, vehicles parked temporarily at the turnout are more likely to be noticeable. From the Blaine County site, Goodale's Cutoff is hidden behind a hill which lies north of the highway and would have no effect on the view from the route.

Impact Avoidance, Minimization and Mitigation Measures

Measures that would be included in the proposed project (as appropriate to the alternative actions) to minimize impacts to prehistoric and historic archeological resources include:

- Survey of project areas by a professional archaeologist for prehistoric and historic cultural remains (NPS 2005:75) (none were found).
- Immediate work stoppage and/or relocation to a non-sensitive area should unknown archeological resources be uncovered during construction to allow collection of soil samples and recordation. At this time, the Monument Cultural Resources Program Manager contacted, the site secured, and the Monument would consult with the State Historic Preservation Officer and tribal representatives according to 36 CFR 800.11.
- Additional consultation would occur as appropriate, according to provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990. In compliance with this act, the National Park Service would also notify and consult concerned tribal representatives for the proper treatment of human remains, funerary, and sacred objects should these be discovered during the course of the project.

Cumulative Impacts

Archeological resources in the Monument have likely been adversely impacted to varying degrees from past construction-related disturbances (prior to the advent of archeological resources protection laws); visitor impacts and vandalism; and erosion and other natural processes. Because mitigation measures would be employed to minimize impacts to potentially unidentified cultural resources in other proposed and future Monument projects, it is likely that these would protect archeological resources from additional impacts. There would be no construction-related contributions to cumulative impacts from Alternative 1 and there would be no anticipated impacts from Alternative 2, however, if archeological remains were inadvertently discovered during construction, Alternative 2 could contribute additional negligible to minor adverse impacts which would be mitigated by additional investigation of the find immediately upon discovery or relocation of the work to a non-sensitive area.

Conclusion

If archeological resources were discovered during implementation, the preferred action would be to avoid further impact to the site by modifying project implementation as needed. If this is not possible, as much information as possible would be collected about the site in accordance with applicable laws and regulations and additional consultation with applicable agencies and tribes would occur as specified above. The proposed actions under Alternative 1 would have no additional effects on and would not impair archeological resources. Alternative 2 would have no adverse effect on and would not impair Monument archeological resources or the values for which they have been protected.

J. Visitor Experience Affected Environment

Access: US Highway 20/26/93 which traverses the northern boundary of the Monument is the primary access point for most visitors. The original monument boundary and access to the visitor center, campground and 7-mile Loop Drive is off this highway which passes through the towns of Carey on the west and Arco on the east. The existing entrance signs, under Alternative 1, and proposed Entrance signs, pullouts and accessible trails, under Alternative 2, are/would be located off this highway.

Visitor Facilities and Services: Most Monument visitor and educational opportunities are located near the Monument's visitor center south of US 20/26/93 between the "gateway" communities of Carey on the west and Arco in the east (both along the northern boundary of the Monument). In addition to guided walks and programs offered by the NPS, the Monument has several self-interpreting trails with waysides and a 7-mile Loop Drive. Facilities including the visitor center complex, which consists of a campground, museum, and bookstore (NPS 2005:6). The Loop Drive contains several short spur roads to points of interest, pullouts and parking areas, giving access to scenic vistas, hiking trails and vault toilets.

Through interpretive and educational programs, NPS and BLM desire to instill visitors with an understanding, appreciation, and enjoyment of the significance of the Monument. Interpretive and educational programs encourage the development of a personal stewardship ethic and broaden public support for preserving our nation's natural and cultural resources (NPS 2005:169).

Visitation: Approximately 200,000 people per year visit the Monument. Between 1990 and 2001, Monument visitation varied from a low of 186,993 people (1990) to a high of 241,160 people (1992) (NPS 2005:171). (Note: These statistics, however, relate only to the original Monument and not the expanded Monument and Preserve.) BLM estimates an additional 20,000 people per year visit the expanded portions of the Monument (NPS 2005:172).

Visitation occurs primarily in the spring through fall, with summertime peaks, but also occurs scattered throughout the year. In winter the 7-mile Loop Road, closed to motor vehicles, is groomed as a cross-country ski trail.

Based on analysis of visitors to the original Monument (Machlis *et al.* 1989 in NPS 2005), visitors generally spend less than three hours at the Monument, with approximately five percent remaining overnight to camp. Of these 80 percent are in family groups and the same percentage are on their first visit to the Monument. While most visitors are from the United States, primarily the Rocky Mountain and western states (Idaho, Wyoming, California, Colorado, Oregon and Washington), approximately 19 percent come from outside the U.S.

Visitor activities in the original Monument include scenic driving, photography, caving, hiking, cross-country skiing, snowshoeing and camping, while visitor activities in the expanded Monument and preserve include hunting, driving for pleasure, geologic exploration, including caving, hiking, sightseeing, primitive camping, photography, and mountain biking.

Visual Resources: "Perpetuating scenic vistas and open western landscapes for future generations" is one of the Monument purposes identified in the expansion legislation. As a result, the area has been divided into Visual Resource Classes. Visual Resource Management (VRM) is a tool used by BLM to identify and protect visual values on public lands. Based on a 1989 inventory of the Monument, the proposed project area is within Visual Resources Class II. As noted in the Monument Management Plan (NPS 2005:47), "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."

K. Impacts to Visitor Experience

Alternative 1

There would be no change in visitor experience as a result of the implementation of Alternative 1. Visitors would continue to see two different entrance-type signs to the Monument along U.S. 20/26/93, including the small laminated wood double post signs at the expanded boundary and the formal monolithic entrance signs at the edges of the former Monument boundary, a long-term negligible to minor adverse effect resulting in confusion to some visitors. Some visitors would

also continue to try to gain access to the existing Monument entrance signs, parking along the narrow road shoulder in the vicinity of these signs and some would continue to navigate to the signs through the rough volcanic terrain, both long-term minor adverse effects on surrounding vegetation and rock/soil because there are no formal trails to the signs.

Alternative 2

The new entrances signs constructed in this Alternative would result in enhanced visitor recognition of the expanded Monument boundary and would therefore aid in their understanding of Monument resources. The associated pullouts would offer visitors an opportunity to stop at the Monument entrance to contemplate the area and to take a scenic photograph if they desire. The pullouts would also add to the safety features associated with U.S. Highway 20/26/93 by increasing the number of locations where travelers could pull off the road if needed in an emergency or due to rear traffic following too closely. The associated accessible trails to the signs would give visitors and travelers along the highway an opportunity to begin their park visit, to stretch their legs and overall to get a close up look at the lava fields they are passing through. This introduction to park resources could encourage them to make an additional stop at the Monument's visitor center to learn more about what they have seen or to see what else the Monument has to offer. Short-term negligible adverse effects from visitor use of the new areas could occur from vandalism of the facilities, littering or trash dumping in the vicinity. Overall, the combined installation of the signs, pullouts and accessible trails would lead to increasing visitor understanding of the Monument area and give visitors increased access and therefore an introduction to the Monument, a long-term minor beneficial effect. The accessible trails would also give mobility impaired visitors and families with small children another way to experience Monument resources, an additional long-term minor beneficial effect. The additional signage better identifying the location of the visitor center could also result in encouraging some pass-through travelers along the highway to stop, whereas without the clear signage they might inadvertently pass the visitor center entrance.

Visual Resources

Under this Alternative, the Entrance Signs would attract attention; however their placement is subordinate to the landscape as a whole. As a result there would be a localized, long-term, minor adverse effect on visual resources in the immediate vicinity of the sign, which would be wholly mitigated by equal beneficial educational and interpretive effects from the sign informing park visitors of their entry into the Monument and from the opportunity to take a scenic photograph of the surrounding landscape.

Impact Avoidance, Minimization and Mitigation Measures

Measures that would be included in the proposed project (as appropriate to the alternative actions) to minimize impacts to visitor experience include:

- Distributing press releases to local media, and state highway information recordings to inform visitors about the project.
- Monitoring the new trail segments for signs of native vegetation disturbance (NPS 2005:75).
- Locating sustainable, low-impact barriers, if needed, to discourage off-trail use and to protect intact areas from disturbance (NPS 2005:75).

Cumulative Impacts

As a result of the establishment and subsequent expansion of the Monument, there has been and will continue to be a slight to moderate increase in visitor services over time that will result in enhanced visitor access, facilities and services to broaden visitor understanding, and thereby protection, of Monument resources. The proposed project will contribute negligibly to this expansion by replacing existing signs with new signs, pullouts and short, accessible trails.

Conclusion

There would continue to be negligible to minor long-term adverse impacts as a result of Alternative 1. Alternative 2 would result in some improvements to visitor experience with the placement of the new directional and Monument entrance signs, trails and pullouts. Overall, the combined installation of the signs, pullouts and accessible trails would lead to increasing visitor understanding of the Monument area and give visitors increased access and therefore an introduction to the Monument, a long-term minor beneficial effect. The accessible trails would also give mobility impaired visitors and families with small children another way to experience Monument resources, an additional long-term minor beneficial effect. There would be no significant impact on and no impairment of visitor experience as a result of the implementation of the proposed actions under either Alternative 1 or 2 as described in this Environmental Assessment.

Table 1
Impact Comparison Chart

Impacts	Alternative 1	Alternative 2
Soils and Geology	There would be no additional impacts to soils or geology. Existing impacts from visitors wandering around in the vicinity of the existing signs would continue, including occasional damage to fragile lava rock from trampling. These impacts would be minor but long-term.	The disturbance of approximately 0.15 acre in each location (0.30 acre total) would comprise a negligible to moderate, localized, long-term adverse impact. Soils and rock would be affected wherever grading, excavation and/or fill is called for causing a minor, localized but long-term, adverse effect to the area's soil or rock profiles, with the greater degree of impact occurring in the limited areas (beyond the road edge) not previously disturbed by grading or construction. Effects associated with impervious surfacing would result in a minor, localized, long-term adverse effect.
Vegetation	There would be no additional impacts to vegetation as a result of the implementation of Alternative 1. Ongoing negligible localized impacts related to trampling in the vicinity of the existing signs would continue to occur due to the lack of official access trails to the signs.	Alternative 2 would result in localized, short- and long-term negligible to minor adverse effects, primarily from localized vegetation removal and the potential for trampling of vegetation near the proposed visitor use areas.
Wildlife	There would be no new impacts to wildlife from the implementation of Alternative 1. Ongoing impacts related to the presence of the road would continue to cause localized long-term minor to moderate adverse effects, including from noise and disturbance and from direct mortality associated with wildlife-vehicle collisions.	There would be a variety of negligible to minor short- and long-term impacts to wildlife from the alteration of a small amount of generally poor quality wildlife habitat adjacent to the road edge. Overall, this project would have a very small footprint with negligible impact on most wildlife or wildlife habitat. Impacts would primarily be limited to increased human presence and its attendant effects on wildlife, including disturbance and occasional illegal feeding, a long-term negligible to minor impact.
Prehistoric and Historic Archeology	There would be no additional impacts to prehistoric or historic archeology from the implementation of Alternative 1. Ongoing impacts related to visitor use in the vicinity of the existing entrance signs would continue, however, no archeological resources are known from this location and as a result there would continue to be no effect on archeological resources from ongoing use and maintenance of these areas.	No archaeological evidence has been found in or near the proposed new entrance sign/pullout locations as described under Alternative 2. Although there is excavation involved in the construction of the base for the sign and the pullouts, this excavation is not expected to disturb any previously unidentified archaeological resources due to its proximity in and near a highly disturbed road corridor. As a result there would be no effect on known archaeological resources under Alternative 2.
Visitor Experience	There would be no change in visitor experience as a result of the implementation of Alternative 1. Visitors would continue to see two different entrance-type signs to the Monument along U.S. 20/26/93 a long-term negligible to minor adverse effect resulting in confusion to some visitors. Many visitors would also continue to try to gain access to the existing Monument entrance signs, parking along the narrow road shoulder in the vicinity of these signs and some would continue to navigate to the signs through the rough volcanic terrain, both long-term minor adverse effects on surrounding vegetation and rock/soil because there are no formal trails to the signs.	Alternative 2 would result in some improvements to visitor experience with the placement of the new directional and Monument entrance signs, pullouts and accessible trails. Overall, the combined installation of the signs, pullouts and accessible trails would lead to increasing visitor understanding of the Monument area and give visitors increased access and therefore an introduction to the Monument, a long-term minor beneficial effect. The accessible trails would also give mobility impaired visitors and families with small children another way to experience Monument resources, an additional long-term minor beneficial effect.

VI. Consultation and Coordination

A. Public Review

1. Internal and External Scoping

The public scoping period for this Environmental Assessment began on January 22, 2007 and ended on February 3, 2007. During this time, the public was encouraged to submit comments. During the public scoping period, no letters or emails were received. One phone call was received from an individual requesting to be on the mailing list for more information about the project. Comments were also solicited formally and informally from Monument, Harper's Ferry Center and other planning team members and from BLM and Idaho Transportation Department staff.

The public outreach called for in Section 106 of NHPA was integrated into the NEPA process in accordance with National Park Service Management Policies (NPS 2006).

This Environmental Assessment is being made available to the public, federal, state and local agencies and organizations through press releases distributed to a wide variety of news media, direct mailing, placement on the Monument's website and announcements in local newspapers and on local radio stations as well as in local public libraries (Arco, Hailey, Bellevue, Twin Falls and Boise, and the Community Library in Ketchum).

Responses to comments on the Environmental Assessment will be addressed a Finding of No Significant Impact (FONSI) or a Notice of Intent to prepare an environmental impact statement as appropriate.

2. Agency Consultation

As required under Section 106 of the National Historic Preservation Act (NHPA), consultation has been initiated with the Idaho State Historic Preservation Officer regarding the anticipated *no adverse effect* to historic properties. A request for concurrence with this determination of effect will be sent during the public review period for this document.

No further consultation is required with the U.S. Fish and Wildlife Service (USFWS). There would be no effect on any species being considered for listing or listed under the Endangered Species Act.

4. Native American Consultation

Ongoing informal consultation with the Shoshone-Bannock Tribes was initiated for this project on January 30, 2007 with a letter sent to the Tribal Chairman at Fort Hall. To date, **no concerns** have been brought forward by tribal members regarding the proposed implementation of the entrance sign and pullout project.

5. Public Review

This Environmental Assessment is available for a **thirty-day** public review period from April 11, 2007 through May 11, 2007. At that time, a press release will be distributed to people and businesses who have expressed an interest in the road rehabilitation. The press release will also be mailed or emailed to a list of persons and agencies that have expressed interest in Craters of the Moon National Monument and Preserve proposed actions and events. The Environmental Assessment will also be available at the following local libraries: Arco, Hailey, Bellevue, Twin Falls, Idaho Falls and Carey libraries, and the Community Library in Ketchum. In addition, organizations and individuals that have requested to will receive a copy of the Environmental

Assessment. Others will be sent to those who request copies during the review period. The Environmental Assessment will also be available on the Monument's website, located at <http://www.nps.gov/crmo>.

Comments on this Environmental Assessment should be directed to:

Superintendent
Craters of the Moon National Monument and Preserve
P.O. Box 29
Arco, Idaho 83213

Comments may also be sent via electronic mail to:

crmo_information@nps.gov

If reviewers do not identify substantial environmental impacts, this Environmental Assessment will be used to prepare a Finding of No Significant Impact (FONSI), which must be approved by the National Park Service Pacific West Regional Director.

During the public review period, additional consultation will occur to affirm determinations of effect (if needed) with the Idaho State Historic Preservation Office. Notice of the concurrence with the determinations of effect for historical resources will be identified in the FONSI for this Environmental Assessment, if prepared (see above).

For more information concerning this project, please contact NPS Facility Manager, Dwayne Moates at (208)527-3257, extension 401 or for information regarding this Environmental Assessment, Chief of Resources, John Apel at the same number, extension 501. For a copy of this document, please call Craters of the Moon National Monument and Preserve at (208) 527-3257.

B. List of Persons and Agencies Consulted / Preparers

The following people and agencies were consulted during the preparation of this Environmental Assessment:

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Dwayne Moates, Facility Manager
Mike Munts, Biological Science Technician

Doug Owen, Park Ranger
Paige Wolken, Plant Ecologist
Ted Stout, Chief of Interpretation

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