Dear Reader:

Enclosed for your inspection is the Proposed Management Plan/Final Environmental Impact Statement (Proposed Plan/FEIS) for the Craters of the Moon National Monument and Preserve (Monument). This Proposed Plan/FEIS sets forth the management direction for approximately 740,000 acres of public lands located on the Snake River Plain of Southern Idaho that are cooperatively managed by the Bureau of Land Management (BLM) and the National Park Service (NPS).

BLM and NPS published a Notice of Intent to prepare the plan and associated EIS in the April 24, 2002 Federal Register. The agencies then solicited public input and developed four management alternatives, including a No Action alternative and three action alternatives that provided different strategies for managing the Monument in the future. These alternatives were presented and analyzed in the Draft Plan/EIS. A Notice of Availability for the Draft Plan/EIS was published in the Federal Register on April 30, 2004, and copies of the Draft Plan/EIS were made available to the public through several outlets. Alternative D was identified as the Preferred Alternative in that document.

This document, the Proposed Plan/FEIS, presents an overview of the planning process and planning issues, describes all alternatives and their associated impacts, summarizes public comment received on the Draft Plan/EIS, and provides responses to the substantive issues raised. Alternative D, which is identified as the Proposed Plan, is largely based on the Preferred Alternative (Alternative D) presented in the Draft Plan/EIS. However, the Proposed Plan adopts several recommendations received from the public to increase the amount of Pristine Zone and reduce the amount of Passage Zone in the selected alternative. It also incorporates clarifications and additions recommended by reviewers regarding various management actions, including those relating to transportation, access, grazing allotments, and fire history. Many of these recommendations incorporated select portions of Alternatives A, B, and C in the Draft Plan/EIS into the Proposed Plan (Alternative D) presented in this document.

BLM and NPS appreciate the large amount and high quality of public involvement that has taken place throughout this planning process. We believe that this Proposed Plan/FEIS represents a collaborative effort that would not have been possible without the participation of the public, state and local governments, and consultation with tribal governments.

Once adopted, the Proposed Plan/FEIS will become the Final Management Plan and will serve as the guiding management strategy for the Monument. It will provide a framework for proactive decision-making, including decisions regarding visitor use and preserving natural and cultural resources. The Final Management Plan will provide overall guidance under which more detailed activities are conducted or implementation plans are prepared.

This Proposed Plan/FEIS is open for a 30-day no-action/protest period beginning with the date the U.S. Environmental Protection Agency (EPA) publishes the notice of availability of the FEIS in the Federal Register. During this period, neither the NPS nor the BLM will take action to implement the plan. However, the portion of the Proposed Plan/FEIS that addresses BLM-administered lands within the Monument may be protested by any person who participated in the planning process and who has an interest that may be adversely affected by approval of the Proposed Plan/FEIS. A protest may raise only those issues that were submitted for the record during the planning process (see Code of Federal Regulations 1610.5-2). Protests must be filed with the Director, Bureau of Land Management.
Regular mail protests and overnight mail should be sent to: Director, Bureau of Land Management (210) Attention – Brenda Hudgens-Williams, 1620 L Street, Suite 1075, Washington, D.C. 20036. Emailed and fax protests will not be accepted as valid protests unless the protesting party also provides the original letter by either regular or overnight mail postmarked by the close of the protest period. Under these conditions, BLM will consider the emailed or faxed protest as an advance copy and it will receive full consideration. If you wish to provide BLM with such advance notification, please direct faxed protests to the attention of the BLM protest coordinator at 202-452-5112, and emails to Brenda_Hudgens-Williams@blm.gov.

All protests must be written and must be postmarked on or before the 30th day following publication by EPA of the Notice of Availability in the Federal Register and contain the following information:

- The name, mailing address, telephone number, and interest of the person filing the protest;
- A statement of the issue or issues being protested;
- A statement of the part or parts of the document being protested;
- A copy of all documents addressing the issue or issues previously submitted during the planning process by the protesting party, or an indication of the date the issue or issues were discussed for the record; and
- A concise statement explaining precisely why the decision presented in the Proposed Plan/FEIS is believed to be wrong.

The Director, Bureau of Land Management, will promptly render a decision on the protest. The decision will be in writing and will be sent to the protesting party by certified mail, return receipt requested. The decision of the Director shall be final.

Although the NPS does not include a formal protest period in its procedures, anyone who wishes to communicate a particular concern with the Proposed Plan/FEIS before a final decision is rendered may write to the Regional Director, Pacific West Region, National Park Service, 1111 Jackson Street, Suite 700, Oakland, CA 94607.

Upon resolution of any protests, the plan will be approved and a Record of Decision will be issued. The Final Management Plan/Record of Decision will be mailed to all individuals who participated in this planning process and all other interested publics upon their request.

Sincerely,

James A. Morris
Superintendent
Craters of the Moon National Monument and Preserve
National Park Service

Rick Vander Voet
Monument Manager
Craters of the Moon National Monument
Bureau of Land Management
The purpose of this Proposed Management Plan/Final Environmental Impact Statement (Proposed Plan/FEIS) for Craters of the Moon National Monument and Preserve (Monument) is to provide land use direction for both the Bureau of Land Management (BLM) and the National Park Service (NPS) at the Monument. The approved plan will provide the framework for making decisions about managing the natural and cultural resources, visitor use, development, and operations so that future opportunities and problems can be addressed effectively.

On November 9, 2000, Presidential Proclamation 7373 expanded Craters of the Moon National Monument from approximately 54,000 acres to more than 750,000 acres. The Proclamation and subsequent U.S. Department of the Interior direction instructed the BLM and NPS to co-manage the Monument and jointly prepare a land use plan. A Notice of Intent for the Plan/EIS was published in the Federal Register on April 24, 2002. On August 21, 2002, Public Law 107-213 re-designated the NPS portion of the expanded Monument as a National Preserve. The BLM National Monument, original NPS National Monument, and NPS National Preserve are simply referred to as “the Monument.”

Once approved, the Management Plan will replace portions of four existing BLM land use plans and entirely replace the NPS Craters of the Moon National Monument General Management Plan (GMP) (1992). NPS and BLM use slightly different land use planning processes. NPS units typically operate under a GMP, while BLM areas operate under a Resource Management Plan (RMP). This marriage between NPS and BLM represents a need to design a unique planning process, which will produce an effective, single, stand-alone, comprehensive Management Plan for the entire Monument.

**ISSUES ADDRESSED**

Five major issues were identified during public scoping and were subsequently used in developing alternatives for the Proposed Plan/FEIS. Public scoping included eight open houses and three alternative workshops, with an emphasis on gateway communities. Public comments also involved responses to the publication of three newsletters, tours, briefings for local and state government agencies, Resource Advisory Council meetings, both agencies’ Web sites, and presentations to a wide variety of interest groups. The five major issues addressed by the planning process include:

1) **Development**: What kinds of Monument facilities and services will be provided apart from the existing facilities?

   This issue deals with the kind of visitor facilities and services the agencies will provide.

2) **Transportation and Access**: What type of road and trail system will be needed for travel to, and access within, the Monument?

   This issue concerns the impacts of roads and access on the visitor experience and natural and cultural resources.

3) **Public/Visitor Use and Safety**: What will be the extent and location of public uses within the Monument? What kinds of experiences do visitors want?

   This issue includes a variety of topics, from solitude and managing increased visitation to emergency services and interpretation.

4) **Authorized Uses**: How will the different uses in the Monument be managed?

   This issue addresses concerns over mineral materials, outfitters/guides/concessioners, and permitted livestock use.

5) **Natural and Cultural Resources**: How will natural and cultural resources be protected?

   This issue concerns the protection of the outstanding geologic features, as well as plant, animal, and cultural/historic resources, plus related issues concerning fire management, noxious weeds, and restoration of perennial plant communities.
ALTERNATIVES

Four alternatives, including the Proposed Plan, are analyzed in this FEIS.

- **Alternative A** represents the No Action Alternative and continues current management at present levels of effort.
- **Alternative B** emphasizes a variety of different visitor experiences within the Monument.
- **Alternative C** emphasizes and enhances the primitive character of the Monument.
- **Alternative D** (Proposed Plan) emphasizes protection and restoration of physical and biological resources. This alternative is a slight modification of Alternative D as presented in the Draft Plan/EIS (the Preferred Alternative). Modifications were made in response to public comments regarding the amount of various management zones within the alternative and agency review.

The four alternatives vary by emphasis theme, resource management decisions, desired future conditions, and the application of management zones. Each alternative assigns various areas of the Monument to different management zones. These zones identify how different areas would be managed to achieve a variety of resource conditions and visitor experiences, including different levels of desired development.

1. **Frontcountry Zone** areas would allow for a high probability of encountering other people; paved, improved, and maintained roads; a diverse non-motorized trail system; administrative and visitor facilities; developed campgrounds; and a high level of interpretive programs.

2. **Passage Zone** areas would offer a medium probability of encountering other people, relatively high standard gravel/dirt roads, rustic designated campsites, limited interpretation, multiuse trailheads/trails, and a high probability for encountering livestock and associated facilities.

3. **Primitive Zone** areas would prescribe a low probability of encountering other people, challenging driving conditions on low-standard roads, minimal on-site interpretation, low-standard multiuse trails, and a medium probability of encountering livestock and associated facilities.

4. **Pristine Zone** areas would allow for a high probability of experiencing solitude, challenging access and no roads, no designated campsites, no on-site interpretation, very few trails, and a low probability of encountering livestock and associated facilities.

**Alternative A**, the No Action Alternative, proposes no major changes in resource management, visitor programs, or facilities. It depicts current management under the agencies’ five existing management plans, as modified by Proclamation 7373, Public Law 107-213, and the agencies’ Interim Management Guidelines. Alternative A also serves as a baseline for comparison with the other three alternatives.

The management zones depicted in Alternative A represent the planning team’s assessment of current conditions. In other words, the management zones were mapped based on actual, existing conditions in 2003.

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

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

Alternative D (Proposed Plan) emphasizes protection and restoration of physical and biological resources and processes. The Proposed Plan draws primarily upon the Alternative D presented in the Draft Plan/EIS, but includes more Pristine Zone and reduces Passage Zone, especially in the Laidlaw Park area. This was done in response to public and agency comments. Alternative D contains the largest weed treatment and prevention program using all available tools. It prescribes the most extensive fire management program. Alternative D places a greater emphasis than the other alternatives on promoting partnerships at existing facilities such as visitor centers, state parks, and gateway communities. This alternative also encourages the use of outfitters to meet possible future recreation experience demands inside the expanded portion of the Monument. This alternative allows for the upgrade of the Arco-Minidoka Road through the Monument should the adjacent county governments choose to upgrade the portions of the road outside of the Monument.

The principal changes or clarifications that have been made from Alternative D in the Draft Plan/EIS to the Proposed Plan/FEIS are:

- The amount of Pristine Zone is increased to strengthen protection of cultural and natural features, most commonly along the edges of the lava flows.
- The amount of Passage Zone corridors within the Laidlaw Park area of the Monument has been reduced and additional Passage Zone corridors have been added outside or on the edge of the Monument boundary.
- The text clarifies that no road improvements will be made until a Comprehensive Travel Management Plan, containing more detailed and specific guidance, is approved.

A summary of the main features of the four alternatives can be found in Table 7 of the Proposed Plan/FEIS. All of the alternatives would provide the high degree of protection for the objects of interest identified in Proclamation 7373, while still fulfilling both agencies’ land management missions.

**IMPACTS**

The potential environmental consequences of the alternatives are addressed for various natural resources, land uses (including livestock grazing), cultural resources, Native American tribal treaty rights, visitor uses, and regional social and economic conditions. Table S-1 provides a summary of impacts related to all four alternatives considered, and Chapter 4 of the Proposed Plan/FEIS contains detailed analyses of these impacts.

Compared to the other alternatives, Alternative D (Proposed Plan) would have substantial long-term beneficial impacts from the completion of the extensive sagebrush steppe restoration program, with limited short-term adverse impacts during its implementation. The Proposed Plan also offers benefits relating to its encouragement for the agencies to work with partners, including several key gateway communities, to provide for public information and services outside the Monument. It would also provide for improved access along targeted roads for fire suppression and resource management, which provides benefits that outweigh the adverse impacts that could occur from any disruption of visitor uses or impacts on natural and cultural resources. No impairment of the Monument’s natural or cultural resources would be expected for the Proposed Plan, or for any of the alternatives evaluated.
--- | --- | --- | ---
**Geological Resources**
Geological resources would be affected by continued visitor access via roads and trails, as well as by wind erosion, fire, fire suppression, and grazing. These impacts would be mainly direct and both short- and long-term in nature, ranging from negligible to potentially major levels. Indirect impacts would result from deposition of dust and soils on geological features over time. The limitation on new mineral extraction sites would result in long-term indirect negligible beneficial effects on geological resources. Although an individual geologic feature could suffer a major impact, in context of the entire Monument's geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument's land area or an individual type of geologic feature, of which there may be many).

Alternative B would have the most improved road access and the greatest number of improved roads and additional trail designations, which would result in the largest increase in visitation and/or access of all the alternatives. As a consequence, Alternative B could result in a slightly greater loss of geologic features or structures and a higher rate of degradation of geologic resources or damage from vandalism. Adverse impacts from increased access would range from negligible to potentially major, with specific concerns about direct major damage to features in the Kings Bowl and Wapi Lava Field areas. Increased fire suppression and continued grazing could result in minor to moderate adverse impacts, and small beneficial effects would result from limits on new mineral extraction areas. Although an individual geologic feature could suffer a major impact, in context of the entire Monument's geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument's land area or an individual type of geologic feature, of which there may be many).

Alternative C would have the largest area of Pristine Zone, which would afford the most natural protection to geologic features through difficult or remote, foot-only access. Closures of non-essential roads and limited access would lead to the smallest amount of dust-related impacts. Impacts from visitor damage, theft, or vandalism would range from negligible to potentially major locally, but the probability of major impacts would be lower because of decreased access for many visitors. Negligible to minor adverse impacts from fire and grazing would continue, and there would be slight beneficial effects from limits on new mineral extraction sites. Overall, Alternative C would cause the fewest adverse impacts on geologic resources of all the alternatives. Although an individual geologic feature could suffer a major impact, in context of the entire Monument's geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument's land area or an individual type of geologic feature, of which there may be many).

Alternative D (Proposed Plan), because of its aggressive restoration goals and emphasis on off-site experience, would result in beneficial effects because it would limit damage from visitors and result in restoration of many features. Although an individual geologic feature could suffer a major impact, in context of the entire Monument's geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument's land area or an individual type of geologic feature, of which there may be many).

**Soils**
Soil disturbance, erosion, and compaction would be the primary adverse impacts associated with most management actions under Alternative A. Wildland fire and suppression, restoration activities, road and trail maintenance and use, and livestock use are the management activities most likely to affect soils. Overall, short- and long-term adverse impacts on soils would be minor to moderate in intensity, with long-term moderate beneficial effects from the restoration program.

Improved road and trail access, development of recreation facilities, and increased visitor use of the Monument under Alternative B might increase the amount of soil area directly and indirectly affected. Additional construction of unpaved roads, trails, and day use areas and more extensive use of fire suppression would cause direct loss of soils locally, resulting in minor to moderate localized adverse impacts. Grazing also would cause minor to moderate adverse impacts. Overall, short- and long-term adverse impacts on soils from Alternative B would range from minor to moderate; the restoration program would result in long-term moderate beneficial effects.

The effects of Alternative C on soils would be substantially the same as those of Alternative A, with slightly more short-term erosion potential and slightly fewer long-term soil impacts. Impacts from facility construction maintenance and fire suppression would be reduced, and adverse impacts from grazing would remain minor to moderate. Overall, short- and long-term adverse impacts would be minor to moderate in intensity, with more long-term beneficial effects from a slightly expanded restoration program.

The effects of Alternative D (Proposed Plan) on soils would be similar to those of Alternative A, with more short-term erosion potential due to road and trail use and maintenance, facility development, and fire. Long- and short-term minor to moderate adverse impacts could result from grazing and fire suppression. Overall, short- and long-term adverse impacts would be minor to moderate. However, there would be moderate to major long-term beneficial effects on soils in the Monument, assuming successful restoration of the entire proposed acreage under this alternative.

<table>
<thead>
<tr>
<th>Table S-1. Summary of Impacts</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NATURAL RESOURCES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geological Resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soils</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative A (No Action Alternative)</td>
<td>Alternative B</td>
<td>Alternative C</td>
<td>Alternative D (Proposed Plan)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td><strong>Vegetation and Fire Management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative A would result in both short- and long-term negligible to moderate adverse impacts on vegetation from continued use and maintenance of roads and trails, plus illegal off-road use, spread of noxious weeds, fire suppression and fire, and continued grazing. Restoration activities and construction of facilities would cause short-term negligible to minor direct adverse impacts, but they would result in long-term indirect minor to major beneficial effects from vegetation restoration and public education.</td>
<td>Alternative B would result in a greater possibility of fragmentation, increased risk of noxious weed spread, and greater risk of human-caused fire because of increased visitation and access and more road and trail maintenance. Effects on vegetation would be both short- and long-term, ranging from negligible to moderate, but they would be more widespread than in Alternative A. Facility development would cause some long-term negligible to minor negative impacts on vegetation, but increased public education would result in minor to moderate long-term beneficial effects. Restoration acreage would be slightly greater than in Alternative A, with short-term minor adverse impacts and long-term moderate to major beneficial effects.</td>
<td>Alternative C would involve less opportunity for extensive visitor access, less access for fire suppression, less active management of noxious weeds, and a slower rate of restoration over a larger area than any other alternative. Adverse impacts on vegetation from access would be minor and limited, with few impacts from facility development and maintenance. Restoration efforts would cause long-term minor to major beneficial effects, but these would occur more slowly because fewer herbicides and more low impact methods would be used. Fires, fire suppression, and continued grazing would lead to minor to moderate adverse impacts.</td>
<td>In Alternative D (Proposed Plan), there would be more access for fire suppression and more aggressive noxious weed control, which would result in short-term minor to moderate adverse impacts but long-term moderate to major beneficial effects, occurring in a shorter time than in the other alternatives. Strategically placed restoration projects would increase the size and continuity of healthy vegetation patches and reduce the extent of poor quality vegetation. Adverse impacts from visitor access, fire and fire suppression, grazing, and facility development would be similar to those in Alternative A, with both short- and long-term minor to moderate adverse impacts. Impacts from increased access in more sensitive areas of the Monument, including Laidlaw Park, would be limited by the reduction in the Passage Zone and increase in Pristine Zone designations made in response to public comments on the Draft Plan/EIS.</td>
</tr>
<tr>
<td><strong>Water Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementing Alternative A would continue the current local long-term effects on water resources at intensity levels generally ranging from negligible to potentially major, although any major effects would be localized to small areas. The effects of intense recreational use of ice cave pools or from livestock watering on individual playas could create minor to moderate changes in nutrient concentrations, bacteria levels, and turbidity. The duration of effects would depend on the intensity of use at each site. The effects would tend to be localized to the individual water bodies, because no surface waters connect them. The overall effect of livestock use on playas would be widespread and long-term and could range from minor to potentially major intensity, depending on the location.</td>
<td>The effects of Alternative B would be substantially the same as those of Alternative A, but with a somewhat higher likelihood of more indirect adverse effects on local ice caves and playas resulting from access improvements and increased recreational use, plus a possible increase in livestock developments. Impacts would generally range from negligible to potentially moderate, but they would be localized. Depending on the site-specific circumstances, the effects could be either short term or long term.</td>
<td>The effects of Alternative C could be substantially the same as those of Alternative A because there still would be a chance that recreational use could affect ice caves, and there could be limited impacts from grazing. However, moderate adverse impacts would potentially be less widespread or frequent because road access would be reduced.</td>
<td>The effects on water resources from Alternative D (Proposed Plan) would be much the same as Alternative A, with localized long-term effects at negligible to major intensities, depending on site location (proximity of ice caves to roads) or concentration of livestock. Implementing Alternative D (Proposed Plan) could cause local long-term effects on water resources at intensity levels ranging from negligible to potentially major. Intense recreational use could affect ice cave pools, and livestock watering could affect individual playas, causing minor to moderate changes in nutrient concentrations, bacteria levels, and turbidity. The effects would tend to be localized to individual water bodies because no surface waters connect them.</td>
</tr>
<tr>
<td>Alternative A  (No Action Alternative)</td>
<td>Alternative B</td>
<td>Alternative C</td>
<td>Alternative D (Proposed Plan)</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td><strong>Wildlife Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under Alternative A, which would continue current conditions, effects on wildlife would continue to come primarily from conflicts with human uses of the Monument, including disturbance by people and vehicles and conflicts and competition with livestock use. Access and roads and associated visitor recreation would result in minor long-term adverse impacts, plus short-term moderate local adverse impacts on some species in high use areas. Sagebrush steppe restoration and weed management actions would cause some short-term minor impacts, with minor to major beneficial effects over the long term, depending on the species involved. Fire and suppression of fire would benefit some sensitive species, which use all major habitats in the Monument and have a variety of life histories, would experience the same range of impacts as other wildlife. The bald eagle and the gray wolf, which are listed as threatened and endangered, are occasionally found in the Monument, but both are peripheral species, and the impacts on them would be negligible to minor. Current livestock use and potential new livestock developments, which would be authorized in accordance with the Idaho Standards for Rangeland Health and Guidelines, could result in minor to moderate adverse impacts on sagebrush steppe habitat and/or sagebrush obligate wildlife species. In the long-term, the restoration of 40,000 acres of degraded sagebrush steppe would mitigate a portion of any adverse effects on wildlife resources.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The impacts on wildlife from Alternative B would largely be the same as those of Alternative A, but the slight increase in acres restored would result in a related increase in improved habitat for sagebrush steppe species, a long-term minor to major beneficial effect. There could be a modest increase in adverse impacts from traffic disturbance in the larger Passage Zone area and the potential for increased or improved access to motor vehicles in that zone, as well as the development of a visitor use area in Kings Bowl and multiuse trails. The effects on wildlife would vary from species and species, but most effects would be long-term, minor to moderate, and localized.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The effects on wildlife from Alternative C would largely be the same as those described for Alternative A, but 15,000 more acres would be restored in Alternative C, resulting in more improved habitat for sagebrush steppe species. There would be fewer adverse impacts from traffic disturbance because the Passage Zone would be smaller in Alternative C, and the Primitive Zone would be larger. These designations would include the potential for decreased access for motor vehicles and related recreational use overall, resulting in fewer direct and indirect adverse impacts on all wildlife species.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The effects on wildlife from Alternative D (Proposed Plan) would be largely the same as those described for Alternative A, but twice as much acreage would be restored in Alternative D, resulting more improved habitat for sagebrush steppe species, a major long-term beneficial effect. Modest changes in the adverse impacts could result from increases in the Passage Zone roads for restoration and administration uses and in the potential for increased or improved access for motor vehicles in that zone.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Alternative A  
(No Action Alternative) | Alternative B | Alternative C | Alternative D  
(Proposed Plan) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescribed fire, wildland use fire, and fugitive dust from roads would result in smoke or dust containing particles that adversely affect human health and air quality related values such as visibility. The effects on air quality from smoke and dust caused by the management activities of Alternative A typically would be short-term and local. The intensity of effects could range from negligible to moderate, depending on weather conditions and the location and size of fires. Most prescribed and wildland use fires would cause minor short-term effects. Fugitive dust from roads with current traffic use would produce short-term local adverse effects of negligible intensity.</td>
<td>The adverse effects on air quality from the management actions of Alternative B typically would be short term and limited to the local region. The intensity of effects would range from negligible to moderate, with most prescribed and wildland use fires having minor effects. Fugitive dust from potentially increased vehicle traffic use on unpaved roads would produce short-term local effects of negligible to minor intensity. A substantial increase in traffic would be required to elevate this impact to the moderate levels.</td>
<td>The adverse effects on air quality from the actions of Alternative C typically would be short term and limited to the local region. The intensity of effects would range from negligible to moderate, with most prescribed and wildland use fires causing minor effects. Fugitive dust from roads with decreased traffic use and vehicle speeds would produce short-term local effects of negligible intensity.</td>
<td>The adverse effects on air quality from the actions of Alternative D (Proposed Plan) typically would be short term and limited to the local region. The intensity of effects would range from negligible to moderate, with most prescribed and wildland use fires causing minor effects. Fugitive dust from roads with current traffic use would produce short-term local effects of negligible intensity. The addition of non-Monument sources occurring during the same time period could produce more intense but still moderate effects throughout the Monument.</td>
</tr>
<tr>
<td><strong>CULTURAL RESOURCES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative A would have a negligible to minor, adverse impact on maintaining the long-term integrity of the majority of archaeological resources within the Monument. The restoration program outcome and fire suppression would have a long-term, moderate beneficial effect, while initial restoration, suppression actions, grazing, and vehicle travel would result in short-term, minor to moderate adverse impacts.</td>
<td>Alternative B would have a moderate adverse effect on maintaining the long-term integrity of the majority of archaeological resources within the Monument by emphasizing recreational opportunities and vehicle access. The restoration program outcome and fire suppression would have a long-term, moderate beneficial impact, where vehicle travel, grazing, initial restoration, and suppression actions would result in short-term minor to moderate adverse impacts.</td>
<td>Alternative C would have a minor beneficial effect on maintaining long-term integrity of the majority of archaeological resources within the Monument by minimizing the amount of human and vehicle traffic into the Primitive and Pristine Zones. The restoration program outcome, fire suppression, and restricted access would all contribute to long-term, minor to moderate beneficial impacts. Vehicle traffic (limited), grazing, initial restoration, and suppression actions would result in short-term, minor to moderate adverse impacts.</td>
<td>Alternative D (Proposed Plan) would have a moderate beneficial effect on maintaining the long-term integrity of the majority of archaeological resources within the Monument by emphasizing off-site interpretation and visitor services, and by emphasizing range restoration. Short-term minor to moderate adverse impacts would also occur from vehicle travel, initial restoration activities, suppression actions, and grazing.</td>
</tr>
<tr>
<td><strong>NATIVE AMERICAN RIGHTS AND INTERESTS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative A would have a negligible to minor, beneficial impact on maintaining the long-term integrity of ethnographic resources and traditional use areas within the Monument.</td>
<td>By emphasizing recreational activities and vehicle access, Alternative B would result in a minor to moderate adverse effect on maintaining the long-term integrity of ethnographic resources and traditional use areas in the Monument.</td>
<td>By minimizing the amount of human and vehicle traffic into the Primitive and Pristine Zones, Alternative C would result in a minor beneficial effect on maintaining the long-term integrity of ethnographic resources and traditional use areas in the Monument, but by limiting vehicle access it could cause some hardship for elderly tribal members.</td>
<td>By emphasizing off-site interpretation, off-site visitor services, and range restoration, Alternative D (Proposed Plan) would result in a minor to moderate beneficial effect on maintaining the long-term integrity of the ethnographic resources and traditional use areas in the Monument, but by limiting vehicle access it could cause some hardship for elderly tribal members.</td>
</tr>
</tbody>
</table>
| **Alternative A**  
No Action Alternative | **Alternative B** | **Alternative C** | **Alternative D**  
(Proposed Plan) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAND USE AND TRANSPORTATION</strong></td>
<td><strong>LAND USE AND TRANSPORTATION</strong></td>
<td><strong>LAND USE AND TRANSPORTATION</strong></td>
<td><strong>LAND USE AND TRANSPORTATION</strong></td>
</tr>
<tr>
<td><strong>Travel and Access</strong></td>
<td>Increased visitation and other actions under Alternative A would cause minor adverse impacts on travel and access in the Monument, with long-term minor beneficial effects from road maintenance activities.</td>
<td>By emphasizing recreational opportunities and increased access, Alternative B would cause a long-term minor to moderate adverse effect on road conditions in the Monument, but it also would lead to a long-term moderate beneficial effect on the availability of access and ease of travel to many locations in the Monument.</td>
<td>By closing more miles of road in the Monument, Alternative C would cause minor to moderate adverse impacts on access. Reduced vehicle traffic could result in minor beneficial effects on transportation safety, but there also might be minor adverse impacts on visitors using lower standard roads.</td>
</tr>
<tr>
<td><strong>Livestock Grazing</strong></td>
<td>Restoration activities and restrictions in the Pristine Zone in Alternative A could restrict grazing operations and/or increase costs associated with grazing, resulting in short- and long-term minor to moderate adverse impacts. The use of the Passage Zone for potential road improvement and facility development would result in short- and long-term minor beneficial effects, but the potential increased recreational use of this area could cause minor to moderate adverse impacts.</td>
<td>The cumulative effects of Alternative B on livestock grazing would be similar to those described for Alternative A, with both more beneficial effects and more adverse impacts from the additional access available in the expanded Passage Zone. Larger Passage Zone areas and the development of good access could result in road improvement and facility development, which would cause short- and long-term minor to moderate beneficial effects. The increased recreational use and access in this area could cause minor to moderate adverse impacts.</td>
<td>The cumulative effects of Alternative C on livestock operations would be similar to those described for Alternative A, with some additional adverse impacts from the expanded restoration activities. The smaller number of areas in the Passage Zone would allow for some access and facility development, a negligible to minor beneficial effect, but any increased recreational use would cause minor adverse impacts on grazing operations. The large amount of Pristine Zone could increase costs and limit access, causing moderate adverse impacts on grazing.</td>
</tr>
<tr>
<td><strong>Other Land Uses</strong></td>
<td>Alternative A would result in negligible impacts on administrative facilities, realty actions, and existing minerals leases in the Monument.</td>
<td>Alternative B would cause negligible effects on realty actions and existing minerals leases in the Monument and a minor adverse impact on administrative facilities.</td>
<td>By minimizing the amount of human and vehicle traffic into the Primitive and Pristine Zones, Alternative C would cause long-term minor beneficial effects on the Monument’s administrative facilities, realty actions, and existing minerals leases.</td>
</tr>
<tr>
<td>Alternative A (No Action Alternative)</td>
<td>Alternative B</td>
<td>Alternative C</td>
<td>Alternative D (Proposed Plan)</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td><strong>Special Designation Areas</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The effects on the characteristics and purposes of special designation areas from Alternative A would be primarily negligible to minor and short term, but the effect of livestock use on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and the vegetative structure would be altered for long periods of time (5+ years). Road system management and limited regulation of off-highway vehicle use could cause negligible to moderate adverse indirect effects through the spread of invasive weeds and the creation of unauthorized routes.</td>
<td>The effects on the characteristics and purposes of special designation areas from Alternative B would be primarily negligible to minor and short term, but the effects from livestock use on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and vegetative structure would be altered for long periods of time (5+ years). The improvements to the road system could cause higher levels of indirect adverse effects through the spread of invasive weeds and the creation of unauthorized routes.</td>
<td>The adverse effects on the characteristics and purposes of special designation areas from most actions under Alternative C would be primarily negligible to minor and short term. The effect of livestock on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and vegetative structure would be altered for long periods of time (5+ years). Designating a new ACEC in North Laidlaw Park would lead to minor beneficial effects on the adjacent Craters of the Moon Wilderness and Great Rift WSA.</td>
<td>The adverse effects on the characteristics and purposes of special designation areas from Alternative D (Proposed Plan) would be mostly negligible to minor and short-term, with potential for more intense effects if restoration activities took place in or near any of the areas. The effect of livestock on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and vegetative structure would be altered for long periods (5+ years). Designating a new ACEC in North Laidlaw Park would lead to minor beneficial effects in the adjacent Craters of the Moon Wilderness and Great Rift WSA. The additional Pristine Zone and reduction of Passage Zone in the Laidlaw Park area, compared to Alternative D as presented in the Draft Plan/EIS, would result in indirect beneficial effects to an area that had been discussed as an ACEC candidate during the scoping for this project.</td>
</tr>
</tbody>
</table>
| Alternative A  
(No Action Alternative) | Alternative B | Alternative C  
(Proposed Plan) | Alternative D  
| Interpretation and Visitor Understanding | | | |
| Posting information at backcountry access points and fire stations; offering school programs at the original NPS Monument; interpreting cultural resources; adding interpretive media, programs, exhibits, and waysides; and modest development in the Kings Bowl area would cause long-term minor beneficial effects on interpretation and visitor understanding, as would agency assistance to research and educational institutions. | Upgrading the Carey-Kimama and Arco-Minidoka Roads; offering school programs at the original NPS Monument; interpreting geological features through interpretative efforts; adding interpretive media, programs, exhibits, and waysides; and developing portable interpretive media would result in long-term minor beneficial effects on interpretation, as would the agencies assisting research and educational institutions, developing a cave restoration program, and interpreting sagebrush steppe restoration and integrated weed management. Long-term minor beneficial effects on interpretation would result from adding interpretive facilities along US 20/26/93, at significant sites within the Passage Zone, and at Kings Bowl. | Posting information at backcountry access points and fire stations, offering school programs at the original NPS Monument, developing portable interpretive media, and establishing a limited cave restoration program under Alternative C would result in long-term minor beneficial effects on interpretation. There would be cumulative minor beneficial effects from the Cooperative Weed Management Area programs. | Long-term minor beneficial effects on interpretation under Alternative D (Proposed Plan) would result from placing interpretive signs and information along the US 20/26/93 corridor and at access points; offering school programs (including off-site efforts) and off-site interpretation of cultural resources; posting interpretive media, programs, exhibits, and waysides; developing portable off-site interpretive media; and modest development in the Kings Bowl area. Agency assistance to research and educational institutions and an intensive cave restoration program also would cause long-term minor beneficial effects. Long-term moderate beneficial effects would come from placing interpretive materials, facilities, and programs outside the Monument, in gateway communities and at a visitor center along the I 84 corridor, as well as from offering commercially guided services in the Monument. Commercial guide services could cause long-term minor adverse impacts on people visiting the interior of the Monument without a guide. |
| Recreation and Public Safety | The added access available in Alternative B would contribute both beneficial and adverse effects, depending on the type of recreation desired. Nearly all roads would remain open to motorized users under Alternative B, but some roads could be closed individually to protect resources. This continued level of access to Monument features and destinations would lead to long-term minor beneficial effects. However, this level of access, and its associated use, would result in long-term minor adverse effects on visitors seeking solitude. A few new Class I and Class II trails might be developed in certain areas, and trails in the Kings Bowl areas would be rehabilitated or maintained; these actions would result in long-term minor beneficial. | The restricted access of Alternative C would contribute beneficial and adverse effects, depending on the type of recreation desired. Overall, the cumulative effects on recreational users from the actions of Alternative C, combined with the expected (primarily beneficial) effects from other activities and plans, would result in cumulative long-term moderate beneficial effects on recreational activities. Long-term moderate beneficial effects would result from greater protection of geological features in the original NPS Monument, and there would be indirect long-term moderate benefits from restoring sagebrush steppe communities. Long-term minor beneficial effects on certain recreational experiences would result from increased efforts to protect geologic features through interpretive efforts would be the same as those described for Alternative A, resulting in long-term moderate beneficial effects in the original NPS Monument and long-term minor beneficial effects in the expanded part of the Monument. Interpretive efforts would also emphasize safety, resulting in safety improvements that would cause long-term minor beneficial effects on recreational visitors. Long-term minor beneficial effects on certain recreational experiences would result from | The added access available in Alternative D (Proposed Plan) would contribute both beneficial and adverse effects, depending on the type of recreation desired. Long-term moderate beneficial effects would come from placing interpretive materials, facilities, and programs outside the Monument, in gateway communities and at a visitor center along the I 84 corridor, as well as from offering commercially guided services in the Monument. Commercial guide services could cause long-term minor adverse impacts on people visiting the interior of the Monument without a guide. |
| Alternative A  
(No Action Alternative) | Alternative B | Alternative C | Alternative D  
(Proposed Plan) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>dispersed camping, but this also could affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts. Ongoing livestock operations would result in long-term minor to moderate adverse impacts on certain recreational experiences, but this also could affect other recreational opportunities, resulting in long-term negligible to minor beneficial effects.</td>
<td>converting some Class D roads to non-motorized trails, but such conversion also would affect other recreational experiences, causing long-term minor adverse impacts. Closing certain roads and ways in the Pristine Zone to motorized and mechanized vehicle travel would result in long-term moderate beneficial effects on certain recreational experiences, but long-term minor adverse impacts also would result from such closures, affecting other recreational experiences. These closures also would result in long-term moderate adverse impacts from reduced access. Long-term minor beneficial effects would result from the availability of undeveloped and dispersed camping, but this also could adversely affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts.</td>
<td>closing Class D roads or converting them to non-motorized trails to trails in the Primitive and Pristine Zones, but such conversion also would affect other recreational experiences, causing long-term minor adverse impacts. Long-term moderate beneficial effects would result from the availability of undeveloped and dispersed camping, but this also could affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts.</td>
<td>dispersing camping, but this also could affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts. Because the Passage Zone would be large in Alternative B, this alternative would offer the greatest opportunity of all the alternatives for motorized and mechanized recreational experiences. The entire length of both the Carey-Kimama and Arco-Minizocka roads would be designated Backcountry Byways, including an upgrade to Class B standards. This would be likely to increase visitation to the Monument, causing long-term moderate adverse impacts on visitors seeking solitude, but it would result in long-term moderate beneficial effects on people who prefer improved access for experiences like hunting, driving for pleasure, sightseeing, and going to points of interest along those routes. Multi-use and single-use trails would be designated under Alternative B, including both Class I and Class II designations. This would increase the opportunities for hiking, mountain biking, off-highway motorcycle riding, horseback riding, and OHV use, resulting in long-term moderate beneficial effects on visitors wanting to experience those activities.</td>
</tr>
</tbody>
</table>
### Alternative A
(No Action Alternative)

**Visual Resources**

Long-term minor beneficial effects on visual resources would result from greater protection of geologic features, from restoring sagebrush steppe communities, and from holding surface-disturbing activities to the VRM management class standards that apply in Alternative A. Several communications sites outside the Monument are visible from inside the Monument. These communication sites would cause long-term minor adverse impacts on visual resources during the day and long-term moderate adverse impacts on visual resources at night. Artificial light sources and light pollution from neighboring towns would affect the Monument's night sky, causing long-term negligible adverse impacts.

Class B road use would cause short-term minor adverse impacts, and short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution. Rehabilitating or restoring 40,000 acres of sagebrush steppe communities and controlling weed infestations would return those vegetated areas to their natural appearance, a long-term minor beneficial effect on viewscapes in the Monument.

**Soundscapes**

The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.

### Alternative B

**Visual Resources**

Long-term minor beneficial effects on visual resources would result from greater protection of geologic features and from restoring sagebrush steppe communities. Long-term minor to moderate beneficial effects would come from holding surface-disturbing activities to VRM management class standards that apply in Alternative B. As in Alternative A, efforts to protect geologic features from damage would be increased, and rehabilitating or restoring 45,000 acres of sagebrush steppe communities and controlling weed infestations would return those vegetated areas to their natural appearance, a long-term minor beneficial effect on viewscapes in the Monument.

Road upgrades would cause short-term minor cumulative adverse impacts, and short-term minor to moderate adverse impacts would result from Class B road use. Short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.

**Soundscapes**

The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. Some increased noise would come from more use of the Passage Zone. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.

### Alternative C

**Visual Resources**

Long-term minor beneficial effects on visual resources would result from greater protection of geologic features; long-term minor to moderate beneficial effects would come from restoring sagebrush steppe communities; and long-term moderate beneficial effects would result from holding surface-disturbing activities to VRM management class standards that apply in Alternative C. As in Alternative A, efforts to protect geologic features from damage would be increased, and rehabilitating or restoring 55,000 acres of sagebrush steppe communities and controlling weed infestations would return those vegetated areas to their natural appearance, a long-term minor beneficial effect on viewscapes in the Monument.

Class B road use would cause short-term minor adverse impacts, and short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.

**Soundscapes**

The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.

### Alternative D
(Proposed Plan)

**Visual Resources**

Long-term minor beneficial effects on visual resources would result from greater protection of geologic features; long-term minor to moderate beneficial effects would result from holding surface-disturbing activities to VRM management class standards that apply in Alternative D (Proposed Plan), and restoring sagebrush steppe communities would create long-term moderate beneficial effects. As in Alternative A, efforts to protect geologic features from damage would be increased, and rehabilitating or restoring 80,000 acres of sagebrush steppe communities and controlling weed infestations would return those vegetated areas to their natural appearance, a long-term minor beneficial effect on viewscapes in the Monument.

The reduction of Passage Zone in the Laidlaw Park area included in Alternative D (Proposed Plan) of the FEIS would help to limit the visual intrusion and the visual fragmentation of that area. Class B road use would cause short-term minor adverse impacts, and short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.

**Soundscapes**

The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.
### Alternative A (No Action Alternative)

Social and Economic Conditions

Alternative A would result in a negligible adverse or beneficial effect on the number of annual visitors to the Monument, length of stay, or visitor spending. There would be no direct, indirect, or cumulative effects on the regional economy or any economic or social indicator, other than moderate adverse impacts related to a gradual loss of mineral leases. Alternative A would not affect the rural character around the Monument.

### Alternative B

Alternative B would result in a moderate increase in the annual number of visitors, would lengthen visitors' stay, and would increase recreational spending per visit. This moderate increase in visitors and visitor spending would result in a negligible effect on the local economy; a negligible or minor effect on local employment rates and per capita income; a negligible effect on the local population, health care, education, and crime rates around the Monument; and a moderate adverse or beneficial effect on visitor satisfaction. A moderate adverse impact would result from the gradual loss of mineral leases.

### Alternative C

Alternative C would result in a negligible adverse or beneficial effect on the annual number of visitors to the Monument and Preserve, the length of visitors' stay, and the amount of visitor spending. There would be negligible direct, indirect, or cumulative effects on the regional economy or any economic or social indicator, other than the moderate adverse impacts from the gradual loss of mineral leases. Alternative C would not affect the rural character around the Monument.

### Alternative D (Proposed Plan)

Alternative D (Proposed Plan) would result in a moderate increase in the annual number of visitors, the length of visitors' stay, and the amount of recreational spending per visit. This moderate increase in visitors and visitor spending would result in a negligible effect on the local economy; a negligible or minor effect on local employment rates and per capita income; a negligible effect on the local population, health care, education, and crime rates around the Monument; and a moderate adverse or beneficial effect on visitor satisfaction. A moderate adverse impact would result from the gradual loss of mineral leases.
# CONTENTS

## CHAPTER 1 - INTRODUCTION

<table>
<thead>
<tr>
<th>MONUMENT DESCRIPTION</th>
<th>..........................................................</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>....................................................................</td>
<td>3</td>
</tr>
<tr>
<td>Monument Overview</td>
<td>....................................................................</td>
<td>4</td>
</tr>
<tr>
<td>PURPOSE AND NEED FOR THE PLAN</td>
<td>..........................................................</td>
<td>6</td>
</tr>
<tr>
<td>Purpose</td>
<td>....................................................................</td>
<td>6</td>
</tr>
<tr>
<td>Need</td>
<td>....................................................................</td>
<td>6</td>
</tr>
<tr>
<td>PLANNING AREA DESCRIPTION</td>
<td>..................................................................</td>
<td>6</td>
</tr>
<tr>
<td>DIRECTION FOR THE PLAN</td>
<td>....................................................................</td>
<td>7</td>
</tr>
<tr>
<td>Purpose and Significance of the Monument</td>
<td>................................................................</td>
<td>7</td>
</tr>
<tr>
<td>Mission Goals</td>
<td>....................................................................</td>
<td>11</td>
</tr>
<tr>
<td>Planning Criteria (Including Laws, Regulations, and Policies)</td>
<td>................................................................</td>
<td>11</td>
</tr>
<tr>
<td>THE PLANNING PROCESS AND PUBLIC SCOPING</td>
<td>..........................................................</td>
<td>12</td>
</tr>
<tr>
<td>Relationship to Other Plans, Policies, and Programs</td>
<td>................................................................</td>
<td>13</td>
</tr>
<tr>
<td>Relationship to Current BLM Plans and Policies</td>
<td>................................................................</td>
<td>14</td>
</tr>
<tr>
<td>Relationship to Current NPS Plans and Policies</td>
<td>................................................................</td>
<td>15</td>
</tr>
<tr>
<td>Relationship to Other Plans and Policies</td>
<td>....................................................................</td>
<td>16</td>
</tr>
<tr>
<td>Future Planning Needs</td>
<td>....................................................................</td>
<td>16</td>
</tr>
<tr>
<td>PLANNING ISSUES AND CONCERNS</td>
<td>...................................................................</td>
<td>17</td>
</tr>
<tr>
<td>Issues and Concerns Addressed by this Proposed Plan/FEIS</td>
<td>................................................................</td>
<td>17</td>
</tr>
<tr>
<td>Issues Beyond the Scope of this Proposed Plan/FEIS</td>
<td>................................................................</td>
<td>19</td>
</tr>
<tr>
<td>IMPACT TOPICS</td>
<td>........................................................................</td>
<td>20</td>
</tr>
<tr>
<td>IMPACT TOPICS CONSIDERED BUT DISMISSED FROM FURTHER EVALUATION</td>
<td>..........................................................</td>
<td>21</td>
</tr>
<tr>
<td>Prime and Unique Farmland</td>
<td>....................................................................</td>
<td>21</td>
</tr>
<tr>
<td>Floodplains</td>
<td>....................................................................</td>
<td>21</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>....................................................................</td>
<td>21</td>
</tr>
<tr>
<td>Environmental Justice</td>
<td>....................................................................</td>
<td>21</td>
</tr>
<tr>
<td>Cultural Landscapes</td>
<td>....................................................................</td>
<td>21</td>
</tr>
<tr>
<td>Museum Collections</td>
<td>....................................................................</td>
<td>21</td>
</tr>
<tr>
<td>OTHER PLANNING ISSUES</td>
<td>........................................................................</td>
<td>22</td>
</tr>
<tr>
<td>Carrying Capacity</td>
<td>....................................................................</td>
<td>22</td>
</tr>
<tr>
<td>MONUMENT BOUNDARIES</td>
<td>........................................................................</td>
<td>22</td>
</tr>
</tbody>
</table>

## CHAPTER 2 - ALTERNATIVES, INCLUDING THE PROPOSED PLAN

| OVERVIEW OF ALTERNATIVES | .......................................................... | 27 |
| DESCRIPTION OF MANAGEMENT ZONES | ................................................................ | 27 |
| ROAD AND TRAIL CLASSIFICATIONS | .................................................................... | 30 |
| MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES | .......................................................... | 30 |
| ALTERNATIVE A (NO ACTION ALTERNATIVE) | .......................................................... | 43 |
| Alternative Concept | ...................................................................... | 43 |
| Management Zones    | ...................................................................... | 43 |
| Management Guidance for Alternative A | .................................................................. | 43 |
| ALTERNATIVE B | ........................................................................ | 49 |
| Alternative Concept | ...................................................................... | 49 |
| Management Zones    | ...................................................................... | 49 |
| Management Guidance for Alternative B | .................................................................. | 49 |
CHAPTER 3 - AFFECTED ENVIRONMENT ................................................................. 105

NATURAL RESOURCES ............................................................................... 105
Geological Resources ............................................................................. 105
Soils ........................................................................................................ 110
Vegetation, Including Special Status Species, and Fire Management ....... 112
Water Resources, Including Wetlands .................................................. 129
Wildlife, Including Special Status Species ........................................... 131
Air Quality ............................................................................................ 141

CULTURAL RESOURCES ........................................................................ 144
Archaeological and Historical Resources .............................................. 144

NATIVE AMERICAN RIGHTS AND INTERESTS ...................................... 146
Native American Treaty Rights and Trust Resources ......................... 146
Ethnographic Resources ..................................................................... 147

LAND USE AND TRANSPORTATION ....................................................... 148
Travel and Access ................................................................................ 148
Livestock Grazing ............................................................................... 154
Other Land Uses ............................................................................... 160
Special Designation Areas ................................................................ 165

VISITOR EXPERIENCE ......................................................................... 169
Interpretation/Visitor Understanding ................................................... 169
Recreation and Public Safety ................................................................. 171
Visual Resources ................................................................................ 170
Soundscape ......................................................................................... 179

SOCIAL AND ECONOMIC CONDITIONS ............................................. 179

CHAPTER 4 - ENVIRONMENTAL CONSEQUENCES ............................... 201

INTRODUCTION ..................................................................................... 201
ANALYSIS ASSUMPTIONS AND GUIDELINES .................................. 201
Impacts from Alternative A ................................................................. 261
Impacts from Alternative B ................................................................. 262
Impacts from Alternative C ................................................................. 264
Impacts from Alternative D (Proposed Plan) ....................................... 265
Livestock Grazing ............................................................................. 267
Impacts from Alternative A ................................................................. 267
Impacts from Alternative B ................................................................. 268
Impacts from Alternative C ................................................................. 269
Impacts from Alternative D (Proposed Plan) ....................................... 270
Other Land Uses (Administrative Facilities, Realty, and Minerals) ....... 271
Impacts from Alternative A ................................................................. 271
Impacts from Alternative B ................................................................. 272
Impacts from Alternative C ................................................................. 273
Impacts from Alternative D (Proposed Plan) ....................................... 274
Special Designation Areas (Wilderness, Wilderness Study Areas, Research Natural Area/ Areas of Critical Environmental Concern) ................................... 274
Impacts from Alternative A ................................................................. 274
Impacts from Alternative B ................................................................. 275
Impacts from Alternative C ................................................................. 276
Impacts from Alternative D (Proposed Plan) ....................................... 277
Recreation and Public Safety ............................................................ 285
Impacts from Alternative A ................................................................. 285
Impacts from Alternative B ................................................................. 287
Impacts from Alternative C ................................................................. 289
Impacts from Alternative D (Proposed Plan) ....................................... 291
Visual Resources ............................................................................. 294
Impacts from Alternative A ................................................................. 294
Impacts from Alternative B ................................................................. 295
Impacts from Alternative C ................................................................. 296
Impacts from Alternative D (Proposed Plan) ....................................... 297
Soundscapes .................................................................................. 298
Impacts from Alternative A ................................................................. 298
Impacts from Alternative B ................................................................. 298
Impacts from Alternative C ................................................................. 299
Impacts from Alternative D (Proposed Plan) ....................................... 299
SOCIAL AND ECONOMIC CONDITIONS ........................................... 299
Impacts from Alternative A ................................................................. 300
Impacts from Alternative B ................................................................. 301
Impacts from Alternative C ................................................................. 303
Impacts from Alternative D (Proposed Plan) ....................................... 304
UNAVOIDABLE ADVERSE IMPACTS ................................................. 305
Alternative A .................................................................................. 305
CHAPTER 5 - CONSULTATION AND COORDINATION WITH OTHERS ........................................ 315

APPENDICES ................................................................................................................ 329

GLOSSARY .................................................................................................................. 671

ABBREVIATIONS AND ACRONYMS ........................................................................... 693
LIST OF FIGURES

FIGURE 1 Location ........................................................................................................................................................... 5
FIGURE 2 Planning Area .................................................................................................................................................. 9
FIGURE 3 Planning Process ........................................................................................................................................... 12
FIGURE 4 Alternative A ................................................................................................................................................ 45
FIGURE 5 Visual Resource Management Classification - Alternative A (No Action Alternative) ...................... 48
FIGURE 6 Alternative B ................................................................................................................................................ 51
FIGURE 7 Visual Resource Management Classification - Alternatives B, C, & D .................................................... 53
FIGURE 8 Alternative C .............................................................................................................................................. 57
FIGURE 9 Alternative D (Proposed Plan) .................................................................................................................. 65
FIGURE 10 Management Plan Cost Of Alternatives Compared To Importance (Advantages) .......................... 72
FIGURE 11 Regional Geological Settings .............................................................................................................. 106
FIGURE 12 Vegetation Classification ..................................................................................................................... 114
FIGURE 13 Fire Frequency ......................................................................................................................................... 121
FIGURE 14 Fire Response Tests ............................................................................................................................ 124
FIGURE 15 Biotic Integrity ....................................................................................................................................... 127
FIGURE 16 Transportation & Access ..................................................................................................................... 149
FIGURE 17 Grazing Allotments ................................................................................................................................ 155
FIGURE 18 Range Improvement Facilities ........................................................................................................... 157
FIGURE 19 Land Status ............................................................................................................................................ 162
FIGURE 20 Valid Existing Rights ........................................................................................................................... 164
FIGURE 21 Special Designation Areas .................................................................................................................... 167
FIGURE 22 Game Management Units ................................................................................................................... 174
FIGURE 23 Park Visitation ......................................................................................................................................... 181
FIGURE 24 Change in Personal Income in Blaine County, Idaho, 1970-2000 ...................................................... 182
FIGURE 25 Change in Personal Income in Lincoln County, Idaho, 1970-2000 .................................................. 184
FIGURE 26 Change in Personal Income in Butte County, Idaho, 1970-2000 ..................................................... 186
FIGURE 27 Change in Personal Income in Power County, Idaho, 1970-2000 .................................................... 188
FIGURE 28 Change in Personal Income in Minidoka County, Idaho, 1970-2000 ............................................. 190
FIGURE 29 Housing Affordability in Planning Area Communities ........................................................................... 192
FIGURE 30 Commuting Patterns in Planning Area Communities ........................................................................... 193
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE 1</td>
<td>Management Zones</td>
<td>29</td>
</tr>
<tr>
<td>TABLE 2</td>
<td>Alternative A (No Action Alternative) – Road and Trail Distribution by Management Zone</td>
<td>47</td>
</tr>
<tr>
<td>TABLE 3</td>
<td>Alternative B – Road and Trail Inventory by Management Zone</td>
<td>55</td>
</tr>
<tr>
<td>TABLE 4</td>
<td>Alternative C – Road and Trail Inventory by Management Zone</td>
<td>61</td>
</tr>
<tr>
<td>TABLE 5</td>
<td>Alternative D (Proposed Plan) – Road and Trail Inventory by Management Zone</td>
<td>69</td>
</tr>
<tr>
<td>TABLE 6</td>
<td>Summary of Comparative Costs (FY 2003 dollars)</td>
<td>73</td>
</tr>
<tr>
<td>TABLE 7</td>
<td>Summary of Alternatives</td>
<td>77</td>
</tr>
<tr>
<td>TABLE 8</td>
<td>Acreage and Mileage Calculations For All Alternatives</td>
<td>90</td>
</tr>
<tr>
<td>TABLE 9</td>
<td>Results of Fire Response Time Exercise, Including Travel Time and Mileage by Class of Road</td>
<td>91</td>
</tr>
<tr>
<td>TABLE 10</td>
<td>Results of Generalized Fire Growth Modeling for Vegetation in the Monument Using Two Fuel Moisture Regimes and Two Wind Speeds</td>
<td>125</td>
</tr>
<tr>
<td>TABLE 11</td>
<td>Approximate Acreage of Each Vegetation Type in the Monument and Percentage that Occurs</td>
<td>126</td>
</tr>
<tr>
<td>TABLE 12</td>
<td>Vegetation Habitat Characteristics and Location Information for Special Status Plant Species Occuring in the Craters of the Moon National Monumnet and Preserve</td>
<td>128</td>
</tr>
<tr>
<td>TABLE 13</td>
<td>Sagebrush-Associated Species that Occur in the Monument</td>
<td>132</td>
</tr>
<tr>
<td>TABLE 14</td>
<td>Active Sage-Grouse Leaks</td>
<td>139</td>
</tr>
<tr>
<td>TABLE 15</td>
<td>Regional Point Sources of Criteria Air Pollutants in Tons per Year</td>
<td>141</td>
</tr>
<tr>
<td>TABLE 16</td>
<td>Roads and Trails within Craters of the Moon National Monument and Preserve</td>
<td>153</td>
</tr>
<tr>
<td>TABLE 17</td>
<td>Livestock Use per BLM Field Office</td>
<td>156</td>
</tr>
<tr>
<td>TABLE 18</td>
<td>Craters of the Moon Allotment Animal Unit Months</td>
<td>158</td>
</tr>
<tr>
<td>TABLE 19</td>
<td>Allotment Standards &amp; Guides Facts — Idaho Falls and Twin Falls Districts</td>
<td>159</td>
</tr>
<tr>
<td>TABLE 20</td>
<td>Landownership</td>
<td>161</td>
</tr>
<tr>
<td>TABLE 21</td>
<td>Valid Existing Rights</td>
<td>163</td>
</tr>
<tr>
<td>TABLE 22</td>
<td>Summary of Wilderness Study Areas</td>
<td>168</td>
</tr>
<tr>
<td>TABLE 23</td>
<td>Visitation at the NPS Craters of the Moon National Monument 1990-2001</td>
<td>171</td>
</tr>
<tr>
<td>TABLE 24</td>
<td>New Income by Type in Butte County, Idaho, 1990-2000</td>
<td>182</td>
</tr>
<tr>
<td>TABLE 25</td>
<td>New Income by Type in Lincoln County, Idaho, 1982-2000</td>
<td>184</td>
</tr>
<tr>
<td>TABLE 26</td>
<td>New Income by Type in Power County, Idaho, 1994-2000</td>
<td>186</td>
</tr>
<tr>
<td>TABLE 27</td>
<td>New Income by Type in Minidoka County, Idaho, 1970-2000</td>
<td>188</td>
</tr>
<tr>
<td>TABLE 28</td>
<td>New Income by Type in Minidoka County, Idaho, 1970-2000</td>
<td>190</td>
</tr>
<tr>
<td>TABLE 29</td>
<td>Population and Growth Rates for Planning Area Counties and Communities</td>
<td>191</td>
</tr>
<tr>
<td>TABLE 30</td>
<td>Housing Affordability in Planning Area Communities</td>
<td>193</td>
</tr>
<tr>
<td>TABLE 31</td>
<td>Place of Birth and Length of Residence in Planning Area Communities</td>
<td>195</td>
</tr>
<tr>
<td>TABLE 32</td>
<td>Language, Race and Ethnicity in Planning Area Communities</td>
<td>196</td>
</tr>
<tr>
<td>TABLE 33</td>
<td>Aging Trends in Planning Area Counties</td>
<td>197</td>
</tr>
<tr>
<td>TABLE 34</td>
<td>Income Distribution in Planning Area Communities</td>
<td>198</td>
</tr>
<tr>
<td>TABLE 35</td>
<td>Educational Attainments in Planning Area Communities</td>
<td>198</td>
</tr>
<tr>
<td>TABLE 36</td>
<td>Summary of Emissions Produced from Prescribed and Wildland Use Fires by Alternative</td>
<td>242</td>
</tr>
</tbody>
</table>
CHAPTER 1  INTRODUCTION

On November 9, 2000, Presidential Proclamation 7373 expanded Craters of the Moon National Monument from roughly 53,400 acres to approximately 752,500 acres, including 737,700 acres of federal land. The President signed this proclamation to ensure protection of the Great Rift volcanic rift zone and its associated features. The Proclamation also placed the lands under the administration of both the National Park Service (NPS) and the Bureau of Land Management (BLM), with each agency having primary management authority over separate portions. In addition, on August 21, 2002, Public Law (PL) 107-213, 116 Statute [Stat.] 1052 designated the NPS portion of the expanded Monument as a National Preserve.

This document is the Proposed Management Plan/Final Environmental Impact Statement (Proposed Plan/FEIS), which sets forth the future direction for the use and management of the Monument. This plan covers all expansion lands and the original NPS Monument. It addresses the direction set forth in the Proclamation and the designation of National Preserve status for NPS lands. It is intended to serve as a combined Resource Management Plan (RMP)/General Management Plan (GMP) to replace portions of four existing BLM RMPs and one NPS GMP. From here on, any reference to “the Monument” is intended to refer to all lands within the new Monument boundaries, including the National Preserve.

Spring flowers in lava

1 Area and length figures referenced here and through this document are based on the best available GIS data at the time of publication. These figures are based on the Universal Transverse Mercator Zone 11 North projection referencing the North American Datum of 1927. For improved accuracy and in response to public comments, revisions to GIS data, analyses, and calculations have been made resulting in minor change to acreage and mileage figures between the Draft Plan/EIS and this Proposed Plan/Final EIS.

MONUMENT DESCRIPTION

HISTORY

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.
Presidential Proclamation 7373 of November 9, 2000, expanded the boundary to 737,700 acres of federal land (from about 53,400 acres) to include many more of the area’s volcanic features. 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, which allowed for hunting on lands that were closed to this activity by the November 2000 Proclamation. Appendix A provides copies of the proclamations and legislation related to creation of the current Monument and Preserve.

MONUMENT OVERVIEW

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 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.

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 conterminous United States.

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

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

Young (dominantly Holocene) lava flows and other features cover about 450,000 acres of the Monument. The remaining 300,000 acres in the Monument are also volcanic in origin, but older in age and covered with a thicker mantle of soil. This older terrain supports a sagebrush steppe ecosystem consisting of diverse communities of grasses, sagebrush, and shrubs, providing habitat
Figure 1

LOCATION

Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management
for a variety of wildlife. This area also includes lava tube caves, older volcanic formations, and volcanic edifices locally referred to as buttes.

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.

Both the Great Rift Zone and sagebrush steppe ecosystem contain a wealth of cultural resources dating back to the last volcanic eruptions, which were likely witnessed by the Shoshone people. Today, local tribes and communities, as well as visitors and other stakeholders, have an interest in the Monument. Current efforts include preserving cultural resources, wildlife habitat, and pristine wilderness qualities, while also allowing for a variety of resource uses.

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

**PURPOSE AND NEED FOR THE PLAN**

**PURPOSE**

The purpose of the Proposed Plan/FEIS is to provide the NPS and BLM with a comprehensive framework for managing public lands within the newly expanded Monument. Both agencies are required to maintain up-to-date management plans with an environmental impact statement level analysis. When approved, this plan will replace the land use planning decisions in the existing land use plans for this area. Decisions in existing plans that still have merit will be carried forward and incorporated into the planning effort.

Once approved, this plan will become the Final Management Plan, which will provide a framework for proactive decision making, including decisions on visitor use and on managing and preserving natural and cultural resources. It will prescribe the resource conditions and visitor experiences that are to be achieved and maintained in the Monument over time. Where law, policy, or regulations do not provide clear guidance, management decisions will be based on the Monument’s purpose, public concerns, and analysis of social and resource impacts of alternative courses of action, including long-term operational costs.

This document will not describe how particular programs or projects will be implemented or prioritized. Those decisions will be deferred to more detailed implementation planning, which will follow the broad, comprehensive plan presented in this document.

**NEED**

The Monument is currently being managed under four BLM land use plans, one NPS GMP and the Interim Management Guidelines (Appendix B). These five separate existing plans do not address current administrative boundaries and do not provide a comprehensive interagency framework for managing public lands within the new boundaries. They represent a fragmented approach that should be replaced with a single planning document that addresses both BLM and NPS policies, directives, and concerns. Also, the current plans do not specifically address the status of the NPS lands as a National Preserve. Therefore, there is a need for both BLM and NPS to review, update, and consolidate management direction for the new Monument and Preserve and to present relevant Monument planning information and decision making in one document.

**PLANNING AREA DESCRIPTION**

The Craters of the Moon National Monument and Preserve encompasses 737,680 acres of federal land,
8,250 acres of state land, and 6,560 acres of private land (see Table 22). The decisions made through this planning process will apply only to the 737,680 acres of federal land within the Monument boundary, referred to as “the planning area” (see Figure 2).

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

The planning area lies within the Snake River Plain. The Snake River Plain was built up by repeated volcanic outpourings. The chief physiographic features of this region are the flat lava plains broken only by occasional volcanic cones. The Snake River Plain north of the Monument is bounded by the northernmost occurrence of the Basin and Range Mountains. The dominant vegetation is sagebrush with associated grass and forb understory species. Cheatgrass (*Bromus tectorum*) is also widespread as an invasive, non-native component of the plant community.

**DIRECTION FOR THE PLAN**

**PURPOSE AND SIGNIFICANCE OF THE MONUMENT**

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

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

- 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 WSAs within the Monument encompass over one-half million acres of...
This page intentionally left blank
FIGURE 2
PLANNING AREA
Craters of the Moon National Monument & Preserve

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
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

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

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

PLANNING CRITERIA

(INCLUDING LAWS, REGULATIONS, AND POLICIES)

BLM planning regulations (43 Code of Federal Regulations [CFR] 1610) and NPS directives (Director’s Order #2) require preparation of planning criteria to guide development of all RMPs/GMPs. Planning criteria are the constraints, or ground rules, which guide and direct the development of the plan. They influence all aspects of the planning process, including inventory and data collection, formulation of alternatives, estimation of effects, and ultimately the selection of a Preferred Alternative. They ensure that plans are tailored to the identified issues and that unnecessary data collection and analyses are avoided. Planning criteria are based primarily on standards prescribed by applicable laws and regulations and agency guidance, plus consultation with Federally Recognized Tribes, and coordination with other federal, state and local agencies; input from the public; analysis of information pertinent to the planning area; and professional judgement.

Consultation with Federally Recognized Native American Tribes (North American Indians or tribes) is mandated. The agencies have a trust responsibility to maintain government-to-government consultation and coordination with Federally Recognized tribes. Compliance with all federal laws regarding the protection of tribal cultural interests and cultural resource concerns will also be conducted in accordance with consultation with all affected tribes, in this case the Shoshone-Bannock Tribes and the Shoshone-Paiute Tribes. This recognizes and upholds the off-reservation rights of the Shoshone-Bannock Nation under the Fort Bridger Treaty of 1868.

The NPS and the BLM jointly developed the planning criteria for this planning effort, although the authorities of each agency differ. Each agency’s authorities have their origin in separate and different enabling legislation and proclamations. As a result, some planning criteria are specific to one agency or the other. On the other hand, some laws, such as the
Clean Water Act, apply equally to both agencies and require the same planning criteria. The agencies’ goal was to develop a single set of planning criteria to guide the development of a single management plan for the Craters of the Moon National Monument and Preserve. The BLM District Manager, Upper Snake River District, approved the planning criteria, with concurrence by the NPS Superintendent for Craters of the Moon National Monument and Preserve, in September 2002.

Appendix B presents the planning criteria for this planning effort and identifies the laws, regulations, and policies that form the basis for these criteria and are relevant to each of the resource topics discussed in this Proposed Plan/FEIS.

THE PLANNING PROCESS AND PUBLIC SCOPING

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

Figure 3
Planning Process

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Initiate Project</td>
</tr>
<tr>
<td>2002</td>
<td>Visioning</td>
</tr>
<tr>
<td>2003</td>
<td>Alternatives Evaluated and Developed</td>
</tr>
</tbody>
</table>

2001 Initiate Project
Project Scoping
- October
  - Joint planning team assembled, identified project scope and issues, and customized planning project.

2002 Visioning
Develop Alternatives
- February
  - 1st newsletter sent out to obtain public suggestions on qualities of Monument that are valuable to preserve, uses to be accommodated, and concerns to be addressed.
- June
  - Public open house meeting held with agencies and interest groups.
- July
  - 2nd newsletter sent out summarizing public comments from June workshops.
- August
  - Preliminary alternatives developed by joint planning team from public comments, resource data, and planning criteria.
- October
  - Alternatives reviewed by BLM state director and NPS regional director.

2003 Alternatives Evaluated and Developed
- January
  - 3rd newsletter sent out for public comment on preliminary alternatives.
- February
  - Public workshop for input on alternatives.
- March
  - Comments compiled and alternatives revised to reflect comments.
- May
  - Environmental impacts of alternatives assessed.
- April - December
  - Draft Monument Management Plan written.

- April 2004
  - Draft Monument Management Plan distributed for public review.
- May - July 2004
  - 90-day public comment period; open house held to obtain comments on Draft Plan.
- August 2004 - June 2005
  - Revisions to the Draft Plan; Proposed Plan prepared and printed.
- July 2005
  - Proposed Plan distributed to the public; 30-day no-action period.
- Fall 2005
  - Record of Decision Signed. Final/Presentation Plan prepared and distributed. Implementation and Monitoring.
The planning process begins by defining the purpose and significance of the Monument, including appropriate goals, and descriptions of resource conditions, visitor uses, and management actions to best achieve those goals. After goals are established, the treatment and use of Monument resources are considered, based on scientific and technical analyses that employ current scientific research, as well as applied and accepted professional practices. Management alternatives are generated on the basis of the goals and analyses. The alternatives are then scrutinized with respect to their consistency with the Monument’s purpose and goals, the planning criteria, the impact on Monument resources, the quality of the visitor experience, the short- and long-term costs, and environmental consequences that extend beyond Monument boundaries. The overall planning process is illustrated in Figure 3.

An interdisciplinary planning team was assembled in the spring of 2002. It was comprised of the BLM Monument Manager, the NPS Monument Superintendent, and resource specialists and staff from both the NPS and BLM. The team also included representation from the Idaho Department of Fish and Game (IDFG), U.S. Fish and Wildlife Service (USFWS), and U.S. Geological Survey (USGS). The planning team met several times during 2002 and 2003 to gather background information, identify goals and objectives, examine resource issues, and develop alternatives. Throughout the planning process, public scoping efforts played a large part in helping to focus the plan, identify issues, and formulate alternatives. Public input was especially important in the development of the four management zones that were used to define the alternatives. Several Monument tours and briefings were held, three newsletters were released, and open houses were conducted in eight communities throughout southern Idaho. A detailed account of the public scoping process and public input received during the planning process for the Monument is provided under the Consultation and Coordination chapter of this Proposed Plan/FEIS (Chapter 5).

A Draft Plan/EIS was released in April 2004. This was followed by a 90-day public review period including public meetings. Over that time, comments were received from the public and various government agencies. These were gathered, analyzed, and used to complete the Proposed Plan/FEIS.

This Proposed Plan/FEIS is being released for a 30-day no-action and protest period. Upon resolution of any protests, the NPS Regional Director and the BLM State Director will sign a Record of Decision, and a Final Management Plan will be released to the public. The plan is then implemented, subject to additional environmental analysis for site-specific actions.

**RELATIONSHIP TO OTHER PLANS, POLICIES, AND PROGRAMS**

This Proposed Plan/FEIS seeks to define what resource conditions and visitor experiences should be achieved and maintained over time to achieve the purpose of the Monument. This Proposed Plan/FEIS considers various approaches to use, management, and development, some of which may represent competing interests for the same resource base. Ultimately, the plan serves to define a series of desired future conditions that reflect the concerns and needs of the BLM and the NPS, as well as the public.

As previously described, this Proposed Plan/FEIS replaces the four existing BLM land use plans and the current NPS GMP, and serves as a combined RMP/GMP for the Monument. As such, it covers a broad area; addresses a wide range of programs, concerns, and resources; and must, therefore, function at a general level.

The more specific actions required to attain the goals and outcomes defined in this Proposed Plan/FEIS are accomplished through implementation plans. These plans apply to specific program areas, projects, or operational and development strategies for specific areas of the Monument. Because planning is an ongoing and continuous process, this Proposed Plan/FEIS must be viewed as a dynamic document. A number of plans already completed would remain in effect, and this Proposed Plan/FEIS will need to be updated periodically to reflect new information and changing conditions.
Plan/FEIS reflects those still deemed to be useful. Future implementation plans would use the goals and conditions defined in this Proposed Plan/FEIS as their starting point. Implementation plans for actions with potential to affect the environment would require formal analysis of alternatives in compliance with the National Environmental Policy Act (NEPA) and related legislation, including the National Historic Preservation Act (NHPA).

The following explains the relationship between this planning effort and existing plans, policies, or programs of both the BLM and NPS. Other relevant plans, policies, or programs (e.g., state/local land use plans) that were considered in the preparation of this document are listed and discussed in the Environmental Consequences chapter as part of the cumulative impact scenario.

**RELATIONSHIP TO CURRENT BLM PLANS AND POLICIES**

The following current BLM land use plans and Environmental Impact Statements have been considered in the development of this Proposed Plan/FEIS. Once approved as a Management Plan, this plan will replace portions of the following plans that provide direction for the Monument.

**Fire, Fuels, and Vegetation Management Direction:** The BLM is preparing an EIS that will amend 12 existing land use plans (USDI 2004). The area, which includes the Monument, is composed of public lands managed by the Burley, Pocatello, Shoshone, and Upper Snake River field offices, which are now part of the Idaho Falls and Twin Falls districts. The Draft Fire, Fuels, and Vegetation Management Direction Amendments (FMDA) overlaps this Proposed Plan/FEIS direction related to fire, fire-affected resources, and sagebrush-steppe restoration. Management direction proposed and analyzed for the Draft FMDA/EIS Preferred Alternative is incorporated in this Proposed Plan/FEIS as “Management Guidance Common to All Alternatives” (see Chapter 2).

**Monument Resource Management Plan/EIS and Amendments:** The 1985 Monument RMP is the comprehensive framework for managing approximately 1,179,000 acres of public land north of the Snake River in south-central Idaho. RMPs make resource allocations, resolve conflicts between competing uses, and ensure management of the public lands in accordance with the principles of multiple use and sustained yield. The Monument RMP covers approximately 60 percent of the Monument.

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

**Big Desert Management Framework Plan, Grazing EIS, and Amendments:** This 1981 MFP covers an area west of Idaho Falls in southeastern Idaho and includes 1,162,463 acres of public land. The Big Desert MFP covers approximately 30 percent of the Monument.

**Sun Valley Management Framework Plan, Grazing EIS, and Amendments:** This 1981 MFP covers approximately 245,000 acres of public land in the northern portion of the BLM Shoshone Field Office. The Sun Valley MFP covers less than 5 percent of the Monument.

**Great Rift Proposed Wilderness EIS:** This 1980 EIS recommended that 341,000 acres of the Great Rift WSA be designated as part of the National Wilderness Preservation System. The entire Great Rift WSA is within the Monument.

**Interior Columbia Basin Ecosystem Management Project:** The Interior Columbia Basin Ecosystem Management Project (ICBEMP) was based on Presidential direction to develop a scientifically sound, ecosystem-based strategy for managing the 64 million acres of public lands administered...
by the Forest Service and the BLM within the Columbia River Basin, and portions of the Klamath and Great Basins in Oregon. The project was based on concerns over forest and rangeland health, uncharacteristically intense wildland fires, threats to certain fish and wildlife species, and concerns about local community social and economic well being. A Final EIS and Proposed Decision were published in December 2000. No basin-scale Record of Decision has been signed, nor is one expected.

Public lands administered by the BLM and NPS within the Craters of the Moon National Monument planning area are included within the lands covered by the ICBEMP analysis. The BLM State Directors and Regional Foresters are completing the project through the use of the Interior Columbia Basin Strategy (Strategy). The BLM is guided by a 2003 Memorandum of Understanding (MOU) to implement this Strategy in the amendment and revisions of RMPs and project implementation on public lands administered by BLM throughout the Interior Columbia River Basin. The Strategy directs BLM to use the findings of the ICBEMP science, new information, and the best available science in developing land use plans and implementing resource management projects, including consultation and participation in plan and project design. The ICBEMP analysis and findings have been incorporated into this Proposed Plan/FEIS.

**RELATIONSHIP TO CURRENT NPS PLANS AND POLICIES**

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

**NPS Management Policies – 2001:** This volume is the basic policy document of the NPS and is revised at appropriate intervals to consolidate agency policy decisions or to respond to new laws and technologies, new understandings of park resources and the factors that affect them, or changes in American society.

**1992 Craters of the Moon General Management Plan:** The 1992 GMP was the guiding document for the original NPS Monument. Interim Monument guidelines were developed in 2001 with cooperative input from both agencies. The additional lands added as a National Preserve (approximately 410,000 acres) require the updating of this plan.

**1996 Resource Management Plan:** NPS RMPs provide a long-range comprehensive strategy for natural and cultural resource management. The strategy describes a program of activities to achieve desired future conditions. The current plan does not incorporate any of the National Preserve resources.

**October 2000 Wildland Fire Management Plan:** The Wildland Fire Management Plan (FMP) provides fire management direction for the original NPS Monument, not the expanded lands.

**Fiscal Year 2000 – 2005 Strategic Plan for Craters of the Moon National Monument and Preserve:** NPS strategic plans contain the mission statement and goals, describe strategies to accomplish goals, and identify external factors that could significantly affect achievement of goals. The Strategic Plan does not reflect the 2000 expansion, but the Fiscal Year 2005 – 2008 Strategic Plan will.

**1993 Cave Management Program:** The 1993 Cave Management Program provides management guidelines for the original NPS Monument’s cave resources. This plan is no longer adequate, as it does not reflect the expanded areas of the Monument.

**1989 (revised 1996) Backcountry/Wilderness Management Plan:** This plan provides management guidelines for basic recreation use of the backcountry and wilderness of the original NPS Monument.
RELATIONSHIP TO OTHER PLANS AND POLICIES

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

An implementation plan was signed in June 2002 to provide consistent and standard direction to implement the common purposes of the Strategy and the National Fire Plan. BLM will incorporate guidance from the National Fire Plan and 10-Year Comprehensive Strategy in this Proposed Plan/FEIS.

FUTURE PLANNING NEEDS
This Proposed Plan/FEIS is intended to describe resource conditions and visitor experiences to be achieved within the planning area at the Monument. The agencies will be cooperatively preparing or amending existing “implementation plans” to implement this Proposed Plan/FEIS. The implementation plans are necessarily dynamic in order to accommodate new information. Following is a list of examples of implementation plans that may be necessary at the Monument.

Comprehensive Travel Management Plan: Proclamation 7373 requires that a transportation plan be prepared that addresses the actions, including closures or travel restrictions, necessary to protect the objects for which the Monument was established. The management zones, road and trail classification system, and the provisions of the Proposed Plan/FEIS provide the framework for developing a Comprehensive Travel Management Plan. The agencies intend that this will be the first implementation-level plan to be prepared for the Monument. In addition to identifying potential road closures or travel restrictions, the plan will include specific standards for road maintenance and/or improvement and will include a published map/brochure designed for public use, showing road standards, maintenance levels, and appropriate use.

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

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

Wilderness/Wilderness Study Area Management Plan: This plan guides the preservation, management, and use of the designated Wilderness and WSAs. One of the principal purposes is to establish indicators, standards, conditions, and thresholds beyond which management actions would be taken to reduce human impacts to wilderness resources. The current Backcountry / Wilderness Management Plan is no longer adequate as it does not incorporate the WSAs within the National Preserve.

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

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

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

**Integrated Pest Management Plan(s):** This plan would provide guidance related to potential pests, monitoring indicators, action thresholds, and treatment methods to address pest issues within the Monument. Among these issues are invasive exotic plants, grasshoppers, and large predators. This plan would be accomplished cooperatively with the USDA.

**Kings Bowl Development Concept Plan:** All of the alternatives for this Proposed Plan/FEIS identify some level of development in the Kings Bowl area. These range from the minimal needed to protect the resources and protect visitors from hazards in the area, to that of more fully accommodating visitor access and opportunities for exploring the unique features present in the area. A Development Concept Plan allows for the agencies to examine in greater detail options for protecting the area while accommodating public access and use.

**Administrative History:** This is a report that documents the history of a unit of the National Park System. It records the evolution of its management and programs in order to familiarize new managers, staff, and other agency officials with the area and provide them with a historical basis for future management decisions. This report would probably be an addendum to the Administrative History of Craters of the Moon National Monument (Louter 1992).

**Volcanic Hazards Analysis:** No contingency planning has ever been done for the advent of a volcanic eruption. No flow routing modeling has been done to help predict where lava would go and how far it would travel based on possible eruption sites and volumes. Therefore, the team has recommended that a comprehensive volcanic hazard assessment be conducted. This would provide the necessary information for crisis and risk management contingency planning.

**PLANNING ISSUES AND CONCERNS**

BLM and NPS staff and the public raised several issues and related concerns in meetings, responses to newsletters, and discussions with staff from other agencies and organizations. This section identifies those issues or concerns that were discussed and that are considered in development of alternatives and in completion of the EIS, as well as those that are beyond the scope of this planning process.

**ISSUES AND CONCERNS ADDRESSED BY THIS PROPOSED PLAN/FEIS**

The following summarizes the primary issues that were raised and considered in the preparation of this Proposed Plan/FEIS, organized by major category.

**Development**

*What kinds of Monument facilities and services will there be apart from the existing Monument developments?*
• Are new public facilities needed within this Monument within the next 20 years?
• Are there Monument facilities desired outside the Monument?
• What opportunities do surrounding “gateway” communities want for providing services and facilities to visitors?
• Do any existing facilities need to be removed?

Travel and Access
*What type of road and trail system will be needed for travel to and access within the Monument?*

• Will any existing roads within the Monument be closed, or will there be any restrictions on mechanized or motorized travel in order to protect Monument resources?
• Will there be increased risks for fire and noxious weeds?
• Will any existing roads be upgraded? Will some roads receive better maintenance?
• Will access to portions of the Monument be improved?
• Are access improvements needed outside the Monument?
• How will the counties be consulted on transportation issues?

Public Uses and Safety
*What is the extent and location of public uses within the Monument?*

• How will existing recreational uses of the land be affected?
• Will visitation increase and how would it be managed?
• What opportunities will there be for advancing public understanding and appreciation for the Great Rift area?
• Are there new safety concerns associated with visitor use?
• What level of emergency assistance is needed within the Monument?

Authorized Uses

• How will grazing be managed in the Monument?

Hill in Monument showing signs of off-road vehicle use

• Are new range improvements needed to enhance rangeland health?
• Is there a need to authorize access to private and state land inholdings?
• What is the need for local material for road maintenance?
• What opportunities will there be for outfitter and guide operations and concession activities within the Monument?
• What will the criteria be for determinations on new requests for leases or permits?
• What valid existing rights existed at the time of the Proclamation on November 9, 2000?

Natural and Cultural Resources
*How will the natural and cultural resources be protected?*

• How will the more fragile and significant of the geological features be protected from visitor use impacts?
• What protection will be offered for cultural resources?
• How will the Shoshone-Bannock and Shoshone-Paiute tribes be consulted?

**Sagebrush habitat**

• How can we best maintain the integrity and understand the scientific value of both the cultural and geological features, the kipukas, and the large tracts of sagebrush habitat in good condition?
• How will the introduction and spread of noxious weeds be controlled? And are kipukas more important to target for eradication efforts?
• Will there be new guidelines for weed, grasshopper, and predator control programs?
• What opportunities will there be for scientific research?
• How will fire management be addressed in the Monument?
• How will restoration and rehabilitation efforts be addressed on Monument lands?
• How will management actions protect intangible resources like night sky and natural quiet, the integrity of viewscapes, and pristine air quality?

**Monument Administration**

*What issues does the staff face in the day-to-day operation of the Monument?*

• Will new management (administrative) facilities be needed?

• What public services will the federal government and local governments provide, and which will be provided jointly?
• Will the federal government assist local governments with needs for emergency services within the Monument?
• Will state and private property within or adjacent to the Monument be affected?
• Will the Monument be identified with signs to distinguish it from surrounding public lands? Will NPS and BLM lands within the Monument be marked differently?

**Visitor Experience**

*What kinds of experiences do visitors want?*

• What opportunities will there be for enhancing understanding and appreciation of the Great Rift area?
• What kind of interpretive and educational services does the public want?
• Which visitor activities are suitable and where can they occur?

**ISSUES BEYOND THE SCOPE OF THIS PROPOSED PLAN/FEIS**

A number of public comments raised issues concerning laws, regulations, or actions that cannot be taken because they are beyond the scope of this Proposed Plan/FEIS; inconsistent with laws, regulations, or policy; or more appropriately addressed by an implementation plan. For example, a new road across a WSA near Bear Park was suggested, which would be inconsistent with BLM WSA Policy. Another comment asked for road improvements in the vicinity of Big Southern Butte. Big Southern Butte is outside of the planning area. Another comment suggested that the Monument be scaled back to include only outstanding features. Reducing the size of the Monument is outside the authority of the BLM and NPS. Several commenters called for the elimination of grazing on the expanded Monument lands. The Proclamation that expanded the Monument directs BLM to manage livestock grazing under existing laws, regulations, and policies. BLM
authority is limited to administering grazing permits on BLM-administered lands only.

Comments that are more appropriately addressed by implementation plans were often site-specific. One comment called for signed turnouts on US 93 with trails to access Goodale’s Cutoff. While this comment is too site-specific to be addressed by this Proposed Plan/FEIS, the plan will generally address signing, vehicle access, and interpretation, as well as the management of Goodale’s Cutoff. Another comment called for offices in Arco or Minidoka to fill the need for additional public services. While BLM and NPS planning authority is limited to the lands within the Monument, the Proposed Plan/FEIS addresses the need for facilities as well as opportunities to work with local communities and governments to provide visitor services and administrative facilities.

Some comments provided very specific ideas as to how areas should be managed. One comment suggested Moss Cave be monitored and visitor use remain light. Another suggested overnight use at Old Juniper Kipuka should be allowed only with a backcountry permit and that group size should be restricted to 10 persons.

Many comments like those presented above are best addressed in future implementation plans. The agencies have saved all comments and will use those in future planning efforts and/or day-to-day management.

**IMPACT TOPICS**

Impact topics were identified from those issues that were within the scope of the Proposed Plan/FEIS and from relevant BLM and NPS policies and regulations. The specific topics addressed under the Affected Environment and Environmental Consequences chapters of this document include the following:

**Natural Resources**
- Geological Resources
- Soils
- Vegetation, including Special Status Species, and Fire Management
- Water Resources
- Wildlife, including Special Status Species
- Air Quality

**Cultural Resources**
- Archaeological and Historical Resources

**Native American Rights and Interests**

**Land Use and Transportation**
- Travel and Access
- Livestock Grazing
- Other Land Uses
- Facilities
- Lands and Realty
- Mineral Materials
- Special Designation Areas
- Wilderness
- Wilderness Study Areas
- Research Natural Areas, National Natural Landmark, Areas of Critical Environmental Concern

**Visitor Experience**
- Interpretation/Visitor Understanding
- Recreation, including Public Health and Safety
- Visual Resources
- Soundscapes

**Social and Economic Conditions**

Each topic is discussed under Affected Environment and analyzed under Environmental Consequences. Also, these topics form the basis for much of the discussion of Management Guidance in the Alternatives chapter.
IMPACT TOPICS CONSIDERED BUT DISMISSED FROM FURTHER EVALUATION

The following impact topics were discussed during the planning process, but were dismissed from further consideration for the reasons mentioned below.

PRIME AND UNIQUE FARMLAND

In August 1980, the Council on Environmental Quality (CEQ) directed that federal agencies must assess the effects of their actions on farmland soils classified as prime or unique by the Natural Resource Conservation Service (NRCS) of USDA. There are no prime or unique farmlands in Craters of the Moon National Monument and Preserve; therefore, the topic of prime and unique farmland was dismissed as an impact topic in this document.

FLOODPLAINS

Floodplains within the Monument are very limited in extent, and none of the actions proposed in any of the alternatives of this Proposed Plan/FEIS adversely affect floodplains or cause substantial changes to the floodplains or their management. Therefore, floodplains are not included as an impact topic.

HAZARDOUS MATERIALS

The topic of public health and safety is addressed in the EIS as a subset of Social and Economic Conditions. There are no hazardous materials used, or disposed of, in connection with Monument operations other than small amounts of cleaners, maintenance chemicals, and fuels used in daily operations. Therefore, a separate topic of hazardous materials was not included as an impact topic in the document.

ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, focuses federal attention on the environment and human health condition in minority and low-income communities, promotes nondiscrimination in federal programs, and provides access to public information and an opportunity to participate in matters that may affect these populations.

Local residents in communities surrounding the Monument include low-income and minority populations. However, no distinct areas of low-income or minority populations were identified near the Monument, or any that depend upon Monument resources for such purposes as subsistence hunting or fishing. Actions proposed under the alternatives would not cause disproportionate adverse human health or environmental impacts to minority and/or low-income populations.

The planned sagebrush steppe restoration program associated with all the alternatives would occur within the Monument and would not affect populations in nearby communities. Monument operations and permitted uses, including associated tribal treaty rights, would continue similar to current conditions, including recreational use, grazing, and hunting in permitted areas. In addition, the subject of tribal treaty rights was included in the impact analysis (under “American Indian Rights and Interests”) and is addressed in this Proposed Plan/FEIS. All areas of the Monument would remain available and open to all ethnic groups and income levels, and no action would displace users of the Monument to low-income or ethnically sensitive areas. For these reasons, environmental justice was dismissed as an impact topic in this document.

CULTURAL LANDSCAPES

Although there has never been a formal, systematic inventory to document the presence of any cultural landscapes within the Monument, none has ever been identified by NPS or BLM staff, and the public did not identify any cultural landscapes during scoping for the Proposed Plan/FEIS. Therefore, the topic was not included under Cultural Resources as a separate impact topic.
MUSEUM COLLECTIONS

The Monument’s museum collections include objects, specimens, and archival and manuscript collections that serve as scientific and historical documentation of the Monument’s purpose and resources. None of the alternatives considered would adversely affect museum collections or cause substantial changes to the collections or their management, so this topic was not included as a separate impact topic under Cultural Resources.

OTHER PLANNING ISSUES

The following planning issues relate to the Monument’s carrying capacity and the adequacy of its boundaries. These issues are common to all alternatives.

CARRYING CAPACITY

Carrying capacity is the character of use that can be supported over a specific time by an area developed at a certain level without causing excessive damage to either the physical environment or the experience of the visitor. To make sure that visitation does not impair resources and compromise visitor experience, NPS is required by law to determine carrying capacity. This determination is based on the purpose, significance and goal statements unique to the Monument. At this level of planning, carrying capacity is defined by the management zone prescriptions for levels of development and desired visitor experiences for that particular zone.

There are three major components of carrying capacity: physical capacity (e.g., parking spaces, facility space, road capacity); visitor experience (such as congestion in the Visitor Center, opportunities for solitude); and resources (including natural and cultural resources). The carrying capacity in a given area could be exceeded for any of these components, which would trigger management action.

The north end of the Monument is the only area that presently has facilities intended to invite and accommodate large numbers of visitors. Roads, parking areas, and related facilities have been designed and located to meet current visitation. This includes consideration of the impact of visitors upon nearby resources. Before any additional facilities are built or current facilities expanded, the agencies will assess whether such development might have any detrimental effects on natural or cultural resources or visitor experience.

Part of this assessment is a visitor survey conducted jointly by the University of Idaho and the NPS in 2004. Some of the information gathered as part of that survey was whether visitors feel there are any problems with crowding at existing facilities, infringement on opportunities for solitude, or other related issues with carrying capacity. The BLM conducted a similar survey on the backcountry areas of the Monument in 2004. The results of both surveys will alert the agencies to potential carrying capacity problems that will need to be addressed.

Visitation has not reached the point where visitors cause unacceptable levels of resource damage. Due to the older design of the Visitor Center, the museum and bookstore can be congested during peak visitation periods. Because of the harsh terrain, use of the wilderness and backcountry areas is very light.

Carrying capacity for the Craters of the Moon Wilderness is based on “Limits of Acceptable Change” (LAC) planning framework (USDI NPS 1992). The LAC System for Wilderness Planning is appropriate for use at the Monument, since it is a planning process consisting of a series of interrelated steps leading to the development of measurable objectives, defining desired backcountry and wilderness conditions. It also suggests management actions necessary to maintain or achieve desired conditions. Emphasis is placed on defining and achieving the resource and social conditions desired for the area rather than determining how many users an area can sustain.

MONUMENT BOUNDARIES

Monument Boundaries

Proclamation 7373 set aside and reserved as an addition to Craters of the Moon National Monument all
lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the map entitled “Craters of the Moon National Monument Boundary Enlargement,” which is included as part of Appendix A. The previous National Monument was an area of 53,420 acres, with all federal lands administered by the NPS.

In a memorandum from the Secretary of the Interior (memo from the Secretary of the Interior dated November 24, 2000) the BLM was instructed to complete a metes and bounds description of the Monument. BLM completed a cadastral survey of the external monument boundary in 2001. Based on that survey, the Monument and Preserve boundary contains 737,680 acres of federal land. The total acreage encompassed by the Monument and Preserve boundary is 752,490 including 8,250 acres of state land and 6,560 acres of private land, which are inholdings and not part of the Monument.

**National Preserve Boundaries**

Proclamation 7373 states that the NPS shall have primary management authority over the portion of the Monument that includes the exposed lava flows. This land area was described as including approximately 410,000 acres and designated as a unit of the National Park System “Craters of the Moon National Preserve” by PL 107-213 on August 21, 2002. The NPS continues management authority over the original 53,420 acres of Craters of the Moon National Monument. Proclamation 7373 provides that the BLM has primary management authority over the remaining portion of the Monument.

The boundary between the NPS- and BLM-administered lands is often difficult to describe and locate. In some cases, distinguishing the boundary between the NPS- and BLM-administered land on the ground would be a matter of concern to the agencies and the public. Surveying the entire boundary between the agencies would be costly and is not recommended at this time. When a situation requires determination of the National Preserve boundary within the external Monument boundary, the boundary line would be described by the edge of the brown-colored lava shown on the most recent USGS 7.5-minute series topographic quadrangle maps available on the date of the Proclamation 7373.

**Boundary Modifications**

Potential boundary modifications are examined in a management plan to identify potential additional lands with significant resources or opportunities, or which are otherwise critical to fulfilling the Monument’s mission. Based on these criteria, eight areas have been identified for potential boundary modifications. These are described in detail in Appendix C, which contains maps relating to these potential modifications.

In addition, the agencies referred to previous studies looking at boundary modifications for Craters of the Moon, including the Reconnaissance Survey – Expansion of Craters of the Moon National Monument (1989) and Management Alternatives – Expansion of Craters of the Moon National Monument (1990), and concluded no additional recommendation for boundary adjustments needed to be proposed in this plan. However, when the BLM develops the Shoshone Resource Management Plan, scheduled to begin in 2006, areas such as Sand Butte identified by the public for consideration for inclusion someday within the Monument will be examined to determine if additional protection is warranted.
Previous page, clockwise, from top left
A’a and cinders
Lava flow
Cave entrance
Ropy pahoehoe
Chapter 2: ALTERNATIVES, INCLUDING THE PROPOSED PLAN

OVERVIEW OF ALTERNATIVES

The Bureau of Land Management (BLM) and National Park Service (NPS) developed management alternatives for Craters of the Moon National Monument and Preserve (Monument) using public responses to newsletters and public meetings, as well as ideas from staffs of both agencies. National Environmental Policy Act (NEPA) regulations and BLM and NPS resource management planning regulations require the formulation of a reasonable range of alternatives that seek to address identified planning issues and management concerns. Each alternative must be evaluated to ensure that it would be consistent with the area’s purpose and significance; the mission goals for the Monument; and current laws, regulations, and policy.

The four management alternatives developed for the Monument are detailed in this section, including:

- Alternative A – No Action Alternative (required by NEPA) – retains current management of the Monument
- Alternative B – Places emphasis on a broad array of visitor experiences within the Monument
- Alternative C – Places emphasis on retention and enhancement of the Monument’s primitive character
- Alternative D (Proposed Plan) – Places emphasis on aggressive restoration of sagebrush steppe communities

Each alternative has a somewhat different concept, which is primarily defined in terms of area allocations into different management zones. Each alternative also varies somewhat in its desired future conditions and management prescriptions for various resource topics. All alternatives afford the high degree of protection for Monument resources required by Proclamation 7373.

This chapter first contains a description of the four management zones that are apportioned differently in each of the alternatives. These are:

- Frontcountry Zone
- Passage Zone
- Primitive Zone
- Pristine Zone

Next, there is a discussion of “Management Guidance Common to All Alternatives,” organized by resource topic. This management guidance includes desired future conditions and management actions for each resource. Desired future condition statements describe the preferred long-term condition for specific resources. Future decisions and actions by management would be judged by whether they further progress towards these desired conditions. Management actions describe specific activities that help to achieve the desired future conditions.

Following the summary of “Management Guidance Common to All Alternatives,” each alternative is described, with emphasis on the concepts behind the alternative, management zone allocation, and management guidance for those topics that vary from alternative to alternative. Table 7, at the end of this chapter, contains a summary of the alternatives, with emphasis on the key features described below and those aspects that differentiate the alternatives from one another.

DESCRIPTION OF MANAGEMENT ZONES

Four management zones were developed for use in this plan to guide future management actions within the Monument: Frontcountry, Passage, Primitive, and Pristine. These management zones respond to the wide range of preferences expressed by the public. Different views were expressed about what sort of visitor experiences should be available and what facilities and accommodations should be provided within the Monument. While a different emphasis would be given to various zoned portions of the Monument, the intent is to always be consistent with the purposes for which the Monument was established and with the mission goals identified in the Introduction to this document.
Management zones are tools that help guide decision-making on visitor uses, facility development, and other uses. Management zones do not address natural and cultural resource management. Certain limitations and developments in some areas may better provide for one user-type than another. Management zoning would be established throughout the planning area to provide and maintain a range of recreational opportunities for different user-types with varying interests and abilities. Each separate zone has distinct settings to be provided and maintained. Physical settings consider the degree of naturalness and amount and type of facilities, as well as proximity to roads. Social settings consider the number of contacts with other people, the size of groups, and evidence of other users. Managerial settings consider the amount of visitor management used to achieve desired social and resource conditions, the compatibility of traditional land uses with the recreational environment, and the type of vehicle use allowed in the area.

All public lands within each alternative would be assigned to one of the four zones. The location and extent of the various zones vary among the alternatives in order to support the concept behind each alternative.

Table 1 summarizes the main features of each of the four management zones, and photos below illustrate the typical setting that would be expected in each zone.

Examples of typical setting in each Management Zone.
## Table 1: Management Zones

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

Within the Monument, a “road” is defined as an established route capable of accommodating travel by a full-sized automobile or truck. Following other routes or establishing new routes with motorized or mechanized vehicles is considered “off-road” use, which is not permitted in the Monument (see below). The agencies have described four different road classifications and two trail classifications within the Monument:

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

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

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

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

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

- **Class 2 Trails** are open to motorized/mechanized travel in addition to foot travel, pack animal, horseback, and other forms of passage. Examples of prohibited forms of travel include any vehicle with a footprint wider than an 18-inch tread (all-terrain vehicles, four-wheelers, and four-wheel-drive vehicles).

MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES

The following sections describe the management guidance that would be applicable to all four alternatives. The actions described here would be implemented regardless of which alternative is ultimately selected. This section compiles common direction in one place so that the reader can focus on
the actual differences among alternatives. Technical terms used here are defined in the Glossary or are explained more fully in Chapter 3.

Laws, regulations, and policies drive a large portion of BLM and NPS work (see Planning Criteria, Appendix B). The management guidance described in this section includes many decisions, which are required in a land use plan, and also brings forward relevant direction from existing land use plans.

### NATURAL RESOURCES

#### Natural Resources — General

**Desired Future Conditions:**
- Resource inventories and surveys documenting the condition and extent of natural resources (including geologic features) and processes, kipukas, and sensitive species are given sufficient emphasis to enable completion during the life of the plan.
- Monitoring programs are developed and implemented to track changes in the condition of key resources serving as "vital signs" of ecosystem health or to fulfill other purposes of enabling proclamations and laws.

**Management Actions:**
- Resource inventories, surveys, and monitoring programs would be provided for and implemented.
- Information gained would be disseminated to the public and used in management decisions.
- Proactive management activities would be undertaken to mitigate potential effects of public use.
- The agencies would seek opportunities with the tribes and state and federal agencies for partnering in long-term monitoring of Monument natural resources.

#### Geological Resources

**Desired Future Conditions:**
- Natural processes remain the dominant agents of change to geologic resources within the Primitive and Pristine Zones.
- Resource inventories and surveys that document the condition and extent of geologic features (including caves and paleontological resources) and also the geologic processes are sufficiently completed to provide scientifically defensible management decisions.
- Unique or representative geologic features within Frontcountry and Passage Zones are identified and documented and have protective strategies implemented to minimize any adverse effects from improved visitor access to the areas.
- Knowledge and understanding of geologic resources and processes are sufficient to interpret the interrelationships between geology and biotic communities.
- Geologic knowledge and understanding are effectively shared with the public in order to stimulate appreciation and protection of the geologic resources.

**Management Actions:**
- Geologic features within the Frontcountry and Passage Zones could be modified as appropriate to facilitate visitor access.
- A cave management plan would be developed to meet the Federal Cave Resources and Protection Act (FCRPA) requirements.
- Steps would be taken to protect geological features from damage presently occurring as a result of unrestricted public access and/or poorly designed or constructed public facilities.
- Prior to authorizing surface-disturbing activities, areas would be surveyed for unique, rare, or special geologic resources including fossils.
- Threats to unique or outstanding examples of geologic features, including paleontological and cave resources, would be identified and mitigated as appropriate.

*Chapter 2: ALTERNATIVES, INCLUDING THE PROPOSED PLAN*
**Soils**

**Desired Future Conditions:**
- Soils are stable and functional. The amount of bare mineral soil and cover of perennial vegetation, litter, and biological soil crust are within 10 percent of that expected for the ecological site.

**Management Actions:**
- Soils would be protected from accelerated or unnatural erosion from ground disturbing activities. For example, post-fire stabilization efforts would protect erosion-prone soils through natural and assisted revegetation.
- The potential for, or presence, extent, and condition of, biological soil crusts would be investigated to provide specific management guidance.
- Biological soil crusts would be considered in management decisions where appropriate.

**Vegetation, Including Special Status Species, and Fire Management**

**Desired Future Conditions:**
- Native plant communities sustain biodiversity and provide habitat for native wildlife.
- There is no net loss, and preferably a net gain, of sagebrush steppe communities over the life of the plan.
- Woodland communities (e.g., limber pine, aspen, and juniper) are maintained as healthy mixed-age communities within their natural range and distribution.
- Natural ecological processes are the dominant factor in determining the composition and distribution of plant communities in the Preserve and wilderness areas.
- The areas dominated by invasive annual species (cheatgrass and other similar plants) are minimized.
- All plant communities are in or making progress towards Fire Condition Class (FCC) 1 (see Chapter 3).
- Preventing or limiting the spread of noxious weeds using Integrated Weed Management perpetuates the natural condition and biodiversity of the planning area.
- Kipukas in the Pristine Zone are free of noxious weeds.
- Sustainable forage is available for livestock and wildlife.
- Special status species (those listed by U.S. Fish and Wildlife Service [USFWS], BLM, and/or the Idaho Department of Fish and Game [IDFG]) remain at viable population levels.

**Management Actions:**
- Wildland fire would be suppressed to protect life and property, healthy sagebrush steppe communities, recent rehabilitation and restoration projects, cultural sites, and the Little Cottonwood Creek Watershed.
- Existing sagebrush steppe communities would be protected to prevent loss of shrub cover and managed to promote a diverse, desirable grass and forb understory.
- Annual grasslands and highly degraded sagebrush steppe communities would be restored to achieve a mosaic of shrubs, forbs, and grasses capable of sustaining native animal populations.
- In the event of wildland fire, burned areas would be rehabilitated when necessary to restore the appropriate mosaic of sagebrush species and subspecies, along with a diverse perennial understory, and to suppress invasive and noxious weeds.
- National and Idaho state habitat guidelines for sage-grouse and sagebrush steppe obligates developed by interagency working groups regarding composition and structure of sagebrush habitats on a landscape scale would be adopted to guide sagebrush steppe management.
- Only certified weed-free hay, straw, and mulch would be permitted within the Monument.
- Use of native plants would be emphasized in rehabilitation and restoration projects, and only native plants would be used for rehabilitation or restoration projects within the Pristine Zone.
- Integrated Weed Management principles would be used to:
  - Detect and eradicate all new infestations of noxious weeds;
  - Control existing infestations; and
  - Prevent the establishment and spread of weeds within and adjacent to the planning area.
Vegetation, Including Special Status Species, and Fire Management (cont.)

- Weed infestations in wilderness areas would be controlled by methods consistent with minimum tool requirements and Integrated Weed Management principles, including prevention of disturbance activities; use of cultural and mechanical methods to control or physically remove noxious weeds; and application of herbicides and possibly biological controls.
- BLM and NPS would develop a joint fire management implementation plan for the Monument.
- The cooperative arrangement between BLM and NPS related to fire management would continue, including cooperative agreements with local fire departments and rural fire districts.
- All special status species in the Monument would be inventoried with monitoring plans established, particularly when and where adverse impacts may occur.
- Actions and stipulations necessary to protect special status species and their habitats would be made part of land use authorizations (e.g., limiting fragmentation of special status species populations when considering road maintenance) and fire planning.
- Current science and best available technologies and plant materials would be considered in analysis and implementation of all restoration projects. Restoration treatments may be active or passive and may include but are not limited to the following: prescribed fire, thinning, mowing, herbicide treatment, seeding, temporary removal of livestock and/or changes in grazing regimes or facilities, and road closures. See Appendix J for specific protocols for all fire management and vegetation treatment activities.
- Areas classified as poor to fair biotic integrity would be highest priority for restoration treatments (see Figure 15; see also Jurs and Sands 2004).

Water Resources

Desired Future Conditions:
- Riparian areas and wetlands within the planning area are maintained, restored, or enhanced, so that they provide diverse and healthy habitat and water quality conditions for riparian and wetland obligates and other wildlife species.
- Little Cottonwood Watershed yields sufficient safe drinking water for current public and administrative uses in the visitor center complex.

Management Actions:
- No additional playas would be modified or developed.
- Playas would be evaluated for restoration on a case-by-case basis.
- The agencies would work with appropriate State of Idaho authorities to obtain water resources needed for Monument purposes.
Wildlife, Including Special Status Species

Desired Future Conditions:
- Habitat within the planning area supports a diverse range of native wildlife species and gives the public high-quality opportunities for wildlife-based recreation.
- Habitat for migratory birds, including forage, water, cover, structure, and security, is available within the planning area to support healthy populations of resident and migrant species.
- Sage-grouse restoration habitat (R1 & R2) would achieve significant progress towards reclassification as Key habitat.
- High-quality habitats for sagebrush obligate species are provided.
- Species composition in Key sage-grouse habitat would reflect site potential.

Management Actions:
- Inventory and monitoring of wildlife would emphasize species that are regionally or nationally important.
- A monitoring program would be established to detect species populations in decline, species as indicators of the health of the ecosystem, and record the presence of species of special concern.
- NPS, in consultation with the state and tribes, would designate areas within the Preserve and periods of time when no hunting would be permitted for protection of the area’s resources.
- BLM would continue to hold annual meetings and coordinate closely with USDA Wildlife Services and livestock lessees with the purpose of reducing livestock losses. BLM would encourage using non-lethal methods, education, and the targeting of specific offending animals for lethal methods. These procedures would be implemented in order to protect both public safety and the natural resources for which the Monument was designated.
- On all NPS-administered lands, predator control would not be authorized by the NPS except on a case-by-case basis.
- Native animal species identified as pests would be managed in accordance with the applicable BLM or NPS agency management policies depending upon the administrative area in which the pest occurs.
- All special status species in the Monument would be inventoried with monitoring plans established, particularly when and where adverse impacts may occur.
- Actions and stipulations necessary to protect special status species and their habitats would be made part of land use authorizations (e.g., limiting fragmentation of special status species populations when considering road maintenance) and fire planning.

Air Quality

Desired Future Conditions:
- Air quality related values, particularly visibility, within the Class I Craters of the Moon Wilderness Area are not degraded and adverse impacts do not occur.
- Air quality parameters negatively affecting human health, visibility or biological diversity remain at or below current levels.

Management Actions:
- The agencies would work proactively with surrounding communities, land management agencies, and the Idaho Department of Environmental Quality to limit increases of particulate matter and sulfur dioxide, which could reduce visibility, throughout the entire Monument.
Archaeological and Historical Resources

Desired Future Conditions:

- The extent and condition of cultural resources and traditional cultural properties are documented and adverse effects are avoided.
- The agencies maintain a single, consolidated cultural resource database.
- Archaeological resources either listed in or eligible to be listed in the National Register of Historic Places (NRHP) are protected in an undisturbed condition unless it is determined through appropriate consultation that disturbance or natural deterioration is unavoidable.
- The qualities that contribute to the eligibility for listing or listing of prehistoric/historic structures and historic trails in the NRHP are preserved and protected in accordance with the Secretary of the Interior’s Standards, unless it is determined through appropriate consultation that disturbance or natural deterioration is unavoidable.

Management Actions:

- The significance of known archaeological and historic resources, structures, and landscapes would be evaluated and documented, in conjunction with the Idaho State Historic Preservation Officer (SHPO), for listing in the NRHP.
- Through consultation with the Idaho SHPO, areas for Section 110 cultural resource inventories would be prioritized.
- Measures such as access limitations and periodic monitoring would be identified to proactively manage and protect cultural resources, including traditional cultural properties.
- A proactive Section 110 inventory would be conducted as funding allows expanding the cultural resource database for the Monument.
- At-risk NRHP-eligible sites would be monitored for vandalism or other disturbances and protected/stabilized as necessary.
- A comprehensive Archaeological Overview and Assessment of known and potential archaeological resources (baseline research report) within the planning area would be completed.
- A Cultural Resource Management Plan (CRMP) that describes how specific sites would be managed, defines what areas need additional inventory, and designates potential use categories for sites would be completed for the Monument.
- Eligible properties would be monitored periodically and steps would be taken to stabilize any property found to be deteriorating and to limit access as needed.
- Projects would be planned and designed so as to avoid adversely impacting cultural resources where possible. BLM and NPS would consult with Tribes and the Idaho SHPO to develop alternatives to avoid, minimize, or mitigate any potential adverse effects.
- Activities that may affect the Goodale’s Cutoff of the Oregon Trail, the NPS headquarters/Visitor Center Mission 66-era area, or other properties listed or eligible for the NRHP would be undertaken in consultation with the Idaho SHPO.

Museum Collections

Desired Future Conditions:

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

Management Actions:

- Monument collections would be accessible for legitimate scientific research and educational purposes.
- All resource management records that would be directly associated with museum objects would be managed as museum property. These and other resource management records would be preserved as part of the archival and manuscript collection because they document and provide an information base for the continuing management of the Monument’s resources.
**NATIVE AMERICAN RIGHTS AND INTERESTS**

**Desired Future Conditions:**
- Traditional cultural properties of Native American tribes and access to those properties are preserved within the Monument for the use and benefit of current and future tribal members.
- For Native American tribes that have ties to this land as part of their ancestral homeland, the Monument holds meaning and value and is a place where treaty rights and religious/sacred traditions may be practiced in a manner supportive of the purpose of the Monument.
- Agencies and tribes maintain a government-to-government relationship, and the agencies routinely consult on matters involving the treaty interests and/or rights of the tribes.
- Tribal oral history would be considered and incorporated into interpretive materials, as well as resource management.

**Management Actions:**
- Native American tribes that have expressed an interest in traditional cultural properties within the Monument would be consulted with on a regular basis regarding the management of those properties.
- Handling of Native American Graves Protection and Repatriation Act (NAGPRA) materials would be addressed as a component of a Cultural Resources Management Plan.
- Should any NAGPRA materials ever be inadvertently discovered within the Monument, the agencies would follow the tribal consultation procedures outlined in the NAGPRA of 1990 regarding their treatment.
- The agencies in consultation with the tribes would identify protection measures for places of traditional cultural importance to Native Americans to preserve the integrity and use of these areas as described in National Register Bulletin 38.
- Agencies would consult with associated Native American tribes to develop and accomplish the programs of the Monument in a way that respects their beliefs, traditions, and other cultural values.
- Agencies would consult with Native American tribes prior to taking actions that would affect natural and cultural resources that are of interest and concern to them.
- Hunting, gathering, and use of certain natural resources as sacred objects for religious use would continue on the Preserve and expanded areas of the Monument. (See Chapter 3 for additional discussion.)
Travel and Access

**Desired Future Conditions:**

- There is no net increase in road mileage within the Monument.
- The road system within the planning area provides access for visitors, permittees, non-federal landowners, and administrative needs while protecting those resources and values the Monument was established to preserve.
- The agencies coordinate road management inside and outside of the Monument in a cooperative fashion with local government agencies so that the transportation system is managed in a comprehensive, logical manner.
- The agencies also work cooperatively with local government agencies to provide appropriate access to the Monument and private land within the Monument.

**Management Actions:**

- The agencies would prepare guidelines and procedures for authorization of emergency and administrative off-road travel.
- The agencies would prepare an implementation-level Comprehensive Travel Management Plan, showing road and trail classifications, standards, restrictions, and closures. Current road standards and classifications will be maintained until the Comprehensive Travel Management Plan is approved.
- All land within the Monument other than designated roads and trails would be designated “Closed” for off-highway vehicle (OHV) and mechanized vehicle use (see Glossary).
- The agencies would prepare a travel map showing allowable uses, road and trail classifications, and standards and restrictions.
- No motorized vehicle roads or trails would be permitted within the Pristine Zone.
- The agencies would close and rehabilitate all routes established in Wilderness Study Areas that were not identified in the wilderness inventory as “existing ways.”
- All roads and trails within the BLM-administered portions of Monument would be designated “Limited” for OHV/motorized vehicle use.
- All authorized roads located on NPS-administered portions of the Monument and Preserve would be open only to bicycles and licensed motorized vehicle travel and would be designated as “Park Roads.”
- The agencies may close individual roads and trails temporarily or permanently to protect resources on a case-by-case basis.
- Snowmobile use on BLM-administered portions of the Monument would be addressed in an upcoming Comprehensive Travel Management Plan.
- The agencies would seek local jurisdiction concurrence (county or highway district) for any upgrade of commitment to future maintenance for any roadway under that entity’s jurisdiction.
### Livestock Grazing

**Desired Future Conditions:**
- Sustainable rangeland ecosystems are healthy; public rangelands are maintained or restored to meet Idaho Standards for Rangeland Health.
- Livestock forage is provided on a sustainable basis for the life of the plan, consistent with other resource objectives and with public land use allocations.
- Livestock developments are consistent with the desired future conditions for natural, cultural, and visual resources.

**Management Actions:**
- Nine allotment boundaries would be altered to accurately reflect the NPS/BLM boundary. There would be no change in animal unit month (AUM) preferences actually available for grazing. See Appendix F for additional details.
- BLM acres of land available for livestock use: total 273,000. BLM acres of land not available for livestock use: total 1,800. NPS acres of land not available for livestock use: total 462,880.
- Permitted livestock use: totals 36,965 AUMs. The current livestock use authorizations would be maintained until Idaho Standards for Rangeland Health evaluations or similar NEPA-compliant decisions identify the need for adjustments in livestock use to meet standards, vegetation, wildlife livestock, or resource objectives.
- Use of existing livestock developments in Primitive and Pristine Zones may continue. BLM may remove developments if they are no longer serving a useful purpose or resource objectives warrant their removal. Sites would be restored.
- The Brigham Point and Paddelford Flat sheep trails across NPS land would be evaluated for future use. See Appendix F.

### Facilities

**Desired Future Conditions:**
- Visitor and administrative facilities within the Frontcountry Zone of the NPS Monument meet visitors' needs.
- The agencies cooperate with gateway communities in providing information and services to visitors at sites outside the Monument.
- Location of agency facilities and staffing levels promotes efficiency of operations and public needs.
- Principles of sustainable and universal design are incorporated into all facilities and operations.

**Management Actions:**
- Existing paved road system and parking areas would be modified to address safety and maintenance concerns.
- Fire stations at Carey and Kimama would include Monument information. There would be informational kiosks located along roads leading into the Monument.
- Opportunities for sharing BLM and NPS facilities and staff would be evaluated.
- Signs and wayside exhibits previously approved for visitor safety and resources protection would be installed at Kings Bowl.
- Monument informational materials would be provided for display or distribution at non-agency sites in communities surrounding the Monument.

### Lands and Realty

**Desired Future Conditions:**
- Existing access to private lands is maintained, consistent with applicable laws, while minimizing environmental impacts.
- Valid existing rights are protected (see Glossary).

**Management Actions:**
- The agencies would pursue acquisition or exchange for private inholdings within the Monument based on initiation by willing seller.
- The agencies would pursue an exchange with Idaho Department of Lands for state lands located in and near the Monument.
- Action on applications for new discretionary land use authorizations would be guided by existing NPS and BLM policies.
Mineral Materials

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

Management Actions:
- Existing authorization for material sites within the Monument would continue for the term of the authorization.
- New materials sites would not be developed except for Monument administrative purposes.
- Information would be provided on BLM areas outside the Monument where casual collection is appropriate and permitted for materials similar to those found in the Monument.
- Agencies would consult with Idaho Transportation Department on relinquishment of three right-of-way grants for material sites along US 93.
- A Material Sites Reclamation Plan would be prepared.

Wilderness and Wilderness Study Areas (WSAs)

Desired Future Conditions:
- Natural conditions in Wilderness and WSA, including air quality, dark night skies, and natural quiet, are substantially free of human influences.
- Air quality degradation and adverse impacts to air quality related values, particularly visibility, within the Class I Air Quality Craters of the Moon Wilderness Area do not occur.
- Future generations enjoy the enduring wilderness resources of the Craters of the Moon wilderness, including its conservation, scientific, cultural, educational, and recreational benefits.
- WSAs retain the wilderness values identified in the Wilderness Inventory and Study process.

Management Actions:
- NPS and BLM would develop a joint Wilderness/WSA management plan following completion of this plan.
- No additional wildlife water developments or other habitat manipulations would be undertaken to manage wildlife populations in Wilderness, WSAs, or the Preserve.
- Use of aircraft to survey and monitor wildlife populations could be continued, but flights would be scheduled to avoid high visitor use periods. Any landing of aircraft or dropping of supplies from aircraft in wilderness or WSA would be consistent with a minimum requirement and minimum tool analysis.
- Ways or travel routes within WSAs not identified during WSA inventories would be closed to motorized vehicles and rehabilitated.
- Minimum requirement analysis would precede all management activities within wilderness and WSAs.
- Should those portions of the Great Rift WSA adjacent to the original Monument be designated as wilderness, the 660-foot strip of non-wilderness between the Craters of the Moon Wilderness boundary and the original Monument boundary should be designated as Wilderness as well.
- Should Congress release any WSA from WSA status, then the area would be managed under the direction of this land use plan.
VISITOR EXPERIENCE

Interpretation / Visitor Understanding

Desired Future Conditions:

- The Monument builds and maintains positive relationships with visitor user groups and educational organizations.
- The public perceives the Monument as a single entity and its management as a model of public service.
- The public understands and appreciates the area’s natural and cultural resources, including its history and uses.
- The public has access to Monument information and learning opportunities, both on and off site.
- Information/orientation materials such as travel maps, safety bulletins, resource information, and recreation information are available.
- Visitors are offered a variety of interpretive media within the Frontcountry Zone.

Management Actions:

- A Comprehensive Interpretive Plan for the Monument would be developed.
- Educational programs for schools would focus on programs on site in the original NPS-administered Monument. A number of programs (summer and winter) aimed at special users would be presented each year.
- Both agencies would coordinate services to meet the needs of permittees, visitors, students, educators, interest groups, and the general public.
- Developed facilities such as the Visitor Center at the original NPS Monument would continue to be provided.
- Informational/orientation materials dealing with recreation, maps, safety, and resource concerns would be posted on kiosks located at all primary backcountry access points surrounding the Monument and at Carey and Kimama fire stations.
- A variety of interpretive media for on- and off-site use would continue to be developed. Interpretive programs and the maintenance of exhibits and waysides would continue.
- Monument staff would continue to promote visitor safety and resource protection.
- 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.
Recreation

Desired Future Conditions:
- Opportunities are available for diverse recreation experiences, consistent with the intent of Monument proclamations and applicable laws.
- Public awareness of responsible low impact recreational use reduces or eliminates the need for restrictive management policies.
- Public awareness of area hazards, along with an attitude of self-reliance and personal safety, substantially reduces the need for restrictive management policies.
- Impacts associated with recreational uses do not adversely affect the physical and visual integrity of geologic features.
- NPS, BLM, and external partners provide the public accurate and consistent information on recreational opportunities throughout the Monument.
- The area continues to offer a range of opportunities for discovery.
- Responsible low impact recreational use allows for relatively unrestrictive recreational opportunities throughout much of the Monument.
- Within the Pristine Zone, public opportunities to experience solitude, natural quiet/night sky, and views of landscapes remain substantially free of human influence.

Management Actions:
- Idaho’s State Comprehensive Outdoor Recreation and Tourism Plan (SCORTP) (2003) and the Idaho Outdoor Recreation Demand Assessment would be utilized in implementation-level planning to assist managers in understanding the recreational use patterns, trends, and recreation facilities needed for the area.
- Resources and areas most vulnerable to vandalism, theft, and/or recreation use impacts would be inventoried.
- Leave No Trace and Tread Lightly! programs would be promoted with staff and the public.
- Programs would promote wilderness and backcountry ethics.
- Information/orientation materials such as travel maps, safety bulletins, resource information and recreation information would be conveniently available.
- The agencies, in consultation with the State of Idaho, could designate areas within the Preserve and periods of time when no hunting and/or use of firearms would be permitted for reasons of public safety, administration, and/or public use and enjoyment.
- Permits would be required for overnight camping in the Wilderness and/or biking or hiking in the original Monument area north of US 20/26/93.
- No wood fires would be permitted within the original Monument (campground sites provide grills for charcoal cooking only; wood fires permitted at group campsites).
- No hunting would be allowed in the original Monument.
- The agencies would continue to provide and promote cross-country skiing and snowshoeing activities along the 7-mile Loop Drive in the northern end of the Monument.

Visual Resources

Desired Future Conditions:
- Existing opportunities to experience solitude, dark night sky, and views of landscapes remain substantially free of human intrusions.
- A primitive and natural visual setting is retained.
- The visual integrity of the Goodale’s Cutoff historic trail corridor remains protected.
- Management activities meet or exceed adopted Visual Resource Management (VRM) classes.

Management Actions:
- BLM and NPS managers should seek the cooperation of visitors, neighbors, and local government agencies to prevent or minimize impacts and prevent the loss of western landscape vistas and natural dark conditions.
- Existing waste dumps would be inventoried and cleaned up.

Soundscapes

Desired Future Conditions:
- Aircraft noise impacts are minimized.
- Existing opportunities to experience solitude and natural quiet remain substantially free of human intrusions.

Management Actions:
- Aircraft landings associated with commercial air tours would not be authorized within the Pristine Zone.
- The agencies would coordinate with the Department of Defense, Federal Aviation Administration, and the Idaho Department of Aeronautics regarding noise impacts.
SOCIAL AND ECONOMIC CONDITIONS

**Desired Future Conditions:**
- Gateway and other nearby communities benefit economically and socially from the presence of the Monument.

**Management Actions:**
- An intergovernmental coordinating group would be considered to ensure consistency of this plan with other state and local plans.
- The agencies would participate with interested communities in their planning for accommodating Monument visitors through their communities.

RESEARCH

**Desired Future Conditions:**
- The findings of scientific research enhance management decisions and increase public appreciation, and understanding of Monument resources.
- The research community and the Monument staff view the Monument as a productive outdoor laboratory.

**Management Actions:**
- In order to maintain a complete record of research activities, research and specimen collecting permits would be required for all projects. Standard Operating Procedures for the NPS permit process would be incorporated for the entire Monument.
- Varying means, including interdisciplinary and interagency research projects, would emphasize the use of the Monument as an outdoor laboratory for understanding the Great Rift ecosystem.
- BLM and NPS would facilitate the transfer of research information to the public.
- To the extent they are available, NPS and BLM facilities and staff assistance may be made available to qualified researchers and educational institutions conducting authorized studies or field classes.
- The agencies would coordinate the review and approval of research applications to confirm adherence to each agency’s policy and to assure compatibility with the purposes for the Monument.
- The agencies would work with interested partners in sponsoring a symposium or similar forum for sharing information on past research and helping identify future research needs and opportunities.
ALTERNATIVE A
(NO ACTION ALTERNATIVE)

ALTERNATIVE CONCEPT

The No Action Alternative (Alternative A) is required by the NEPA and provides the baseline against which to compare the other alternatives. Under this alternative, current management practices would continue as funding allows. Existing visitor facilities would be maintained to support current activities.

Following the expansion of the Monument, the agencies were directed to follow the directives of Proclamation 7373 and the Interim Management Guidelines issued pursuant to the Proclamation. Alternative A (No Action Alternative) would continue the current management direction, guided by the Proclamation, and Interim Management Guidelines (see Appendix B), as well as existing laws and policy. Current direction includes the five existing land use plans that were in place prior to Proclamation 7373: the Sun Valley Management Framework Plan (1981), the Monument Resource Management Plan (1985), the Big Desert Management Framework Plan (1981), the Craters of the Moon General Management Plan-NPS (1992), and the Big Lost Management Framework Plan (1983).

The key components of Alternative A (No Action Alternative) are as follows:

- Depicts current management under the five existing management plans as modified by Proclamation 7373, Public Law 107-213, and the agencies’ Interim Management Guidelines.
- Serves as a baseline for comparison with the other three alternatives.
- Responds to those public comments favoring keeping things as they are.

MANAGEMENT ZONES

Although the Monument is not currently zoned as depicted, management zones were established for the purposes of this planning process. Figure 4 depicts the zones based on the agencies’ best understanding of where the zone boundaries would be located under Alternative A (No Action Alternative). Figure 4 also shows the zone allocations that would occur under Alternative A (No Action Alternative).

As can be seen on Figure 4, the Frontcountry Zone coincides with the high-use visitor areas: the Visitor Center/Loop Drive area and US 20/26/93 along the northern boundary of the Monument. The Passage Zone includes a few other main access roads in Laidlaw Park, the portion of the Carey-Kimama Road that goes through the Monument, the southern portion of the Arco-Minidoka Road within the Monument, and a small area at Kings Bowl. The Passage Zone designation is appropriate for these areas since they are the primary travel and access routes within the Monument. They have some signs and facilities used by visitors who are sightseeing, hiking, or accessing camping or day-use areas and they contain many livestock-oriented facilities such as sheep bed grounds, fences, water troughs, and corrals.

The Pristine Zone under Alternative A (No Action Alternative) appropriately includes the undisturbed lava flows, while the Primitive Zone was appropriate for the remainder of the Monument and Preserve, which consists of relatively large expanses with few facilities located between the lava flows and travel corridors. The Primitive Zone includes lands currently used for dispersed recreation and primitive camping only, with mostly two-track dirt roads.

MANAGEMENT GUIDANCE FOR ALTERNATIVE A

Alternative A (No Action Alternative) would incorporate all of the “Management Guidance Common to All Alternatives” previously described, plus the following alternative-specific guidance.
<table>
<thead>
<tr>
<th>VEGETATION, INCLUDING SPECIAL STATUS SPECIES, AND FIRE MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desired Future Conditions:</td>
</tr>
<tr>
<td>• Existing and potential sagebrush steppe communities within the Monument are protected and restored, with an emphasis on Key sage-grouse habitat in Laidlaw Park, Little Park, and Paddelford Flat.</td>
</tr>
<tr>
<td>Management Actions:</td>
</tr>
<tr>
<td>• Approximately 40,000 acres would be identified for proactive restoration and/or post-fire rehabilitation (5 percent of the entire Monument, 15 percent of BLM-administered land). This assumes the current rate of restoration, approximately 2,500 to 4,000 acres annually over the life of the plan. Approximately 31,000 acres of annual grassland and 9,000 acres of highly degraded low elevation sagebrush steppe (poor to fair biotic integrity; see Figure 15) would be treated to control cheatgrass and restore big sagebrush cover with a perennial understory.</td>
</tr>
<tr>
<td>• All wildland fires within the Preserve and BLM portion of the Monument would be managed in accordance with current BLM land use plans.</td>
</tr>
<tr>
<td>• Wildland fire within the original Monument would be managed according to the NPS Wildland Fire Management Plan (2000) that permits use of naturally ignited wildland fires for resource benefit (wildland fire use) in the Wilderness area under specific conditions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CULTURAL RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desired Future Conditions:</td>
</tr>
<tr>
<td>• Same as “Common to All.”</td>
</tr>
<tr>
<td>Management Actions:</td>
</tr>
<tr>
<td>• A minimum of 5 percent of the Monument would be intensively inventoried (Section 110 National Historic Preservation Act [NHPA]) for cultural resources over the life of the plan.</td>
</tr>
<tr>
<td>• Some interpretation of archaeological and historic sites would continue (e.g., Goodale’s Cutoff, Baker Cave, and Indian Tunnel).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TRAVEL AND ACCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desired Future Conditions:</td>
</tr>
<tr>
<td>• Same as “Common to All.”</td>
</tr>
<tr>
<td>Management Actions:</td>
</tr>
<tr>
<td>• Authorized roads and trails would continue to be maintained to current standards.</td>
</tr>
<tr>
<td>• New trails could be developed within the NPS-administered portion of the Monument and within the area presently zoned as “park and interpretive development” in the 1992 General Management Plan.</td>
</tr>
<tr>
<td>• Trails in the Kings Bowl area would be maintained or rehabilitated to prevent further resource damage.</td>
</tr>
<tr>
<td>• All existing roads and trails within the Monument that were legally open to vehicle travel prior to Proclamation 7373 would remain open, although the agencies may close individual roads and trails temporarily to protect resources on a case-by-case basis.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FACILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desired Future Conditions:</td>
</tr>
<tr>
<td>• Administrative and visitor facilities continue to be restricted to an area of approximately 92 acres in the north end of the Monument adjacent to US 20/26/93. This area includes lands adjacent to the 7-mile paved Loop Drive.</td>
</tr>
<tr>
<td>Management Actions:</td>
</tr>
<tr>
<td>• The kiosks located along roads leading into the Monument and a few information and directional signs in the interior would continue to be maintained and replaced as necessary.</td>
</tr>
<tr>
<td>• Visitor safety and information signs would be provided in the Kings Bowl area.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RECREATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desired Future Conditions:</td>
</tr>
<tr>
<td>• Same as “Common to All.”</td>
</tr>
<tr>
<td>Management Actions:</td>
</tr>
<tr>
<td>• Existing authorized roads in the Pristine Zone would remain open to motorized and mechanical vehicle travel.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VISUAL RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desired Future Conditions:</td>
</tr>
<tr>
<td>• Same as “Common to All.”</td>
</tr>
<tr>
<td>Management Actions:</td>
</tr>
<tr>
<td>• VRM inventory classes would be designated as management classes as shown on Figure 5</td>
</tr>
</tbody>
</table>
Zone Allocation:
- Frontcountry Zone: 2,300 acres (0.3% of Monument)
- Passage Zone: 4,700 acres (0.6% of Monument)
- Primitive Zone: 290,200 acres (38.6% of Monument)
- Pristine Zone: 448,800 acres (59.6% of Monument)

FIGURE 4
ALTERNATIVE A
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management
The following are the definitions of classes of Visual Resource Management, as depicted in Figures 5 and 7.

- Class I – The objective of this class is to preserve the existing character of the landscape. Any contrast created within the characteristic landscape must not attract attention. This classification is applied by policy to Visual ACECs, wilderness and WSAs, Wild and Scenic Rivers, and other similar situations.

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

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

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

Table 2 summarizes where the various types of roads and trails that currently exist would fall within the management zones as they have been located under Alternative A. Road and trail classification is based on the inventoried condition and maintenance standards for roads and trails as of 2003; refer to Chapter 3 for a description of the road and trail classifications. These decisions will be made in an implementation plan that will follow. Under Alternative A, the intent is to maintain the road network in its current condition and road classification.

### Table 2
**Alternative A (No Action Alternative) – Road and Trail Distribution by Management Zone**

<table>
<thead>
<tr>
<th>Road Classification</th>
<th>Frontcountry</th>
<th>Passage</th>
<th>Primitive</th>
<th>Pristine</th>
<th>Total Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Class B</td>
<td>0</td>
<td>45</td>
<td>12</td>
<td>0</td>
<td>57</td>
</tr>
<tr>
<td>Class C</td>
<td>2</td>
<td>14</td>
<td>344</td>
<td>1</td>
<td>361</td>
</tr>
<tr>
<td>Class D</td>
<td>0</td>
<td>2</td>
<td>166</td>
<td>1</td>
<td>169</td>
</tr>
<tr>
<td>Class I Trails</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total Miles</strong></td>
<td><strong>39</strong></td>
<td><strong>61</strong></td>
<td><strong>522</strong></td>
<td><strong>9</strong></td>
<td><strong>631</strong></td>
</tr>
</tbody>
</table>

*Approximate miles of existing roads and trails within each zone rounded to the nearest whole number.
No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

FIGURE 5
VISUAL RESOURCE MANAGEMENT CLASSIFICATION
ALTERNATIVE A (No Action Alternative)
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management
**ALTERNATIVE B**

**ALTERNATIVE CONCEPT**

This alternative would optimize opportunities to experience the Monument, offer a wide range of recreational opportunities and experiences, and perpetuate historic use patterns. It would promote more travel and access within the Monument and provide for more extensive educational and directional signage throughout the Monument. One emphasis would be on maintaining a strong interpretation and education program for visitors within the Monument to help protect resources, maintain a safe visitor experience, and minimize conflicts with traditional uses. This alternative represents the highest accommodation of visitor access to, and within, the Monument.

The key components of Alternative B are as follows:

- Provides the greatest number of multiuse trail opportunities.
- Provides extensive educational and directional signs throughout the Monument.
- Allocates large areas in the Passage Zone instead of only narrow corridors.
- Proposes travel corridors outside the Monument boundary to provide consistent road standards and access to and through the Monument, including the Carey-Kimama, Arco-Minidoka, and American Falls-Kings Bowl roads.

**MANAGEMENT ZONES**

Figure 6 depicts the zones based on the agencies’ best understanding of where the zone boundaries would be located under Alternative B. Figure 6 also shows the zone allocations that would occur under Alternative B.

As Figure 6 indicates, under Alternative B the Frontcountry Zone would remain primarily the same as under Alternative A (No Action Alternative). A small area immediately surrounding the existing facilities at the Crystal Ice Caves/Kings Bowl area would be added to the Frontcountry Zone. However, the biggest emphasis would be on the Passage Zone, which would be greatly expanded to include an area north of US Highway 20/26/93, all of the Carey-Kimama and Arco-Minidoka roads (approximately 9,000 acres outside of the Monument), a network of roads leading to and through Laidlaw Park, and two relatively large areas in Laidlaw Park and between the Craters of the Moon and Wapi lava flows. These areas were designated as Passage Zone to facilitate access to several areas of the Monument, thereby providing for a broad range of visitor experience and recreation opportunities within the Monument. In cooperation with the local jurisdictions, primary access roads such as the Carey-Kimama and Arco-Minidoka roads would be designated as Backcountry Byways and upgraded to a consistent Class B standard. This would require collaboration with adjacent county governments. Passage Zone designation in these areas also allows for more new facilities including wayside exhibits, trailheads, parking areas, trail systems, day-use facilities, and designated campsites.

With the increase in Passage Zone provided in Alternative B, there would be a corresponding decrease in Primitive Zone areas, with the Pristine Zone allocation remaining about the same as under Alternative A (No Action Alternative). Essentially, Alternative B trades Primitive Zone and associated primitive-type visitor uses for the opportunity to provide an expanded Passage Zone that would allow for increased and/or improved access for visitors to many more areas within the Monument.

**MANAGEMENT GUIDANCE FOR ALTERNATIVE B**

Alternative B would incorporate all of the “Management Guidance Common to All Alternatives” previously described, plus the following alternative specific guidance.
GEOLOGICAL RESOURCES

**Desired Future Conditions:**
- Same as “Common to All.”

**Management Actions:**
- A restoration program would be initiated to remove graffiti from caves and foster public understanding of the need for cave resource protection.
- Trails to key geological features would be considered to mitigate resource impacts from user-created trails.

VEGETATION, INCLUDING SPECIAL STATUS SPECIES, AND FIRE MANAGEMENT

**Desired Future Conditions:**
- Fire is allowed to function as a natural process in the Wilderness and Preserve.

**Management Actions:**
- Approximately 45,000 acres would be identified for proactive restoration and/or post-fire rehabilitation treatment (6 percent of the entire Monument, 16 percent of BLM-administered). Approximately 31,000 acres of annual grassland and 14,000 acres of highly degraded low elevation sagebrush steppe (poor to fair biotic integrity; see Figure 15) would be treated to control cheatgrass and restore big sagebrush cover with a perennial understory.
- Restoration projects would be an opportunity for interpretation on the decline of sagebrush steppe and efforts to restore this dwindling resource.
- Proactive fuels management activities would be undertaken to offset the potential effects of increased public use as a result of improvements to roads and facilities.
- Integrated Weed Management would have a heightened emphasis on treatment/containment, prevention, and education, particularly in Frontcountry and Passage Zones.
- Wildland fire use would be allowed in the Wilderness and Preserve except when incompatible with resource management objectives or when there would be danger to life or property.
- Limited prescribed fire (<500 acres) would be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood Watershed.

WILDLIFE

**Desired Future Conditions:**
- Same as “Common to All.”

**Management Actions:**
- Consistent with Rangeland Health Standards & Guidelines determinations, livestock grazing management would be modified as necessary to ensure that Key sage-grouse habitat achieves site potential.
- Roads in Key sage-grouse habitat found in the Primitive Zone would be closed to motor vehicles during the sage-grouse breeding season (generally March and April but specific dates would be modified to reflect actual use in the Preserve) and between 1 a.m. and 11 a.m.
- Active leks would be protected from disturbance during the sage-grouse breeding season.

CULTURAL RESOURCES

**Desired Future Conditions:**
- Same as “Common to All.”

**Management Actions:**
- In response to increased access, public education and interpretation of cultural resources would be emphasized and provided at various dispersed recreation sites.
- Emphasis would be on increased Section 110 inventory in the Passage Zone.
- A minimum of 10 percent of the Monument would be intensively inventoried (Section 110 NHPA) for cultural resources over the life of the plan.
- Site monitoring and site protection measures, such as physical barriers, would be emphasized at various dispersed recreation sites.
FIGURE 6
ALTERNATIVE B
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

Zone Allocation:
- Frontcountry Zone: 2,300 acres (0.3% of Monument)
- Passage Zone: 68,900 acres (9.2% of Monument)
- Primitive Zone: 226,900 acres (30.1% of Monument)
- Pristine Zone: 447,900 acres (59.5% of Monument)

Frontcountry, Passage, and Primitive Zone corridors have been oversized for graphic presentation and are not to scale. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
FIGURE 7
VISUAL RESOURCE MANAGEMENT CLASSIFICATION (ALT'S B, C, & D)
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
TRAVEL AND ACCESS

*Desired Future Conditions:*
- The road and trail system within the planning area provides a high level of access to a wide variety of destinations, recreational activities, and both Class 1 and Class 2 trails.
- Within the four Passage Zone areas, multiuse trail systems and associated educational and directional signs/waysides are established.
- The desired condition for Alternative B is reflected in the management zone allocation (see Table 3).

*Management Actions:*
- The Carey-Kimama and Arco-Minidoka roads would be designated as Backcountry Byways over their entire length including portions outside the Monument.
- The Carey-Kimama and Arco-Minidoka roads would be upgraded and maintained to a consistent Class B Standard over their entire length including portions outside the Monument.
- A trail system would be improved at the Kings Bowl area and to additional points of interest.
- Multiuse and single-use (e.g., ATV, equestrian, bicycling, walking) trail routes would be designated.

FACILITIES

*Desired Future Conditions:*
- Same as “Common to All.”

*Management Actions:*
- New facilities at the NPS headquarters visitor center would be expanded or developed to enhance visitor understanding and accommodate increased visitation.

INTERPRETATION / VISITOR UNDERSTANDING

*Desired Future Conditions:*
- Increased opportunities for educational opportunities are created throughout the Monument.

*Management Actions:*
- Additional interpretive facilities would be provided along the corridor of US 20/26/93 and at significant sites within the Passage Zone.
- Interpretive kiosks, wayside exhibits, and associated trail system and day-use area in the Kings Bowl area would be upgraded.
- A variety of portable media (maps, tapes, guidebooks, etc.) would be developed to interpret the expanded portion of the Monument.
- Educational programs for school groups visiting the Monument would be expanded.

RECREATION

*Desired Future Conditions:*
- Diverse and accessible recreational opportunities and experiences are available throughout the Monument.
- A relatively large amount and wide variety of designated motorized recreation opportunities and experiences are available throughout the Monument.

*Management Actions:*
- Implementation-level planning would make determinations as to where specific trails, trailhead facilities and/or number of rustic designated campsites would be needed or desired within the Passage Zone. Up to 12 locations could be developed for camping within the Passage Zone.
- In areas in which adverse impacts on resources or the visitor experience occur, limits on human activities could be set. These limits could affect areas of use, group size, and duration of stay, number of people or vehicles, or types of activities.
- Increased opportunities would be provided to experience a wide range of recreation trail uses (e.g. ATV, equestrian, bicycling, walking).

VISUAL RESOURCES

*Desired Future Conditions:*
- Same as “Common to All.”

*Management Actions:*
- VRM inventory classes would be designated as management classes as shown on Figure 7.
Table 3 summarizes the number of miles of roads and trails by classification under each management zone as proposed under Alternative B. Road and trail classification is based on the inventoried condition and maintenance standards for roads and trails as of 2003. Because management zones are a prescription for desired future conditions, road classification would be expected to change over the life of the management plan to achieve the “Desired Future Conditions” and “Management Actions” for this alternative. These changes would be addressed in the Comprehensive Travel Management Plan. Note that there is an increase in Passage Zone mileage and a corresponding decrease in Primitive Zone road mileage compared to Alternative A (No Action Alternative). Some of the Class C and D roads now located within the Passage Zone areas could be improved to facilitate access and/or converted to Class I and II trails.

Table 3

<table>
<thead>
<tr>
<th>Road Classification</th>
<th>Frontcountry</th>
<th>Passage(^1) (Inside / Outside)</th>
<th>Primitive</th>
<th>Pristine</th>
<th>Total Miles(^1) (Inside/Outside)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A</td>
<td>30</td>
<td>0 / 0</td>
<td>0</td>
<td>0</td>
<td>30 / 0</td>
</tr>
<tr>
<td>Class B</td>
<td>0</td>
<td>57 / 81</td>
<td>0</td>
<td>0</td>
<td>57 / 81</td>
</tr>
<tr>
<td>Class C</td>
<td>2</td>
<td>166 / 56</td>
<td>184</td>
<td>1</td>
<td>353 / 56</td>
</tr>
<tr>
<td>Class D</td>
<td>0</td>
<td>39 / 1</td>
<td>127</td>
<td>1</td>
<td>167 / 1</td>
</tr>
<tr>
<td>Class I Trails</td>
<td>7</td>
<td>0 / 0</td>
<td>3</td>
<td>4</td>
<td>14 / 0</td>
</tr>
<tr>
<td><strong>Total Miles</strong></td>
<td><strong>39</strong></td>
<td><strong>262 / 138</strong></td>
<td><strong>314</strong></td>
<td><strong>6</strong></td>
<td><strong>621 / 138</strong></td>
</tr>
</tbody>
</table>

\(^1\)Approximate miles of existing roads and trails within each zone rounded to the nearest whole number.

*Under Alternative B, portions of the Carey-Kimama and Arco-Minidoka roads that lie outside the Monument boundaries and provide key Monument access are included in the Passage Zone. This would require coordination with the surrounding county governments.
ALTERNATIVE C

ALTERNATIVE CONCEPT

Under Alternative C, there would be emphasis on retention and enhancement of the Monument’s primitive character, with minimal visitor facilities or services outside the Frontcountry Zone, and less intensive management to influence resource conditions. More acres would be allocated to the Pristine Zone as compared to the other alternatives. This alternative would emphasize “opportunities for solitude” and provide a more primitive setting for recreational, educational, and management activities. It would offer protection for geologic and cultural resources and features by limiting access and development.

The key components of Alternative C are as follows:

• Would have the largest acreage in the Pristine Zone and least acreage in the Passage Zone.
• Maintains the fewest miles of roads and least amount of road access to the edge of the lava flows.
• Limits the amount of interpretation activities and number of information signs within the expanded Monument.
• Relies on the least intrusive methods of resource management, including sagebrush steppe restoration.
• Includes an ACEC designation in North Laidlaw Park to provide special protective management for native sagebrush steppe.

MANAGEMENT ZONES

Figure 8 depicts the zones based on the agencies’ best understanding of where the zone boundaries would be located under Alternative C. Figure 8 also shows the zone allocations that would occur under Alternative C.

Under Alternative C, the Frontcountry Zone would remain the same as under Alternative A (No Action Alternative), and the Passage Zone would be reduced, particularly in Laidlaw Park and along the Arco-Minidoka Road. The biggest change from Alternative A (No Action Alternative) would be the increase in Pristine Zone including Laidlaw Park and the vegetated portions of Wilderness Study Areas.

The reasons for the increased Pristine Zone allocation in these areas under Alternative C are to provide for a more primitive visitor experience; to de-emphasize facilities, services, and easy access; and to emphasize retention and enhancement of the Monument’s primitive character. With the expanded Pristine Zone areas, there would be less access to the edge of the lava flows and fewer maintained roads, resulting in a resource protection strategy relying on limited access.

MANAGEMENT GUIDANCE FOR ALTERNATIVE C

Alternative C would incorporate all of the “Management Guidance Common to All Alternatives” previously described, plus the following alternative-specific guidance.
Zone Allocation:
- Frontcountry Zone: 2,300 acres (0.3% of Monument)
- Passage Zone: 3,200 acres (0.4% of Monument)
- Primitive Zone: 201,000 acres (26.7% of Monument)
- Pristine Zone: 539,500 acres (71.7% of Monument)

FIGURE 8
ALTERNATIVE C
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

Frontcountry, Passage, and Primitive Zone corridors have been oversized for graphic presentation and are not to scale. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
GEOLGICAL RESOURCES

Desired Future Conditions:
- Same as “Common to All.”

Management Actions:
- A limited restoration program would be initiated to remove graffiti from caves and foster public understanding of the need for cave resource protection.
- Site development to facilitate access to caves would be limited to existing infrastructure and programs. Management of all other caves, including Crystal Ice Cave, would emphasize natural conditions.

VEGETATION, INCLUDING SPECIAL STATUS SPECIES, AND FIRE MANAGEMENT

Desired Future Conditions:
- Sagebrush steppe communities are protected and restored in Passage and Primitive Zones.
- Greater continuity of habitat for special status species and general wildlife is emphasized.
- Fire is allowed to function as a natural process in the Wilderness and Preserve.

Management Actions:
- Approximately 55,000 acres (7 percent of the entire Monument, 20 percent of BLM-administered) would be identified for proactive restoration treatment and/or post-fire rehabilitation. Approximately 31,000 acres of annual grassland and 24,000 acres of highly degraded low elevation sagebrush steppe (poor to fair biotic integrity; see Figure 15) would be treated to control cheatgrass and restore big sagebrush cover with a perennial understory.
- Non-chemical methods of weed control would be emphasized, while not ruling out herbicide use.
- Less intensive treatment methods would be used for restoration and rehabilitation employing minimum tool constraints and “light handed” non-intrusive technology.
- Larger, more continuous acreages would be treated for restoration.
- Wildland fire use would be allowed in the Wilderness and Preserve except when incompatible with resource management objectives or danger to life or property.
- Limited prescribed fire (<500 acres) would be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood Watershed.

WILDLIFE

Desired Future Conditions:
- Same as “Common to All.”

Management Actions:
- Consistent with Rangeland Health Standards & Guidelines determinations, livestock grazing management would be modified as necessary to ensure that Key sage-grouse habitat achieves site potential.
- Active and historic leks would be protected from disturbance during the sage-grouse breeding season.
- All roads in Key sage-grouse habitat would be closed to the general public between 1 a.m. and 11 a.m. during the sage-grouse breeding season.

CULTURAL RESOURCES

Desired Future Conditions:
- Same as “Common to All.”

Management Actions:
- A minimum of 10 percent of the Monument would be intensively inventoried (Section 110 NHPA) for cultural resources over the life of the plan.
- The focus of the Section 110 inventory would be in the Primitive and Pristine Zones.
### TRAVEL AND ACCESS

**Desired Future Conditions:**
- There is a net decrease in road mileage within the Monument.
- The road and trail system within the planning area provides the visitor opportunities for challenge, risk, and adventure with limited improved access to destinations.
- Most management direction related to travel and access is covered by management zone allocation (see Table 4).

**Management Actions:**
- All roads and ways within the Pristine Zone would be closed to all motorized and mechanized vehicle use except authorized emergency and administrative use.
- Many Class D roads in the Primitive Zone would be converted to non-motorized trails.
- Road closures will be addressed in an implementation plan to follow.
- Many existing directional road signs would be removed or not replaced, promoting the idea of unsigned and self-directed motorized recreation opportunities.

### FACILITIES

**Desired Future Conditions:**
- Same as “Common to All.”

**Management Actions:**
- Any new facilities would be limited to what may be necessary for public safety and/or resource protection.
- There would be no new developments in the North Pasture of Laidlaw Park Allotment, unless it results in a net benefit to those resources identified as needing improvement or protection.

### SPECIAL DESIGNATION AREAS (ACECs only)

**Desired Future Conditions:**
- The integrity of native plant communities in North Laidlaw Park (north of E/W pasture fence) is maintained.

**Management Actions:**
- North Laidlaw Park (north of E/W pasture fence) would be designated as an ACEC.

### INTERPRETATION / VISITOR UNDERSTANDING

**Desired Future Conditions:**
- A minimum of visitor services is provided except in the existing developed area of the north end Visitor Center and Loop Drive. This alternative provides the most opportunities for a self-discovery experience.

**Management Actions:**
- A variety of portable interpretive media (maps, tapes, guidebooks, etc.) would be developed to interpret the expanded portion of the Monument.

### RECREATION

**Desired Future Conditions:**
- The public enjoys the most extensive opportunities of all the alternatives for self-discovery and primitive type recreation experiences.
- Unsigned and self-directed motorized recreation opportunities are available.

**Management Actions:**
- Implementation-level planning would make determinations as to where specific trails, trailhead facilities and/or number of primitive campsites would be needed or desired within the Passage Zone. Up to four locations could be developed for camping within the Passage Zone.

### VISUAL RESOURCES

**Desired Future Conditions:**
- Same as “Common to All.”

**Management Actions:**
- VRM inventory classes would be designated as management classes as shown on Figure 7.
Table 4 summarizes the number of miles of roads and trails by classification under each management zone as proposed under Alternative C. Road and trail classification is based on the inventoried condition and maintenance standards for roads and trails as of 2003. Because management zones are a prescription for desired future conditions, road classification would be expected to change over the life of the management plan to achieve the “Desired Future Conditions” and “Management Actions” described for this alternative. These decisions will be dealt with in the Comprehensive Travel Management Plan to follow. Note that there is a decrease in Passage and Primitive zone road mileage and a corresponding increase in Pristine Zone road mileage compared to Alternative A (No Action Alternative). Many of the roads now located in the Pristine Zone would be closed to unauthorized motorized use or converted to Class I trails over the life of the plan.

Table 4
Alternative C – Road and Trail Inventory by Management Zone

<table>
<thead>
<tr>
<th>Road Classification</th>
<th>MANAGEMENT ZONES*</th>
<th>Total Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frontcountry</td>
<td>Passage</td>
</tr>
<tr>
<td>Class A</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Class B</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>Class C</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Class D</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Class I Trails</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Total Miles</td>
<td>39</td>
<td>40</td>
</tr>
</tbody>
</table>

*Approximate miles of existing roads and trails within each zone rounded to the nearest whole number.
ALTERNATIVE D
(PROPOSED PLAN)

ALTERNATIVE CONCEPT

This alternative is a slightly modified version of the Alternative D presented in the Draft Plan/EIS. It was developed in response to public comments that recommended an increase in Pristine Zone and a decrease in Passage Zone in order to help protect resources and limit access to sensitive areas. The primary emphasis of Alternative D remains the same as previously described in the Draft Plan/EIS: aggressive restoration of the sagebrush steppe community lands, including noxious weed control and fire management. Compared to other alternatives considered, Alternative D would target the most acreage for restoration and utilize aggressive management of weeds and fire to promote restoration of sagebrush steppe communities. In addition, commercial services (e.g., outfitters and guides) would be encouraged, and off-site visitor opportunities would be emphasized in this alternative. These commercial services would provide opportunities inside the Monument for visitors to experience and learn about the resources of the Monument. This would minimize the need for development and agency staffing within the Monument. This alternative would also encourage more off-site visitor experiences, in addition to providing visitor services in the developed portion of the Monument around the existing Visitor Center and 7-mile Loop Drive.

The modifications made to arrive at the Proposed Plan Alternative D included changing some previously designated Primitive Zone areas to Pristine Zone. This was done to address concerns about the protection of the interior of the lava flows, especially some specific geological and archaeological resources that could be accessed if Primitive Zone designations remained in or near these resources. Changing the designation to Pristine Zone near these resources and along the fringes of the lava fields would help to limit access from the main roads into the more sensitive interior. Therefore, the areas that were selected to be converted to Pristine Zone included those that were in good ecological condition, generally located along the edge of the lava flows, or located where they would serve as buffers along more heavily used roadways, where a change to Pristine Zone would help to limit access to sensitive archaeological or geological resources. In some locations along the edges of the lava fields, areas of Primitive Zone that extended into the lava fields under Draft Alternative D were reduced in size and confined to road fringes only, and the former extensions were changed to Pristine Zone.

Recommendations to limit Passage Zone in Alternative D came mainly from concerns about the additional disturbance and habitat fragmentation that could occur in the Laidlaw Park area, given the number and loop configuration of the Passage Zone road corridors proposed in that area under the Draft Plan/EIS version of Alternative D. To address this concern, several road segments in that area were taken out of Passage Zone and put into the Primitive Zone category, to limit the amount of visitor use and habitat fragmentation in Laidlaw Park and to better protect that area’s vegetation resources. The specific road segments that were taken out of Passage Zone were selected so as to reduce the undesirable effects, while maintaining one main Passage Zone loop through the area for visitor access. The segments that were removed from Passage Zone designation were:

- North Laidlaw Park Road
- West Laidlaw Park Road
- Laidlaw Butte Road
- Road into the “Thumb” or Bear Den Butte area

In addition, it was suggested that the Passage Zone formerly designated along the South Boundary Road be changed to Primitive Zone, and instead that additional Passage Zone be designated outside the Monument. This would encourage more visitor use in less sensitive areas, while facilitating visitor access to the popular recreational areas of the Monument. Therefore, the South Boundary Road was remapped as Primitive Zone, and the section of the Carey-Kimama Road outside the Monument and the Arco-Minidoka Road segment leading
to the southern boundary of the Monument were added to the Passage Zone under the Proposed Plan. Decisions regarding any changes (upgrades, closures, etc.) to the existing road inventory (refer to Figure 16, Transportation Network) will be made in a subsequent, more detailed Comprehensive Travel Management Plan.

Following the changes made to Alternative D, the key components of the Proposed Plan are as follows:

- Promotes use of partnerships at off-site facilities such as visitor centers and state parks to provide Monument information and interpretation.
- Emphasizes protection of vegetation resources in North Laidlaw Park.
- Maintains a road network suitable for aggressive fire suppression and restoration activities within the Monument.
- Encourages outfitter and guide services in the expanded portion of the Monument, instead of new agency-provided services and facilities.
- Promotes the largest and most proactive Integrated Weed Management Program.
- Proactively protects and restores sagebrush steppe communities.
- Continues to focus visitor experience within the Monument on the existing lands and facilities located at the north end of the Monument.

MANAGEMENT ZONES

Figure 9 depicts the zones based on the agencies’ best understanding of where the zone boundaries would be located under Alternative D (Proposed Plan). Figure 9 also shows the zone allocations that would occur under Alternative D.

Under Alternative D (Proposed Plan), the Front-country Zone would remain the same as under Alternative A (No Action Alternative). Much of the increase in Passage Zone would occur from the additional proposed Passage Zone located outside the Monument boundaries. There would also be an increase in Pristine Zone, especially along the edges of the lava fields. The road system included in the Passage Zone would allow access for the aggressive restoration of physical and biological resources and would facilitate fire suppression, especially in Laidlaw Park.

Recreational uses would continue. Road maintenance in the Passage Zone would be limited to what is needed for fire or resource protection. The Comprehensive Travel Management Plan will provide greater detail on road maintenance and a road sign plan. Alternative D’s zone allocations were proposed as a means of achieving its aggressive resource protection and restoration goals, while addressing the public’s concerns that sufficient Pristine Zone be designated under the selected alternative to provide protection for resources, especially in Laidlaw Park.

MANAGEMENT GUIDANCE FOR ALTERNATIVE D (PROPOSED PLAN)

Alternative D (Proposed Plan) would incorporate all of the “Management Guidance Common to All Alternatives” previously described, plus the following alternative-specific guidance.
**GEOLOGICAL RESOURCES**

*Desired Future Conditions:*
- Disturbed or degraded geologic features are identified and restored when feasible.

*Management Actions:*
- An intensive restoration program would be initiated to remove graffiti from caves and foster public understanding of the need for cave resource protection.
- Public access to caves and other geological features that are experiencing recreational use-related damage would be controlled, and damaged geological features would be restored as needed and when feasible.

**VEGETATION, INCLUDING SPECIAL STATUS SPECIES, AND FIRE MANAGEMENT**

*Desired Future Conditions:*
- Continuity of habitat for special status species and general wildlife will be emphasized.
- Fire is allowed to function as a natural process in the Wilderness and Preserve.
- The high ecological condition of the vegetation of North Laidlaw Park and Bowl Crater is maintained.

*Management Actions:*
- Approximately 80,000 acres (11 percent of the entire Monument, 29 percent of BLM-administered) have been identified within the Monument in need of proactive restoration and/or post-fire rehabilitation treatment, and these areas would be the focus of restoration actions. Approximately 31,000 acres of annual grassland and 49,000 acres of highly degraded low elevation sagebrush steppe (poor to fair biotic integrity; see Figure 15) would be treated to control cheatgrass and restore big sagebrush cover with a perennial understory.
- Aggressive protection of existing sagebrush steppe communities and proactive restoration of areas with poor to fair biotic integrity through both active and passive means (see Figure 15) would be emphasized.
- Integrated Weed Management (IWM) principles would be applied proactively throughout all zones. A Monument IWM program would emphasize protection of weed free areas, and aggressive detection and control of noxious or highly invasive exotic weeds.
- Restoration projects would be prioritized relative to locations of Key sage-grouse habitats and population strongholds. Emphasis would be on projects that restore annual grasslands and degraded sagebrush steppe communities, as well as enlarging and connecting existing good condition habitats.
- Fire would be managed to maximize protection and restoration of sagebrush steppe in Passage and Primitive Zones.
- Wildland fire use would be allowed in the Wilderness and Preserve except when incompatible with resource management objectives or danger to life or property.
- Limited prescribed fire (<500 acres) would be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood Watershed.
- The network of main arterial roads would be managed to support access for wildland fire suppression.
- To protect vegetation resources, no new livestock developments would be permitted in North Laidlaw Park pasture and Bowl Crater allotment unless they result in a net benefit to those resources identified as needing improvement or protection.

**WILDLIFE**

*Desired Future Conditions:*
- Same as “Common to All.”

*Management Actions:*
- Consistent with Rangeland Health Standards & Guidelines determinations, livestock grazing management would be modified as necessary to ensure that Key sage-grouse habitat achieves site potential.
- Active and historic leks would be protected from disturbance during the sage-grouse breeding season.
Note: Road closures or restrictions during the breeding season would not apply to agency (BLM and NPS) vehicles, including Idaho Department of Fish and Game vehicles and personnel who conduct necessary sage-grouse inventory and monitoring.
Zone Allocation:
- Frontcountry Zone: 2,300 acres (0.3% of Monument)
- Passage Zone: 6,700 acres (0.9% of Monument)
- Primitive Zone: 218,700 acres (29.1% of Monument)
- Pristine Zone: 518,300 acres (68.8% of Monument)

FIGURE 9
ALTERNATIVE D (Proposed Plan)
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

Frontcountry, Passage, and Primitive Zone corridors have been oversized for graphic presentation and are not to scale. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
CULTURAL RESOURCES

**Desired Future Conditions:**
- Same as “Common to All.”

**Management Actions:**
- A minimum of 10 percent of the Monument would be inventoried (Section 110 NHPA) for cultural resources over the life of the plan.
- The agencies would pursue more public education and interpretation off site, with increased monitoring and protection for those sites at risk.
- The focus of the Section 110 inventory would be in the Primitive and Passage Zones.

TRAVEL AND ACCESS

**Desired Future Conditions:**
- There is a net decrease in road mileage within the Monument.
- The road system within the planning area supports efficient response time for fire suppression activities.
- Most management direction related to travel and access is covered by management zone allocation (see Table 5).

**Management Actions:** A Comprehensive Travel Management Plan will be prepared.
- Existing Class B and C roads would remain open, but maintenance would be driven by natural resource management needs, primarily fire suppression, weed management, and restoration activities.
- Selected Class D roads in the Primitive Zone could be converted to trails or closed for resource protection. Class D roads in the Pristine Zone could be converted to Class I trails where resource protection need dictate.
- Allow for a Class B standard on the Arco-Minidoka Road through the Monument should the adjacent county governments choose to upgrade the roads outside the Monument.
- Temporary improvements to existing Class C and D roads could be authorized in the Passage and Primitive Zones to facilitate fire suppression and restoration activities or other management actions aimed at natural resource protection.
- In cooperation with the counties, the agencies would maintain the primary access roads to provide better access for fire management.
- Redundant, unnecessary, or unused roads would be closed as determined by management after completing a Comprehensive Travel Management Plan.

FACILITIES

**Desired Future Conditions:**
- Off-site facilities for new visitor services are emphasized.

**Management Actions:**
- Partnerships would be encouraged in developing new visitor information facilities in gateway communities.
- The BLM and NPS would become involved other agencies and the private sector in seeking opportunities for visitor information centers in communities along the interstate corridor.
- There would be no new livestock developments permitted in North Laidlaw Park pasture and Bowl Crater allotment unless they result in a net benefit to those resources identified as needing improvement or protection.
### INTERPRETATION / VISITOR UNDERSTANDING

**Desired Future Conditions:**
- Same as “Common to All.”

**Management Actions:**
- Interpretive signs would be provided along the US 20/26/93 corridor.
- Informational/orientation materials dealing with recreation, maps, safety, and resource concerns would be available in gateway communities. A visitor center(s) operated in cooperation with local partners would be proposed within the I-84 corridor. Emphasis on providing new interpretive and educational materials and programs outside the expanded portion of the Monument and in partnering communities and facilities.
- Educational programs would be expanded to off-site locations.
- A variety of portable media (maps, tapes, guidebooks, etc.), would be developed to interpret the expanded portion of the Monument.
- Commercial outfitters and guides would be encouraged to offer a range of guided experiences. Visitors who might not otherwise have the proper knowledge, vehicles, or preparation to experience the interior of the Monument would then have a viable option that would not require a lot of the road, trail, and facility improvement associated with Alternative B.
- Interpretation outside the Frontcountry Zone would emphasize publications, websites, exhibits, and other off-site interpretive media.
- Safety and resource protection would be emphasized at access points.

### RECREATION

**Desired Future Conditions:**
- The public enjoys opportunities for self-discovery and primitive type recreation experiences.
- Unsigned and self-directed motorized recreation opportunities are available.
- Commercial outfitters and guide services provide opportunities for visitors to experience and learn about the resources of the Monument, reducing the need for development and agency staffing.
- Partnerships with off-site facilities, such as visitor centers and state parks, provide Monument information and interpretation.

**Management Actions:**
- Implementation-level planning would make determinations as to where specific trails, trailhead facilities, and/or number of primitive campsites would be needed or desired within the Passage Zone. Up to six locations could be developed for camping within the Passage Zone.
- Applications for permitted outfitters and guide services would be encouraged within the Monument for a variety of recreational experiences, such as geology tours, nature walks, bird/wildlife watching, or horseback riding.
- Should permitted outfitter, guide, or similar NPS concession use numbers reach 2,000 annual user days in the expanded portion of the Monument, BLM and/or NPS would prepare an implementation level plan for the management of these services. This plan would include use allocations and limits.
- The BLM and NPS would actively seek potential partnerships with off-site communities and state agencies to provide Monument information and interpretation.

### VISUAL RESOURCES

**Desired Future Conditions:**
- Same as “Common to All.”

**Management Actions:**
- VRM inventory classes would be designated as management classes as shown on Figure 7.

Table 5 summarizes where the various types of roads that currently exist would fall within the management zones as they would be located under Alternative D (Proposed Plan). Road and trail classification is based on the inventoried condition and maintenance standards for roads and trails as of 2003. This alternative allows for Passage Zone roads to serve as access for resource management and protection and also allows for more Pristine Zone protection.
### Table 5
**Alternative D (Proposed Plan) – Road and Trail Inventory by Management Zone**

<table>
<thead>
<tr>
<th>Road Classification</th>
<th>Frontcountry</th>
<th>Passage1 (Inside / Outside)</th>
<th>Primitive</th>
<th>Pristine</th>
<th>Total Miles1 (Inside / Outside)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A</td>
<td>30</td>
<td>0 / 0</td>
<td>0</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Class B</td>
<td>0</td>
<td>46 / 52</td>
<td>11</td>
<td>0</td>
<td>57 / 52</td>
</tr>
<tr>
<td>Class C</td>
<td>2</td>
<td>34 / 11</td>
<td>321</td>
<td>2</td>
<td>359 / 11</td>
</tr>
<tr>
<td>Class D</td>
<td>0</td>
<td>2 / 0</td>
<td>141</td>
<td>26</td>
<td>169 / 0</td>
</tr>
<tr>
<td>Class I Trails</td>
<td>7</td>
<td>0 / 0</td>
<td>1</td>
<td>6</td>
<td>14 / 0</td>
</tr>
<tr>
<td><strong>Total Miles</strong></td>
<td><strong>39</strong></td>
<td><strong>82 / 63</strong></td>
<td><strong>474</strong></td>
<td><strong>34</strong></td>
<td><strong>629 / 63</strong></td>
</tr>
</tbody>
</table>

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

**To be closed.

1Under Alternative D, portions of the Carey-Kimama and Arco-Minidoka roads that lie outside the Monument boundaries and provide key Monument access are included in the Passage Zone. This would require coordination with the surrounding county governments.

### ALTERNATIVES AND ACTIONS CONSIDERED BUT NOT ANALYZED IN DETAIL

The Council on Environmental Quality (CEQ) guidelines for implementing NEPA requires federal agencies to analyze all “reasonable” alternatives that substantially meet the purpose and need for the proposed action. The purpose of the Proposed Monument Management Plan/Final Environmental Impact Statement (Proposed Plan/FEIS) is to provide for management of the Craters of the Moon National Monument and Preserve within the provisions of the Proclamation, and to meet the requirements of the Federal Land Policy and Management Act (FLPMA) and other laws and regulations. Because the Proclamation states that certain uses will not continue, and that other uses will continue consistent with federal laws and regulations, actions that do not comply with the Proclamation would not meet the purpose and need for the plan and therefore were not included in alternatives that were analyzed in this EIS.

The following specific alternatives, or actions that could be components of alternatives, were suggested but not analyzed:

### NO LIVESTOCK GRAZING

During the summer of 2000, of the Secretary of the Interior published Consensus Management Points (May 19, 2000) stating:

“Sheep and cattle grazing will continue in the shrub steppe of the Great Rift area to be managed by the Bureau of Land Management (BLM), including Laidlaw Park, consistent with the laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction.”

Proclamation 7373 states: “Laws, regulations, and policies followed by the Bureau of Land Management in issuing and administering grazing permits or leases on all lands under the jurisdiction shall continue to apply with regard to the lands in the Monument administered by the Bureau of Land Management.” Based on this language, a “no livestock grazing” alternative would not meet the purpose and need and would not be consistent with the Proclamation. The BLM’s authority to manage grazing under existing laws, regulations, and policies would continue under all the alternatives considered. Lands available for grazing would be...
limited to those under BLM authority and where BLM’s process allows grazing to continue. With the exception of the lava lands now within the Preserve, all of the lands have been found to be suitable for livestock grazing, with certain management restrictions in some areas to meet standards.

**NO HUNTING WITHIN THE MONUMENT**

Comments supporting a ban on hunting within the Monument or limiting hunting to game species were expressed. Proclamation 7373 states: “Nothing in this proclamation shall be deemed to enlarge or diminish the jurisdiction of the State of Idaho with respect to fish and wildlife management,” as well as “…the National Park Service shall have primary management authority over the portion of the Monument that includes the exposed lava flows, and shall manage the area under the same laws and regulations that apply to the current monument.” Hunting is prohibited under the NPS Organic Act and that act applied to the “current monument.” Therefore, hunting was prohibited within the NPS-administered portions of the expanded Monument until Public Law (PL) 107-213 (August 2002) designated the NPS-administered lands within the new areas of the Monument as a Preserve and directed the Secretary of the Interior to allow hunting within the Preserve. PL 107-213 provides that the Secretary of the Interior, after consultation with the State of Idaho, “may designate zones where, and establish periods when, no hunting may be permitted for reasons of public safety, protection of the area’s resources, administration, or public use and enjoyment”.

An alternative proposing zones within the Preserve closed to hunting was not analyzed in detail. However, it is expected in implementing this plan that the NPS will consult with the State of Idaho and the tribes on options for closing the developed areas of Preserve lands to hunting for reasons of public safety. In addition to consulting with the State of Idaho, that process will require publication as a rulemaking in the Federal Register for public review and comment. While no specific circumstances were identified in the public scoping process, the area and timing of hunting activities could be modified in a like manner for the other purposes identified in PL 107-213 should such a need be identified in the future.

**OTHER ALTERNATIVES**

No comprehensive alternatives were submitted by outside interests, including tribes, state and local governments, or other groups.

The planning team has considered recommendations for adjustments to the boundary of the Monument. In looking at possible boundary adjustments, previous studies including the Reconnaissance Survey – Expansion of Craters of the Moon National Monument (1989) and Management Alternatives – Expansion of Craters of the Moon National Monument (1990) were examined. It was determined that a recommendation for substantial changes to the boundary of the Monument was not needed as part of any of the alternatives. However, a few minor changes to address operational concerns were identified. As a result, minor boundary adjustments are being recommended for future concerns and those, along with the reasons, are described in Appendix C.

**SUMMARY OF ALTERNATIVES**

Table 7, at the end of this chapter, contains a summary of the major features and management actions that would be associated with each of the four alternatives. The table shows actions that are common to all the alternatives, as well as the alternative-specific actions for each. Also provided is Table 8, which summarizes acreages and mileages within each management zone, by road classification, for all four alternatives.

**SUMMARY OF ENVIRONMENTAL CONSEQUENCES**

Table 9, at the end of this chapter, contains a comparative summary of the key environmental consequences for each of the four alternatives. A
detailed description of these impacts can be found in the Environmental Consequences chapter.

**SELECTION OF THE PREFERRED ALTERNATIVE / PROPOSED PLAN**

To select the Preferred Alternative, all of the alternatives were evaluated with regard to the planning objectives and other criteria deemed important to the planning team. To minimize the influence of individual biases and opinions, a team used an objective analysis process called “Choosing by Advantages” (CBA). This process, which has been used extensively by government agencies and the private sector, evaluates the different alternatives by identifying and comparing the relative advantages of each according to a set of criteria.

One of the greatest strengths of the CBA process is the fundamental philosophy that decisions must be anchored in relevant facts and in the purpose and significance of the resources and lands involved. The CBA process asks which alternative gives the greatest advantages. To answer this question, relevant facts were used to determine the advantages the alternatives provide. To ensure a logical and traceable process, evaluation criteria were based on impact topics where there were differences in the alternatives.

The following categories were further broken down to better assess the alternatives. Alternatives were evaluated to see how well they:

- Protect Natural and Cultural Resources
  - Prevent loss of, or damage to, geologic resources
  - Restore degraded sagebrush steppe vegetation
  - Prevent introduction and spread of noxious weeds
  - Prevent loss of, and damage to, cultural resources
- Provide a Quality Visitor Experience
  - Availability of visitor facilities, interpretive programs and other visitor services
- Variety of driving experiences
- Opportunities for solitude and self-discovery
- Availability of travel assistance (signage and maps)
- Variety of non-motorized trails (hiking, pack stock, and bicycling)
- Protect Public Health, Safety, and Welfare
- Maintain and Enhance Relationships with Local Governments and Local Communities
  - Impacts on local government – emergency service providers (e.g., sheriff)
  - Fiscal impact on county facilities (e.g., roads)
  - Impacts on “grazing” permittees
- Maintain and Enhance Relationships with Local Governments and Local Communities
  - Air Quality
  - Grazing
  - Predator Control
  - Wilderness
  - Opportunities for Research and Science

In addition, the CBA Team considered but dismissed the following topics, since there were no substantial differences among the alternatives and the management actions were essentially the same for all:

- Air Quality
- Grazing
- Predator Control
- Wilderness
- Opportunities for Research and Science

The next step was to assess and rank the alternatives based on the advantages they provided. The advantages were assessed by evaluating how well each alternative would meet (or not meet) the criteria listed above. Protecting natural and cultural resources was determined to be the most important evaluation criterion by the CBA Team.

Each alternative was assigned an “importance” value that reflected its rank; a higher importance value indicated that the alternative would meet more of the evaluation criteria and/or more of the ones deemed most important to the CBA Team. Alternative D ranked the highest in advantages for the resources of the Monument. Major advantages of Alternative D identified during the CBA process included accelerated sagebrush steppe restoration and increased...
efforts to partner for interpretation and orientation information outside the Monument boundary.

Costs for each alternative versus the advantages provided were also compared and analyzed. These costs were developed for comparative purposes only. Because the Plan/EIS costs are estimated well in advance of a project, the numbers will need to be re-examined and refined as BLM and NPS move forward with implementation planning. Costs identified in the Plan/EIS are not intended to be used as a basis for funding until further analysis has been completed.

Comparative costs for the alternatives, as shown in Table 6, include initial development costs and annual operational costs. Initial development costs include labor and materials for construction of new facilities, annualized over the life of the plan. For the purposes of cost estimating, general assumptions are made regarding amounts and sizes of development and operations. Annual operational costs consider the annual costs of each alternative over the life of the plan. For example, annual costs would include staffing required, costs of operating a building, ongoing rehabilitation and restoration projects, and replacement and maintenance costs of elements such as roadways in an alternative. Not included here under initial development costs is the possible federal shared cost for new facilities outside the Monument, such as a jointly operated visitor center within the I-84 corridor suggested under Alternative D (Proposed Plan).

Selection of the Preferred Alternative considers the advantages provided by each alternative (reflected in the importance scores), as compared to the costs of the alternative. Figure 10 summarizes the results of the CBA analysis.

Based on the CBA importance rankings and cost analyses, the CBA Team recommended Alternative
Table 6
Summary of Comparative Costs (FY 2003 dollars)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Operating</td>
<td>$2,754,000</td>
<td>$3,389,000</td>
<td>$2,906,000</td>
<td>$3,352,000</td>
</tr>
<tr>
<td>Initial Development</td>
<td>$0</td>
<td>$30,000</td>
<td>$6,000</td>
<td>$9,000</td>
</tr>
<tr>
<td>Total</td>
<td>$2,754,000</td>
<td>$3,419,000</td>
<td>$2,912,000</td>
<td>$3,362,000</td>
</tr>
</tbody>
</table>

D as the Preferred Alternative, and thus the Proposed Plan. Alternative D scored the highest in advantages (215 importance value) and was not the highest cost alternative. Alternative B had the highest cost and a lower importance value compared to Alternative D. Although Alternative C had a lower cost than Alternative D ($450,000 less), it also had a substantially lower importance value. Alternative A (No Action Alternative) had a low cost, but a considerably lower importance value. Overall, Alternative D represented the best choice in that it provided high importance (many advantages) at a relatively reasonable cost.

Based on this analysis and recommendation of the CBA Team, the Idaho BLM State Director and the NPS Pacific West Regional Director selected Alternative D as the Preferred Alternative in the Draft Plan/EIS, and thus the Proposed Plan.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The Environmentally Preferred Alternative is defined as “the alternative that will promote the national environmental policy as expressed in §101 of the National Environmental Policy Act.” Section 101 states, “…it is the continuing responsibility of the federal government to…

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

In comparison with the other alternatives analyzed, Alternative D, also selected as the Preferred Alternative, best meets the national environmental goals identified above. Alternative D provides a high level of protection of natural and cultural resources, while providing for a wide range of beneficial uses of the environment.

Alternative D (Preferred Alternative/Proposed Plan) would enhance the ability of BLM and the NPS to achieve the purposes of the enabling laws and proclamations, as well as those goals outlined in Chapter 1 of this document. Alternatives A, B, and C lack the degree of management emphasis required to protect benchmark native vegetative communities and restore degraded sagebrush steppe habitat found in Alternative D. Substantial portions of the new Monument lands are currently in a degraded condition that can only be improved with the scope of
active restoration efforts provided for in Alternative D.

Alternative D (Preferred Alternative/Proposed Plan) would maintain most existing public facilities and access routes, but does not expand or substantially upgrade these. Alternative D allows for largely self-directed dispersed recreational use throughout most of the lands recently added to the Monument, while recognizing that site-specific use restrictions may be required in some areas to protect natural and cultural resources.

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

**MITIGATION MEASURES**

The identification of mitigating measures is required by NPS in general management planning documents, as well as by the Council on Environmental Quality in its requirements for implementing the National Environmental Policy Act. These measures would be used to avoid or minimize potential impacts on natural and cultural resources on NPS lands from construction activities, use by visitors, and Monument operations. Similar actions would be taken on BLM lands to protect resources following the “Management Actions” previously described and the Planning Criteria (Appendix B).

**Natural Resources**

**Geological Resources and Caves**

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

**Soils and Water**

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

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

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

**Vegetation, including Special Status Species, and Fire Management**

Monument staff would survey proposed development sites for sensitive species and would relocate new development if those populations were present. Similarly, trails, roads, and campsites would be
located to avoid impact on sensitive species.

Damage to natural and cultural resources by fire suppression, prescribed fire, or restoration treatment operations will be avoided by following the operational protocols in Appendix J. Areas burned by wildland fire will be examined and the need for treatment under Emergency Stabilization and Rehabilitation (ESR) will be determined. The Normal Fire Rehabilitation Plan will be used to guide ESR treatments on BLM-administered lands for the Shoshone and Burley Field offices (USDI BLM 2005). Revegetation efforts would emulate the natural form, spacing, abundance, and diversity of native plant communities and would use native species whenever feasible.

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

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

Inventory and monitoring of all natural resources would be undertaken to provide a comprehensive understanding of the Monument’s wildlife, vegetation, and habitat.

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

All special status species in the Monument and Preserve would be inventoried with monitoring plans established. Actions and stipulations necessary to protect special status species and their habitats would be made part of land use authorizations (e.g., limiting fragmentation of special status species populations when considering development of road network) and fire planning.

Air Quality
Dust control during construction activities would be required, and all construction machinery would be required to meet air emission standards.

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

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

Through consultation with the tribes and the Idaho SHPO, areas for Section 110 cultural resource inventories would be prioritized. At-risk sites eligible for the NRHP would be monitored for vandalism. A Cultural Resources Management Plan, which describes how specific sites would be managed, defines what areas need additional inventory, and
designates potential-use categories for sites, would be completed for the Monument. Should NAGPRA materials be inadvertently discovered within the Monument, the agencies would follow the tribal consultation procedures outlined in the NAGPRA of 1990. All preservation, rehabilitation and restoration efforts for historic structures would be carried out in accordance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties, with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings.
Table 7
Summary of Alternatives

<table>
<thead>
<tr>
<th>(*)COMMON TO ALL ALTERNATIVES</th>
<th>ALTERNATIVE A (NO ACTION ALTERNATIVE)</th>
<th>ALTERNATIVE B</th>
<th>ALTERNATIVE C</th>
<th>ALTERNATIVE D (PROPOSED PLAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENERAL CONCEPTS</td>
<td>No major changes in resource management, visitor programs, or facilities.</td>
<td>Provide the opportunity for a broad array of visitor experiences; represents the highest accommodation of visitor access to, and within, the Monument.</td>
<td>Retain and enhance the Monument’s primitive character with minimal visitor facilities or services and less intensive management action to influence resource conditions.</td>
<td>Aggressively restore the sagebrush steppe communities, including noxious weed control and fire management, and promote partnerships at off-site facilities to provide Monument information and interpretation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ALLOCATION OF ZONES</th>
<th>Frontcountry Zone Acreage (% of Monument)</th>
<th>Passage Zone Acreage (% of Monument)</th>
<th>Primitive Zone Acreage (% of Monument)</th>
<th>Pristine Zone Acreage (% of Monument)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,300 acres (0.3%)</td>
<td>4,700 acres (0.6%)</td>
<td>290,200 acres (38.6%)</td>
<td>448,800 acres (59.6%)</td>
</tr>
<tr>
<td></td>
<td>2,300 acres (0.3%)</td>
<td>68,900 acres (9.2%)</td>
<td>9,000 acres Outside Monument</td>
<td>2,300 acres Outside Monument</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9,000 acres Outside Monument</td>
<td>3,200 acres (0.4%)</td>
<td>4,100 acres Outside Monument</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>201,000 acres (26.7%)</td>
<td>218,700 acres (29.1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>226,900 acres (30.1%)</td>
<td>218,700 acres (29.1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>447,900 acres (59.5%)</td>
<td>518,300 acres (68.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>539,500 acres (71.7%)</td>
<td>518,300 acres (68.8%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NATURAL RESOURCES</th>
<th>General</th>
<th>(*)</th>
<th>(*)</th>
<th>(*)</th>
<th>(*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(*) Provide for and implement resource inventories, surveys, and monitoring programs; disseminate information to the public; mitigate threats to resources utilizing proactive management activities.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: An (*) appearing in a column means the description under the Common to All Alternatives for the topic also applies to this alternative.
<table>
<thead>
<tr>
<th>(*) COMMON TO ALL ALTERNATIVES</th>
<th>ALTERNATIVE A (NO ACTION ALTERNATIVE)</th>
<th>ALTERNATIVE B</th>
<th>ALTERNATIVE C</th>
<th>ALTERNATIVE D (PROPOSED PLAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geological Resources</strong></td>
<td></td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>(*) Protect geological features from damage presently occurring; designate and implement resource inventories and monitoring strategies appropriate for resource protection; complete surveys prior to any surface disturbance; identify and mitigate threats to resources.</td>
<td>Initiate a restoration program to remove cave graffiti and foster public understanding of the need to protect cave resources; consider implementing trails to mitigate impacts from user-created trails.</td>
<td>Initiate a limited restoration program to remove cave graffiti and foster public understanding of the need to protect cave resources; no further site development to facilitate cave access; emphasize current natural conditions.</td>
<td>Initiate intensive restoration program to remove cave graffiti and foster public understanding of the need to protect cave resources; control public access to caves and other geological features that are experiencing recreational use-related damage; restore geological features as needed and when feasible.</td>
<td></td>
</tr>
<tr>
<td><strong>Soils</strong></td>
<td></td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>(*) Protect soils from accelerated and unnatural erosion; investigate biological soil crusts to provide specific management guidance.</td>
<td>Initiate a limited restoration program to remove cave graffiti and foster public understanding of the need to protect cave resources; no further site development to facilitate cave access; emphasize current natural conditions.</td>
<td>Initiate intensive restoration program to remove cave graffiti and foster public understanding of the need to protect cave resources; control public access to caves and other geological features that are experiencing recreational use-related damage; restore geological features as needed and when feasible.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vegetation, Including Special Status Species and Fire Management</strong></td>
<td>Manage all wildland fires within the Preserve and BLM portion of the Monument according to current BLM land use plans. Manage wildland fire within the original Monument according to NPS Wildland Fire Management Plan.</td>
<td>Implement proactive fuels management activities to offset the potential effects of increased public use. Allow wildland fire use in the Wilderness and Preserve when compatible. Limited prescribed fire would be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood Watershed.</td>
<td>Allow wildland fire use in the Wilderness and Preserve when compatible. Limited prescribed fire would be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood Watershed.</td>
<td>Manage fire to maximize protection and restoration of sagebrush steppe. Allow wildland fire use in the Wilderness and Preserve when compatible. Limited prescribed fire would be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood Watershed. Manage the road network to emphasize access for wildfire suppression and minimal response time.</td>
</tr>
<tr>
<td>Restore annual grasslands and highly degraded sagebrush steppe communities to achieve a mosaic of shrubs, forbs, and grasses capable of sustaining native animal populations. Restoration treatments may be active or passive and may include but are not limited to the following: prescribed fire, thinning, mowing, herbicide treatment, seeding, temporary removal of livestock and/or changes in grazing regimes or facilities, and road closures.</td>
<td>Implement proactive fuels management activities to offset the potential effects of increased public use. Allow wildland fire use in the Wilderness and Preserve when compatible. Limited prescribed fire would be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood Watershed.</td>
<td>Allow wildland fire use in the Wilderness and Preserve when compatible. Limited prescribed fire would be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood Watershed.</td>
<td>Manage fire to maximize protection and restoration of sagebrush steppe. Allow wildland fire use in the Wilderness and Preserve when compatible. Limited prescribed fire would be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood Watershed. Manage the road network to emphasize access for wildfire suppression and minimal response time.</td>
<td></td>
</tr>
</tbody>
</table>
Vegetation, Including Special Status Species and Fire Management (continued)

<table>
<thead>
<tr>
<th>(*) COMMON TO ALL ALTERNATIVES</th>
<th>ALTERNATIVE A (NO ACTION ALTERNATIVE)</th>
<th>ALTERNATIVE B</th>
<th>ALTERNATIVE C</th>
<th>ALTERNATIVE D (PROPOSED PLAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(*) Protect and restore sagebrush steppe communities; restore annual grasslands and highly degraded sagebrush steppe communities; emphasize use of native plants.</td>
<td>(*) Target 40,000 acres for restoration (5% of Monument; 15% of BLM land); assumes current rate of restoration – 2,500 to 4,000 acres/year.</td>
<td>(*) Target 45,000 acres for restoration (6% of Monument; 16% of BLM land).</td>
<td>(*) Target 55,000 acres for restoration (7% of Monument; 20% of BLM land).</td>
<td>(*) Target 80,000 acres for restoration (11% of Monument; 29% of BLM land).</td>
</tr>
<tr>
<td>(*) Rehabilitate wildland fire burned areas when necessary to restore sagebrush steppe species and suppress noxious weeds; permit only certified weed-free hay, straw, and mulch within the Monument; utilize Integrated Weed Management to control and prevent noxious weeds.</td>
<td>(*) Treat areas to control cheatgrass and restore sagebrush cover.</td>
<td>(*) Utilize Integrated Weed Management with emphasis on treatment/containment, prevention, and education, particularly in Frontcountry and Passage Zones.</td>
<td>(*) Employ less intrusive treatment methods for restoration and rehabilitation. Utilize non-chemical weed control methods, while not ruling out herbicide use.</td>
<td>(*) Proactively treat and restore areas as quickly as possible.</td>
</tr>
<tr>
<td>(*) Adopt interagency habitat guidelines for sage-grouse and sagebrush steppe obligates to guide sagebrush steppe management; inventory all special status species in the Monument; authorize actions and stipulations to protect special status species and their habitats.</td>
<td>(*) Restore existing and potential sagebrush steppe communities within the Monument, emphasizing Key sage-grouse habitat in Laidlaw Park, Little Park, and Paddelford Flat.</td>
<td>(*) Create an opportunity for interpreting the decline of sagebrush steppe and efforts to restore this dwindling resource.</td>
<td>(*) Treat larger, more continuous acreages for restoration.</td>
<td>(*) Restore annual grasslands and degraded sagebrush steppe communities, while enlarging and connecting existing good condition habitats. Prioritize restoration projects relative to Key sage-grouse habitats and population strongholds. Protect vegetation resources by not permitting any new livestock developments in North Laidlaw Park pasture and Bowl Crater allotment.</td>
</tr>
</tbody>
</table>

Water Resources, Including Wetlands

<p>| (<em>) Maintain, restore, and enhance riparian areas and wetlands; no additional playas are modified or developed; work with appropriate authorities to obtain water resources needed for Monument purposes. | (</em>) | (<em>) | (</em>) | (*) |</p>
<table>
<thead>
<tr>
<th>(*) COMMON TO ALL ALTERNATIVES</th>
<th>ALTERNATIVE A (NO ACTION ALTERNATIVE)</th>
<th>ALTERNATIVE B</th>
<th>ALTERNATIVE C</th>
<th>ALTERNATIVE D (PROPOSED PLAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wildlife, Including Special Status Species and Their Habitat</strong></td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>(*) Inventory and monitor target species; designate no hunting areas as needed for safety and protection of area resources; protect special status species in the Monument; work with various agencies to control predators and pests.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td><strong>Air Quality</strong></td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>(*) Work proactively with surrounding communities, land management agencies, and the Idaho Department of Environmental Quality to limit increases in particulate matter and sulfur dioxide throughout the Monument.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
</tbody>
</table>

**CULTURAL RESOURCES**

<table>
<thead>
<tr>
<th>Archaeological and Historic Resources</th>
<th>(*)</th>
<th>(*)</th>
<th>(*)</th>
<th>(*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(*) Inventory, evaluate, and document cultural resources of known archaeological and historic resources; prioritize Section 110 inventories in consultation with the Idaho SHPO; complete a baseline research report of archaeological resources within the Monument; prepare a Cultural Resource Management Plan that defines what areas need additional inventory.</td>
<td>Intensively inventory a minimum of 5 percent of the Monument for cultural resources.</td>
<td>Intensively inventory a minimum of 10 percent of the Monument for cultural resources; increase Section 110 inventory in Passage Zone.</td>
<td>Intensively inventory a minimum of 10 percent of the Monument for cultural resources; focus Section 110 inventory in the Primitive and Pristine Zones.</td>
<td>Intensively inventory a minimum of 10 percent of the Monument for cultural resources; focus Section 110 inventory in the Primitive and Passage Zones.</td>
</tr>
<tr>
<td>(*) Proactively manage and protect cultural resources; monitor and stabilize at-risk NRHP-eligible sites found to be deteriorating and protect/stabilize as needed.</td>
<td>Continue some interpretation of archaeological and historic sites.</td>
<td>Emphasize public education and interpretation of cultural resources in response to increased access. Monitor sites and implement protection measures at various recreation sites.</td>
<td>(*)</td>
<td>(*) Pursue more public education and interpretation off site; increase monitoring and protection of at-risk sites.</td>
</tr>
<tr>
<td>COMMON TO ALL ALTERNATIVES</td>
<td>ALTERNATIVE A (NO ACTION ALTERNATIVE)</td>
<td>ALTERNATIVE B</td>
<td>ALTERNATIVE C</td>
<td>ALTERNATIVE D (PROPOSED PLAN)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td><strong>Museum Collections</strong></td>
<td>(*) Allow access to Monument collections for legitimate research and educational purposes; manage all resource management records directly associated with museum objects as museum property.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td><strong>NATIVE AMERICAN RIGHTS AND INTERESTS</strong></td>
<td>(*) Consult with interested tribes on a regular basis regarding the management of traditional cultural properties. Identify with the tribes protection measures for places of traditional cultural importance to Native Americans to preserve the integrity and use of these areas as described in National Register Bulletin 38. Take measures to identify traditional cultural places of importance to preserve the integrity and use of these areas. Allow continued traditional tribal hunting, gathering, and use of natural resources on the Preserve and BLM portions of the Monument.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td><strong>LAND USE AND TRANSPORTATION</strong></td>
<td>(*) Prepare a Comprehensive Travel Management Plan; prepare a travel map showing allowable uses, road and trail classifications, closures, and standards and restrictions; prepare guidelines and procedures for emergency and administrative off-road travel.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>COMMON TO ALL ALTERNATIVES</td>
<td>ALTERNATIVE A (NO ACTION ALTERNATIVE)</td>
<td>ALTERNATIVE B</td>
<td>ALTERNATIVE C</td>
<td>ALTERNATIVE D (PROPOSED PLAN)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td><strong>Travel and Access (cont.)</strong></td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>(*) On an interim basis and until a detailed Comprehensive Travel Management Plan is completed, roads are limited to those designated as Class A-D roads (displayed on Figure 16, “Transportation Network”), excluding any segments falling within the Pristine Zone boundaries. All other lands are off-road and closed to motorized or mechanized vehicle recreation use.</td>
<td>Legal roads in existence prior to Proclamation 7373 remain open, but roads can be closed on a case-by-case basis to protect resources.</td>
<td>Designate the Carey-Kimama and Arco-Minidoka roads as “Backcountry Byways” over their entire length outside the Monument.</td>
<td>Close or convert many Class D roads in the Primitive Zone to non-motorized trails.</td>
<td>Existing Class B and C roads remain open, but maintenance driven by resource, fire/weed control needs, and restoration activities. Select Class D roads in Primitive and Pristine Zones could be converted to trails or closed for resource protection. Possibly allow for a Class B standard on the Arco-Minidoka Road through the Monument. Close all roads and ways within the Pristine Zone to all motorized and mechanical vehicle use except for emergencies and administrative use.</td>
</tr>
<tr>
<td>Class A roads found in the Frontcountry Zone.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>Class B roads found in the Frontcountry and Passage Zones.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>Class C&amp;D roads found in the Passage and Primitive Zones.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>(*) Designate all roads and trails on BLM-administered lands as “Limited” off-highway vehicle (OHV) use (i.e., allow OHV on these roads in a restricted manner; no OHV off roads); designate all land within the Monument other than designated roads and trails as “Closed” for OHV use; close and rehabilitate all routes established in WSA not identified as “existing ways”; authorized NPS “Park roads” are open only to licensed vehicles.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>Close redundant, unneeded, or unused routes as determined by management.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
</tbody>
</table>
## Travel and Access (cont.)

<table>
<thead>
<tr>
<th>(*) COMMON TO ALL ALTERNATIVES</th>
<th>ALTERNATIVE A (NO ACTION ALTERNATIVE)</th>
<th>ALTERNATIVE B</th>
<th>ALTERNATIVE C</th>
<th>ALTERNATIVE D (PROPOSED PLAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(*) No new motorized vehicle roads or trails will be developed in the Pristine Zone; individual roads and trails may be temporarily or permanently closed to protect resources.</td>
<td>New trails could be developed in certain areas; maintain or rehabilitate trails in the Kings Bowl area to prevent further resource damage.</td>
<td>Improve a trail system at the Kings Bowl area and to additional nearby points of interest.</td>
<td>Close all roads and ways within the Pristine Zone to all motorized and mechanized vehicle use except for emergency and administrative use.</td>
<td>Authorize temporary improvements to Class C and D roads in the Passage and Primitive Zones to facilitate management actions aimed at natural resource protection. Close unneeded, unused, or redundant routes as determined by management. Cooperate with the counties to provide better access for fire management.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ALTERNATIVE A (NO ACTION ALTERNATIVE)</th>
<th>ALTERNATIVE B</th>
<th>ALTERNATIVE C</th>
<th>ALTERNATIVE D (PROPOSED PLAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frontcountry road and trail mileage</td>
<td>39 miles</td>
<td>39 miles</td>
<td>39 miles</td>
<td>39 miles</td>
</tr>
<tr>
<td>Passage Zone road and trail mileage</td>
<td>61 miles</td>
<td>262 miles (138 miles Outside Monument)</td>
<td>40 miles</td>
<td>82 miles (63 miles Outside Monument)</td>
</tr>
<tr>
<td>Primitive Zone road and trail mileage</td>
<td>522 miles</td>
<td>314 miles</td>
<td>490 miles</td>
<td>474 miles</td>
</tr>
<tr>
<td>Pristine Zone road and trail mileage</td>
<td>9 miles</td>
<td>6 miles</td>
<td>62 miles</td>
<td>34 miles</td>
</tr>
</tbody>
</table>

** See Table 8 (at the end of this table) for summary of acreage/mileage in each management zone by road classification, for all four alternatives.  

## Livestock Grazing

| (*) Alter nine allotment boundaries to accurately reflect NPS/BLM boundary (no change in AUMs): 273,000 BLM acres available for livestock use, 1,800 BLM acres not available for livestock use, and 462,880 NPS acres not available for livestock use; 36,965 AUMs permitted. Continue using existing livestock developments in Primitive and Pristine Zones; evaluate Brigham Point and Paddelford Flat sheep trails across NPS land for future use. | (*) | (*) | (*) |

<table>
<thead>
<tr>
<th></th>
<th>ALTERNATIVE A (NO ACTION ALTERNATIVE)</th>
<th>ALTERNATIVE B</th>
<th>ALTERNATIVE C</th>
<th>ALTERNATIVE D (PROPOSED PLAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
</tbody>
</table>

No new livestock developments would be permitted in North Laidlaw Park pasture and Bowl Crater allotment unless they result in a net benefit to those resources identified as needing improvement or protection.
<table>
<thead>
<tr>
<th>COMMON TO ALL ALTERNATIVES</th>
<th>ALTERNATIVE A (NO ACTION ALTERNATIVE)</th>
<th>ALTERNATIVE B</th>
<th>ALTERNATIVE C</th>
<th>ALTERNATIVE D (PROPOSED PLAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OTHER LAND USES</strong></td>
<td></td>
<td>(°)</td>
<td>(°)</td>
<td>(°)</td>
</tr>
<tr>
<td><strong>Facilities</strong></td>
<td></td>
<td>(°)</td>
<td>Expand and develop new facilities at the Visitor Center to accommodate increased visitation.</td>
<td>(°)</td>
</tr>
<tr>
<td>(*) Enlarge and reconstruct existing Visitor Center/Administration Building, as approved; evaluate sharing BLM/NPS facilities and staff; install previously approved signs and wayside exhibits at Kings Bowl.</td>
<td>(°)</td>
<td></td>
<td>Become involved with other agencies and the private sector in seeking opportunities for visitor information centers in communities along the interstate corridor.</td>
<td>(°)</td>
</tr>
<tr>
<td>(*) Include Monument information at BLM fire stations in Carey and Kimama.</td>
<td>(°)</td>
<td></td>
<td></td>
<td>(°)</td>
</tr>
<tr>
<td>(*) Modify existing paved road system and parking areas to address safety and maintenance concerns at NPS Visitor Center at the original Monument.</td>
<td>(°)</td>
<td>Potential to increase visitor services for the Monument at Carey and Kimama Fire Stations.</td>
<td>(°)</td>
<td></td>
</tr>
<tr>
<td>(°) Maintain existing informational and directional kiosks located along and within the Monument.</td>
<td>(°)</td>
<td></td>
<td>Encourage partnership developing new visitor information facilities in gateway communities.</td>
<td>(°)</td>
</tr>
<tr>
<td>(°) Provide visitor safety and information signs in the Kings Bowl area.</td>
<td>(°)</td>
<td></td>
<td></td>
<td>(°)</td>
</tr>
<tr>
<td>(°) Centralized office space for BLM and NPS staff would be considered.</td>
<td>(°)</td>
<td>Limited to what may be necessary for public safety and/or resource protection. No new livestock developments are permitted in the nominated North Laidlaw Park ACEC. Centralized office space for BLM and NPS staff would be considered.</td>
<td>(°)</td>
<td></td>
</tr>
<tr>
<td><strong>Lands and Realty</strong></td>
<td></td>
<td>(°)</td>
<td>(°)</td>
<td>(°)</td>
</tr>
<tr>
<td>(*) Pursue with willing landowners acquisition or exchange of private inholdings within the Monument; pursue an exchange for state lands located in and near the Monument; use existing policies to guide action on applications for new discretionary land use authorizations. Inventory all rights of way, easements, land use permits, and other authorizations in effect as of the date of the Proclamation.</td>
<td>(°)</td>
<td></td>
<td></td>
<td>(°)</td>
</tr>
<tr>
<td>COMMON TO ALL ALTERNATIVES</td>
<td>ALTERNATIVE A (NO ACTION ALTERNATIVE)</td>
<td>ALTERNATIVE B</td>
<td>ALTERNATIVE C</td>
<td>ALTERNATIVE D (PROPOSED PLAN)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td><strong>Mineral Materials</strong></td>
<td>(*) Continue existing authorization for mineral sites within the Monument for the term of the authorization; no new material sites will be developed except for administrative purposes; provide information on BLM areas outside the Monument where casual collection is appropriate and permitted. Consult with Idaho Transportation Department (ITD) on relinquishment of three right-of-way grants for material sites along US 93.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td><strong>Wilderness and Wilderness Study Areas</strong></td>
<td>(*) Develop a joint BLM/NPS Wilderness/WSA Plan; no additional water development or other habitat manipulations are undertaken to manage wildlife populations; continue aircraft surveillance and monitoring of wildlife population accordingly. Close and rehabilitate ways or travel routes within WSAs not identified during WSA inventories to motorized vehicles. Should those portions of the Great Rift Wilderness Study Area adjacent to the original Monument be designated as wilderness, designate the 660-foot strip of non-wilderness between the Craters of the Moon Wilderness boundary and the original Monument boundary as Wilderness.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td><strong>Areas of Critical Environmental Concern (ACECs)</strong></td>
<td>(*) Could consider new ACEC nominations in next land use planning cycle. None designated</td>
<td>(*) None designated</td>
<td>(*) Designate North Laidlaw Park as an ACEC.</td>
<td>(*) None designated</td>
</tr>
<tr>
<td>(*) COMMON TO ALL ALTERNATIVES</td>
<td>ALTERNATIVE A (NO ACTION ALTERNATIVE)</td>
<td>ALTERNATIVE B</td>
<td>ALTERNATIVE C</td>
<td>ALTERNATIVE D (PROPOSED PLAN)</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>INTERPRETATION/VISITOR UNDERSTANDING</td>
<td>(*) Develop a Comprehensive Interpretive Plan; coordinate services to meet the needs of permittees, visitors, students, educators, interest groups, and the general public; encourage partnerships at existing facilities outside the Monument; promote visitor safety and resource protection.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*) Allow commercial outfitters and guides to offer a range of guided experiences. Emphasize safety and resource protection at access points.</td>
</tr>
<tr>
<td>(*) Focus educational programs for schools on programs on site in the original NPS Monument.</td>
<td>(*)</td>
<td>(*) Expand educational programs for school groups in the Monument.</td>
<td>(*)</td>
<td>(*) Expand education programs to off-site locations.</td>
</tr>
<tr>
<td>(*) Continue developing a variety of interpretive media for on- and off-site use; continue interpretive programs and maintaining exhibits and waysides.</td>
<td>(*)</td>
<td>(*) Develop a variety of portable media to interpret the expanded portion of the Monument.</td>
<td>(*)</td>
<td>(*) Develop a variety of portable media to interpret the expanded portion of the Monument.</td>
</tr>
<tr>
<td>(*) Post informational/orientation materials at all primary backcountry access points surrounding the Monument and at proposed fire stations at Carey and Kimama.</td>
<td>(*)</td>
<td>(*) Upgrade interpretive kiosks, wayside exhibits, and associated trail system and day-use area in the Kings Bowl area.</td>
<td>(*)</td>
<td>(*) Interpretation of the expanded Monument, Preserve, and Wilderness will emphasize publications, web sites, and other off-site methods.</td>
</tr>
<tr>
<td>(*) Provide developed facilities such as the Visitor Center at the original NPS Monument.</td>
<td>(*)</td>
<td>(*) Provide additional interpretive facilities along the US 20/26/93 corridor and at significant sites within the Passage Zone.</td>
<td>(*)</td>
<td>(*) Provide additional interpretive facilities along the US 20/26/93 corridor. Provide information/orientation materials regarding the Monument in gateway communities; emphasize providing new interpretive and educational materials and programs outside the expanded portion of the Monument and in partnering communities and facilities.</td>
</tr>
<tr>
<td>COMMON TO ALL ALTERNATIVES</td>
<td>ALTERNATIVE A (NO ACTION ALTERNATIVE)</td>
<td>ALTERNATIVE B</td>
<td>ALTERNATIVE C</td>
<td>ALTERNATIVE D (PROPOSED PLAN)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Recreation</td>
<td>* Utilize Idaho State Comprehensive Outdoor Recreation and Tourism Plan (SCORTP) and Outdoor Recreation Demand Assessment in implementation-level planning to assist managers in understanding the recreational use patterns, trends, and recreation facilities needed. Require permits for overnight camping in the Wilderness and/or biking or hiking in the original Monument area north of US 20/25/93; no wood fires are permitted within the original Monument.</td>
<td>Keep existing roads open to motorized and mechanical vehicle travel.</td>
<td>Make implementation-level planning determinations as to where specific trails, trailhead facilities, and/or number of primitive campsites could be located in the Passage Zone; develop up to 12 locations for camping in the Passage Zone. Provide increased opportunities to experience a wide range of recreation trail uses. Keep existing roads open to motorized and mechanical vehicle travel.</td>
<td>Make implementation-level planning determinations as to where specific trails, trailhead facilities, and/or number of primitive campsites could be located in the Passage Zone; develop up to 4 locations for camping in the Passage Zone. Close all roads to unauthorized motorized and mechanized vehicle use in the Pristine Zone.</td>
</tr>
<tr>
<td></td>
<td>* Inventory resources and areas most vulnerable to vandalism, theft, and/or recreation use impacts. Designate areas within the Monument and periods of time when there will be no hunting and/or firearm use for reasons of public safety, administration, and/or public use and enjoyment.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td></td>
<td>* Promote Leave No Trace and Tread Lightly! Programs with staff and the public; provide information/orientation materials.</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>Visual Resources</td>
<td>ALTERNATIVE A (NO ACTION ALTERNATIVE)</td>
<td>ALTERNATIVE B</td>
<td>ALTERNATIVE C</td>
<td>ALTERNATIVE D (PROPOSED PLAN)</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>(*) Monument managers seek cooperation of visitors, neighbors, and local governments to prevent or minimize impacts to Western landscape vistas and natural dark conditions.</td>
<td>(*) VRM classification – currently 3 Class IV, 2 Class II; Wilderness – Class I.</td>
<td>(*) Wilderness and WSAs are Class I; all other areas are Class II.</td>
<td>(*) Wilderness and WSAs are Class I; all other areas are Class II.</td>
<td>(*) Wilderness and WSAs are Class I; all other areas are Class II.</td>
</tr>
<tr>
<td>Soundscapes</td>
<td>(*) Coordinate with Dept. of Defense, FAA, and Idaho Dept. of Aeronautics to minimize aircraft noise impacts. No aircraft landings associated with commercial air tours are authorized in Pristine Zone (emergency air strips are state managed and are not included in this guidance).</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOCIAL AND ECONOMIC CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(*) Consider developing intergovernmental coordinating group to ensure consistency with state and local plans. Participate with interested gateway communities in jointly meeting visitor needs.</td>
</tr>
<tr>
<td>COMMON TO ALL ALTERNATIVES</td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>(* Require research and specimen collecting permits; emphasize the use of the Monument as an outdoor laboratory for understanding the Great Rift ecosystem; coordinate the review and approval of research applications to confirm adherence to applicable policies and compatibility with the purposes of the Monument. Facilitate the transfer of research information to the public. Assist qualified researchers and educational institutions in conducting authorized studies or field classes as feasible.</td>
</tr>
<tr>
<td>ALTERNATIVE A</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Front Country</td>
</tr>
<tr>
<td>2,300 Acres (.3% CRMO)</td>
</tr>
<tr>
<td>Σ A  B C D Trails</td>
</tr>
<tr>
<td>39 30 0 2 0 7</td>
</tr>
<tr>
<td>Passage Zone Outside CRMO</td>
</tr>
<tr>
<td>Σ A  B C D Trails</td>
</tr>
<tr>
<td>39 30 0 2 0 7</td>
</tr>
<tr>
<td>Passage Zone Outside CRMO</td>
</tr>
<tr>
<td>Σ A  B C D Trails</td>
</tr>
<tr>
<td>39 30 0 2 0 7</td>
</tr>
</tbody>
</table>

CRMO = Craters of the Moon National Monument and Preserve

These figures summarize the existing inventory of land, roads, and trails on public land for which there was a management zone prescription. State lands are included in these figures; however, private lands are not included. Total private land makes up approximately 0.9% of the Monument. Acreage and mileage figures have been rounded to the nearest 100 acres and whole mile, respectively.
### Table 9
**Summary of Impacts**

<table>
<thead>
<tr>
<th></th>
<th>Alternative A</th>
<th>Alternative B</th>
<th>Alternative C</th>
<th>Alternative D (Proposed Plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geological Resources</strong></td>
<td>Geological resources would be affected by continued visitor access via roads and trails, as well as by wind erosion, fire, fire suppression, and grazing. These impacts would be mainly direct and both short- and long-term in nature, ranging from negligible to potentially major levels. Indirect impacts would result from deposition of dust and soils on geological features over time. The limitation on new mineral extraction sites would result in long-term indirect negligible beneficial effects on geological resources. Although an individual geologic feature could suffer a major impact, in context of the entire Monument's geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument's land area or an individual type of geologic feature, of which there may be many).</td>
<td>Alternative B would have the most improved road access and the greatest number of improved roads and additional trail designations, which would result in the largest increase in visitation and/or access of all the alternatives. As a consequence, Alternative B could result in a slightly greater loss of geologic features or structures and a higher rate of degradation of geologic resources or damage from vandalism. Adverse impacts from increased access would range from negligible to potentially major, with specific concerns about direct major damage to features in the Kings Bowl and Wapi Lava Field areas. Increased fire suppression and continued grazing could result in minor to moderate adverse impacts, and small beneficial effects would result from limits on new mineral extraction areas. Although an individual geologic feature could suffer a major impact, in context of the entire Monument's geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument's land area or an individual type of geologic feature, of which there may be many).</td>
<td>Alternative C would have the largest area of Pristine Zone, which would afford the most natural protection to geologic features through difficult or remote, foot-only access. Closures of non-essential roads and limited access would lead to the smallest amount of dust-related impacts. Impacts from visitor damage, theft, or vandalism would range from negligible to potentially major locally, but the probability of major impacts would be lower because of decreased access for many visitors. Negligible to minor adverse impacts from fire and grazing would continue, and there would be slight beneficial effects from limits on new mineral extraction sites. Overall, Alternative C would cause the fewest adverse impacts on geologic resources of all the alternatives. Although an individual geologic feature could suffer a major impact, in context of the entire Monument's geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument's land area or an individual type of geologic feature, of which there may be many).</td>
<td>Alternative D (Proposed Plan), because of its aggressive restoration goals and emphasis on off-site experience, would result in beneficial effects because it would limit damage from visitors and result in restoration of many features. The erosion of roads, fires, fire suppression, and grazing would result in site-specific negligible to minor adverse impacts. Although an individual geologic feature could suffer a major impact, in context of the entire Monument's geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument's land area or an individual type of geologic feature, of which there may be many).</td>
</tr>
</tbody>
</table>
### Alternative A
**(No Action Alternative)**

**Soils**
Soil disturbance, erosion, and compaction would be the primary adverse impacts associated with most management actions under Alternative A. Wildland fire and suppression, recreation facilities, and increased visitor use of the Monument under Alternative B might increase the amount of soil area directly and indirectly affected. Improvements to unpaved roads, trails, and day use areas and more extensive use of fire suppression would cause direct loss of soils locally, resulting in short- and long-term localized adverse impacts. Grazing also would cause minor to moderate adverse impacts. Overall, short- and long-term adverse impacts on soils would be minor to moderate in intensity, with long-term moderate beneficial effects from the restoration program.

### Alternative B

Improved road and trail access, development of recreation facilities, and increased visitor use of the Monument under Alternative B would cause minor to moderate adverse impacts on soils. Long- and short-term minor to moderate beneficial effects from a slightly expanded restoration program.

### Alternative C

The effects of Alternative C on soils would be substantially the same as those of Alternative A, with slightly more short-term erosion potential and slightly fewer long-term soil impacts. Impacts from facility construction maintenance and fire suppression would be reduced, and adverse impacts from grazing would remain minor to moderate. Overall, short- and long-term adverse impacts on soils would be minor to moderate in intensity, with more long-term beneficial effects from a slightly expanded restoration program.

### Alternative D
**(Proposed Plan)**

The effects of Alternative D (Proposed Plan) on soils would be similar to those of Alternative A, with more short-term erosion potential due to road and trail use and maintenance, facility development, and fire. Long- and short-term minor to moderate adverse impacts could result from grazing and fire suppression. Overall, short- and long-term adverse impacts would be minor to moderate. However, there would be moderate to major long-term beneficial effects on soils in the Monument, assuming successful restoration of the entire proposed acreage under this alternative.

### Vegetation and Fire Management

**Alternative A** would result in both short- and long-term negligible to moderate adverse impacts on vegetation from continued use and maintenance of roads and trails, plus illegal off-road use, spread of noxious weeds, fire suppression and fire, and continued grazing. Restoration activities and construction of facilities would cause short-term negligible to minor direct adverse impacts, but they would result in long-term indirect minor to major beneficial effects from vegetation restoration and public education.

**Alternative B** would result in a greater possibility of fragmentation, increased risk of noxious weed spread, and greater risk of human-caused fire because of increased visitation and access and more road and trail maintenance. Effects on vegetation would be both short- and long-term, ranging from negligible to moderate, but they would be more widespread than in Alternative A. Facility development would cause some long-term negligible to minor negative impacts on vegetation, but increased public education would result in minor to moderate long-term beneficial effects. Restoration acreage would be slightly greater than in Alternative A, with short-term minor adverse impacts and long-term moderate to major beneficial effects.

**Alternative C** would involve less opportunity for extensive visitor access, less access for fire suppression, less active management of noxious weeds, and a slower rate of restoration over a larger area than any other alternative. Adverse impacts on vegetation from access would be minor and limited, with few impacts from facility development and maintenance. Restoration efforts would cause long-term minor to major beneficial effects, but these would occur more slowly because fewer herbicides and more low impact methods would be used. Fires, fire suppression, and continued grazing would lead to minor to moderate adverse impacts.

**Alternative D** (Proposed Plan), there would be more access for fire suppression and more aggressive noxious weed control, which would result in short-term minor to moderate adverse impacts but long-term moderate to major beneficial effects, occurring in a shorter time than in the other alternatives. Strategically placed restoration projects would increase the size and continuity of healthy vegetation patches and reduce the extent of poor quality vegetation. Adverse impacts from visitor access, fire and fire suppression, grazing, and facility development would be similar to those in Alternative A, with both short- and long-term minor to moderate adverse impacts. Impacts from increased access in more sensitive areas of the Monument, including Laidlaw Park, would be limited by the reduction in the Passage Zone and increase in Pristine Zone designations made in response to public comments on the Draft Plan/EIS.
### Chapter 2: ALTERNATIVES, INCLUDING THE PROPOSED PLAN

<table>
<thead>
<tr>
<th>Alternative A</th>
<th>Alternative B</th>
<th>Alternative C</th>
<th>Alternative D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Resources</strong></td>
<td>Implementing Alternative A would continue the current local long-term effects on water resources at intensity levels generally ranging from negligible to potentially major, although any major effects would be localized to small areas. The effects of intense recreational use of ice cave pools or from livestock watering on individual playas could create minor to moderate changes in nutrient concentrations, bacteria levels, and turbidity. The duration of effects would depend on the intensity of recreational use at each site. The effects would tend to be localized to the individual water bodies, because no surface waters connect them. The overall effect of livestock use on playas would be widespread and long-term and could range from minor to potentially major intensity, depending on the location.</td>
<td>The effects of Alternative B would be substantially the same as those of Alternative A, but with a somewhat higher likelihood of more indirect adverse effects on local ice caves and playas resulting from road improvements and increased recreational use, plus a possible increase in livestock developments. Impacts would generally range from negligible to potentially moderate, but they would be localized. Depending on the site-specific circumstances, the effects could be either short term or long term.</td>
<td>The effects of Alternative C could be substantially the same as those of Alternative A because there still would be a chance that recreational use could affect ice caves, and there could be limited impacts from grazing. However, moderate adverse impacts would potentially be less widespread or frequent because road access would be reduced.</td>
</tr>
</tbody>
</table>
**Wildlife Resources**

Under Alternative A, which would continue current conditions, effects on wildlife would continue to come primarily from conflicts with human uses of the Monument, including disturbance by people and vehicles and conflicts and competition with livestock use. Access and roads and associated visitor recreation would result in minor long-term adverse impacts, plus short-term moderate local adverse impacts on some species in high use areas. Sagebrush steppe restoration and weed management actions would cause some short-term minor impacts, with minor to major beneficial effects over the long term, depending on the species involved. Fire and suppression of fire would benefit some species but adversely affect others. The 50 sensitive species, which use all major habitats in the Monument and have a variety of life histories, would experience the same range of impacts as other wildlife. The bald eagle and the gray wolf, which are listed as threatened and endangered, are occasionally found in the Monument, but both are peripheral species, and the impacts on them would be negligible to minor. Current livestock use and potential new livestock developments, which would be authorized in accordance with the Idaho Standards for Rangeland Health and Guidelines, could result in minor to moderate adverse impacts on sagebrush steppe habitat and/or sagebrush obligate wildlife species. In the long-term, the restoration of 40,000 acres of degraded sagebrush steppe would mitigate a portion of any adverse effects on wildlife resources.

<table>
<thead>
<tr>
<th>Alternative A</th>
<th>Alternative B</th>
<th>Alternative C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wildlife Resources</strong></td>
<td>The impacts on wildlife from Alternative B would largely be the same as those of Alternative A, but the slight increase in acres restored would result in a related increase in improved habitat for sagebrush steppe species, a long-term minor to major beneficial effect. There could be a modest increase in adverse impacts from traffic disturbance in the larger Passage Zone area and the potential for increased or improved access to motor vehicles in that zone, as well as the development of a visitor use area in Kings Bowl and multiuse trails. The effects on wildlife would vary from species and species, but most effects would be long-term, minor to moderate, and localized.</td>
<td>The effects on wildlife from Alternative C would largely be the same as those described for Alternative A, but 15,000 more acres would be restored in Alternative C, resulting in more improved habitat for sagebrush steppe species. There would be fewer adverse impacts from traffic disturbance because the Passage Zone would be smaller in Alternative C, and the Primitive Zone would be larger. These designations would include the potential for decreased access for motor vehicles and related recreational use overall, resulting in fewer direct and indirect adverse impacts on all wildlife species.</td>
</tr>
<tr>
<td>(No Action Alternative)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternative D</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Proposed Plan)</td>
</tr>
</tbody>
</table>
### Alternative A
**(No Action Alternative)**

**Air Resources**
Prescribed fire, wildland use fire, and fugitive dust from roads result in smoke or dust containing particles that adversely affect human health and air quality related values such as visibility. The effects on air quality from smoke and dust caused by the management activities of Alternative A typically would be short-term and local. The intensity of effects could range from negligible to moderate, depending on weather conditions and the location and size of fires. Most prescribed and wildland use fires would cause minor short-term effects. Fugitive dust from roads with current traffic use would produce short-term local adverse effects of negligible intensity.

**Cultural Resources**
Alternative A would have a negligible to minor, adverse impact on maintaining the long-term integrity of the majority of archaeological resources within the Monument. The restoration program outcome and fire suppression would have a long-term, moderate beneficial effect, while initial restoration, suppression actions, grazing, and vehicle travel would result in short-term, minor to moderate adverse impacts.

### Alternative B

**Air Resources**
The adverse effects on air quality from the management actions of Alternative B typically would be short term and limited to the local region. The intensity of effects would range from negligible to moderate, with most prescribed and wildland use fires having minor effects. Fugitive dust from roads with potentially increased vehicle traffic use on unpaved roads would produce short-term local effects of negligible to minor intensity. A substantial increase in traffic would be required to elevate this impact to the moderate levels.

**Cultural Resources**
Alternative B would have a moderate adverse effect on maintaining the long-term integrity of the majority of archaeological resources within the Monument by emphasizing recreational opportunities and vehicle access. The restoration program outcome and fire suppression would have a long-term, moderate beneficial impact, where vehicle travel, grazing, initial restoration, and suppression actions would result in short-term minor to moderate adverse impacts.

### Alternative C

**Air Resources**
The adverse effects on air quality from Alternative C typically would be short term and limited to the local region. The intensity of effects would range from negligible to moderate, with most prescribed and wildland use fires causing minor effects. Fugitive dust from roads with decreased traffic use and vehicle speeds would produce short-term local effects of negligible intensity. The addition of non-Monument sources occurring during the same time period could produce more intense but still moderate effects throughout the Monument.

**Cultural Resources**
Alternative C would have a minor beneficial effect on maintaining long-term integrity of the majority of archaeological resources within the Primitive and Pristine Zones. The restoration program outcome, fire suppression, and restricted access would all contribute to long-term, minor to moderate beneficial impacts. Vehicle traffic (limited), grazing, initial restoration, and suppression actions would result in short-term, minor to moderate adverse impacts.

### Alternative D (Proposed Plan)

**Air Resources**
The adverse effects on air quality from the actions of Alternative D (Proposed Plan) typically would be short term and limited to the local region. The intensity of effects would range from negligible to moderate, with most prescribed and wildland use fires causing minor effects. Fugitive dust from roads with current traffic use would produce short-term local effects of negligible intensity. The addition of non-Monument sources occurring during the same time period could produce more intense but still moderate effects throughout the Monument.

**Cultural Resources**
Alternative D (Proposed Plan) would have a moderate beneficial effect on maintaining the long-term integrity of the majority of archaeological resources within the Monument by emphasizing off-site interpretation and visitor services, and by emphasizing aggressive range restoration. Short-term minor to moderate adverse impacts would also occur from vehicle travel, initial restoration activities, suppression actions, and grazing.
| **Alternative A**  
(No Action Alternative) | **Alternative B**  
By emphasizing recreational activities and vehicle access, Alternative B would cause a long term minor to moderate adverse effect on road conditions in the Monument, but it also would lead to a long-term moderate beneficial effect on the availability of access and ease of travel to many locations in the Monument. | **Alternative C**  
By minimizing the amount of human and vehicle traffic into the Primitive and Pristine Zones, Alternative C would result in a minor beneficial effect on maintaining the long-term integrity of ethnographic resources and traditional use areas in the Monument, but by limiting vehicle access it could cause some hardship for elderly tribal members. | **Alternative D**  
(Proposed Plan)  
By emphasizing off-site interpretation, off-site visitor services, and range restoration, Alternative D (Proposed Plan) would result in a minor to moderate beneficial effect on maintaining the long-term integrity of the ethnographic resources and traditional use areas in the Monument, but by limiting vehicle access it could cause some hardship for elderly tribal members. |

### LAND USE AND TRANSPORTATION

**Travel and Access**  
Actions under Alternative A would cause minor adverse impacts on travel and access in the Monument, with long-term minor beneficial effects from completed restoration and road maintenance activities.

By emphasizing recreational opportunities and increased access, Alternative B would cause a long term minor to moderate adverse effect on road conditions in the Monument, but it also would lead to a long-term moderate beneficial effect on the availability of access and ease of travel to many locations in the Monument.

By closing more miles of road in the Monument, Alternative C would cause minor to moderate adverse impacts on access. Reduced vehicle traffic could result in minor beneficial effects on transportation safety, but there also might be minor adverse impacts on travel safety from visitors using lower standard roads.

By emphasizing off-site interpretation, off-site visitor services, and long-term range restoration, Alternative D (Proposed Plan) would lead to long-term minor beneficial effects on access and road conditions in the Monument.

**Livestock Grazing**  
Restoration activities and restrictions in the Pristine Zone in Alternative A could restrict grazing operations and/or increase costs associated with grazing, resulting in short- and long-term minor to moderate adverse impacts. The use of the Passage Zone for potential road improvement and facility development would result in short- and long-term minor beneficial effects, but the potential increased recreational use of this area could cause minor to moderate adverse impacts. Alternative A would have the third largest Pristine Zone, which could restrict or increase the costs associated with grazing.

Restoration activities and restrictions in the Pristine Zone under Alternative B could restrict or increase costs associated with grazing, resulting in short- and long-term moderate adverse impacts on grazing, but larger Passage Zone areas and the development of good access could result in road improvement and facility development, which would cause short- and long-term minor to moderate beneficial effects. The increased recreational use and access in this area could cause minor to moderate adverse impacts.

Restoration activities and restrictions in the Pristine Zone under Alternative C could restrict or increase the costs associated with grazing, resulting in moderate short- and long-term adverse impacts on grazing. The smaller number of areas in the Passage Zone would allow for some access and facility development, a negligible to minor beneficial effect, but any increased recreational use would cause minor adverse impacts on grazing operations. The large amount of Pristine Zone could increase costs and limit access, causing moderate adverse impacts on grazing.

Alternative D (Proposed Plan) would involve the largest acreage identified for restoration; this would cause short-term moderate adverse impacts on grazing operations, but the long-term effects would be beneficial. The use of an expanded Passage Zone for potential road improvement and facility development and potentially more recreational use would result in minor to moderate beneficial effects from increased access and more ability to create new facilities. The Pristine Zone could restrict or increase the costs associated with grazing, a moderate adverse impact.
### Chapter 2: ALTERNATIVES, INCLUDING THE PROPOSED PLAN

<table>
<thead>
<tr>
<th>Alternative A</th>
<th>Alternative B</th>
<th>Alternative C</th>
<th>Alternative D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other Land Uses</strong></td>
<td>Alternative B would cause negligible effects on realty and minerals in the Monument and a minor adverse impact on administrative facilities.</td>
<td>By minimizing the amount of human and vehicle traffic into the Primitive and Pristine Zones, Alternative C would cause long-term minor beneficial effects on the Monument’s administrative facilities, realty, and minerals.</td>
<td>Because of its emphasis on off-site interpretation and visitor services, Alternative D (Proposed Plan) would result in negligible impacts on administrative facilities, realty, and minerals in the Monument.</td>
</tr>
<tr>
<td>Alternative A (No Action Alternative)</td>
<td>Alternative A would result in negligible impacts on administrative facilities, realty, and minerals in the Monument.</td>
<td>The adverse effects on the characteristics and purposes of special designation areas from most actions under Alternative C would be primarily negligible to minor and short term.</td>
<td>The adverse effects on the characteristics and purposes of special designation areas from Alternative D (Proposed Plan) would be mostly negligible to minor and short-term, with potential for more intense effects if restoration activities took place in or near any of the areas. The effect of livestock on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and vegetative structure would be altered for long periods (5+ years). Road system management and limited regulation of off-highway vehicle use could cause indirect adverse effects through the spread of invasive weeds and the creation of unauthorized routes.</td>
</tr>
</tbody>
</table>

### Special Designation Areas

The adverse effects on the characteristics and purposes of special designation areas from Alternative B would be primarily negligible to minor and short term, but the effects from livestock use on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and the vegetative structure would be altered for long periods of time (5+ years). Road system management and limited regulation of off-highway vehicle use could cause negligible to moderate adverse indirect effects through the spread of invasive weeds and the creation of unauthorized routes.

The adverse effects on the characteristics and purposes of special designation areas from Alternative C would be primarily negligible to minor and short term. The effect of livestock on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and vegetative structure would be altered for long periods of time (5+ years). The lack of access and limited Passage Zone acreage could cause indirect adverse effects if grazing was expanded to certain areas, with potential indirect adverse effects through the spread of invasive weeds and the creation of unauthorized routes. Designating a new ACEC in North Laidlaw Park would lead to minor beneficial effects on the adjacent Craters of the Moon Wilderness and Great Rift WSA.

The adverse effects on the characteristics and purposes of special designation areas from Alternative D (Proposed Plan) would be mostly negligible to minor and short-term, with potential for more intense effects if restoration activities took place in or near any of the areas. The effect of livestock on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and vegetative structure would be altered for long periods (5+ years). Road system management and limited regulation of off-highway vehicle use could cause indirect adverse effects through the spread of invasive weeds and the creation of unauthorized routes. The additional Pristine Zone and reduction of Passage Zone in the Laidlaw Park area, compared to Alternative D as presented in the Draft Plan/EIS, would provide indirect beneficial impacts to an area that had been discussed as an ACEC candidate during the scoping for this project.
<table>
<thead>
<tr>
<th><strong>Alternative A</strong> (No Action Alternative)</th>
<th><strong>Alternative B</strong></th>
<th><strong>Alternative C</strong></th>
<th><strong>Alternative D</strong> (Proposed Plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VISITOR EXPERIENCE</strong></td>
<td><strong>INTERPRETATION AND VISITOR UNDERSTANDING</strong></td>
<td><strong>REcreation AND PUBLIC SAFETY</strong></td>
<td><strong>REcreation AND PUBLIC SAFETY</strong></td>
</tr>
<tr>
<td>Posting information at backcountry access points and fire stations; offering school programs at the original NPS Monument; interpreting cultural resources; adding interpretive media, programs, exhibits, and waysides; and modest development in the Kings Bowl area would cause long-term minor beneficial effects on interpretation and visitor understanding, as would agency assistance to research and educational institutions. In addition, long-term major benefits would result from expanding the existing Monument Visitor Center.</td>
<td>Upgrading the Carey-Kimama and Arco-Minidoka Roads; offering school programs at the original NPS Monument; interpreting cultural resources; adding interpretive media, programs, exhibits, and waysides; and developing portable interpretive media would result in long-term minor beneficial effects on interpretation, as would agencies assisting research and educational institutions, developing a cave restoration program, and interpreting sagebrush steppe restoration and integrated weed management. Short-term negligible adverse impacts would result from upgrading the Carey-Kimama and Arco-Minidoka Roads. Long-term minor beneficial effects on interpretation would result from adding interpretive facilities along US 20/26/93, at significant sites within the Passage Zone, and at Kings Bowl. Long-term major beneficial effects would come from expanding and developing new facilities at the existing Visitor Center.</td>
<td>The added access available in Alternative B would contribute both beneficial and adverse effects, depending on the type of recreation desired. Acquiring private inholdings would result in long-term negligible to minor beneficial effects, as would greater protection of geological features in the expanded part of the Monument, safety emphasis through interpretation, restoring sagebrush steppe communities, limited facility developments.</td>
<td>Long-term minor beneficial effects on interpretation under Alternative D (Proposed Plan) would result from placing interpretive signs and information along the US 20/26/93 corridor and at access points; offering school programs (including off-site efforts) and off-site interpretation of cultural resources; posting interpretive media, programs, exhibits, and waysides; developing portable off-site interpretive media; and modest development in the Kings Bowl area. Agency assistance to research and educational institutions and an intensive cave restoration program also would cause long-term minor beneficial effects. Long-term moderate beneficial effects would come from placing interpretive materials, facilities, and programs outside the Monument, in gateway communities and at a visitor center along the I 84 corridor, as well as from offering commercially guided services in the Monument. Long-term major benefits would accrue from expanding the existing Visitor Center. Commercial guide services could cause long-term minor adverse impacts on people visiting the interior of the Monument without a guide.</td>
</tr>
<tr>
<td>Long-term minor beneficial effects on interpretation under Alternative D (Proposed Plan) would result from placing interpretive signs and information along the US 20/26/93 corridor and at access points; offering school programs (including off-site efforts) and off-site interpretation of cultural resources; posting interpretive media, programs, exhibits, and waysides; and developing portable interpretive media would result in long-term minor beneficial effects on interpretation. There would be cumulative effects from Cooperative Weed Management Area programs. Long-term, major benefits would result from expanding the existing visitor center.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative A</td>
<td>Alternative B</td>
<td>Alternative C</td>
<td>Alternative D</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------</td>
<td>---------------</td>
<td>----------------</td>
</tr>
<tr>
<td><strong>(No Action Alternative)</strong></td>
<td>communities, developing and rehabilitating trails in the Kings Bowl area, developing or improving facilities, closing certain ways in Wilderness areas and WSAs, and authorizing commercial outfitters and guides. Short-term minor beneficial effects would result from wildland fire suppression. Long-term moderate beneficial effects would result from greater protection of geological features in the original NPS Monument and indirectly from restoring sagebrush steppe communities. Keeping almost all existing roads open to motorized travel would result in long-term minor beneficial effects on certain recreational experiences, but such access also could affect other recreational experiences, resulting in long-term minor adverse impacts. Long-term minor beneficial effects would result from the availability of undeveloped and dispersed camping, but this also could affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts. Ongoing livestock operations would result in long-term minor to moderate adverse impacts on certain recreational experiences, but this also could affect other recreational opportunities, resulting in long-term negligible to minor beneficial effects.</td>
<td>communities, developing and rehabilitating trails in the Kings Bowl area, developing or improving facilities, closing certain ways in Wilderness areas and WSAs, and authorizing commercial outfitters and guides. Short-term minor beneficial effects would result from wildland fire suppression, and short-term negligible adverse impacts would result from wildland fire use. Long-term moderate beneficial effects would result from greater protection of geological features in the original NPS Monument, and there would be indirect long-term moderate benefits from restoring sagebrush steppe communities. Long-term minor beneficial effects on certain recreational experiences would come from converting many Class D roads to non-motorized trails, but such conversion also would affect other recreational experiences, causing long-term minor adverse impacts. Closing certain roads and ways in the Pristine Zone to motorized and mechanized vehicle travel would result in long-term moderate beneficial effects on certain recreational experiences, but long-term minor adverse impacts also would result from such closures, affecting other recreational experiences. These closures also would result in long-term moderate adverse impacts from reduced access. Long-term minor beneficial effects would result from the availability of undeveloped and dispersed camping, but this also could adversely affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts. Ongoing livestock operations would result in long-term minor to moderate adverse impacts on certain recreational experiences, but this also could affect other recreational opportunities, resulting in long-term negligible to minor beneficial effects.</td>
<td>interpretation, restoring sagebrush steppe communities, trail development and rehabilitation in the Kings Bowl area, developing or improving facilities, closing certain ways in Wilderness areas and WSAs; and authorizing commercial outfitters and guides. Short-term minor beneficial effects would result from wildland fire suppression. Long-term moderate beneficial effects would result from greater protection of geological features in the original NPS Monument and indirectly from restoring sagebrush steppe communities. Keeping almost all existing roads open to motorized travel would result in long-term minor beneficial effects on certain recreational experiences, but such access also could affect other recreational experiences, resulting in long-term minor adverse impacts. Long-term minor beneficial effects would result from the availability of undeveloped and dispersed camping, but this also could affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts. Ongoing livestock operations would result in long-term minor to moderate adverse impacts on certain recreational experiences, but this also could affect other recreational opportunities, resulting in long-term negligible to minor beneficial effects.</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Long-term minor beneficial effects on visual resources would result from greater protection of geologic features, from restoring sagebrush steppe communities, and from holding surface disturbing activities to the VRM management class standards that apply in Alternative A.</td>
<td>Long-term minor beneficial effects on visual resources would result from greater protection of geologic features and from restoring sagebrush steppe communities. Long-term minor to moderate beneficial effects would come from holding surface-disturbing activities to VRM management class standards that apply in Alternative B. Artificial light sources would cause long-term negligible cumulative adverse impacts. Long-term minor adverse impacts would result from existing livestock facilities and, cumulatively, from communications sites during the day. Long- and short-term minor adverse impacts would result from the use of existing mineral material sites. Long-term moderate adverse impacts would result from communications sites at night. Class B road use would cause short-term minor adverse impacts, and short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.</td>
<td>Long-term minor beneficial effects on visual resources would result from greater protection of geologic features; long-term minor to moderate beneficial effects would come from restoring sagebrush steppe communities; and long-term moderate beneficial effects would result from holding surface-disturbing activities to VRM management class standards that apply in Alternative C. Artificial light sources would cause long-term negligible cumulative adverse impacts. Long-term minor adverse impacts would result from existing livestock facilities and, cumulatively, from communications sites during the day. Long- and short-term minor adverse impacts would result from the use of existing mineral material sites. Long-term moderate adverse impacts would result from communications sites at night. Class B road use would cause short-term minor adverse impacts, and short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.</td>
<td>Long-term minor beneficial effects on visual resources would result from greater protection of geologic features; long-term minor to moderate beneficial effects would result from holding surface-disturbing activities to VRM management class standards that apply in Alternative D (Proposed Plan), and restoring sagebrush steppe communities would create long-term moderate beneficial effects. Artificial light sources would cause long-term negligible cumulative adverse impacts. Long-term minor adverse impacts would result from existing livestock facilities and, cumulatively, from communications sites during the day. Long- and short-term minor adverse impacts would result from the use of existing mineral material sites. Long-term moderate adverse impacts would result from communications sites at night. Class B road use would cause short-term minor adverse impacts, and short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.</td>
</tr>
</tbody>
</table>
| Alternative A  
(No Action Alternative) | Alternative B | Alternative C | Alternative D  
(Proposed Plan) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soundscapes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.</td>
<td>The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. Some increased noise would come from more use of the Passage Zone. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.</td>
<td>The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations and from livestock operations. Air operations would cause short-term minor adverse impacts.</td>
<td>The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations and from livestock operations. Air operations would cause short-term minor adverse impacts.</td>
</tr>
<tr>
<td><strong>Social and Economic Conditions</strong></td>
<td>Alternative B would result in a moderate increase in the annual number of visitors, would lengthen visitors’ stay, and would increase recreational spending per visit. This moderate increase in visitors and visitor spending would result in a negligible effect on the local economy; a negligible or minor effect on local employment rates and per capita income; a negligible effect on the local population, health care, education, and crime rates around the Monument; and a moderate adverse or beneficial effect on visitor satisfaction. A moderate adverse impact would result from the gradual loss of mineral leases.</td>
<td>Alternative C would result in a negligible adverse or beneficial effect on the annual number of visitors to the Monument and Preserve, the length of visitors’ stay, and the amount of visitor spending. There would be negligible direct, indirect, or cumulative effects on the regional economy or any economic or social indicator, other than the moderate adverse impacts from the gradual loss of mineral leases. Alternative C would not affect the rural character around the Monument.</td>
<td>Alternative D (Proposed Plan) would result in a moderate increase in the annual number of visitors, the length of visitors’ stay, and the amount of recreational spending per visit. This moderate increase in visitors and visitor spending would result in a negligible effect on the local economy; a negligible or minor effect on local employment rates and per capita income; a negligible effect on the local population, health care, education, and crime rates around the Monument; and a moderate adverse or beneficial effect on visitor satisfaction. A moderate adverse impact would result from the gradual loss of mineral leases.</td>
</tr>
</tbody>
</table>
Previous page, clockwise, from top left
Hornito
Dwarf buckwheat
Lava lichen
Lava bombs
The purpose of this chapter is to describe the physical, biological, cultural, and social environments of the Craters of the Moon National Monument and Preserve (the Monument), including human uses, that could be affected from implementing any of the alternatives described in Chapter 2. The topics discussed in this chapter are those identified as important issues by the public and the agencies during scoping. The discussion generally follows the order of the topics addressed in Chapter 2 under “Management Guidance Common to All Alternatives.” The scientific names for species mentioned in the text are listed in Appendix D.

NATURAL RESOURCES

GEOLOGICAL RESOURCES

The purpose and significance of the Monument tie 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.

Geologic Setting

The Monument is in the Snake River Basin-High Desert (Omernik 1986) and is primarily comprised of three geologically young (Late Pleistocene-Holocene) lava fields that lie along the Great Rift (see Figure 11 for regional setting and location). The Great Rift volcanic rift zone is a belt of open cracks, eruptive fissures, shield volcanoes, and cinder cones, which varies in width between approximately 1 and 5 miles. It begins north of the Monument, approximately 6 miles from the topographic edge of the Snake River Plain, in the vent area of the Lava Creek flows located in the southern Pioneer Mountains (Kuntz et al. 1992). The Great Rift extends southeasterly from the Lava Creek vents for more than 50 miles to somewhere beneath the Wapi Lava Field (Kuntz et al. 1982).

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

The Craters of the Moon Lava Field covers 618 square miles and is the largest dominantly Holocene basaltic lava field in the lower 48 states (Kuntz et al. 1992). It contains a tremendous diversity of Holocene 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).

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

Adjacent to the bowl is an outstanding example of a lava lake with well-developed levees. The crust of the lake was broken by many of the blocks ejected by the phreatic explosion. The interior of this lake was still molten and oozed up through the holes punched in its crust, resulting in a large number of squeeze-up mounds of gas-charged lava (Hughes et al. 1999). Fissure caves, such as Crystal Ice Cave
Regional Geological Settings

Note: L.F. = Lava Field

CRATERS OF THE MOON NATIONAL MONUMENT AND PRESERVE
Proposed Management Plan and Final Environmental Impact Statement
and Creons Cave, lie along the Great Rift at Kings Bowl. At South Grotto, the rift may be passable to a depth of 650 feet below the surface (Earl 2001). Feeder dikes and spatter cones can be seen along the Great Rift at Kings Bowl.

The Wapi Lava Field, approximately 2,200 years old (Hughes et al. 1999), is a classic shield volcano with a flattened dome shape. Kuntz et al. (1992) believe that the Wapi Lava Field began as a fissure eruption, but developed a sustained eruption from a central vent complex, which produced the low shield volcano seen today. Rising approximately 60 feet above the south side of the largest vent is Pillar Butte. Greeley (1971) reported that the only known dribblet spires in the continental United States occur on the flows associated with Pillar Butte. Now, however, dribblet spires are known to also occur in Diamond Craters in Oregon.

Potential for Future Eruptions

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

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

Geologic Features

The lava is described by its physical appearance, which is largely determined by its composition, temperature, fluid and crystal content, and the
influence exerted on it by the surface and slope it flowed down. Block lava has a surface of angular blocks and forms from very dense lava. 'a has a rough, jagged, or clinkery surface. Pahoehoe has a smooth, ropy, or billowy surface.

There are several types of pahoehoe. Shelly pahoehoe forms from highly gas-charged lava, often near vents or tube skylights, and contains small open tubes, blisters, and thin crusts. Some shelly pahoehoe crusts are so thin and fragile that they are easily broken by foot traffic; much of the shelly pahoehoe that surrounds Pillar Butte is like this. Spiny pahoehoe forms from very thick and pasty lava and contains elongated gas bubbles on the surface that form spines. Spiny pahoehoe is the dominant type of pahoehoe found in the Monument. Slabby pahoehoe is made up of jumbled up plates or slabs of broken pahoehoe crust. Many of the pahoehoe crusts are glassy and may exhibit various shades of blue or green prized by collectors. These glassy crusts are also prone to damage from foot traffic.

Lava tubes are hollow spaces beneath the surface of solidified lava flows, formed by the withdrawal of molten lava after the formation of the surface crust. Within lava tubes, various formations such as lava stalactites occur that are vulnerable to damage or theft.

Most of the lava flows in the Monument are pahoehoe and were fed through tubes and tube systems. Some lava flows produce tumuli (small mounds) or pressure ridges (el长得 ridges) on their crusts. There are also pressure plateaus that were produced by the sill-like injection of new lava beneath the crust of an earlier sheet flow that had not completely solidified. In some places, squeeze-ups formed when pressure was sufficient to force molten lava up through tension fractures in the top of pressure ridges or cracks in the solidified crust of lava ponds. Because of their small size and unusual shapes, many of the squeeze-ups associated with the Kings Bowl Lava Field are vulnerable to theft.

When lava comes to the surface, highly charged with gas, and is ejected from one or a few vents, it can spray high into the air forming a fire fountain(s). The highly gas-charged molten rock cools and solidifies during flight and rains down to form cinder cones. Loose cinders are particularly vulnerable to compaction and wind and water erosion. Cinders displaying a play of colors, caused by a thin layer of glass, also make a tempting target for souvenir gatherers.
Other lava features include spatter cones that formed when fluid globs (spatter) were ejected short distances (generally less than 200 feet) from some of the vents and accumulated right around the vent, forming short steep-sided cones. Along eruptive fissures where a whole segment erupted, spatter accumulated to produce low ridges called spatter ramparts. Hornitos, also known as rootless vents, are similar in appearance to spatter cones, but formed from spatter ejected from holes in the crust of a lava tube instead of directly from a feeding fissure. The individual globs that comprise the spatter cones, spatter ramparts, and hornitos are frequently not very well adhered to one another and are easily dislodged, making them very vulnerable to human damage.

Four kinds of volcanic “bombs” are found in the Monument; all of which started off as globs of molten rock thrown or ejected into the air. The smaller bombs (backpack size or less) are frequently a target for collection and are now rare in proximity to roads and high-use trails in the Monument. The photo below depicts one type of bomb known as a “bread crust bomb.”

Caves
There are many different kinds of caves in the Monument. Shelly pahoehoe areas contain many small open tubes and blisters. There are thousands of these small open tubes and blisters within the Monument. Pahoehoe flows can travel more than 20 miles because the ceilings of lava tube insulate them from heat loss and some of the tubes are greater than 30 feet in height. The photo below depicts one cave known as Indian Tunnel.

Some fissure caves associated with the Great Rift can be passable to hundreds of feet below the surface. Earl (2001) reported at South Grotto in the Kings Bowl Lava Field that the Great Rift can be passable to a depth of at least 650 feet, depending on the internal ice conditions. Bears Den Waterhole, another fissure cave located in cracks of the Great Rift, is ice floored and usually a source of water even in a drought year.

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

These various types of caves in
the Monument can also be associated with archaeological and paleontological features, and they can harbor wildlife such as the blind lava-tube beetle, bushy-tailed woodrats, and Townsend’s big-eared bats. Deep cracks and fissures, including cracks with likely connections to lava tubes beneath, and the entrances to caves often create or provide microenvironments or microhabitats. Some of these microenvironments support impressive moss, algal, or lichen communities and even ferns.

People are attracted to caves, and some of the easily accessed caves in the Monument now contain considerable graffiti (e.g., Lariat Cave), litter, and other forms of vandalism.

**Paleontology**

Tree molds are impressions in the solidified lava that form as trees are enveloped by the lava flows, begin to burn, release water and other vapors that quickly cool the surrounding lava, and leave behind a mold of the charred tree and occasionally some carbon residue (see photos). Generally, tree molds preserve impressions of the cracked, partly burnt wood, but do not preserve bark or other textures that would aid in the identification of tree species. In the northern end of the Monument, more than 100 tree molds have been identified. Of the more than 100 inventoried tree molds, 11 showed minor damage from humans, and these were at developed sites.

Animal bones accumulate in lava tubes as inhabitants die naturally and are also introduced into the caves as a result of human or animal disposal. Exploration of such deposits in the lava tubes of the Snake River Plain has revealed bones of extinct animals such as mammoth and camel and modern large animals such as grizzly bear, gray wolf, bison, elk, and pronghorn (Miller 1989). In addition to lava tubes, lava blisters have also accumulated a faunal record. The openings create an excellent trap for larger animals. Carnivores found in these blister traps on the ESRP include the now extinct noble marten and animals no longer found in the area such as bison, wolverine, and Canada lynx (Miller 1989). A third type of unaltered fossil accumulation occurs in packrat nests. These nests, or middens, are an important contributor to the fossil record because of the ability to date the pollen and bone assemblages and relate that information to the paleoecology of the area.

**SOILS**

The soils of the Monument area are variable, reflecting the differences and interactions between 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. Plants can establish and grow in little to no soil. As time progresses, soil development continues and more vegetation establishes.

Sagebrush steppe, mountain areas, and kipukas within the Monument have deeper, well-formed soils. 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 susceptible to water and wind erosion.

Soil Origins
The soils in the Monument and surrounding area have developed from rocks deposited during a sequence of geologic events that began almost 600 million years ago, during the Cambrian Period. For approximately 500 million years, ancient seas intermittently covered the region, depositing limestone and other sedimentary rocks typical of ocean floors (Shallat and Burke 1994). Beginning about 17 million years ago, fault block mountain building has pushed up the rocks, exposing them to weathering and soil development processes. The many mountain ranges in the Basin and Range Province have developed in this way. Recent earthquake activity is evidence that these mountain-building processes continue today.

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 basalt flows that are visible on the surface of the majority of the Snake River Plain began approximately 2 million years ago, during the Pleistocene, and continued until very recent times.

The lava flows on the Snake River Floodplain are approximately 1 million years old (Anderson et al. 1996). This volcanic activity built up the central part of the plain, forming some internally drained basins within, such as Big and Little Lost River sinks.

During recent times, the region has periodically received layers of windblown dust from sources further west. These loess deposits have mantled the local geology and have resulted in many of the deeper soils on the eastern Idaho foothills and the leeward sides of lava flows within the Snake River Plain.

Soil Types
Soil surveys have been completed and published by the Natural Resource Conservation Service (NRCS) for most of the Monument outside of the recent lava. Other portions of the area have been partially mapped at different times by the Bureau of Land Management (BLM) in the late 1980s and 1990s. Many of the soils surveys are now in Geographic Information System (GIS) form, where they can be viewed in Arcview and other GIS software.

Soil types in the Monument fall into the following categories:

- Soils of the Mountains and Foothills – These soils are located primarily in northern part of the Monument. They have developed in mixed metamorphic and/or volcanic shallow, rocky material and have carbonate accumulations at depth. Typical vegetation includes sagebrush, mountain shrubs, and trees found native to eastern and southern Idaho.

- Soils of Alluvium from the Mountains and Streams – These soils have developed in lime-rich alluvial materials eroded from the mountains on the Snake River Floodplain and streams. Typical shrub vegetation includes mountain or Wyoming big sagebrush, low sagebrush, and occasionally some basin big sagebrush.

- 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 threetip sagebrush.

- Sandy Soils and Playa Lake Bottoms – These soils have formed in alluvial and eolian accumulations usually near dry lake bottoms. The sands have weathered from quartzite, basalt, and sedimentary rocks, generally of local origin (Nace et al. 1975). Typical shrub vegetation includes basin big sagebrush or Wyoming big sagebrush.

- Cinder Soils – This is a complex of soils mapped by NRCS and particular to cinder cones and deposits located within the Monument. Soils within this complex consist of varying ratios of cinder and eolian loess accumulations. Typical vegetation includes dwarf buckwheat, antelope bitterbrush, mountain big sagebrush, and limber pine.

**Biological Soil Crusts**

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

Soil textures in the Monument range from fine- to coarse-textured, with silt loams and sandy loams being predominant in areas where biological soil crusts are most likely to occur. Coarse-textured soils are more difficult for biological crusts organisms to stabilize due to the size of the particles. While crusts occur on soils with a variety of chemical natures, they tend to be highly developed on soils with basic pH and that are more saline or calcareous. Mosses are often a dominant organism on soils with neutral to acidic pH. Annual precipitation in the Monument averages from 8 to 16 inches. Areas with approximately 14 inches of annual precipitation have vegetation of a density where crusts are no longer needed to stabilize the soil surface.

The presence or absence of biological soil crusts on the Monument landscape depends on a variety of environmental factors as well as land use and fire history. While several BLM-administered areas and some kipukas in the Monument do not show good development of biological soil crusts, more areas, particularly in the drier southern portions, need to be investigated to determine the potential for crusts development. For example, areas with non-sprouting basin and Wyoming big sagebrush need to be compared with similar areas supporting the re-sprouting threetip sagebrush to determine if areas with a naturally shorter fire cycle (as indicated by the re-sprouting shrub) might have less potential for crust development than areas with longer historic fire return intervals.

**VEGETATION, INCLUDING SPECIAL STATUS SPECIES, AND FIRE MANAGEMENT**

Although some of the younger lava flows are devoid of vegetation, there is a surprising diversity of plants and plant communities in the Monument (see Appendix D). The type and density of vegetation varies widely, depending on the availability of soil. The lavas and kipukas (islands of vegetation surrounded by younger lava flows) show a full range of ecological succession – from pioneer plants, such as lichens and mosses on the basalt surfaces, to complex plant communities in the kipukas and rangelands bordering the lava flows. The rough topography of the lava flows creates numerous microsites where soil and water accumulate to support plants that would normally occur in higher precipitation zones.
Limber pine stands occur on the cinder cones and lava flows in the northern part of the Monument. The transition between limber pine and juniper vegetation types occurs between Blacktail Butte and the original Monument. This ecotone normally occurs only in montane regions and is thus an unusual feature for the lava flows (USDI BLM 1980b). Quaking aspen and Douglas fir stands are found on some north-facing slopes in the northern portion of the Monument. Riparian and wetland habitats are limited to the northern periphery due to the geology, topography, and climate of the area.

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

Some of the kipukas and portions of the original Monument have not been grazed by domestic livestock and have seen little in the way of other human-related disturbances. Thus, these areas, which are protected by new, rough lavas, offer some of the best remaining examples of native sagebrush steppe for the Snake River Plain. They are valuable as examples of range conditions before European-American settlement and the introduction of domestic livestock, and they offer an opportunity to observe climax vegetation, as well as successional processes associated with natural disturbances such as fire.

Vegetation in the original Monument and parts of the expanded Monument has been inventoried and mapped through various efforts (Day and Wright 1985; Whipple 1992; Jurs and Sands 2004). A recent vascular plant inventory effort estimates the presence of more than 600 species and at least 35 vegetation communities within the Monument (NPS, unpubl. data). The current vegetation map of the Monument was created with the use of LandSat imagery.

Data from the various vegetation studies, as well as inventory and monitoring points, were used to define spectral signatures. Vegetation inventory and ground-truthing of the map are ongoing; the vegetation map is a dynamic resource. This map, which is relatively broad in scale, is intended to provide a frame of reference for vegetation distribution and diversity within the Monument. The following discussion describes complexes that group and define the various vegetation types illustrated on the map (Figure 12).

**Vegetation Types in the Monument**

- **Vegetated Lava Complex**

Exposed lava flows are the newest lava flows or rough A’a flows that are mostly devoid of vascular plants; however, lichens and mosses are frequently present. Based on statewide Gap Analysis of Idaho Land Cover from 1996, approximately 20 percent of the Monument is exposed lava flows and 33 percent is vegetated lava (Landscape Dynamics Lab 1999). Vegetated lava is defined as lava fields with greater than 5 percent total vegetative cover, with plants occurring as islands, pockets, or clustered individuals in the lava flow. The vegetated lava complex mainly consists of early successional and adaptable plants that grow in the limited soil that blows into the cracks and fractures on young basalt rock.

The type of lava and the amount of soil determine the type and density of vegetation. Penstemon and gland cinquefoil grow in shallow soils, while fern-bush, rock spirea, and syringa are present in deeper crevices. Trees, such as limber pine in the north end of the Monument and juniper in the south
These vegetation data were derived from 30m satellite imagery and is intended to provide a general frame of reference for vegetation distribution and diversity for the Monument. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

FIGURE 12
VEGETATION CLASSIFICATION
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management
end, also grow in crevices and cracks where sufficient moisture is funneled and retained. These trees may grow as scattered individuals or as small woodlands. Antelope bitterbrush, rabbitbrush, and sagebrush can also be found (up to 15 percent vegetative cover) where more soil development or deposition has occurred.

• **Sagebrush Steppe Complex**

Sagebrush steppe, which is the dominant vegetation in the Monument, includes all areas where adequate soil deposition or development has occurred to allow sagebrush taxa and associated shrubs with a bunchgrass understory to dominate. Due to the drastic reduction of sagebrush steppe in southern Idaho by cultivation, fire, and weed invasion (Hironaka et al. 1983), some of the sagebrush communities in the Monument are the best remaining examples of this vegetation type on the Snake River Plain.

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

Sagebrush steppe vegetation in the Monument occurs over an elevation gradient and is dominated largely by three subspecies of big sagebrush – mountain big sagebrush, basin big sagebrush, and Wyoming big sagebrush – as well as threetip sagebrush. The Mid- to High-Elevation Sagebrush Steppe vegetation type is generally defined by the presence of mountain big sagebrush and antelope bitterbrush, which occur in the higher elevation areas of the northern Monument that are colder and receive more precipitation. Low sagebrush is also found in this vegetation type, occurring in a mosaic with mountain big sagebrush.

The Low-Elevation Sagebrush Steppe vegetation type is defined by basin and Wyoming big sagebrush and threetip sagebrush, although these may overlap to some extent with the mid-elevations. Both basin and Wyoming big sagebrush are adapted to the hot, seasonally dry conditions of the Snake River Plain. Basin big sagebrush communities occur in pockets of deeper, more fertile soils. Wyoming big sagebrush communities tend to be found in shallower soils and can be found intermixed with basin big sagebrush.

Threetip sagebrush is widespread throughout the Monument, particularly in areas burned within the last 20 years. Threetip sagebrush is the only sagebrush found in the Monument that re-sprouts following fire. Both the Low- and Mid- to High-Elevation Sagebrush Steppe vegetation types contain other common shrubs such as antelope bitterbrush, rubber rabbitbrush, and green rabbitbrush.

Understory components in the sagebrush steppe complex vary widely in type and abundance, but common species include Sandberg bluegrass, Idaho fescue, needlegrasses, bluebunch wheatgrass, and the exotic annual cheatgrass. Forbs such as buckwheats, arrowleaf balsamroot, lupine, phlox, and milkvetches are also commonly found growing in these vegetation types. Both diversity and abundance of herbaceous plants increase with increasing elevation and moisture in the Monument.

The reduction of large tracts of sagebrush through increased size and frequency of wildfires is a concern in the area. Less obvious is the loss of native understory plants, particularly native bunchgrasses that are valuable components to the ecosystem. Plants such as bluebunch wheatgrass and Idaho fescue may not be resilient under conditions of closed shrub communities, frequent fire regimes, cheatgrass invasion, altered climate or site conditions, or excessive grazing. The reduction in these native species by one factor increases their susceptibility to other factors. Once native understory species are excluded, they are very difficult to reestablish (Hironaka et al. 1983).

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

The Monument contains more than 500 kipukas, many of which contain relatively undisturbed native sagebrush steppe communities. Fire, livestock grazing, recreation, or cheatgrass invasion has altered some of the kipukas; however, other kipukas in the Monument have been protected from access and buffered by rough lavas. The abundance and condition of resources within most these
kipukas is undocumented and relatively unknown. However, for those kipukas that have been documented and studied, it is clear that these unique islands of nearly pristine native vegetation are important rangeland and scientific benchmarks (Henderson and Murie 1958; Yingst and Handy 1961; Tisdale et al. 1965; Caicco and Wellner 1983a, 1983b, 1983c).

The Monument also includes parks. Laidlaw Park, Paddelford Flat, and Little Park technically meet the definition of a kipuka, but are referred to as “parks” due to their larger size, accessibility, and land use. There is road access to and within these parks, and livestock grazing is a current and historical use. All three parks contain the Low-Elevation Sagebrush Steppe vegetation type, as well as areas dominated by annual and perennial grasslands. The abundance of native species and the quality of these sagebrush steppe communities depends mainly on management practices and cumulative effects of environmental responses. For example, the northern parts of Laidlaw Park have not been overgrazed; retain sufficient native understory and sagebrush; and support big game as well as sage-grouse. However, historic overgrazing, frequent wildfires, Aroga moth infestations, cheatgrass invasion, and noxious weeds have negatively affected the southern portions of Laidlaw Park. In addition, the southern part of the park receives slightly less rainfall than the northern part, making it less resilient to disturbance (Jurs and Sands 2004).

- Grasslands Complex
  The Perennial Grassland vegetation type is dominated by native or introduced perennial grasses. Historically, these grasslands were part of the sagebrush steppe complex and formed as a result of disturbance, primarily through fire. Shrubs would eventually reinvade perennial grasslands if they remained unburned for several decades. In most cases, fire is the main cause of shrub removal. Some shrubs such as mountain big sagebrush, threetip sagebrush, rubber rabbitbrush, and green rabbitbrush are able to re-sprout or reestablish within a short time (10 years). However, Wyoming and basin big sagebrush must regenerate from seed and can be slow to reestablish after fire. The Annual Grassland vegetation type is the result of altered disturbance regimes, such as soil surface disturbance or frequent fires in areas with long natural fire return intervals. The primary component is cheatgrass, an exotic species that perpetuates short fire-return intervals and conditions that maintain its dominance.

In many cases, microsite conditions have often been altered to the extent that native grasses are unable to effectively compete with cheatgrass and noxious weeds. Under these conditions, managers revegetate burned areas by seeding perennial vegetation to prevent the establishment of annual grasslands. In areas where altered site conditions and high compe-
tition from exotic species exist, select cultivars of introduced and native perennial grasses and forbs are used to rehabilitate burned areas. Some of the species seeded in rehabilitated areas are crested or Siberian wheatgrass, Snake River wheatgrass, tall wheatgrass, big bluegrass, and Sandberg bluegrass. Forbs such as blue flax, sainfoin, and alfalfa have also been seeded. Exclusively native plant seedings have also been conducted to a limited extent. Both the NPS and BLM encourage the use of native species for restoration and rehabilitation efforts.

• Mountain Complex
  The complex of mountain vegetation occurs at the far north end of the Monument in the foothills of the Pioneer Mountains. This complex covers less than 1 percent of the Monument, but it includes vastly different and important habitat types that contribute to its diversity.

  Five vegetation types are included in this complex. The Douglas fir type is found on relatively steep, north-facing slopes of older cinder cones and along Little Cottonwood Creek. The Aspen type is predominantly found in upland sites away from permanent stream courses. The Riparian type is characterized by dense woody vegetation such as black cottonwood, chokecherry, willow, alder, and a dense layer of tall forbs close to permanent watercourses. The Mountain Shrub vegetation type includes communities dominated by mountain big sagebrush, low sagebrush, and mountain snowberry that occupy slopes and ridges of the Pioneer Mountains. The Wetland type predominantly occurs along the periphery of the Monument where this vegetation is supported by cold water and Mountain vegetation complex north of the highway.

  Human-based activities (e.g., water right diversions, livestock grazing, thermal spring recreation), in the past and present, have degraded the Riparian and Wetland types. For example, early 20th century mining, fire suppression, and NPS spring diversions in Little Cottonwood Creek, facility development, and maintenance activities may have altered the plant species composition and influenced the spread of Canada thistle. NPS facilities recently converted to well water and reinstated full spring flow to Little Cottonwood Creek.

• Cinder Cone Complex
  This complex is located in the north end of the Monument, south of the highway, where many cinder cones are present. This area is mapped primarily as the Vegetated Lava, Limber Pine, and Mid- to High-Elevation Sagebrush Steppe types. The cinder cone complex includes three
different plant communities, depending on aspect, soil development, and successional stage. Less than 1 percent of the Monument is cinder gardens. Cinder gardens occur on cinder deposits with little to no soil development. These communities produce spectacular spring wildflower displays and are dominated by dwarf buckwheat, scorpion weed, Douglas chaenactis, dwarf monkeyflower, and bitterroot. As soils develop on the cinders, antelope bitterbrush dominates newly establishing mid- to high-elevation sagebrush steppe communities.

The Limber Pine type is present on north-facing slopes where sufficient moisture is available. Limber pine stands with antelope bitterbrush understory provide valuable wildlife habitat and are used by mule deer for fawning. Attempts were made in the 1950s to eradicate native dwarf mistletoe from the limber pine population. More than 6,000 trees were cut or poisoned until managers realized that limber pine and mistletoe had coexisted for thousands of years. The effects of this action have not been studied and are not understood; however, there was a change in the population and age structure of the limber pine forest (Blakesley and Wright 1988).

- **Nonvascular Plants**
  Mosses, liverworts, lichens, and fungi are vegetative life forms that have been historically overlooked in the Monument flora due to their inconspicuous nature. These organisms occur to some extent in every vegetation type occurring in the Monument and are commonly observed on exposed lava. This large group of organisms has been studied to some degree in other areas, but limited information exists for the Monument area specifically. Nonvascular plants perform a number of ecologically important functions – they actively decompose detritus, break down rock, and add structure and nutrients to the soil. They are important components of the functioning ecosystem and also serve as environmental quality indicators. Diffuse knapweed, a state-listed noxious weed occurring in the Monument

**Noxious and Exotic Species**
Ten species of weeds designated as noxious by Idaho State Law (State of Idaho 2001) have been identified in the Monument: spotted knapweed, diffuse knapweed, Russian knapweed, rush skeletonweed, leafy spurge, Canada thistle, musk thistle, Scotch thistle, dalmatian toadflax, and field bindweed. Disturbed areas such as road rights-of-way, intensively grazed areas, and burns are particularly susceptible to invasion by exotics; consequently, most of the noxious weeds are found specifically in these areas. No noxious weed infestations have currently been documented on the few inventoried kipukas in the Monument.

Spotted knapweed and diffuse knapweed have been documented extensively along U.S. Highway
20/26/93 (US 20/26/93) along the northern extent of the Monument. More than 200 infestations of these knapweeds occur along the highway within Monument boundaries. NPS mapped and treated these locations in 2001 and 2003 as a partner in the Lost Rivers and Blaine County Cooperative Weed Management Areas. Spotted and diffuse knapweeds have also been documented and treated in Paddelford Flat and Laidlaw Park, along the west and east edges of the Monument, respectively.

Rush skeletonweed has been reported in approximately 10 locations in Laidlaw Park and the west side of the Monument; approximately 18 locations have been documented in the Bear Trap Cave and Kings Bowl vicinities along the east side of the Monument. Many observations of this species have not been documented. This weed also takes advantage of disturbed soil and spreads primarily by seed. It is reported to be the most invasive (rapidly spreading) noxious weed in recent years within the Monument.

Leafy spurge has been documented in the west part of the Monument as small, scattered sites within the sagebrush steppe and vegetated lava (Carey Lava Field). It has also been recently documented in the group campsite north of the highway. Large infestations are known to exist along the west edge of the Monument in the Carey area and in the Monument Butte and Sand Butte vicinities. These large infestations have increased the potential for further introduction and spread onto the Monument via bird, deer, livestock, and vehicles. BLM is continuing a successful 10-year control program specifically developed to address infestations on lava-based terrain.

Thistles are found in scattered locations in the North Unit, Laidlaw Park, and along the west and east edges of the Monument. Approximately 75 total infestations have been documented for all three noxious thistles.

Both BLM and NPS have initiated integrated noxious weed programs. Efforts to control these species are in effect, including the use of mechanical and spray techniques, as well as limited use of biological control agents. The priority species discussed have been targeted specifically for mapping, treatment, and prevention programs. Education and public awareness are emphasized by both agencies. Involvement in Cooperative Weed Management Areas has resulted in strong community commitment and cost-effective management of noxious weeds.

Other invasive exotic species, such as cheatgrass, are as much of a concern as state-listed noxious weeds. Cheatgrass, a common and widespread invader throughout the West, was introduced in the early 1900s when domestic sheep grazed the area. Cheatgrass is extremely competitive and readily invades and dominates disturbed land. It can be a component of undisturbed or otherwise healthy sagebrush. For example, cheatgrass has been documented in several kipukas that lack a history of common human disturbances such as livestock grazing. This annual grass out-competes native vegetation and perpetuates a frequent fire regime, which further discourages the regrowth of native species and encourages more cheatgrass. This has been a key management concern for BLM and has driven the development of more effective disturbed land rehabilitation and restoration techniques. Approximately 80,000 acres of annual grassland and low-elevation sagebrush steppe dominated by cheatgrass have been identified in the Monument as needing management intervention to restore functional sagebrush communities.

BLM and NPS have implemented nationwide policies against invasive and harmful exotic species. All the species mentioned in this discussion have been targeted for eradication or control.

**Fire and Vegetation Management**

Between 1970 and 2002, approximately 330,000 acres have burned in wildfires within the boundary of the expanded Monument, primarily on BLM-administered land. About a third of this acreage has burned two or more times (Figure 13).

Peak fire years occurred in 1971 (29,000 acres), 1981 (22,000 acres), 1992 (61,000 acres), 1996 (31,000 acres), and 1999 (87,000 acres). Extensive acreages outside of and adjacent to the Monument also
No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

FIGURE 13
FIRE FREQUENCY
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management
burned during this period. About half of Laidlaw Park and Paddelford Flat and nearly all of Little Park have remained unburned in the last decade. Relatively small fires have burned on vegetated lava and in kipukas, notably Little Prairie in 1992 (1,900 acres) and Echo Crater in 2000 (632 acres). Overall, fires within the original NPS Monument boundaries represent only 8 percent of the total area burned since 1970.

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

Native Americans historically used fire to manipulate vegetation and wildlife (Williams 2001). Since the mid-1800s, sheepherders used fire in the Monument to reduce shrub cover and encourage herbaceous plant growth. Good fire records prior to 1950 are not available; however, traditional practices throughout southern Idaho are known to have included the use of fire to eliminate sagebrush and promote grass growth. In 1982, the BLM proposed to burn approximately 19,000 acres to break up continuous tracts of sagebrush; create more diverse wildlife habitat; reduce fuel loads; and improve forage for domestic livestock and wildlife (Saras 1982).

The burning of approximately half of this acreage was accomplished by 1992, at which time large wildfires occurred in the area and the use of prescribed fire was curtailed. The use of prescribed fire was re-initiated in 2001, when small areas within the Monument (part of larger projects near the southern boundary) were burned to reduce cheatgrass, in conjunction with herbicide and seeding treatments.

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

Areas most at risk for large, destructive wildfires are the rangelands in the southern part of the Monument where fuel loading is high due to an abundance of cheatgrass in the understory. Ignitions on vegetated lava are rare; however, there is a risk that fires near the edge of the lava can lie low for a period of time and then ignite adjacent rangelands if weather conditions become hot or windy. Fires in kipukas remain localized and small, because the surrounding lava limits spread.

The northern end of Laidlaw Park, in particular, and other isolated areas in the Monument contain good examples of sagebrush steppe vegetation, which could potentially be lost or degraded by invasive or noxious weeds following a fire. In areas of the Monument north of the highway, mountain shrub, aspen, and Douglas fir communities might benefit somewhat from fire; however, watershed protection in Little Cottonwood Creek (which provides potable water in the Monument) and the protection of research and group campsite facilities necessitate aggressive suppression.

Fire management in the Monument is directed by
the current BLM Land Use Plans, the Fire Management Plan for South Central Idaho (USDI 2004), and the NPS Craters of the Moon National Monument Wildland Fire Plan within the original Monument boundaries (USDI NPS 2000a). Under these plans, all wildfires are suppressed except for naturally ignited fires in designated wilderness, which may be managed for resource benefit (also known as wildland fire use).

Fire suppression response in the Monument varies depending on the location of the fire, terrain (roughness and slope), weather (especially wind speed and direction), fuel type and moisture, and potential resource damage. While suppression response usually includes both aerial and ground support, this can vary if there are multiple incidents at the same time. In summer/fall 2005, fire personnel performed an exercise which determined travel times to selected areas in the Monument for fire response. Two-person teams drove heavy engines from the Carey and Kimama Guard Stations to predetermined sites within the Monument. Table 10 summarizes travel time, as well as the miles of road by class for each route. Figure 14 shows the site locations relative to the road network. In general, average speed on paved highways is approximately 60 mph, on Class B roads is 40 mph, on Class C roads is 25 mph, and Class D roads is 15 mph. Average speed, especially on Class C and D roads, will vary depending on roughness of terrain.

Rate of fire spread is dependent on numerous variables, including fuel type and moisture, wind speed and direction, and slope. The Behave fire modeling system was used to estimate potential fire growth in the general area encompassing the selected geographic points. Type of fuel, fuel moisture, and wind speed were the parameters included in the model. The vegetation at the selected points is generally represented by two fuel models. Fuel Model 2 represents a grass community with a shrub component; Fuel Model 5 represents a low to moderate height shrub community. The dry fuel moisture regime represents conditions during the peak of the fire season (mid-July through early October) with temperatures of 90-100 degrees Fahrenheit and relative humidity of 10-19%. The moderate fuel moisture regime represents conditions that are more typical early in the fire season (May through early July) with temperatures of approximately 75-85 Fahrenheit and relative humidity in the mid-20s. Table 11 summarizes the results of the modeling exercise. Wind speeds of 10 and 20 mph are presented for comparison. Wind speed of 10 mph represents relatively typical conditions, while 20

<table>
<thead>
<tr>
<th>END LOCATION</th>
<th>TRAVEL TIME IN MINUTES</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carey Guard Station to Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Little Park</td>
<td>34</td>
<td>4</td>
<td>9</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Laidlaw Butte</td>
<td>57</td>
<td>4</td>
<td>14</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Lava Butte</td>
<td>97</td>
<td>4</td>
<td>25</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Cream Can Junction</td>
<td>120</td>
<td>4</td>
<td>32</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Kimama Guard Station to Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Little Park</td>
<td>51</td>
<td>0</td>
<td>39</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Laidlaw Butte</td>
<td>56</td>
<td>0</td>
<td>29</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Lava Butte</td>
<td>57</td>
<td>0</td>
<td>24</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Cream Can Junction</td>
<td>60</td>
<td>17</td>
<td>16</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 10: Results of Fire Response Time Exercise, Including Travel Time and Mileage by Class of Road
This map illustrates 8 routes taken by BLM fire crews for documenting fire response times to four separate locations as described in the fire management section of chapter three. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

FIGURE 14
FIRE RESPONSE TESTS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management
Table 11
Results of Generalized Fire Growth Modeling for Vegetation in the Monument Using Two Fuel Models, Two Fuel Moisture Regimes (See the Text for Definitions of Each), and Two Wind Speeds

<table>
<thead>
<tr>
<th>MODELING PARAMETERS</th>
<th>0.5</th>
<th>1</th>
<th>1.5</th>
<th>2</th>
<th>2.5</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fuel Model 2</strong></td>
<td>Fire size in acres</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry 10 mph</td>
<td>159</td>
<td>634</td>
<td>1,427</td>
<td>2,537</td>
<td>3,964</td>
<td>5,708</td>
</tr>
<tr>
<td>Dry 20 mph</td>
<td>1,107</td>
<td>4,428</td>
<td>9,962</td>
<td>17,710</td>
<td>27,673</td>
<td>39,849</td>
</tr>
<tr>
<td>Moderate 10 mph</td>
<td>74</td>
<td>296</td>
<td>666</td>
<td>1,184</td>
<td>1,850</td>
<td>2,664</td>
</tr>
<tr>
<td>Moderate 20 mph</td>
<td>517</td>
<td>2,067</td>
<td>4,650</td>
<td>8,266</td>
<td>12,916</td>
<td>18,599</td>
</tr>
<tr>
<td><strong>Fuel Model 5</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry 10 mph</td>
<td>52</td>
<td>210</td>
<td>472</td>
<td>839</td>
<td>1,311</td>
<td>1,887</td>
</tr>
<tr>
<td>Dry 20 mph</td>
<td>201</td>
<td>804</td>
<td>1,809</td>
<td>3,216</td>
<td>5,025</td>
<td>7,236</td>
</tr>
<tr>
<td>Moderate 10 mph</td>
<td>6</td>
<td>25</td>
<td>55</td>
<td>98</td>
<td>153</td>
<td>221</td>
</tr>
<tr>
<td>Moderate 20 mph</td>
<td>18</td>
<td>71</td>
<td>159</td>
<td>282</td>
<td>441</td>
<td>635</td>
</tr>
</tbody>
</table>

mph represents extreme conditions.

Although the fire growth models are simplified compared to the conditions that actually occur during a fire incident, they demonstrate the high level of variability resulting from differences in fuel type, fuel moisture, and wind speed. This variability is a consideration for both fire management and transportation/access planning.

Fire and Related Vegetation Management

Federal wildland fire policy (USDI and USDA 1995; USDI et al. 2001; USDI 2003) focuses on protecting sensitive resources while using fire along with other treatments (such as herbicides and seeding) to achieve desired future conditions for vegetation resources. Currently all federal land management agencies are implementing, or preparing to implement, this policy through a Cohesive Strategy (Laverty and Williams 2000). This strategy presents guidelines for reducing wildland fire risk to human communities and to restore and maintain ecosystem health within fire-prone areas. The Cohesive Strategy is based on the concept of restoring vegetation composition and structure (and thus fire regimes) to historical levels. As part of this process, three Fire Condition Classes (FCC1 through 3) have been identified to help clarify the degree to which a particular vegetation community departs from its historic fire regime, as described below:

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

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

- **FCC3** represents high departure from the historic fire regime, resulting in high risk of resource loss due to frequent fire return intervals and/or high levels of severity. An example of FCC3 is an area that was formerly low-elevation sagebrush steppe that is currently dominated by an understory or
Table 12
Approximate Acreage of each Vegetation Type in the Monument and Percentage that occurs in each Fire Condition Class

<table>
<thead>
<tr>
<th>VEGETATION TYPE</th>
<th>APPROXIMATE ACREAGE IN MONUMENT</th>
<th>% FCC1</th>
<th>% FCC2</th>
<th>% FCC3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Elevation Sagebrush Steppe</td>
<td>157,000</td>
<td>40</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Annual Grassland (exotic)</td>
<td>31,000</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Perennial Grassland (seeding and native)</td>
<td>153,000</td>
<td>10</td>
<td>90</td>
<td>0</td>
</tr>
<tr>
<td>Mid-Elevation Sagebrush Steppe</td>
<td>9,400</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Lava (bare and vegetated)</td>
<td>399,000</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mountain Shrub</td>
<td>400</td>
<td>50</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Aspen</td>
<td>60</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Conifer (Douglas fir)</td>
<td>140</td>
<td>50</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Riparian</td>
<td>670</td>
<td>90</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

Currently, several vegetation types within the Monument are in FCC2 or FCC3, with the exception of plant communities on lava (Table 12).

The Cohesive Strategy seeks to restore fire to its historic role in ecosystems through managing fire, fuels, and vegetation in order to return areas that are in FCC2 and FCC3 to the FCC1 class. It encourages proactive treatments to reduce fuels and restore plant community structure. These treatments can include prescribed fire, thinning, mowing, herbicides, seeding, temporary removal of livestock, and/or changes in grazing regimes. Current science and best available technologies and plant materials are considered in analysis and implementation of all fuels reduction and restoration projects. Recent inventories (Jurs and Sands 2004) categorized BLM-administered lands within the Monument according to their biotic integrity. In general, areas with poor biotic integrity are in FCC3, areas with fair biotic integrity are in FCC2, and areas with good biotic integrity are in FCC1 (see Figure 15).

Similar efforts may also follow unplanned wildland fires through emergency stabilization and rehabilitation (ESR) treatments, which can stabilize burned areas against erosion by wind or water, prevent the dominance of invasive or noxious weeds, and reestablish desirable perennial vegetation. ESR treatments are most commonly required on sites with highly erosive soils and areas in FCC3, and such treatments may be needed in areas in FCC2. The need for post-fire ESR is determined case by case, and Emergency Stabilization and Rehabilitation Plans are prepared in accordance with the Interagency Burned Area Emergency Stabilization and Rehabilitation Handbook, Department of the Interior Manual, and supplemental guidance by the BLM and NPS (http://fire.r9.fws.gov/ifcc/Esr/Handbook/Default.htm).

**Special Status Plants**

The Monument also provides habitat for two state- and BLM-designated special status plants. Special status plants are those listed under the federal Endangered Species Act (ESA), plus species recognized by Idaho and BLM as sensitive. All species identified as sensitive by BLM must be managed proactively by BLM to protect these species, and NPS strives to manage its land to protect any federally listed, state-listed, or special status species.

The Idaho Native Plant Society (INPS) and Idaho Department of Fish and Game (IDFG) Conservation Data Center (ICDC) meet annually with state...
This map illustrates the approximate range of biotic integrity for BLM lands within the Monument. These polygons are based on 2004 Jurs & Sands assessment and unpublished BLM data. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

Chapter 3: AFFECTED ENVIRONMENT
and federal agencies to review the status of plants considered to be globally, state, or locally rare. The resulting list is used to determine which species, if they lack federal protection under ESA, require or would benefit from protection at a local or regional level.

Some of the plant communities in the Monument have undisturbed, relict, or pristine conditions or are excellent examples of a specific or even rare habitat type. The areas designated as Research Natural Areas (RNAs) are discussed later in this chapter.

There are no proposed or listed threatened or endangered plants known within the Monument. Potential habitat for Ute ladies’ tresses (Spiranthes diluvialis), a federally listed threatened plant species, may exist throughout Idaho. Ute ladies’ tresses, an orchid, occurs in moist to mesic sites associated with wetland and riparian areas, including springs.

Table 13
Vegetation Habitat Characteristics and Location Information for Special Status Plant Species Occurring in the Craters of the Moon National Monument and Preserve

<table>
<thead>
<tr>
<th>NAME</th>
<th>HABITAT</th>
<th>LOCATION</th>
<th>SOILS</th>
<th>COMMUNITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obscure phacelia (Phacelia inconspicua) (Murphy 2002b)</td>
<td>Northeast- to east-facing aspects on basaltic and rhyolitic buttes and foothills. Elevation ranges from 5,390 to 6,200 feet. Concave, lower to mid-slopes below the rimrock of butte tops or foothill ridgetops. Slopes are generally moderately steep (averaging about 32 percent), although some populations occur on nearly flat, sheltered terraces. The microtopography is often undulating due to numerous large boulders and stones deposited from the rimrock or ridges above. Phacelia grows in the depressions between boulders. Typically grows in small gaps (1 to 5 m²) within shrubby vegetation in partially shaded microsites to full sunlight. Often grows on disturbed soil associated with older cattle trails, native ungulate trails, and gopher diggings. Subpopulations occupy transitional areas between mesic, dense vegetation dominated by Populus tremuloides (quaking aspen), Prunus virginiana (chokecherry), or Leymus cinereus (Great Basin wildrye), and open, xeric vegetation dominated by Artemisia tridentata ssp. vaseyana (mountain big sagebrush) with Purshia tridentata (bitterbrush), Pseudoroegneria spicata (bluebunch wheatgrass), and Balsamorhiza sagittata (arrowleaf balsamroot)</td>
<td>Eastern side of the Great Rift of the upper Snake River Plain and in the foothills of the Pioneer Mountains.</td>
<td>Dark-colored, well-drained silt-loams with varying amounts of sand, gravel, cobble, stone, and boulder colluvium intermixed. Most microsites are not cindery or extremely gravelly. Soils are derived from and overlay volcanic substrates. Areas supporting Phacelia usually lack litter accumulation, are always relatively loose or scarified (due to animal and erosion disturbance), and lack dense perennial vegetation. The soil depth varies from shallow (over boulders) to moderately deep.</td>
<td>1) Prunus virginiana/Leymus cinereus 2) Artemisia tridentata ssp. vaseyana-Symphoricarpos oreophila (snowberry)/Leymus cinereus 3) Prunus virginiana-Symphoricarpos oreophila 4) Populus tremuloides/Symphoricarpos oreophila 5) Prunus virginiana-Symphoricarpos oreophila/Pseudoroegneria spicata 6) Artemisia tridentata ssp. vaseyana/Pseudoroegneria spicata</td>
</tr>
<tr>
<td>Picabo milkvetch (Astragalus oniciformis) (Moseley and Popovich 1995; Alexander 2001)</td>
<td>Sandy basins, bowls, and flats within rolling basalt on the northern edge of the Snake River Plain. A. oniciformis is frequently found in open grassy areas (often in previously burned patches within Artemisia shrubland) and is rarely found in the understory of late seral Artemisia stands.</td>
<td>At the northern edge of the upper Snake River Plain and at the base of the foothills of the Pioneer Mountains and Picabo Hills.</td>
<td>Sandy loams or uniformly, highly calcareous silt loams overlying basalt plains. A. oniciformis prefers stabilized sandy soils and is never found on unstabilized sand dunes.</td>
<td>Primarily found in the Artemisia tridentata ssp. wyomingensis (Wyoming big sagebrush) / Stipa comata (needle-and-threadgrass) habitat type, but also Artemisia tripartita/Pseudoroegneria spicata. Common associates are Oryzopsis hymenoides, A. tridentata ssp. tridentata, and Chrysothamnus sp.</td>
</tr>
</tbody>
</table>
wet meadows, and river meanders. The plant is known to occur at sites ranging from 1,500 to 7,000 feet in elevation. This species generally flowers from mid-August through September in the Intermountain Region and can be identified definitively only at that time. Marginal, potential habitat for Ute ladies’ tresses is limited to very small wet meadows associated with creeks and springs in the north part of the Monument.

Surveys for Ute ladies’ tresses have been conducted in the past by ICDC botanists (Murphy 2002a) and were again performed in September 2002 by NPS and BLM botanists. No orchids were located as a result of these surveys. Although potential habitat is marginal, these areas will be revisited in the future, because the orchid can remain dormant for several years.

Two BLM sensitive plants are known to occur within the Monument. These species and their associated habitats are summarized in Table 13. Obscure phacelia (Phacelia inconspicua) is one of Idaho’s most rare plants, with only six occurrences (population areas) known statewide. This species is also listed as endangered in Nevada. It occurs on north- and east-facing slopes of volcanic-based mountains and buttes. Picabo milkvetch (Astragalus oniciformis) is narrowly endemic to stable, sandy soils in the north-central portion of the ESRP, near the foothills of the Pioneer Mountains.

Areas within and surrounding the Monument have been systematically surveyed for both obscure phacelia and Picabo milkvetch, and population information is documented in status and monitoring reports (Moseley and Popovich 1995; Murphy 2002b). One location for meadow pussytoes (Antennaria arcuata), which is rare in Idaho but not a BLM sensitive species, has been documented directly outside of Monument boundaries in moist meadows associated with Huff Creek. There is a small amount of potential habitat at the northern edge of the Monument. Mourning milkvetch (Astragalus atratus var. inseptus), a BLM sensitive species, was recorded in a plant inventory of Brass Cap Kipuka RNA (Caicco and Wellner 1983b). However, a plant survey conducted by ICDC and BLM in the late 1980s did not confirm the occurrence of the milkvetch (Popovich 2003).

WATER RESOURCES, INCLUDING WETLANDS

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

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

Wetlands and Riparian Communities

Wetland and riparian communities are somewhat rare in the Monument. The cold-water springs, creeks, lakes, and marshes on the lower slopes of the Pioneer Mountains support limited aquatic, wetland, and riparian habitat for numerous plant and animal species. Several species of water-loving (hydrophilic) plants, waterfowl and marsh birds, two frog types, several small mammals, beaver, and moose use these habitats. Many other species use the water sources these areas provide.

Wetlands mapped by the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory
are limited to the northwest corner of the Monument. Most wetlands and wetland habitat are palustrine (non-tidal, inland wetlands dominated by terrestrial and emergent vegetation) and are only seasonally or temporarily flooded.

The Monument is mostly composed of a semiarid sagebrush steppe ecosystem. These areas generally receive 8 to 14 inches of precipitation a year. With such little precipitation, snow runoff is the primary source of water for the few wetland areas in the Monument. The snow runoff accumulates in the flat-floored bottom of an undrained desert basin that sometimes becomes shallow lakes called playas. They hold water long enough to allow some specialized aquatic organisms to grow and reproduce, but not long enough for a pond or marsh ecosystem to develop because most of the playas dry up by July and August.

Fairy shrimp, a scarce freshwater crustacean, can be found in almost every seasonal pool (Bratton 1990). Fairy shrimp serve as a valuable food source for migratory waterfowl that use the playas as resting areas along their long trek north in spring and early summer.

**Water Quality**

Steep-sided canyons with high gradient channels and a narrow floodplain characterize the watershed of Little Cottonwood and Leech Creeks. Mean discharge rates for both streams are less than 1 cubic foot per second. Since the 1930s, NPS has diverted water from four springs in the upper Little Cottonwood Creek Watershed for a public drinking water supply. During dry years, these diversions accelerate the dewatering of stream channels throughout the middle and lower reaches of Little Cottonwood Creek. However, the lower reach of Leech Creek has also run dry with no diversions in place.

To meet new drinking water standards, efforts were initiated in 2000 to replace the existing surface drinking water sources with groundwater sources. Shallow water wells have been developed at the bottom of Leech and Little Cottonwood drainages. Surface water from the two streams disappears below the surface in this vicinity even during wet years. Once the wells are fully operational in 2004, upstream diversions will cease.

Mining activities in the Little Cottonwood Creek drainage predate the establishment of the Monument in the 1920s. Open adits and tailings material remained along the stream until an NPS reclamation project was completed in the mid-1990s. Before this reclamation work, copper and zinc concentrations had exceeded U.S. Environmental Protection Agency (EPA) water quality criteria (USDI NPS 1998).

Streamwater quality in Little Cottonwood and Leech creeks has been monitored and has generally been found to be good, with no violations of Idaho State standards for temperature, dissolved oxygen, and turbidity (Falter and Freitag 1996). Total dissolved solids content of the water, as indicated by electrical conductivity, has been found to be moderate to low. The stream's waters are carbonate-based, of moderately low alkalinity and carbon dioxide, and neutral to slightly basic pH. Streamwater nutrient concentrations of total phosphorus have been shown to be moderately high with nitrogen limitation indicated, and streamwater concentrations of nitrate nitrogen are high.

Low to moderate levels of fecal coliform with high fecal streptococcus bacteria in streams suggest animal, rather than human, influence on the stream. Aquatic insect associations are balanced, with the exception of the middle reach of Little Cottonwood Creek, where Dipteran (true flies) dominance suggests metals impact from the Martin Mine site (Falter 1996). Stream bank and channel stability is good, with little indication of eroding or collapsing banks.

Ice caves easily accessible to the public have been found to have much higher levels of nutrients than caves located in remote areas. This may be attributable to human waste (Falter and Freitag 1996).

**Water Rights/Water Use**

The State of Idaho granted NPS federal reserved...
water rights within the Monument in 1998. The priority dates of the rights range from 1924 to 1996, depending on the date when each area was added to the Monument. These rights grant diversions of 54.5-acre feet per year from all surface water and groundwater sources within the 1998 Monument boundaries. The rights provide for domestic, irrigation, or industrial use within the Monument, as well as in-streamflow rights on areas including Little Cottonwood and Leech Creeks (Hurlbutt 1998). The rights do not entitle the United States to maintain any specific water table elevation in the Snake River Aquifer beneath the Monument.

The BLM has 337 filed water right claims on 18 springs, 192 playa lakes, and 127 reservoirs within the Monument. The claims, primarily used for stock water and wildlife, are for 333.5 total acre-feet per year, and a de minimus amount of 0.02 cubic feet per second on each source. Priority dates of the water rights claims are as early as 1926.

Many of the water resources in the Monument are used in a variety of ways: drinking water for the Monument Visitor Center, irrigation water for farms, livestock watering sites, and recreational opportunities like bird watching. Human use and activities sometimes alter water and associated resources. Playas and reservoirs developed by BLM are an integral part of this semiarid ecosystem, and they often are the only source of water for wildlife and livestock.

The aquatic and wetland habitat supported by the only thermal spring complex in the Monument has historically been altered by concentrated livestock use and human recreation. Efforts are underway to protect the unique Monument habitat and allow recovery of the biological resources present.

WILDLIFE, INCLUDING SPECIAL STATUS SPECIES

During some portion of each year, about 200 species of birds, 60 mammals, 10 reptiles, and at least three amphibians occupy the Monument (see Appendices D and E). Surveys in the late 1960s in a very small portion of the northernmost area identified more than 2,000 species of insects (Horning and Barr 1970).

Wildlife Habitats and Common Monument Wildlife

Sagebrush steppe communities comprise much of the wildlife habitat within the Monument. Numerous species are found in sagebrush habitats (Braun et al. 1976, Trimbel 1989). Some of these are sagebrush obligates (restricted to sagebrush habitats during the breeding season or year-round) or near obligates (occurring in both sagebrush and grassland habitats; Paige and Ritter 1999).

Sagebrush obligates that occur in the Monument include the sage sparrow, black-throated sparrow, Brewer’s sparrow, sage thrasher, greater sage-grouse, pygmy rabbit, sagebrush vole, and sagebrush lizard. Some species, such as Brewer’s sparrows, are at their highest densities statewide in ungrazed portions of the Monument (Bart 2001). Table 14 lists some sagebrush-associated species that can be found in the Monument.

Sagebrush itself and the native perennial grasses and forbs of the shrub-steppe are important sources of food and cover for wildlife (Dealy et al. 1981). During 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). Pronghorn, pygmy rabbits, and sage-grouse may eat exclusively sagebrush in winter, and sagebrush also becomes a major portion of mule deer and elk diets. Taller sagebrush provides cover for mule deer and sage-grouse (Dealy et al. 1981), and the crowns of sagebrush break up hard-packed snow, making it easier for animals to forage on the grasses beneath (Peterson 1995).

Throughout the rest of the year, sagebrush provides food for pygmy rabbits and sage-grouse; protective cover for fawns, calves, rabbits, and grouse broods; and nesting sites for many shrub-nesting birds. The sage thrasher, Brewer’s sparrow, sage sparrow, and greater sage-grouse most frequently nest in or beneath sagebrush.

The Monument contains portions of the lower
Table 14
Sagebrush-Associated Species that Occur in the Monument

<table>
<thead>
<tr>
<th>BIRDS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chukar</td>
<td>Grasshopper sparrow</td>
<td>Sage sparrow</td>
<td></td>
</tr>
<tr>
<td>Black-throated sparrow</td>
<td>Golden eagle</td>
<td>Short-eared owl</td>
<td></td>
</tr>
<tr>
<td>Burrowing owl</td>
<td>Great horned owl</td>
<td>Ferruginous hawk</td>
<td></td>
</tr>
<tr>
<td>Red-tailed hawk</td>
<td>Swainson’s hawk</td>
<td>Rough-legged hawk</td>
<td></td>
</tr>
<tr>
<td>Turkey vulture</td>
<td>Greater sage-grouse</td>
<td>Lark sparrow</td>
<td></td>
</tr>
<tr>
<td>Common nighthawk</td>
<td>Northern harrier</td>
<td>Common raven</td>
<td></td>
</tr>
<tr>
<td>American crow</td>
<td>Bobolink</td>
<td>Gray flycatcher</td>
<td></td>
</tr>
<tr>
<td>Horned lark</td>
<td>Brewer’s blackbird</td>
<td>Gyr falcon</td>
<td></td>
</tr>
<tr>
<td>Peregrine falcon</td>
<td>Prairie falcon</td>
<td>American kestrel</td>
<td></td>
</tr>
<tr>
<td>Loggerhead shrike</td>
<td>Brown-headed cowbird</td>
<td>Ash-throated flycatcher</td>
<td></td>
</tr>
<tr>
<td>Long-billed curlew</td>
<td>Sage thrasher</td>
<td>Savannah sparrow</td>
<td></td>
</tr>
<tr>
<td>Lazuli bunting</td>
<td>Gray partridge</td>
<td>Common poorwill</td>
<td></td>
</tr>
<tr>
<td>Ring-necked pheasant</td>
<td>Green-tailed towhee</td>
<td>Spotted towhee</td>
<td></td>
</tr>
<tr>
<td>Vesper sparrow</td>
<td>Say’s phoebe</td>
<td>Brewer’s sparrow</td>
<td></td>
</tr>
<tr>
<td>Western meadowlark</td>
<td>Mourning dove</td>
<td>White-crowned sparrow</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAMMALS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pronghorn</td>
<td>Pygmy rabbit</td>
<td>Coyote</td>
<td></td>
</tr>
<tr>
<td>Elk</td>
<td>Ord’s kangaroo rat</td>
<td>Bobcat</td>
<td></td>
</tr>
<tr>
<td>Sagebrush vole</td>
<td>Black-tailed jackrabbit</td>
<td>White-tailed jackrabbit</td>
<td></td>
</tr>
<tr>
<td>Yellow-bellied marmot</td>
<td>Montane vole</td>
<td>Long-tailed vole</td>
<td></td>
</tr>
<tr>
<td>Mule deer</td>
<td>Northern grasshopper mouse</td>
<td>Great Basin pocket mouse</td>
<td></td>
</tr>
<tr>
<td>Deer mouse</td>
<td>Raccoon</td>
<td>Merriam’s shrew</td>
<td></td>
</tr>
<tr>
<td>Pioite ground squirrel</td>
<td>Nutall’s cottontail</td>
<td>Least chipmunk</td>
<td></td>
</tr>
<tr>
<td>Badger</td>
<td>Northern pocket gopher</td>
<td>Red fox</td>
<td></td>
</tr>
<tr>
<td>Kit fox</td>
<td>Yuma bat</td>
<td>Long-eared bat</td>
<td></td>
</tr>
<tr>
<td>Long-legged bat</td>
<td>Small-footed myotis</td>
<td>Fringed myotis</td>
<td></td>
</tr>
<tr>
<td>Townsend’s big-eared bat</td>
<td>Spotted bat</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REPTILES &amp; AMPHIBIANS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber boa</td>
<td>Western yellow-bellied racer</td>
<td>Western rattlesnake</td>
<td></td>
</tr>
<tr>
<td>Western skink</td>
<td>Long-nosed leopard lizard</td>
<td>Night snake</td>
<td></td>
</tr>
<tr>
<td>Short-horned lizard</td>
<td>Desert horned lizard</td>
<td>Gopher snake</td>
<td></td>
</tr>
<tr>
<td>Sagebrush lizard</td>
<td>Western terrestrial garter snake</td>
<td>Great Basin spadefoot toad</td>
<td></td>
</tr>
</tbody>
</table>
slopes of the Pioneer Mountains, which contain both perennial and ephemeral springs. Several of these springs feed small creeks and marshes, and several species of waterfowl and marsh birds, two frog species, several small mammals, beaver, and moose use these habitats exclusively, along with several other species. Numerous species of birds use these areas exclusively or as primary habitat in the area.

The Monument contains some scattered stands of trees, including riparian stands of black cottonwood, willows, alders, and quaking aspen; upland stands of quaking aspen or Douglas fir; and lava- or cinder-based stands of limber pine and junipers. These forested sites are used by more than 110 species of birds, at least four species of reptiles, and at least 37 mammals (USDI NPS 2003). These coniferous stands are widely scattered throughout the Monument. The open shrub-steppe and agricultural lands of the Snake River Basin surround these small islands of trees.

Migrant forest birds are highly selective of resting habitat (Kerlinger 1995), and these forest stands are important to forest birds migrating from the Northern Rocky Mountains, needing to cross the open habitat of the basin. Dozens of species of migratory birds use the conifer stands. Many resident species, including Clark’s nutcracker, chickadees, nuthatches, woodpeckers, and others, use them exclusively. Forested sites also provide critical thermal cover for deer, elk, and moose in the foothills of the Pioneer Mountains (Griffith 1983).

Extensive lava flows also serve as habitat for numerous animal species. At least seven species of bats, several species of rodents, and several species of cave invertebrates use lava tubes and flows in the Monument. The flow surfaces also are used by many species of vertebrates and invertebrates, and several species are dependent on the lava structures. Species such as pika, woodrats, skinks, and rock wrens are found primarily on the rock surfaces. Several snake and bat species are dependent on cavities in the lava for hibernation sites. Two of the three known bat maternity colonies of Townsend’s big-eared bat in Idaho are in the Monument (Pierson et al. 1999). Subspecies of the Great Basin pocket mouse, the pika, and the yellow-pine chipmunk are endemic to the lavas of the Great Rift. Darker fur characterizes these subspecies, which may be an adaptation to the black lava rock. Known primarily as residents of high-elevation alpine regions, pikas living on the Craters of the Moon Lava Field occupy lower elevations and the highest mean temperatures within the species, range (Bever 2002).

Several species of birds are also dependent on the lava structures. The Monument has a large population of rock wrens that nest almost exclusively on basalt formations. Many cavity-nesting species nest in rock cavities on the flows. Chickadees and swallows are typically associated with woodlands but will use rock crevices when near limber pine or juniper stands. Mountain bluebirds and violet-green swallows nest primarily in tree cavities but are known to use rock crevices for nesting. Both species have been documented nesting in crevices and bubbles in flow surfaces in the Monument (Rich 1985; USDI NPS 2003).

Both western and mountain bluebirds have experienced major range-wide declines as result of habitat loss and competition from introduced European starlings. Bluebirds nest in high densities in the northern part of the Monument but are seen far less frequently in the southern areas, where substantial flocks of starlings now breed.
Numerous bird species protected under the Migratory Bird Treaty Act (USC Title 16, Chapter 7, Subchapter II; Appendix E) have been documented in the Monument, occupying all habitat types. The migrant patterns include permanent residents, summer residents, migrants only using resting areas a few days a year, and winter-only residents.

Reptiles in the Monument also occupy a wide range of habitats. Ten species of reptiles have been identified in the Monument, including five snakes and five lizards. Several hibernating sites for snakes have been identified in the Monument (Lee 2002). These hibernacula may contain animals from several square miles of summer habitat both inside and outside the Monument. Garter snakes and rubber boas are predominantly riparian species, and skinks and gopher snakes use primarily rocky habitats with sparse vegetation. Night snakes may occupy the area but are rare and difficult to survey (Peterson 2003).

Two frog species occur in the Monument, Boreal chorus frog and Pacific tree frog. Two toad species may exist in the Monument as well. One, the Great Basin spadefoot toad, has not been detected in recent inventory work, but it can remain dormant for several years and is not readily detected while in burrows. These toads are well documented in the Snake River Plain, and it is likely that they occupy the Monument as well. Western toads have not been detected in surveys since 1987; they may have been extirpated.

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

Mule deer occupy the northern parts of the area as spring and summer range, with two distinct herds migrating into the Pioneer Mountains by autumn (Griffith 1983). One of these herds comes from lands to the north and west of the Monument. The other herd winters in the desert area south of the Craters of the Moon Lava Field. This herd slowly migrates to the northwest as vegetation dries out throughout the summer. By late summer or early fall this herd has merged with the herd from the northwest. Upon reaching the riparian areas, they have access to water and browse that is still fresh.

Mule deer are scattered throughout the most of the vegetated areas. Few studies have been conducted outside of the northwest portion (Griffith 1983). NPS monitoring since 1988 in the northwest part of the Monument indicates a very dynamic population that fluctuates greatly with varying annual conditions. This may even include shifting migration routes out of the area in some years (IDFG 2003). The south part of the Monument contains substantial winter range for deer and pronghorn (IDFG 2003). Since 1999, moose have been regularly seen in both the Big and Little Cottonwood Creek watersheds of the Pioneer Mountains.

Elk summer in the riparian areas of the northwest part of the Monument (USDI NPS 2003). Elk occupy widely scattered areas, with records from both immediately east and west of the Craters of the Moon Lava Field and in larger kipukas like Laidlaw Park. Larger numbers of elk winter in the Pioneer Mountains along the northwestern part of the Monument. Two distinct groups of more than 100 animals each were recorded moving back and forth across the west boundary during early 2003 (IDFG
2003). In summer, most of these elk move to summer range west and north of the Monument, with only a few animals remaining in the Monument.

Pronghorn are found within much of the Monument and are common throughout the year in Laidlaw Park (IDFG 2003; USDI NPS 2003). A migratory herd of pronghorn uses the western part of the Monument as a migratory corridor and birthing area (IDFG 2003; USDI NPS 2003). Occasional use during winter has also been recorded in this area (USDI NPS 2003). Smaller numbers of animals can be found along the east boundary and in the rift crack area. Winter range has been identified in the southern areas and the rift crack area (IDFG 2003).

Both cougar and black bear are found in the Pioneer Mountains area of the Monument. In recent decades, documented observations have been confined to the northern part of the Monument in or adjacent to the Pioneer Mountains. Sightings of these two species are rare, and little is known about their status in the Monument.

Moose colonized the riparian areas of the Monument in 1999 and continue to be present. Suitable habitat is limited in the Monument, so that further expansion is not likely.

Four species of large mammals and one small mammal were extirpated from the Monument during the twentieth century. The North American bison, bighorn sheep, wolf, and grizzly bear were last documented in the early twentieth century (Smithsonian Institution 2003). Some wolves from the reintroduced Central Idaho packs occupy territory immediately north of the area. One previously extirpated species, the porcupine, has recently reoccupied historic habitat within the Monument (USDI NPS 2003).

**Pest Control – Grasshoppers**

The BLM currently implements an integrated grasshopper/Mormon cricket control program in cooperation with the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS). Extreme grasshopper population increases can occur during years favorable to their survival. High numbers of grasshoppers have caused and will continue to cause damage to agricultural crops adjacent to public lands.

There are areas of the Monument adjacent to agricultural crops. One is the private land that borders the Monument south and east of Carey, another is the private land that borders the Monument east of the Wapi Lava Flow, and a third is located along the northeast tip of the Monument near Arco. These agricultural cropland interface areas potentially could be grasshopper treatment areas. These cropland interface areas have traditionally grown crops such as potatoes, beets, corn, barley, alfalfa, and beans, which may be fertilized and treated with pesticides and herbicides.

The USDA, APHIS, and BLM have worked together since the 1960s to control grasshoppers and Mormon crickets on public lands. In 1985, the Secretary of Agriculture issued Instruction Memorandum No. ID-85-242, approving application for applying pesticides by APHIS on more than 6.4 million acres of BLM-managed public land to control grasshoppers. That year, the southern one-fourth to one-third of what is now the Monument was aerially sprayed with malathion to control grasshoppers.

In 1986, APHIS and BLM conducted the Nosema Locustae Project along the Little Wood River northeast of Richfield, which is now part of the Monument. Nosema is a biological control agent that affects the grasshoppers’ reproductive organs. It was aerially applied to 10,279 BLM acres, 956 state acres, and 673 private acres.

The state directors have issued Final Decisions for the Environmental Assessments (EA) completed for Site-Specific Environmental Assessment Rangeland Grasshopper Suppression Program (USDA 2004) and Site-Specific Environmental Assessment Rangeland Mormon Cricket Suppression Program (USDA 2004). These final decisions have a concise version of APHIS and BLM standard operating procedures and application guidelines. The USDA and APHIS are working on new BLM policy that allows some control of insect outbreaks in WSAs and Areas of
Critical Environmental Concern (ACECs) as related in Washington Office Instruction Memorandum No. 87-408.

NPS policies address the management of native species, such as grasshoppers, which may become pests. Chapter 4 of the NPS Management Policies (USDI NPS 2001) addresses Management of Native Plants and Animals (4.4.2.1) and Pest Management (4.4.5), including the use of pesticides. According to NPS policy, native pests will be allowed to function unimpeded, except that native pests may be controlled to:

- Conserve threatened, rare, or endangered species or unique specimens or communities;
- Preserve, maintain, or restore the historical integrity of cultural resources;
- Conserve and protect plants, animals, and facilities in developed areas;
- Prevent outbreaks of a pest from invading uninfested areas outside the Monument; or
- Manage a human health hazard when advised to do so by the U.S. Public Health Program, or to otherwise protect against a significant threat to human safety.

The NPS follows an integrated pest management process to address all pest issues on a case-by-case basis. Controversial issues, or those with potential to negatively impact the environment, must be assessed according to the National Environmental Policy Act (NEPA). Intervention to control pests may not be undertaken if the pest control actions would cause unacceptable impacts on the populations of other species or other components and process of the ecosystem that support them.

Wildlife Damage Control

APHIS WS conducts wildlife damage control activities in response to requests for assistance, when and where there is a demonstrated need, and after review of the available evidence. Assistance includes providing technical assistance and direct control by APHIS WS wildlife damage specialists. Direct control includes the use of traps, snares and other devices, as well as aerial gunning (shooting animals from aircraft). Most animal damage control activities in the Monument have been directed at controlling coyote depredation on sheep.

The state authorizes animal damage activities on BLM-administered land; therefore, wildlife damage control will continue to be implemented during the planning process. For BLM-administered land, wildlife damage control, including any necessary preemptive strategies, will continue to be governed by applicable laws. The BLM will continue to coordinate with Wildlife Services as described in existing national MOUs, BLM state policy, and Twin Falls District annual meetings with APHIS WS. Aerial gunning over WSAs requires approval of the BLM State Director.

Within the original Monument and Preserve, NPS management policy limits the management of native animals to specific circumstances, including unnaturally high populations resulting from human influences or to protect property. The NPS Superintendent has the authority to authorize removal of native pest animals (animals that interfere with the purposes or management objectives of a specific area or that jeopardize human health) on NPS-administered land when needed to:

- Conserve threatened, rare, or endangered species or unique specimens or communities;
- Preserve, maintain, or restore the historical integrity of cultural resources;
• Conserve and protect plants, animals, and facilities in developed areas;
• Prevent outbreaks of a pest from invading uninfested areas outside the NPS lands; or
• Manage a human health hazard.

Nothing in this section should be construed as authorizing Wildlife Services or any other entity to take a species formally listed under the Endangered Species Act. For example, although the gray wolf is currently classified as experimental/nonessential throughout Idaho south of Interstate 90, Section 10 of the ESA specifies that such populations should be treated as threatened species on NPS-administered lands. The entire Monument, both NPS- and BLM-administered lands, will be treated as if it were an NPS unit for the purposes of ESA Section 10.

NPS actions to remove or control native pests require appropriate compliance with NEPA.

Special Status Animals
Special status species are those listed as endangered or threatened under the ESA; candidates or species proposed for listing under the ESA; species listed by IDFG as endangered, threatened, or species of special concern; and/or species listed by BLM as sensitive. The BLM manages all species identified as sensitive to minimize the need for future listing as threatened or endangered under the ESA. NPS strives to manage its lands to protect any federally listed, state-listed, or BLM listed species.

The USFWS has provided a list of endangered, threatened, proposed, and/or candidate species that may be present in the area of the Monument (Table 15). According to this list, threatened and endangered animal species that could potentially occur in the Monument area are Canada lynx (*Lynx canadensis*), gray wolf (*Canis lupus*), bald eagle (*Haliaeetus leucocephalus*), bull trout (*Salvelinus confluentus*), Bliss Rapids snail (*Taylorconcha serpenticola*), Utah valvata snail (*Valvata utahensis*), and Snake River physa (*Physa natricina*). However, sufficient habitat for Canada lynx, bull trout, and the snails is not available. The Monument area is not in a Lynx Analysis Unit because it lacks suitable habitat for the species. There is not adequate surface water present in the Monument area for the survival of bull trout or the snails, all of which require substantial riverine habitat.

Gray wolves are known to occur in the vicinity of the Monument (Williams 2002). In the spring and winter of 2001, a pack was observed and tracked just north of the Monument. The pack was thought to have followed migrating elk and deer. In addition, individual wolves have been observed near the boundary of the Monument, with several confirmed sightings in this area since 2000.

There is a bald eagle breeding territory just west of the Monument near Carey Lake. Transient, wintering bald eagles might be found anywhere throughout Blaine, Butte, Minidoka, and Power Counties, including parts of the Monument.

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

Three sub-units of the Monument were also analyzed both for total number of leks and possible influence of wildfire. The results are presented below in Table 16. Note that these sub-units do not represent the entire Monument.

The percent change in number of leks between burned and unburned areas is relatively similar, except in southern Laidlaw Park where cheatgrass (*Bromus tectorum*) has become dominant. In that particular area, seven leks were lost, while one new lek was established. In all cases, current active leks are within 2 miles of an unburned area suitable for nesting and early brood rearing.
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAMMALS</strong></td>
<td></td>
</tr>
<tr>
<td>Gray wolf (Canis lupus)</td>
<td>T</td>
</tr>
<tr>
<td>Townsend's big-eared bat (Corynorhinus townsendii)</td>
<td>I</td>
</tr>
<tr>
<td>Western small-footed myotis (Myotis ciliolabrum)</td>
<td>I</td>
</tr>
<tr>
<td>Long-eared myotis (Myotis evotis)</td>
<td>W</td>
</tr>
<tr>
<td>Fringed myotis (Myotis thysanodes)</td>
<td>S</td>
</tr>
<tr>
<td>Long-legged myotis (Myotis volans)</td>
<td>I</td>
</tr>
<tr>
<td>Yuma myotis (Myotis yumanensis)</td>
<td>I</td>
</tr>
<tr>
<td>Western pipistrelle (Pipistrellus hesperus)</td>
<td>I</td>
</tr>
<tr>
<td>Pygmy rabbit (Brachylagus idahoensis)</td>
<td>I</td>
</tr>
<tr>
<td>Kit fox (Vulpes macrotis)</td>
<td>I</td>
</tr>
<tr>
<td>Plute ground squirrel (Spermophilis mollis)</td>
<td>S</td>
</tr>
<tr>
<td><strong>BIRDS</strong></td>
<td></td>
</tr>
<tr>
<td>White-faced ibis (Plegadis chihi)</td>
<td>I</td>
</tr>
<tr>
<td>Bald eagle (Haliaeetus leucocephalus)</td>
<td>T</td>
</tr>
<tr>
<td>Northern goshawk (Accipiter gentilis)</td>
<td>I</td>
</tr>
<tr>
<td>Ferruginous hawk (Buteo regalis)</td>
<td>I</td>
</tr>
<tr>
<td>Swainson's hawk (Buteo swainsoni)</td>
<td>W</td>
</tr>
<tr>
<td>Prairie falcon (Falco mexicanus)</td>
<td>S</td>
</tr>
<tr>
<td>Peregrine falcon (Falco peregrinus)</td>
<td>E</td>
</tr>
<tr>
<td>Blue grouse (Dendrogapus obscurus)</td>
<td>W</td>
</tr>
<tr>
<td>Greater Sage-grouse (Centrocercus urophasianus)</td>
<td>I</td>
</tr>
<tr>
<td>Columbian sharp-tailed grouse</td>
<td>I</td>
</tr>
<tr>
<td>Wilson's phalarope (Phalaropus bicolor)</td>
<td>W</td>
</tr>
<tr>
<td>Long-billed curlew (Numenius americanus)</td>
<td>I</td>
</tr>
<tr>
<td>Black tern (Chlidonias niger)</td>
<td>S</td>
</tr>
<tr>
<td>Short-eared owl (Asio flammeus)</td>
<td>W</td>
</tr>
<tr>
<td>Western burrowing owl (Athene cunicularia)</td>
<td>I</td>
</tr>
<tr>
<td>Calliope hummingbird (Stellula calliope)</td>
<td>S</td>
</tr>
<tr>
<td>Lewis' woodpecker (Melanerpes lewis)</td>
<td>S</td>
</tr>
<tr>
<td>Red-naped sapsucker (Sphyrapicus nuchalis)</td>
<td>W</td>
</tr>
<tr>
<td>Williamson's sapsucker (Sphyrapicus thyroideus)</td>
<td>S</td>
</tr>
<tr>
<td>Olive-sided flycatcher (Contopus borealis)</td>
<td>S</td>
</tr>
<tr>
<td>Loggerhead shrike (Lanius ludovicianus)</td>
<td>I</td>
</tr>
<tr>
<td>Cordilleran flycatcher (Empidonax occidentalis)</td>
<td>W</td>
</tr>
<tr>
<td>Hammond's flycatcher (Empidonax hammondii)</td>
<td>S</td>
</tr>
<tr>
<td>Willow flycatcher (Empidonax traillii)</td>
<td>S</td>
</tr>
<tr>
<td>Pinyon jay (Gymnorrhinus cyanopechus)</td>
<td>W</td>
</tr>
<tr>
<td>Sage thrasher (Oreoscoptes montanus)</td>
<td>W</td>
</tr>
<tr>
<td>Green-tailed towhee (Pipilo chlorurus)</td>
<td>W</td>
</tr>
<tr>
<td>Grasshopper sparrow (Ammodramus savannarum)</td>
<td>W</td>
</tr>
<tr>
<td>Brewer's sparrow (Spizella breweri)</td>
<td>S</td>
</tr>
<tr>
<td>Sage sparrow (Amphispiza belli)</td>
<td>S</td>
</tr>
<tr>
<td>Black-throated sparrow (Amphispiza bilincta)</td>
<td>S</td>
</tr>
<tr>
<td>Brewer's blackbird (Euphagus cyanocephalus)</td>
<td>W</td>
</tr>
<tr>
<td>Cassin's finch (Carposdacus cassini)</td>
<td>W</td>
</tr>
</tbody>
</table>
Table 15, Continued
Special Status Animal Species in the Monument

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>REPTILES &amp; AMPHIBIANS</th>
<th>INVERTEBRATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western night snake (Hypsiglena torquata)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western toad (Bufo boreas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-horned lizard (Phrynosoma douglassi)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho dunes tiger beetle (Cicindela arenicola)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind cave leiodid beetle (Glacicavicola bathysciodes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho pointheaded grasshopper (Arolophitus pulchellus)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Federal Designations:
E = Federally Endangered
T = Federally Threatened
C = Federal Candidates for listing as T or E
I = Species of concern to USF&WS but without formal federal status

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

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

Three conclusions may be drawn from these and related observations:

- Sage-grouse show a high affinity for lek sites, even after they are burned, if cheatgrass does not become dominant (this hypothesis deserves further study).
- The overall downward trend in the number of sage-grouse leks is not due entirely to wildfire. The major land use affecting sage-grouse habitat is historic livestock grazing.

The concurrent decline in the health of native plant communities, as indicated by Rangeland Health Standards and Guidelines assessments, points to livestock grazing as a major contributing factor in the decline of sage-grouse populations within the Monument. Decreased cover by native perennial grasses and forbs (relative to the appropriate range site descriptions) is likely responsible for decreased sage-grouse production as indicated by the decrease in number of leks.

Table 16
Active Sage-Grouse Leks

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddelford Flat</td>
<td>8</td>
<td>9 (+12%)</td>
<td>1 lek lost on private land and 2 new leks in burred and seeded area.</td>
</tr>
<tr>
<td>Little Park</td>
<td>9</td>
<td>6 (-33%)</td>
<td>No leks impacted by fire.</td>
</tr>
<tr>
<td>Laidlaw Park</td>
<td>47</td>
<td>23 (-51%)</td>
<td>In areas that burned during the 20-year period, there were 18 leks in 1979-83 and 8 leks in 1999-2003.</td>
</tr>
</tbody>
</table>
Regardless of the initial cause (fire, livestock, or some other vector), the dominance of cheatgrass significantly degrades the quality of sage-grouse habitat.

Additionally, the BLM and IDFG have classified sage-grouse habitat in southern Idaho into four groups: Key, Restoration 1 (R1), Restoration 2 (R2), and Restoration 3 (R3).

- Key habitat areas are generally large-scale, intact sagebrush steppe areas that provide sage-grouse habitat.
- R1 lands are sagebrush limited areas with acceptable understory conditions in terms of grass species composition.
- R2 lands are areas with existing sagebrush cover that may or may not be adequate to meet the needs of sage-grouse, but the understory herbaceous conditions are poor.
- R3 lands are areas where junipers are encroaching into sage-grouse habitat.

Within the Monument, there are approximately 340,000 acres of sage-grouse habitat, of which 65 percent is Key habitat, 25 percent is R1 habitat, and 10 percent is R2 habitat.

IDFG has also identified some areas as stronghold or source habitat. These are generally the most important remnants of sage-grouse habitat and have the potential to produce birds that could then populate non-stronghold areas. In the Monument, 43 percent of the sage-grouse habitat is classified as stronghold.

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

The Monument contains hundreds of caves and several cave-related species of concern, including seven species of bats that are USFWS species of concern, Idaho species of special concern, or BLM sensitive species. As of 1999, three maternity colonies of Townsend’s big-eared bat (Corynorhinus townsendii) have been identified in Idaho (Pierson et al. 1999), with two occurring in the Monument. Numerous hibernacula have been identified in the Monument for this and other bat species. Six other cave roosting bats that are classified as sensitive or of concern are found in the Monument (Table 15; Keller 1996). In addition to bats, other cave species are of concern, including the blind cave leiodid beetle (Glavcicavicola bathyscioides). Two of the four known worldwide sites for this species are in the Monument (ICDC 2002a).

Two additional insects listed as sensitive by BLM and as USFWS species of concern have been documented on lands adjacent to the Monument. One, the Idaho point-headed grasshopper (Acrolophitus pulchellus), is found in the Lost River drainage adjacent to the Monument. Two of the five known sites are near the northeast perimeter of the Monument (ICDC 2002b). The preferred habitat is relatively level or rolling terrain with gravelly to rocky soil having low sparse vegetative cover between 4,800 and 7,000 feet elevation (ICDC 2002b).

The Idaho dunes tiger beetle (Cicindela arenicota) is found only in sand dunes in south central and southeast Idaho. Beetles have been documented at several sites near the southeast corner of the Wapi Lava Field (Idaho State Conservation Effort 1996). More potential habitat for this beetle may exist with the Monument.

Table 15 lists the special status animal species that are known or reported in the Monument, including all those mentioned above. In addition, the table lists 42 sensitive species that are either migratory birds or sagebrush related species that have been discussed in this section. Table 15 is a representation of a dynamic list that is expected to change over the life of the plan. The most current list will always be the applicable special status species list.
AIR QUALITY

The Monument and Preserve lie within one of the cleanest air regions of the country. While generally below the national average for most pollutants, the area’s relative ranking varies, depending on the specific pollutant. Air quality also varies, depending on the location within the unit, the pollutant being measured, the season and time of day, wind direction, and climatic factors. Clean air enhances the understanding and appreciation of the Monument’s geologic resources by allowing clear views of distant landscape features.

Sources of air pollutants are both local and regional (Table 17). Emission sources within the Monument are limited to automobile exhaust, smoke from wood stoves and campfires, smoke from wildfires, and windblown dust. Smoke from forest and rangeland fires, as well as agricultural burning, are seasonal sources of fine particulate matter, carbon monoxide, and volatile organic compounds. Industrial point sources are located at the Idaho National Engineering and Environmental Laboratory (INEEL), which is 12 miles east of the Monument, and Bonneville, Bingham, and Bannock Counties to the east. Population densities in the four counties surrounding the Monument range from 1.3 to 26.6 people per square mile, with a total population of 50,000 people across 7,043 square miles (Idaho Department of Commerce 2000).

The air quality management of fire and roads is the primary activity affecting resources in the Monument. Both naturally ignited wildland fires and prescribed fires produce smoke emissions over the life of the fire. The amount of smoke produced and the rate at which it disperses will vary, depending on weather conditions existing during the fire, the amount and type of vegetation burned, and the moisture content of the vegetation consumed. As actively managed events, prescribed fires burn at a controlled size, intensity, and time; therefore, smoke emissions can be minimized and dispersal rates maximized. While wildland fires result from natural, unplanned ignitions, decisions to manage the fire for resource benefits or extinguish it are based in part on the potential impacts of the smoke generated over the life of the fire.

The major pollutant of concern in smoke from fire is fine particulate matter (PM), both PM10 and PM2.5. National Ambient Air Quality Standards (NAAQS) for PM are established for two aerodynamic diam-

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>COUNTY (IDAHO)</th>
<th>CARBON DIOXIDE</th>
<th>NITROGEN OXIDES</th>
<th>PM2.5</th>
<th>PM10</th>
<th>SULFUR DIOXIDE</th>
<th>VOLATILE ORGANIC COMPOUNDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amalgamated Sugar</td>
<td>Minidoka</td>
<td>131</td>
<td>431</td>
<td>214</td>
<td>630</td>
<td>511</td>
<td>1.76</td>
</tr>
<tr>
<td>FMC</td>
<td>Power</td>
<td>2</td>
<td>9</td>
<td>1,391</td>
<td>1,657</td>
<td>2,935</td>
<td>0</td>
</tr>
<tr>
<td>JR Simplot</td>
<td>Bannock</td>
<td>11</td>
<td>1,011</td>
<td>244</td>
<td>307</td>
<td>7,133</td>
<td>0</td>
</tr>
<tr>
<td>Ash Grove Cement</td>
<td>Bannock</td>
<td>0</td>
<td>124</td>
<td>184</td>
<td>288</td>
<td>488</td>
<td>0</td>
</tr>
<tr>
<td>Idaho Supreme Potato</td>
<td>Bingham</td>
<td>2</td>
<td>64</td>
<td>70</td>
<td>243</td>
<td>67</td>
<td>0</td>
</tr>
<tr>
<td>INEEL-DOE</td>
<td>Butte</td>
<td>8</td>
<td>518</td>
<td>3</td>
<td>5</td>
<td>657</td>
<td>0</td>
</tr>
</tbody>
</table>

eter classes: PM10 is particulate matter less than 10 microns in diameter, and PM2.5 is less than 2.5 microns in diameter. Studies indicate that 90 percent of all smoke particles emitted during wildland burning is PM10, and 90 percent of PM10 is PM2.5 (Ward et al. 1991). In 2001, the PM2.5 annual average within the Monument was 2.8 micrograms per cubic meter (µg/m³; Visibility Information Exchange Web System: http://vista.cira.colostate.edu/views/Default.htm), compared with the national health-based standard of 15 µg/m³.

Fugitive dust consists of PM suspended in the air by the wind and human activities. It originates primarily from the soil and is not emitted from vents, chimneys, or stacks. Soils on burned lands or bare agricultural lands lacking vegetative cover are subject to wind erosion of soil particles until vegetative cover is restored. Fugitive dust can also be generated by wind blowing across unpaved roadbeds and by the passage of vehicles along the same roads.

Estimates of the quantity of fugitive dust generated are imprecise and difficult to calculate. The amount of dust produced and its effects vary seasonally with weather conditions (soil moisture, wind speed, and direction) and the amount and speed of motor vehicle traffic. The best indicator of fugitive dust potential is fugitive dust sources, including unpaved roads and lands burned to remove vegetative cover.

The Craters of the Moon National Wilderness Area (“43,243” acres) within the Monument is a mandatory Class I area, as defined in Clean Air Act (42 USC Sections 7401-7671q; as amended in 1990, PL 101-549). Congress created a Prevention of Significant Deterioration (PSD) section, the purpose of which is “to preserve, protect, and enhance the air quality in national parks, national wilderness areas and other areas of special national or regional natural, recreational, scenic, or historic value.” Specifically, the PSD section reflected the law’s intention that, among the clean air regions of the country, certain areas – the Class I areas – deserve the highest level of air quality protection. The impairment of visibility within Class I areas was a major concern addressed in the Clean Air Act.

Integral vistas include those views perceived from within Class I areas of landmarks or panoramas located outside the boundary of a Class I area.

The rest of the Monument is a Class II area (including the WSAs). Class II areas also have limits on increases of particulate matter and sulfur dioxide above baseline concentrations. The allowable increases for Class II areas are higher than those established for Class I areas. Other Class I areas in the region are the Sawtooth Wilderness (70 miles northwest) and Yellowstone and Grand Teton National Parks (140 miles east).

Air quality monitoring in the Monument has recorded concentrations of ozone, PM, visibility, acid deposition, and radionuclides (gross alpha, gross beta, and gamma spec). These monitoring programs have been conducted as part of NPS responsibilities under the Clean Air Act, as well as part of the INEEL off-site environmental surveillance program. All the monitoring sites have been at the north end of the Monument.

Ozone is a widespread air pollutant formed in the atmosphere from emissions of nitrogen oxides and volatile organic compounds. High levels of ozone can injure vegetation and affect human health. Ozone concentrations monitored in the Monument have not exceeded the primary national ambient air quality standard for ozone. The primary ozone standard is exceeded when the annual fourth-highest maximum 8-hour ozone concentration averaged over three years exceeds 80 parts per billion (ppb) (USDI NPS 2002a).

The annual fourth-highest maximum 8-hour ozone concentration averaged from 1994 to 2000 was 63 ppb (USDI NPS 1994-2000). The peak ozone concentration (the second-highest 1-hour average) measured at the northern end of the Monument in 2000 was 77 ppb, which was comparable to concentrations in Yellowstone National Park (73 ppb) the same year. The peak ozone ranged from 63 to 89 ppb and averaged 73 ppb during the 1994 to 2000 period. Peak ozone concentrations in 2000 at other NPS units in the Western United States
ranged from 123 ppb at Joshua Tree National Park in Southern California to 56 ppb at North Cascades in Washington (USDI NPS 1994-2000).

The SUM06 statistic (the sum of hourly average ozone concentrations greater than 0.06 parts per million) calculated over a 3-month period is used to correlate with vegetation impacts. The recommended SUM06 value is no more than 8 to 12 parts per million per hour (ppm/hr) to prevent foliar injury to vegetation, which compares to a maximum three-month ozone SUM06 of 12 ppm/hr in the Monument between 1995 and 1999. While at or well below the average for other NPS-monitored units, the trend in ozone concentrations from 1992 through 1999 indicates a statistically significant degradation in ozone-related air quality (USDI NPS 2002a).

The scattering and absorption of light by particles and gases emitted by, or formed as a result of, natural and human-caused activities degrades the visibility of distant features of the landscape. On the clearest days, visibility at the northern end of the Monument is much better than the national average (Visibility Information Exchange Web System: http://vista.cira.colostate.edu/views/Default.htm), compared with 28 other Class 1 areas scattered across the country (USDI NPS 2002a). In 2001, the best visibility days (upper 20 percent) at the Monument averaged 5 deciviews (a haziness index, lower = clearer) compared with a 7.2 deciview national average between 1990 and 1999. For the worst visibility days (lowest 20 percent), the Monument averaged 14.5 deciviews in 2001, which is comparable with the national average of 16.9 deciviews.

In 2001, the Monument’s annual average visibility range was 106 miles as compared to the 1996 to 1999 annual average at Yellowstone National Park of 102 miles (USDI NPS 2002a).

Trends from 1990 to 1999 in nearby national parks (Yellowstone and Great Basin) indicate improvement in visibility during the clearest days of the year, but the haziest days have improved only slightly or even gotten worse (USDI NPS 2002a). Fine particulates (less than 2.5 micrometers) have been monitored at the Monument as part of the Interagency Monitoring of Protected Environments Program (IMPROVE) since 2000.

EPA has designated portions of Power and Bannock Counties (located 50 miles east of the Monument) as non-attainment areas for the national PM standard (EPA Web site: http://www.epa.gov/oar/oaqps/greenbk/pnp.html#16078). The standard is defined as PM that is smaller than 10 micron (PM10).

A National Atmospheric Deposition Program/National Trends Network (NADP/NTN) site has been operated at the north end of the Monument since 1980. The network measures the chemistry of precipitation to monitor the graphical and temporal long-term trends of hydrogen (acidity as pH), sulfate, nitrate, ammonium, chloride, and base cations (such as calcium, magnesium, potassium, and sodium). In 2000, pH levels of Monument samples ranged from 4.6 to 6.7 with an annual mean of 5.5 (NADP/NTN 2002). This compares with a similar result (5.4) at the NADP/NTN site in Yellowstone National Park.

Ammonium and nitrate ion concentrations are generally higher at the Monument. In 2000, the annual mean concentration of ammonium at the Monument was 0.32 milligrams per liter (mg/L) compared to 0.19 mg/L at Yellowstone and 0.20 mg/L in Owyhee County in southwest Idaho.

Both the U.S. Department of Energy (DOE) and the Idaho Department of Environmental Quality’s INEEL Oversight Program (INEEL OP) have operated environmental monitoring programs to determine whether activities on Idaho National Laboratory (INL) lands have affected off-site locations. Similar monitoring occurs on the INL lands, at the edge of the INL lands, and at several distant locations surrounding the INL. One of the co-located distant sites is located at the Monument’s Visitor Center 18 miles west of Arco. At this site, radiochemistry analysis of airborne particulates for alpha, beta, gamma, americium-241, cesium-137, plutonium-238, and plutonium-239/240 radionuclides have been independently conducted by DOE and the state’s INEEL OP since 1990. DOE and
INEEL also conduct weekly analysis for iodine-131 and quarterly analysis for tritium at this site. In 2002, both monitoring programs concluded that no off-site environmental impacts from INL operations were evident based on the results of particulate air sampling (Stoller 2003; Idaho INEEL Oversight Program 2003).

Statistical comparison of on-site and off-site gross alpha and beta results indicate that the INEEL is not a significant source of off-site contamination. All results were well below applicable regulatory standards and guidelines and were within the range of values measured in previous years. In 2002, annual median gross alpha and beta activity in the air at the Monument site were 1.41 and 2.54 (10-15 µCi/mL), respectively, compared to an annual median value of 1.53 and 2.62, respectively, for the site in Jackson, Wyoming (Stoller 2003).

CULTURAL RESOURCES

Both the NPS and the BLM are responsible for identifying, protecting, managing, and enhancing archaeological, historic, architectural, and traditional lifeway values located on their lands, as well as those that might be affected by BLM or NPS undertakings on non-federal lands. BLM and NPS both manage archaeological remains, historic values, and traditional cultural properties important to Federally Recognized Native American tribes.

Cultural resources are generally identified through field inventories conducted by qualified professionals in compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA). Interviews and historical records can also be used to identify archaeological, historical, and traditional lifeway values. David Louter (1992) completed a Historic Context Statement for Craters of the Moon National Monument in 1992. This document provides a broad historical overview for the area.

During scoping for this Proposed Plan/FEIS, ethnographic resources of importance were identified by the Shoshone-Bannock and Shoshone-Paiute Tribes. Further discussion of Native American ethnographic resources is included in the section entitled “Native Americans Rights and Interests,” following this section.

There has been no systematic, formal inventory to document the presence of any potential cultural landscapes within the Monument to date, such as historic mining districts or historic sheep herding use areas. The general public did not identify any cultural landscapes of concern during scoping for this Proposed Plan/FEIS, and this topic was therefore dismissed as an impact topic. Museum collections would not be affected by any of the alternatives considered and were also dismissed as an impact topic.

ARCHAEOLOGICAL AND HISTORICAL RESOURCES

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

Over the years, several different universities have also conducted Class III inventories on the Monument, unassociated with any specific development project, expanding the information base. It is estimated that less than 5 percent of the Monument has been intensively inventoried for cultural resources. No systematic inventory of the caves associated with the lava flows has been completed. There may be many important cultural resources associated with the lava tubes, as well as the harder to reach kipukas, which have not been recorded by archaeologists because of their remote nature.
Early NPS surveys in the 1960s suggested that there was not a great deal of prehistoric use in this area, but more recent surveys on the adjacent BLM lands would seem to indicate otherwise. These early surveys were concentrated in areas archaeologists deemed likely because they contained known water sources. We now know that Native Americans used this area much more than archaeologists originally believed. Data from recent nearby fire rehabilitation surveys indicate a rather high density of prehistoric sites in association with the lava flows. Therefore, it is believed that there is a significant prehistoric cultural component associated with the Monument area, in addition to the well-documented historic component.

While these inventories have identified many cultural resource sites, little work has been done to synthesize the results and provide a comprehensive framework for assessing cultural resource function, significance, variability, and distributional patterns. There are also many previously recorded cultural resources that should be revisited so that the present condition of these sites can be assessed. Older records are in need of informational details and require updating. Consultation and communication with tribes would improve the agencies’ knowledge of traditional cultural properties within the Monument as well. The synthesis of this data will be necessary to identify cultural resources that may be suitable for public education or interpretation, as well as resources that will require special preservation measures. Patterns of anticipated visitor use will guide these decisions as well. Most recorded sites in the Monument are considered eligible for listing on the National Register of Historic Places (NRHP). Presently, however, only Goodale’s Cutoff is listed on the NRHP.

Cultural resources condition and trend within the Monument varies considerably because of the variability of terrain and geomorphology, access and visibility, and past and current land use. Exposed artifacts and features on the ground surface can be disturbed by elements such as wind and water erosion, animal and human intrusion, and development and maintenance activities. Based on limited site visitation and site form documentation, the trend of site condition within the Monument is considered stable in most areas. Vandalism and unauthorized collection at sites constitutes the main source of cultural resource degradation.

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

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

**Prehistoric and Historic Sites**

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

Although there is no evidence of earlier occupation at the Monument, there is certainly evidence to suggest an earlier PaleoIndian occupation elsewhere on the Snake River Plain. Sites that are relatively nearby with definite PaleoIndian artifacts are Wilson Butte Cave (Gruhn 1961), the Buhl Burial, and the Simon Site (Butler 1963). The recent discovery of the Buhl Burial in 1991 provided researchers with an undisputable carbon date of 9,600 years ago. The oldest carbon dates recovered from Wilson Butte
Cave (14,500 years ago) were not in clear association with cultural material, and there is some doubt among scholars as to whether the cultural deposits themselves are older than 9,000 years.

The Monument contains portions of an NRHP-listed historic trail. Goodale’s Cutoff was an alternate route of the Oregon Trail that skirted the northern edge of the Craters of the Moon Lava Field. These portions of Goodale’s Cutoff from US 20/26/93 in Butte County west to Blaine County are on the NRHP. Historic sites in the Monument include portions of historic trails, as well as sheepherder camps, cairns, and dumps. A few stock-raising homestead claims were filed within the Monument in the 1890s and early 1900s, but the environment proved too harsh for them to succeed, and most were canceled. Virtually no visible physical evidence of these endeavors remains (Louter 1992). During the early days of Euro-American settlement in southern Idaho, sheep and cattle grazing were the predominant economic pursuit in this area. During the late 19th and 20th centuries, silver, gold, and lead mining also took place in the mountains just north of the Monument.

The Monument headquarters complex, including the Visitor Center, employee residences, and maintenance buildings, was recently determined to be eligible for nomination to the NRHP (USDI NPS 2000b). A nomination has not yet been forwarded to the keeper of the NRHP for approval. The eligibility is based on the continued integrity of the modern architectural design with grouping of public and administrative facilities in a headquarters area. This approach typified the NPS Mission 66 Program of the late 1950s and early 1960s (Allaback 2000). Mission 66 was a 10-year development program designed to upgrade facilities throughout the National Park System. The National Park Visitor Center, as it is known today, is from the Mission 66 era. The concept of a single building incorporating public facilities, interpretive programs, and administrative functions originated during the Mission 66 Program.

NATIVE AMERICAN RIGHTS AND INTERESTS

NATIVE AMERICAN TREATY RIGHTS AND TRUST RESOURCES

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

On July 3, 1868, the Eastern Band of Shoshone and Bannock Tribes and the United States signed the Treaty with the Eastern Band Shoshone and Bannock, 1868, commonly referred to as the Fort Bridger Treaty (15 Stat. 673). In the Fort Bridger Treaty, the tribes relinquished claims to approximately 20 million acres to the United States. The treaty retains the tribes’ rights to hunt, fish, and gather natural resources, and provides other associative rights necessary to effectuate these rights on
open and unoccupied lands of the United States. The Shoshone-Bannock Tribes have a long, rich, historical association with the Monument, and their use of those trust resources continues today.

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

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

Members of the Shoshone-Bannock Tribes exercise their hunting, fishing, and gathering rights on certain state and federal lands outside the boundaries of their reservations. Tribal treaty rights pursued on public lands within the Preserve and BLM-administered portions of the Monument include hunting of large and small game and gathering various natural resources for both subsistence and medicinal purposes. Game identified by the tribe as having importance includes elk, deer, antelope, moose, sharp tailed grouse, sage-grouse, rabbits, marmots, squirrels, partridges and other associated small game.

The Idaho Department of Fish and Game (IDFG) is charged with enforcement of fish and game regulations within the state of Idaho. However, the IDFG recognizes the authority of the 1975 Tribal Fish and Game Code of the Shoshone-Bannock Tribes of the Fort Hall Indian Reservation to regulate tribal members residing on the reservation when hunting or fishing on federal and state-owned lands outside the reservation, the exception being when those lands have been specifically closed to hunting by state or federal statute.

As a rule, NPS does not allow consumptive uses of natural resources such as plants, rocks, and wildlife from NPS-administered lands (36 CFR 2.1). However, as a matter of policy, NPS generally supports limited and controlled acquisition and use of natural resources for traditional religious and ceremonial purposes (NPS Management Policies, Chapter 8.9).

ETHNOGRAPHIC RESOURCES

Native American ethnographic resources within the Monument have not been characterized in detail to date, but include traditional cultural properties and sacred sites. The existence and importance of these resources can only be determined through consultation with knowledgeable tribal members, and study of existing ethnographic research.

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

The American Indian Religious Freedom Act of 1978 (42 USC 1996) states United States policy to recognize and protect Native American religion. In part, the law states that the policy of the United States is to protect and preserve the right of Native Americans to access sites, as well as use and possess sacred objects for ceremonial and traditional practices. Accordingly, the agencies will accommodate access to and ceremonial use of Native American sacred sites, consistent with the purposes of the Monument (Executive Order 13007).

There are no Native American Graves Protection and Repatriation Act (NAGPRA) materials in the existing museum collections from the Monument and Preserve. In the event that materials are inadvertently discovered or encountered during authorized archaeological excavations, the affiliated tribes would be contacted immediately and the procedures outlined in NAGPRA would be followed.

**LAND USE AND TRANSPORTATION**

**TRAVEL AND ACCESS**

One of the most important issues to be considered in this planning effort is the amount and type of access to and within the Monument. This plan characterizes the existing road and trail network using the best available data on current condition and historical maintenance practices. Figure 16 depicts the current road network in the planning area.

With the exception of road closures implicit in the application of Pristine Zone areas (see management zone descriptions in Chapter 2), decisions affecting the status or condition of all roads and trails within the Monument will be made in a follow-up implementation plan (see Chapter 1 Future Planning Needs). As stated in the Desired Future Conditions, there will be no net increase in road mileage within the Monument. All travel and access will be limited to the existing roads and trails as shown in Figure 16. This map represents the best available information at the time of publication and was compiled using USGS 1:24,000 scale topographic maps BLM and NPS roads information including a 2002 survey of roads, ways, and trails in and around existing Wilderness Study Areas. These roads and trails were evaluated by agency staff and organized into the following classification system to provide for a reasonable baseline data set to be used within the context of a more specific Comprehensive Travel Management Plan to follow.

**Major Transportation Routes**

Interstate Highways 15, 86, and 84 on the south and east, US 20/26/93 on the west and north, and US 26 on the northeast connect population centers and constitute primary access to the planning area. Idaho State Highway (SH) 24 (parallel with the Union Pacific Railroad) connects Shoshone with Rupert by way of Minidoka, and to the east, SH 39 connects Blackfoot and American Falls by Aberdeen.

US 20/26/93 traverses the north end of the Monument, and in the developed area of the Monument around the Visitor Center, there is a paved 7-mile Loop Drive and developed trails. No public transportation is available to the Monument. While paved roads surround the Monument, the roads within the Monument are either gravel or dirt, and very few roads cross the lava flows. There is no vehicle access to most of the interior of the Monument in winter or spring because of snow and wet road conditions.

On the east side of the Craters of the Moon Lava Flow, a 69-mile dirt/gravel road connects Arco and Minidoka. The Arco-Minidoka Road has a wide variety of road conditions. The north and south ends of the road, maintained by Butte and Minidoka Counties, are relatively well-maintained gravel roads. The middle part of the Arco-Minidoka Road, within the Monument, is a difficult to follow dirt, two-track road that receives relatively little maintenance. The main travel way on the west side of the Monument is the 39-mile Carey-Kimama Road, of which 11 miles are within the Monument. Carey-Kimama Road is a continuous gravel road that receives regular maintenance.
The southern part of the Monument, including Crystal Ice Cave and Kings Bowl, is accessed by paved and gravel county roads, which lead to dirt/gravel BLM and county roads near and within the Monument.

**Road Classification**

Within the Monument, a “road” is defined as an established route capable of accommodating travel by a full-sized automobile or truck. Following other routes or establishing new routes with motorized or mechanized vehicles is considered “off-road” use, which is not permitted in the Monument (see below). There are four different types of roads within the Monument: These conditions were arrived at using the best available resource base data (USGS 1:24,000 scale GIS layers) while incorporating institutional knowledge among agency experts for verification and revision.

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

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

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

- **Class D Roads** are primitive roads that were not constructed but have been established over time by the passage of motorized vehicles. These roads receive no maintenance or grading. These roads are generally referred to as “two-tracks” or a set of two ruts with vegetation growing in between the wheel ruts. The condition of these roads varies from sometimes passable by a passenger car, to only suitable for high-clearance four-wheel-drive vehicles, to passable only by adventurous off-highway vehicle (OHV) enthusiasts with special equipment. Seasonal conditions or wet weather may render these roads impassable at any time. Class D roads are found primarily in the Primitive Zone.

**Ways** are defined in the BLM Handbook 8550-1 Interim Management Policy for Lands Under Wilderness Review (USDI BLM 1995) as a “trace maintained solely by the passage of vehicles which has not been improved and/or maintained by mechanical means to ensure relatively regular and continuous use.” The BLM identified all ways inside Wilderness Study Areas (WSAs) as part of the wilderness inventory process. Ways are generally open to motorized and mechanical use until Congress designates a WSA as Wilderness or releases it from wilderness consideration. Technically, ways fall into the Class D road classification in this plan. However, this does not imply that roads would be permitted in WSAs, rather it is simply a way of fitting what we have already inventoried and identified as ways into one comprehensive classification system in an effort to characterize all access and transportation within the Monument.

**Trail Classification**

A “trail” is a constructed (or established by past use) linear feature, with a single tread designated, designed, and intended for travel by hikers, horses, and two-wheeled vehicles (for example, mountain bikes and motorcycles). Trails are sometimes referred to as “single track.” Trails within the Monument are classified into two types based on use.
**Class 1 Trails** are restricted to non-motorized/non-mechanized travel (wheelchairs are allowed). Examples of permitted forms of travel include foot travel, pack animal, and horseback. Examples of prohibited forms of travel on Type 1 trails are mountain bikes and all motorized vehicles. Class 1 trails may be further restricted; for example, to foot travel only.

**Class 2 Trails** are open to motorized/mechanized travel in addition to foot travel, pack animal, horseback, and other forms of passage. Examples of prohibited forms of travel are any vehicle with a footprint wider than an 18-inch tread (all-terrain vehicles, four-wheelers, and four-wheel-drive vehicles).

Table 18 summarizes the current status of roads and their designated classes in the Monument.

Costs vary tremendously for road maintenance, whether performed by BLM or by the counties. The counties and local highway districts receive funding from the Federal Highway Administration (FHWA) at a fixed dollar per mile cost for the number of miles of road they maintain. For example, costs associated with annual maintenance of a Class C road can be relatively low, between $200 and $400 per mile. This would involve smoothing the road surface with a road grader. One-time deferred maintenance (every 10 to 15 years) such as reshaping the road, cleaning ditches, and adding aggregate material on a Class B standard road can cost $10,000 per mile. To completely rebuild a road, or to bring a road from a Class D standard to a Class B standard, can cost as
much as $50,000 per mile. These maintenance costs apply to roads leading to the Monument as well as roads within the Monument.

BLM policy requires land use plans to make OHV (also referred to as “off-road vehicle”) designations for all BLM lands within the planning area in the land use planning process (Land Use Planning Handbook H1601-1). The three OHV designations are “open”, “limited”, and “closed”. Open means an area where all types of vehicle use are permitted at all times, and closed means an area where off-road vehicle use is prohibited (43 CFR 8340-0-5(f)(g)(h). All lands within the planning area have been designated by the Proclamation as “limited.” A “limited” designation means that all off-road vehicle use will be limited to existing roads and trails. On NPS-administered lands, operating a motorized vehicle is permitted only on Park Roads, in parking areas, and on routes and areas designated for off-road motor vehicle use. No routes or areas are presently designated for off-road vehicle use, nor are they permitted on lands that have been classified as eligible for wilderness designation. Similar restrictions apply to bicycle use. The Comprehensive Travel Management Plan completed following the finalization of this plan will identify seasonal limitations and closures, vehicle type and size restrictions, road construction, and maintenance standards for all roads and trails within the Monument. The Idaho

Table 18
Roads and Trails within Craters of the Moon National Monument and Preserve

<table>
<thead>
<tr>
<th>ROADS WITHIN THE MONUMENT</th>
<th>MILES</th>
<th>MAINTENANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A</td>
<td>30</td>
<td>Idaho Transportation Department maintains 21 miles; NPS maintains 9 miles.</td>
</tr>
<tr>
<td>Class B</td>
<td>58</td>
<td>BLM maintains 28 miles; remaining 30 miles maintained by Blaine (28) and Butte (2) Counties.</td>
</tr>
<tr>
<td>Class C</td>
<td>367</td>
<td>BLM maintains 365 miles, NPS maintains 1 mile, Blaine County maintains 1 mile.</td>
</tr>
<tr>
<td>Class D</td>
<td>173</td>
<td>Not maintained.</td>
</tr>
<tr>
<td>Arco-Minizdoka Road</td>
<td>69</td>
<td>BLM maintains 15 Class B miles and 25 Class C miles; remaining 29 miles maintained by Butte (24) and Blaine (5) Counties.</td>
</tr>
<tr>
<td>Carey-Kimama Road</td>
<td>40</td>
<td>BLM maintains 15 miles (all Class B); remaining 25 miles maintained by Blaine (12) and Lincoln (13) Counties.</td>
</tr>
</tbody>
</table>
Transportation Department (ITD), counties, and local highway districts manage roads leading to and passing through the Monument under the terms of right-of-way grants.

**Off-Road Access**
Except for emergency or authorized administrative purposes, the operation of motorized and mechanized vehicles off-road is prohibited within the Monument (Proclamation 7373). A common use on much of the public lands within the Monument is operation of OHVs. The operation of OHVs is currently permitted on all existing inventoried roads, with the exception of the restrictions noted above on NPS-administered lands.

Administrative purposes include the authorized activities of the agencies; permit holders (e.g., livestock permittees), and other agencies. In all cases, off-road travel must be specifically authorized by the agencies. The agencies coordinate with livestock permittees, USDA WS, IDFG, and others who may require authorizations for off-road vehicle use.

Existing BLM land use plans address off-road (cross-country) travel on public lands outside of the Monument. Generally, the public lands outside the Monument are designated “open” to OHV use.

**LIVESTOCK GRAZING**

**Livestock use at the Monument**
The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the Bureau of Land Management in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the Bureau of Land Management.” The Monument is cooperatively managed by NPS and BLM. NPS administers 462,880 acres, or 61 percent, of the Monument, and that area is not available for livestock use. These areas consist primarily of exposed lava flows, which are mostly devoid of available forage and/or inaccessible to livestock; therefore, prohibiting grazing in these areas has little to no impact on the livestock industry.

Three BLM field offices (Idaho Falls, Burley, and Shoshone) in the Idaho Falls and Twin Falls Districts administer livestock use on the 285,700 acres (including BLM, Private and State Lands) in the Monument. Sheep and/or cattle graze these lands, which are divided into management units known as allotments. Grazing permits are awarded to permittees by allotment. These permits, or leases, convey no right, title, or interest in the land or resources. Although the Proclamation specifically mentions livestock grazing, it does not establish the practice as a “right” or convey to it any new status. There are an additional 1,800 acres of BLM-administered land adjacent to privately owned agriculture fields and NPS-administered lava, which are designated not available for grazing. Figure 17 shows all grazing allotments in the Monument.

Table 19 shows the breakdown of allotment acres, animal unit months (AUMs), and permittees by field office.

Table 20 shows the current individual allotment information within the Monument, including AUM figures, which are estimates based on the percentages of each allotment that lies within the Monument.

Grazing systems, or acceptable grazing practices, for allotments are detailed in Allotment Management Plans (AMPs). Grazing systems result from certain decisions and agreements and are subject to standards and guidelines, as are adjustments made to stocking rates. AUMs, shown in Tables 19 and 20, reflect current authorizations and are not a mandated level of use.
Only those allotments which are either inside or immediately adjacent to the Monument have been labeled here. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

FIGURE 17
GRAZING ALLOTMENTS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management
Standards and guidelines have been applied to 18 out of 23 allotments, as is shown in Table 21. This analysis begins with consultation between an authorized officer, interested publics, and resource users. Field assessments and evaluations are then conducted to determine the achievement or non-achievement for each standard. A plan to reach uniform achievement, when needed, is typically developed through an environmental assessment (EA). EAs identify changes necessary for allotments to meet, or to make significant progress toward meeting, all standards. EAs also require follow-up monitoring and the reporting of results. Appendix F contains the handbook, “Standards for Rangeland Health and Guidelines for Livestock Grazing Management.”

Grazing preference is not expected to decrease as a result of standards and guidelines analysis because most allotments are attaining, or are making significant progress toward attaining, uniform achievement.

Rangeland developments are used in the Monument to improve livestock distribution, provide livestock forage, restore degraded areas, protect sensitive sites, improve wildlife habitat, and facilitate intensive management of livestock through the implementation of grazing systems. Many of these are also closely associated with the road system in the Monument. See Figure 18.

Proclamation 7373 recognized existing roads and two-tracks across narrow strips of exposed lava that are used to trail livestock from one grazing area to another. Trailing of livestock between allotments is another common practice in the livestock industry, and historic trail routes are still used today in many areas of the Monument. The majority of this trailing occurs along existing roads. In the table accompanying the Proclamation, these corridors were designated for primary management by the BLM to allow for continued livestock trailing and other authorized uses in these corridors. However, there are two known areas in the Monument where historic livestock trails do not follow designated roads and cross lava flows that are now administered by the NPS. These two much less obvious trails historically used for trailing livestock were not identified on the Proclamation map. While not in use at the time of Proclamation 7373, the question of their future use has been raised during the preparation of this plan. Both were once used for trailing sheep. One leads between US 93 and Paddelford Flat and the other across Brigham Point in the southern portion of the Craters of the Moon Lava Flow.

The Paddelford Flat Trail, in the northern part of the Monument (T.1S, R.23E, Sec. 5,8), allows the passage of livestock from the north end of Paddelford Flat to US 20/26/93, about 1 mile west of Lava Lake. Without this trail, it would take about 13 miles to trail out around the lava and along the highway back to Lava Lake. This trail, which is approximately 1.5 to 2 miles long, is passable by foot traffic only because it is narrow and goes through rugged lava. The photo below depicts a traditional sheep camp that is used in today’s sheep herding operations.

The Brigham Point Trail, in the southern part of the Monument (T.5S, R.25E, Sec.15), is at the north end of the Brigham Point Lava Flow. This trail, which is less than 0.25-mile long, has similar characteristics to the Paddelford Flat Trail, and therefore it is passable only by foot traffic. This trail allows passage between the east and west sides of Brigham Point without having to go around the entire flow, which would be approximately 9 miles.

### Table 19
Livestock Use per BLM Field Office

<table>
<thead>
<tr>
<th>INFORMATION</th>
<th>SHOSHONE</th>
<th>IDAHO FALLS</th>
<th>BURLEY</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Allotments</td>
<td>10</td>
<td>9</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td>Total Acres</td>
<td>154,300</td>
<td>77,400</td>
<td>54,000</td>
<td>285,700</td>
</tr>
<tr>
<td>Number of AUMs</td>
<td>19,043</td>
<td>9,095</td>
<td>8,827</td>
<td>36,965</td>
</tr>
<tr>
<td>Number of Permittees</td>
<td>30</td>
<td>35</td>
<td>14</td>
<td>79</td>
</tr>
</tbody>
</table>
Range Improvements data displayed here is sufficient for illustrating the approximate quantity and distribution of facilities inside the Monument. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

FIGURE 18
RANGE IMPROVEMENT FACILITIES
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

Chapter 3: AFFECTED ENVIRONMENT 157
### Table 20
Craters of the Moon Allotment Animal Unit Months

<table>
<thead>
<tr>
<th>FIELD OFFICE</th>
<th>ALLOTMENTS</th>
<th>ALLOTMENT</th>
<th>ESTIMATED AUMS WITHIN THE MONUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Acres</td>
<td>Acres in Monument</td>
<td>% of acres in Monument</td>
</tr>
<tr>
<td>Idaho Falls</td>
<td>Blizzard Mountain</td>
<td>3,500</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Huddles Hole</td>
<td>2,300</td>
<td>2,300</td>
</tr>
<tr>
<td></td>
<td>Sunset</td>
<td>12,700</td>
<td>1,600</td>
</tr>
<tr>
<td></td>
<td>Quaking Aspen</td>
<td>81,500</td>
<td>2,900</td>
</tr>
<tr>
<td></td>
<td>Smith</td>
<td>19,800</td>
<td>2,800</td>
</tr>
<tr>
<td></td>
<td>Coxes Well</td>
<td>21,500</td>
<td>6,700</td>
</tr>
<tr>
<td></td>
<td>Big Desert</td>
<td>236,000</td>
<td>54,000</td>
</tr>
<tr>
<td></td>
<td>Rudeen</td>
<td>15,000</td>
<td>6,400</td>
</tr>
<tr>
<td></td>
<td>Craters</td>
<td>2,200</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>394,500</strong></td>
<td><strong>77,400</strong></td>
</tr>
<tr>
<td>Burley</td>
<td>East Minidoka</td>
<td>21,300</td>
<td>5,100</td>
</tr>
<tr>
<td></td>
<td>Minidoka</td>
<td>99,800</td>
<td>43,500</td>
</tr>
<tr>
<td></td>
<td>Sand</td>
<td>8,800</td>
<td>1,800</td>
</tr>
<tr>
<td></td>
<td>Schodde</td>
<td>21,100</td>
<td>3,600</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>151,000</strong></td>
<td><strong>54,000</strong></td>
</tr>
<tr>
<td>Shoshone</td>
<td>Bowl Crater</td>
<td>2,900</td>
<td>2,900</td>
</tr>
<tr>
<td></td>
<td>Cottonwood</td>
<td>6,900</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td>Crater</td>
<td>2,500</td>
<td>1,600</td>
</tr>
<tr>
<td></td>
<td>Kimama</td>
<td>33,100</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>Laidlaw Park</td>
<td>94,600</td>
<td>94,600</td>
</tr>
<tr>
<td></td>
<td>Lava Lake</td>
<td>14,500</td>
<td>1,900</td>
</tr>
<tr>
<td></td>
<td>Pagari</td>
<td>26,700</td>
<td>1,900</td>
</tr>
<tr>
<td></td>
<td>Poison Lake</td>
<td>18,600</td>
<td>18,600</td>
</tr>
<tr>
<td></td>
<td>Timber Butte</td>
<td>7,900</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Wildhorse</td>
<td>241,000</td>
<td>30,800</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>448,700</strong></td>
<td><strong>154,300</strong></td>
</tr>
</tbody>
</table>

**GRAND TOTAL**

<table>
<thead>
<tr>
<th>Total AUMs per Allotment</th>
<th>36,965</th>
</tr>
</thead>
</table>

These acreage calculations are based on allotment boundaries which include BLM, State, and Private lands.
# Table 21

**Allotment Standards & Guides Facts — Idaho Falls and Twin Falls Districts**

<table>
<thead>
<tr>
<th>ALLOTMENT</th>
<th>% OF ALLOTMENT AFFECTED</th>
<th>AUMS IN PROPOSAL</th>
<th>NUMBER OF PERMITTEES</th>
<th>YEAR STANDARDS &amp; GUIDELINES COMPLETE</th>
<th>PERMIT EXPIRATION DATE</th>
<th>STANDARDS MET</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IDAHO FALLS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blizzard Mountain</td>
<td>4</td>
<td>26</td>
<td>1</td>
<td>1999</td>
<td>2009</td>
<td>Yes</td>
</tr>
<tr>
<td>Craters</td>
<td>35</td>
<td>88</td>
<td>1</td>
<td>1999</td>
<td>2009</td>
<td>Yes</td>
</tr>
<tr>
<td>Huddles Hole</td>
<td>100</td>
<td>44</td>
<td>1</td>
<td>1999</td>
<td>2009</td>
<td>Yes</td>
</tr>
<tr>
<td>Sunset</td>
<td>13</td>
<td>206</td>
<td>1</td>
<td>1999</td>
<td>2009</td>
<td>Yes</td>
</tr>
<tr>
<td>Quaking Aspen</td>
<td>4</td>
<td>259</td>
<td>11</td>
<td>1999</td>
<td>2009</td>
<td>Yes</td>
</tr>
<tr>
<td>Smith</td>
<td>14</td>
<td>352</td>
<td>1</td>
<td>2008</td>
<td>2008</td>
<td>In Progress</td>
</tr>
<tr>
<td>Coxes Well</td>
<td>31</td>
<td>659</td>
<td>1</td>
<td>2005</td>
<td>2005</td>
<td>In Progress</td>
</tr>
<tr>
<td>Big Desert</td>
<td>23</td>
<td>6,710</td>
<td>18</td>
<td>1999</td>
<td>2009</td>
<td>Yes</td>
</tr>
<tr>
<td>Rudeen</td>
<td>43</td>
<td>799</td>
<td>1</td>
<td>2005</td>
<td>2005</td>
<td>In Progress</td>
</tr>
<tr>
<td><strong>BURLEY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Minidoka</td>
<td>23</td>
<td>1,025</td>
<td>1</td>
<td>1999</td>
<td>2005</td>
<td>Yes</td>
</tr>
<tr>
<td>Minidoka</td>
<td>43</td>
<td>6,845</td>
<td>9</td>
<td>2002</td>
<td>2/05, 4/07, 1/08, 2/09</td>
<td>No</td>
</tr>
<tr>
<td>Sand</td>
<td>19</td>
<td>86</td>
<td>1</td>
<td>2006</td>
<td>2007</td>
<td>Yes</td>
</tr>
<tr>
<td>Schodde</td>
<td>17</td>
<td>547</td>
<td>3</td>
<td>2000</td>
<td>1/06, 2/09</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>SHOSHONE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bowl Crater</td>
<td>100</td>
<td>133</td>
<td>1</td>
<td>2004</td>
<td>2/28/15</td>
<td>No</td>
</tr>
<tr>
<td>Cottonwood</td>
<td>11</td>
<td>20</td>
<td>1</td>
<td>1999</td>
<td>2/28/09</td>
<td>No</td>
</tr>
<tr>
<td>Crater</td>
<td>65</td>
<td>85</td>
<td>1</td>
<td>1999</td>
<td>2/28/09</td>
<td>No</td>
</tr>
<tr>
<td>Kimama</td>
<td>2</td>
<td>117</td>
<td>6</td>
<td>1999</td>
<td>Varies</td>
<td>No</td>
</tr>
<tr>
<td>Laidlaw Park</td>
<td>100</td>
<td>11,431</td>
<td>14</td>
<td>2003</td>
<td>Varies</td>
<td>No</td>
</tr>
<tr>
<td>Lava Lake</td>
<td>12</td>
<td>88</td>
<td>1</td>
<td>2004</td>
<td>2/28/15</td>
<td>Yes</td>
</tr>
<tr>
<td>Pagari</td>
<td>7</td>
<td>180</td>
<td>3</td>
<td>2004</td>
<td>Varies</td>
<td>No</td>
</tr>
<tr>
<td>Poison Lake</td>
<td>100</td>
<td>3,262</td>
<td>1</td>
<td>2005</td>
<td>2/28/05</td>
<td>In Progress</td>
</tr>
<tr>
<td>Timber Butte</td>
<td>7</td>
<td>63</td>
<td>1</td>
<td>2006</td>
<td>2/28/12</td>
<td>In Progress</td>
</tr>
<tr>
<td>Wildhorse</td>
<td>13</td>
<td>3,668</td>
<td>22</td>
<td>1999</td>
<td>Varies</td>
<td>No</td>
</tr>
</tbody>
</table>
OTHER LAND USES

Administrative and Visitor Facilities
Existing administrative and visitor facilities in the Monument are concentrated in an area of approximately 90 acres adjacent to US 20/26/93 in the north area of the Monument. These are the Visitor Center/Administrative Building, maintenance shop, five residential buildings, the entrance station, paved parking areas and roads, a 51-unit campground, a campsite, and related sites. The Visitor Center (which also serves as the NPS administrative headquarters), the maintenance building, and five residential buildings were built in the late 1950s as part of the NPS Mission 66 Program.

The Visitor Center building contains a lobby with book displays, sales, and an information desk; a small exhibit room; and public restrooms. The administrative office area of the building consists of six rooms serving as offices and shared work areas. Renovation of the building and additions of 1,800 square feet for staff work area and 450 square feet for a multipurpose audiovisual room are in progress.

The six-bay maintenance building provides limited area for its intended purposes, since parts of the building have been converted to offices for maintenance staff, administrative staff, and storage of park supplies. One of the residential buildings has been converted to staff offices and museum collections storage. Sewage is handled by separate septic tanks and leaching wells for the Visitor Center/maintenance building and for the residential area. Each of the campground restrooms is served a separate system.

The 51-unit campground contains a 130-seat amphitheater and two restrooms. An entrance station where visitors are contacted before entering the paved loop drive is located adjacent to the campground. North of the highway is a public group campsite. In this vicinity is also a modest research camp, the park’s potable water wells and delivery systems, and underground water storage reservoirs.

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

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

Lands and Realty
The planning area encompasses approximately 752,490 acres. Figure 19 shows land status, and land ownership is detailed in Table 22.

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

The agencies will consider acquiring private and state land in the Monument through exchange, purchase, or donation. Acquisitions of private land must be initiated by the private landowner as a willing seller. The Idaho Department of Lands (IDL) has initiated a proposal to exchange state land in the Monument for BLM land outside of the Monument (see letter from IDL in Appendix I). Private or state land acquired by the agencies would automatically become part of the Monument and subject to the direction in this plan.

Proclamation 7373 transferred 409,460 acres in the Monument from BLM to NPS administration. In 2002, Congress changed the designation of this land from National Monument to the Craters of the Moon National Preserve.

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

The Monument contains multiple land use authorizations for a wide variety of purposes. Lands and realty authorizations fall into two broad categories, valid existing rights and other valid but lesser interests. Proclamation 7373 states that: “The establishment of this monument is subject to valid existing rights.” Land use authorizations that give “rights” to the holder under various laws, leases, and filings under federal law, such as some rights-of-way (ROWs), are listed in Table 23 and shown on Figure 20.

Table 22
Landownership

<table>
<thead>
<tr>
<th>LAND STATUS</th>
<th>ACRES</th>
<th>% OF MONUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPS Lands</td>
<td>462,880</td>
<td>61</td>
</tr>
<tr>
<td>Original Monument</td>
<td>53,420</td>
<td>7</td>
</tr>
<tr>
<td>National Preserve</td>
<td>409,460</td>
<td>54</td>
</tr>
<tr>
<td>BLM Lands</td>
<td>274,800</td>
<td>37</td>
</tr>
<tr>
<td>Federal Total</td>
<td>737,680</td>
<td>98</td>
</tr>
<tr>
<td>State Total</td>
<td>8,250</td>
<td>1</td>
</tr>
<tr>
<td>Private Total</td>
<td>6,560</td>
<td>1</td>
</tr>
<tr>
<td>Grand Total</td>
<td>752,490</td>
<td>100</td>
</tr>
</tbody>
</table>
No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

FIGURE 19
LAND STATUS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management
Other existing authorizations in the Monument are three Free Use Permits for mineral materials (see the “Minerals” section, below) and 14 easements held by BLM across state and private land. Only one pending authorization/application for a land use authorization within the Monument existed on November 9, 2000. This is a proposed cooperative agreement for a groundwater recharge area along the Little Wood River, approximately 5 miles south of Carey. At the time of Proclamation 7373, there were no other pending lands and realty cases or applications such as ROWs, Land Use Permits, exchange or sale proposals, or trespass cases.

A potential powerline corridor was identified in 1984, running southwest to northeast between the Craters of the Moon and Wapi lava fields in the Monument (Montgomery 1984). However, because of conflicts with the Great Rift WSA, this corridor has not been carried forward in other regional powerline and utility corridor studies (Western Regional Corridor Study 1992). A utility corridor, an existing 500-kilovolt-transmission line, and a railroad ROW border the Monument on its southern extremity near the Wapi Lava Field.

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

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

Table 23
Valid Existing Rights

<table>
<thead>
<tr>
<th>LOCATION ON FIGURE 20</th>
<th>CASE TYPE</th>
<th>CUSTOMER NAME</th>
<th>CASE FILE NUMBER</th>
<th>SIZE IN ACRES</th>
<th>EXPIRATION DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Federal Aid Highway 93</td>
<td>ITD</td>
<td>IDI-001314</td>
<td>94</td>
<td>Perpetuity</td>
</tr>
<tr>
<td>2</td>
<td>ROW Powerline</td>
<td>Lost River Electric Cooperative</td>
<td>IDI-002855</td>
<td>19</td>
<td>12/16/2019</td>
</tr>
<tr>
<td>3</td>
<td>ROW Observation Well</td>
<td>USGS</td>
<td>IDI-012671</td>
<td>10</td>
<td>12/02/2009</td>
</tr>
<tr>
<td>4</td>
<td>ROW Telephone Line</td>
<td>ATC Communications</td>
<td>IDI-020118</td>
<td>6</td>
<td>08/08/2012</td>
</tr>
<tr>
<td>5</td>
<td>ROW Seismic Station</td>
<td>DOE</td>
<td>IDI-028657</td>
<td>&lt;1</td>
<td>04/16/2012</td>
</tr>
<tr>
<td>6</td>
<td>ROW Snow Fence</td>
<td>ITD</td>
<td>IDI-032380</td>
<td>14</td>
<td>09/09/2017</td>
</tr>
<tr>
<td>7</td>
<td>ROW Mineral Material Site</td>
<td>ITD</td>
<td>IDI-006614</td>
<td>109</td>
<td>Perpetuity</td>
</tr>
<tr>
<td>8</td>
<td>ROW Observation Wells</td>
<td>BOR</td>
<td>IDI-0008954</td>
<td>4</td>
<td>Perpetuity</td>
</tr>
<tr>
<td>9</td>
<td>Emergency Airstrip Lease</td>
<td>Idaho Division of Aeronautics</td>
<td>IDI-0010307</td>
<td>43</td>
<td>03/05/2013</td>
</tr>
<tr>
<td>10</td>
<td>Emergency Airstrip Lease</td>
<td>Idaho Division of Aeronautics</td>
<td>IDI-00100310</td>
<td>40</td>
<td>09/19/2013</td>
</tr>
<tr>
<td>11</td>
<td>Federal Aid Highway 93</td>
<td>ITD</td>
<td>IDBL-0047476</td>
<td>87</td>
<td>Perpetuity</td>
</tr>
<tr>
<td>12</td>
<td>ROW Mineral Material Sites</td>
<td>ITD</td>
<td>IDBL-0047852</td>
<td>156</td>
<td>Perpetuity</td>
</tr>
<tr>
<td>13</td>
<td>Federal Aid Highway 93</td>
<td>ITD</td>
<td>IDBL-0049776</td>
<td>373</td>
<td>Perpetuity</td>
</tr>
<tr>
<td>14</td>
<td>ROW Mineral Material Site</td>
<td>ITD</td>
<td>IDBL-0052624</td>
<td>40</td>
<td>Perpetuity</td>
</tr>
<tr>
<td>15</td>
<td>Federal Aid Highway 93</td>
<td>ITD</td>
<td>IDBL-0052700</td>
<td>141</td>
<td>Perpetuity</td>
</tr>
<tr>
<td>16</td>
<td>Federal Aid Highway 93</td>
<td>ITD</td>
<td>IDBL-0053778</td>
<td>28</td>
<td>Perpetuity</td>
</tr>
<tr>
<td>17</td>
<td>ROW Mineral Material Sites</td>
<td>ITD</td>
<td>IDBL-0053709</td>
<td>7</td>
<td>Perpetuity</td>
</tr>
</tbody>
</table>
FIGURE 20
VALID EXISTING RIGHTS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

Numbers associated with each feature are a reference to further descriptions found in Table 18 - Valid Existing Rights. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
The Monument contains three Free Use Permits for pumice/cinders; Butte County and Blaine County use these sites as a material source for gravel road maintenance. Free Use Permits authorize use only by state or local governments. These material sites are not available to the general public or commercial parties.

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

ITD also holds three ROW grants for five pumice/cinder material sites in the Monument. These ROWs are valid existing rights unaffected by Proclamation 7373. The former General Land Office granted these ROWs in the 1930s during the construction of US 20/26/93. ITD has used only two of these material sites during the last 10 years.

The Monument contains no known industrial minerals, gems, semiprecious stones, or petrified wood. The collection of any lava rock features in the Monument is authorized only under a scientific collecting permit issued to institutions. Public collecting is illegal. Many public and commercial sources exist throughout southern Idaho for lava-based materials used in landscaping, barbecue grills, and saunas.

**SPECIAL DESIGNATION AREAS**

**Wilderness**
Congressional designation of the 43,243-acre Craters of the Moon National Wilderness Area was enacted on October 23, 1970, making the Monument and Petrified Forest National Park the first units within the National Park System with designated wilderness areas (PL 91-504).

The Craters of the Moon Wilderness is south of US 93 entirely within the original Monument (Figure 21). All but the north end of the wilderness boundary is adjacent to lands inventoried by BLM as the Great Rift WSA in 1980 (USDI BLM 1980). When designated, the wilderness boundary was offset one-eighth of a mile (660 feet) inside the Monument boundary. Thus, a narrow non-wilderness strip of the Monument separates the Great Rift WSA and the designated wilderness. This “buffer” area was intended to permit administrative vehicle access for firefighting and other management needs (U.S. House of Representatives 1970). Since the narrow buffer area does not contain roads and consists largely of impassable lava flows, it never has been used for such purposes.

Much of the scenic 7-mile Loop Drive developed by NPS in the 1930s and 1950s lies close to the northern edge of the wilderness area. At two points, the wilderness boundary lies within 2,000 feet of US 20/26/93. The openness of the terrain results in the sights and sounds of traffic on the highway and the 7-mile Loop Drive being perceivable from some of the northernmost areas of the wilderness.

Human-made facilities in the wilderness area are limited to the Wilderness and Tree Molds trails, a small concrete watering trough that predates the Monument, and numerous rock cairns and rock rings of historic or prehistoric origin. Initially developed as a primitive wagon trail to serve pre-1924 livestock use on Little Prairie, the 5.1-mile Wilderness Trail later served as a primitive vehicle route until 1970. At some point, perhaps as early as the 1950s, the route was closed to the public, and only administrative use was permitted. The extent of construction or maintenance on the route up until 1970 is poorly documented, but no evidence of grading exists. There has been no documented maintenance of the route since 1970. The trail to Echo Crater remains distinct, but south of Echo
Crater, the trail has faded in some areas.

Before the wilderness was designated, the 1.5-mile Tree Molds Trail was developed to gain access to numerous tree mold features. The Tree Molds Trail is the only maintained trail listed in the 1996 NPS Wilderness Management Plan (USDI NPS 1996). A spur trail leading from the Tree Molds Trail to Great Owl Cavern was closed following wilderness designation, and a large metal stairway leading into the cavern was removed.

NPS management activities have been limited to monitoring air quality, vegetation, wildlife, and recreational impacts and fire suppression. In 2000, a fire management plan was completed that provided for managing natural fires for resource benefits under certain conditions (USDI NPS 2000a).

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

Four WSAs have been designated within the boundaries of the Monument (Table 24, Figure 21). Eighty-four percent of the WSAs lie within the National Preserve; the rest is managed by BLM. The 381,800-acre Great Rift WSA was designated in 1980 (USDI BLM 1980). The Great Rift WSA encompasses most of the Craters of the Moon and Wapi lava fields, along with parts of the surrounding sagebrush grasslands. The Raven’s Eye WSA covers 68,300 acres of the western part of the Craters of the Moon Lava Field, with 66 percent of the area within the Monument. The Little Deer WSA takes in 35,200 acres of a narrow extension of the Craters of the Moon Lava Field and adjacent sagebrush grasslands. The 9,700-acre Bear’s Den Butte WSA is centered on a narrow finger of the Craters of the Moon Lava Field, which extends into Laidlaw Park.

The Raven’s Eye, Little Deer, and Bear’s Den Butte WSAs were designated in 1986 (USDI BLM 1987). BLM land use plans indicated that parts of the WSA were suitable for preservation as wilderness. Designation of the WSA as wilderness requires a recommendation by the President and an Act of Congress. The lands remain in WSA status until Congress acts either to designate the land as wilderness or to release it for other uses. In 1985, President Reagan recommended that Congress designate 322,450 acres of the Great Rift WSA as wilderness (Reagan 1985).

Presidential Proclamation 7373 transferred portions of the four WSA to NPS in 2000. The proclamation directed the following:

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

Section 603(c) requires that WSAs be managed to maintain their suitability for wilderness designation and prevent unnecessary or undue degradation. The BLM and NPS will follow the BLM WSA IMP in guiding management decisions within the WSA until completion of this Plan/EIS (USDI BLM/NPS 2001).

There are no roads within the WSA boundaries. BLM wilderness inventory procedures (USDI BLM 2001) define roads as routes improved and maintained by mechanical means to ensure relatively regular and continuous use. A route maintained solely by the passage of vehicles is defined as a vehicle way. Numerous vehicle ways exist within the WSA. The BLM IMP for WSAs permit continued motorized travel on those ways recorded during the wilderness inventory. Additional vehicle routes created since the inventory were not authorized, and motorized vehicle use of such routes is prohibited.

Wilderness inventories recorded 20 miles of vehicle ways in the Raven’s Eye WSA, 5.1 miles in the Little Deer WSA, and 2 miles in the Bear Den Butte WSA (USDI BLM 1987). Current inventories of the Great Rift WSA indicate that it contains approximately 29
FIGURE 21
SPECIAL DESIGNATION AREAS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
miles of vehicle ways (Class D roads). Unauthorized vehicle ways may have been created since the inventories were completed, but the numbers are unknown. New vehicle ways may have also been created during authorized fire suppression and restoration activities.

Other human-made facilities in the WSAs include wildlife guzzlers, sheep bed grounds, fences, and watering structures associated with livestock use. The sights and sounds of roads adjacent to the WSAs are visible and audible from within limited portions of the WSAs. Communication towers near Arco and Lava Lake are visible from portions of the Great Rift WSA.

**Research Natural Areas, National Natural Landmark, Areas of Critical Environmental Concern**

- **Research Natural Areas**

  NPS policies define RNAs as areas with prime examples of natural ecosystems or significant genetic resources with value for long-term research. Activities within RNAs are restricted to non-manipulative research, education, and other activities that will not detract from the area’s research value.

Four RNAs have been designated within the Monument: Carey Kipuka RNA, Big Juniper Kipuka RNA, Brass Cap RNA, and Sand Kipuka RNA. Three of the four were nominated and designated by BLM before 1991 (Hilty and Moseley 1991). The fourth, Carey Kipuka, was nominated and designated by NPS in 1993. All four RNAs feature kipukas, an area of older vegetated landscape surrounded by recent lava flows. Isolation, difficulty of access, and a lack of surface water made these areas unsuitable for livestock, and little or no grazing has been recorded. Isolation has also limited recreational access to the kipukas.

Carey Kipuka RNA is a 170-acre kipuka in the Craters of the Moon Lava Field, 14 miles east of Carey, Idaho. The kipuka and surrounding area was added to the Monument in 1961 and became designated wilderness in 1970. The area has also been nominated as a National Natural Landmark (NNL).

The entire kipuka is dominated by sagebrush vegetation represented by three distinct vegetative communities. The area is a particularly good representative of the Low Sagebrush Theme, Low Sagebrush/Idaho Fescue Subtheme. Cheatgrass (Bromus tectorum), an aggressive invader of areas disturbed by fire, is widespread throughout much of the kipuka. No other invasive exotic plants or noxious weeds have been recorded. Scientific investigation of the area dates to 1956, and its value for basic and applied study of sagebrush-grassland ecosystems has long been recognized (Tisdale 1965). Long-term

**Table 24**  
**Summary of Wilderness Study Areas**

<table>
<thead>
<tr>
<th>WILDERNESS STUDY AREA</th>
<th>AREA WITHIN MONUMENT (ACRES)</th>
<th>NPS AREA (ACRES)</th>
<th>BLM AREA (ACRES)</th>
<th>TOTAL WSA AREA (ACRES)</th>
<th>AREA WITHIN MONUMENT RECOMMENDED SUITABLE BY BLM (ACRES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Rift</td>
<td>381,100</td>
<td>335,000</td>
<td>46,000</td>
<td>381,800</td>
<td>322,450</td>
</tr>
<tr>
<td>Raven’s Eye</td>
<td>45,400</td>
<td>37,000</td>
<td>8,400</td>
<td>68,300</td>
<td>67,110</td>
</tr>
<tr>
<td>Little Deer</td>
<td>35,100</td>
<td>21,300</td>
<td>13,800</td>
<td>35,200</td>
<td>0</td>
</tr>
<tr>
<td>Bear Den Butte</td>
<td>9,700</td>
<td>4,300</td>
<td>5,400</td>
<td>9,700</td>
<td>0</td>
</tr>
</tbody>
</table>

* Acreage values have been rounded to the nearest hundred acres.
monitoring of vegetation and breeding birds in the area continues to be conducted by NPS.

Big Juniper Kipuka RNA is a 320-acre area within the Wapi Lava Field, 14 miles northeast of Minidoka, Idaho. This RNA contains undisturbed examples of several habitat types that occur on the ESRP, including Wyoming big sagebrush/bluebunch wheatgrass, Wyoming big sagebrush/Thurber’s needlegrass, and threetip sagebrush/bluebunch wheatgrass. Surrounding lavas contain a sparse cover of Utah juniper woodland with a mixed shrub later (Caicco and Wellner 1983b).

Brass Cap Kipuka RNA is an 860-acre area surrounding the Brass Cap Kipuka on the Craters of the Moon Lava Field, 11 miles east of Carey, Idaho. This area is an undisturbed example of a major habitat type. Alkali sagebrush and Idaho fescue are the dominant species, covering nearly 100 acres of the kipuka (Caicco and Wellner 1983a).

Sand Kipuka RNA is a 320-acre area surrounding Sand Kipuka, 12 miles east of Minidoka within the Wapi Lava Field. The kipuka is dominated by Wyoming big sagebrush or basin big sagebrush and needle-and-thread grass. Utah juniper woodlands are well developed on the lava surfaces surrounding the kipuka (Wellner and Moseley 1983).

- **National Natural Landmarks**
  NNLs are areas of national significant designated by the Secretary of the Interior as being outstanding representatives of a region’s biotic or geologic features (U.S. Government Printing Office 2001). The Monument encompasses most of the 252,000-acre Great Rift NNL, which was designated by the Secretary of the Interior in 1968 for its geological significance and enlarged in 1980 in recognition of its biological significance. The low sagebrush/Idaho fescue habitat of the north unit and the early low sagebrush/Idaho fescue habitat in Carey Kipuka have been evaluated and found to meet the criteria for NNL status. They are outstanding representatives of the Low Sagebrush/Idaho Fescue Subtheme in the Low Sagebrush Theme within the Columbia Plateau Natural Region (Rust 2002). Part of the north unit of the proposed NNL extends outside of the Monument onto BLM lands.

- **Areas of Critical Environmental Concern**
  ACECs are certain areas designated by BLM because of their unique or significant environmental qualities or features. The three RNAs (Old Juniper Kipuka, Sand Kipuka, and Brass Cap Kipuka) in the National Preserve were BLM ACECs before the Monument was expanded. The BLM Baker Cave ACEC was also transferred to the NPS by the proclamation and will continue to be managed for its cultural resource values. The Laidlaw Park area would be considered for ACEC designation under Alternative C (see Appendix G, Proposed Laidlaw Park ACEC evaluation).

**VISITOR EXPERIENCE**

**INTERPRETATION/ VISITOR UNDERSTANDING**

Through interpretive and educational programs, NPS and BLM strive to instill in visitors 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.

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

Informational kiosks, press releases, and the development of Web sites have been implemented recently to address the needs of more users. Visitors unable to attend or take advantage of these activities have an excellent opportunity to learn about the Monument through a broad range of educational opportunities, including a museum, wayside exhibits, self-guided trails, and publications.

Interpretive themes are important ideas, stories, and concepts that are presented to visitors in exhibits, publications, and programs. With the development of a Comprehensive Interpretative Plan for the Monument, the following themes will be addressed:

- An extraordinary example of the creation of a volcanic landscape.
- A place with a diverse population of plants and animals associated with a wide variety of volcanic habitats.
- A resource associated with thousands of years of human history, giving insight into a variety of people, cultures, and times.
- A laboratory that supports a diverse natural and cultural history, which provides important opportunities for research and education.
- A landscape of lava and sagebrush — one of the few remaining examples of what is “natural.”

The primary theme of the interpretive program at the Monument is the significance of the awesome effects of volcanism on this landscape. Other themes stress the incredible diversity of plants and animals that have adapted to this harsh environment and the unique cultural history that reflects the interactions between people and the rugged volcanic terrain. An ongoing effort to make visitors aware of their relationship to this environment and their role in preserving and protecting this area is also an integral component of all interpretive activities. Visitor safety, orientation, and trip-planning information are available through a variety of media. See the “Social and Economic Conditions” section for more information about public health and safety, including visitor health and safety.

Making visitors aware of the need to avoid certain behaviors that may have a detrimental impact on Monument resources is the first step in the protection of fragile natural and cultural features. The need for visitors to stay on trails, avoid walking in sensitive areas, and leaving the rocks in place is stressed. This approach is believed to have a positive effect in protecting such features as spatter cones, cinder cones, and ropy lava flows. The need to protect plants, animals, and archaeological and historic sites is also a part of a diverse interpretive program.

A visitor survey done at the Monument in 1989 indicates that interpretive programs were considered important by at least 74 percent of Monument visitors (Machlis et al. 1989). More specifically, the percentage of those visitors using non-personal services such as NPS folder and map (91 percent), wayside exhibits (58 percent), self-guided trails (75 percent), and Visitor Center exhibits (77 percent) indicates wide use among visitors (Machlis et al. 1989). The percentage of all visitors using personal services such as evening programs (10 percent) and guided walks (17 percent) indicates that a much smaller number of visitors attend these types of programs. Such visitor statistical information is not available on the expanded part of the Monument.

Nearly all interpretive efforts take place in the developed section of the Monument adjacent to US 20/26/93. Along what is known as the 7-mile Loop Drive, visitors have access to a visitor center with accompanying exhibits and audiovisual programs, a series of self-guided trails, and a system of wayside exhibits at roadside pullouts and along several trails. Interpretive walks and activities, available primarily during the peak season, are also conducted from
this site. Although not all interpretive activities or sites are considered accessible to all visitors, a few recently developed sites offer a higher level of access.

The Monument’s interpretive facilities are in good to excellent condition. Visitor Center exhibits done in the 1950s have been completely redone in recent years. A few wayside exhibits are dated, but most have been installed within the past 15 years.

The interpretive program also has several other components, including publications, educational programs, winter ecology walks, a Junior Ranger Program, and off-site programs that offer interpretive opportunities to a much larger, diverse audience. Both the NPS and BLM Web sites contain information about the Monument.

Interpretation in the recently expanded Monument is limited, consisting primarily of informational signs at key attractions like Crystal Ice Cave, Kings Bowl, Baker Caves, and Bear Trap Cave. A detailed map of the area published several years ago offers orientation and interpretation. A series of signs is being developed for use in the Kings Bowl/Crystal Ice Cave area to convey critical safety messages and site information. This project, which predates the Monument expansion, is being carried out in connection with the rehabilitation of a defunct commercial operation site that left behind numerous deteriorating structures and unsafe conditions.

Kiosks containing orientation, safety, and user information have been installed at key access points. An extensive self-guiding trail system has been developed at Hell’s Half Acre on I-15, which, although not in the Monument, interprets many related subjects.

**RECREATION AND PUBLIC SAFETY**

**General Visitation**

Visitation to the original Monument averages 200,000 people per year, with peak visitation on summer weekends. Many visitors are on vacations that include Yellowstone and Grand Teton National Parks to the east and Sun Valley and the Sawtooth National Recreation Area to the west (USDI NPS 1990). Table 25 presents visitation statistics for the original Monument for 1990 through 2001, and Appendix H presents various recreational statistics for 1999 to 2002.

**Table 25**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL VISITS</th>
<th>PERCENT CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>186,993</td>
<td>-14.31%</td>
</tr>
<tr>
<td>2000</td>
<td>213,758</td>
<td>0.86%</td>
</tr>
<tr>
<td>1999</td>
<td>211,929</td>
<td>7.83%</td>
</tr>
<tr>
<td>1998</td>
<td>195,328</td>
<td>-10.66%</td>
</tr>
<tr>
<td>1997</td>
<td>216,145</td>
<td>-0.44%</td>
</tr>
<tr>
<td>1996</td>
<td>217,087</td>
<td>-9.09%</td>
</tr>
<tr>
<td>1995</td>
<td>236,827</td>
<td>2.28%</td>
</tr>
<tr>
<td>1994</td>
<td>231,427</td>
<td>-1.99%</td>
</tr>
<tr>
<td>1993</td>
<td>236,027</td>
<td>-2.17%</td>
</tr>
<tr>
<td>1992</td>
<td>241,160</td>
<td>9.60%</td>
</tr>
<tr>
<td>1991</td>
<td>218,000</td>
<td>5.50%</td>
</tr>
<tr>
<td>1990</td>
<td>206,000</td>
<td>-</td>
</tr>
</tbody>
</table>

To view a detailed breakdown, visit the Public Use Statistics Office Web site.

Commonly, visitors spend less than 3 hours at the Monument; 5 percent remain overnight. The typical visitor will stop and tour the Visitor Center, then sight-see along the 7-mile paved loop drive, taking advantage of photographic opportunities and often having a picnic before leaving.

Within the original Monument, nearly 80 percent of visitors are in family groups, with the most common...
visitors in age groups over 62 and under 11. For nearly 80 percent of visitors, this is their first visit to Craters of the Moon, and 19 percent of all visitors in the 1988 survey were from foreign countries. Most U.S. visitors originated from the states around the Monument – Idaho, Wyoming, California, Colorado, Oregon, and Washington (Machlis et al. 1989).

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

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

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

Visitation to the expanded parts of the Monument over the last 10 years averages approximately 20,000 visits per year, according to BLM’s Recreation Management Information System (RMIS). Some popular sites are Pillar Butte, Wood Road Kipuka, Bear Park, Snowdrift Crater, Kings Bowl, and Bear Trap Cave. No visitor facilities are available at any of the sites, but all receive day use and occasional overnight camping. Recreational activities in the expanded part of the Monument, in order of popularity, are hunting; driving for pleasure; geologic exploration including caving, lava hiking, and sightseeing; hiking; primitive camping; photography; horseback riding; and mountain biking.

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

Hunting
The Idaho Fish and Game Commission sets hunting seasons and other regulations for hunting in Idaho. Most of the Monument and Preserve is within Idaho Fish and Game Hunting Unit 52A (Figure 22). The southern part of the area, including all of the Wapi Lava Field, is included in Unit 68. A very small portion of the northern edge of the Monument and Preserve fall within Units 49 and 50. The length of season and number of available controlled-hunt tags vary annually on the basis of wildlife population levels and other factors.

RMIS and IDFG estimates indicate that sage-grouse hunting and open mule deer hunting attract the highest number of hunters in the Monument. The open seasons for archery (antelope, elk, and deer), other small game (rabbits, upland birds), predators, and unprotected species, along with the controlled seasons (draw tags) for antelope, elk, and deer, account for a much smaller portion of hunting use.

Almost all hunting has historically been in the BLM portions of the Monument. A very small amount of
hunting occurs in what is now the NPS Preserve. The exposed lava flows in the NPS Preserve can be used for a quality hunt for a few hunters who seek the challenge. Hunting has never been authorized in the original NPS Monument.

The very small amount of hunting by members of the Shoshone-Bannock Tribes that takes place in the Monument is considered a treaty right and is not considered a recreational hunting experience.

Motorized and Mechanized Recreation

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

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

Hiking and Horseback Riding

Most hikers hike on designated trails in the original Monument. Hiking trails to features of interest in the original Monument are the North Crater Flow, Devils Orchard, Inferno Cone, the Big Craters/Spatter Cones area, Tree Molds, and the Cave Area. Hikers in the non-Wilderness part of the original Monument regularly see other visitors, because the area is highly used. Opportunities for solitude are limited; however, the Craters of the Moon Wilderness offers outstanding opportunities for self-directed hiking, with an excellent chance to experience solitude.

Wilderness use is extremely light, with an average of 130 overnight backpackers per year (based on backcountry permits issued 1990 through 2002). Backpacking parties usually consist of fewer than four persons, and they seldom stay out more than two nights (USDI NPS 1990). All water must be packed into the backcountry. Exact numbers of day users are unavailable.

Hiking in the expanded part of the Monument offers outstanding opportunities to experience a high degree of solitude. Since no designated hiking trails exist within the expanded portion of the Monument, most hiking experiences are cross-country and self-directed. Some constructed hiking trails exist at the Crystal Ice Caves/ Kings Bowl area (RMIS estimates 1,000 visits).

Horseback riding in the original Monument is limited to the Craters of the Moon Wilderness Trail by permit only. In the expanded part of the Monument, most stock animals and horseback riders work in association with livestock operations and in other non-recreation activities, but there is a small amount of recreational horseback riding and pack-stock use in this area. Hunters also regularly use horses. The few recreational users enjoy outstanding opportunities for solitude and a self-directed experience. Riders and pack-stock users travel cross-country or along the existing road network. No designated trails currently exist for horseback riding.

Camping

In the original Monument, 51 developed campsites with water, restrooms, charcoal grills, and picnic tables are available on a first-come-first-serve basis. Most campers stay only one night and are usually gone by 10 a.m. The campground is rarely full, with the exception of several weekends during the summer season, generally around holidays.

Recreational overnight use of the Wilderness area is light. The NPS issues fewer than 100 overnight camping permits per year in the Wilderness. The entire area is snow-covered and accessible by snowshoe and ski for at least one-third of the year. Most overnight Wilderness users hike the Wilder-
FIGURE 22
GAME MANAGEMENT UNITS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

Game Management Unit data provided by Idaho Fish & Game. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
ness Trail and camp in or near Echo Crater. Stock use is restricted to day use by groups of 12 or less on the Wilderness Trail. No overnight camping with stock is permitted (USDI NPS 2002b).

The expanded part of the Monument does not contain any developed campgrounds. Currently, dispersed camping is available throughout the entire expanded portion. Many use-established primitive campsites near crossroads, access points, and major features of interest are available throughout the Monument.

Caving
Caving does not draw large numbers of visitors; however, caving is an important and unique recreation opportunity at Craters of the Moon National Monument. Opportunities exist for recreational cave experiences ranging from hiking a paved trail to an easily accessible lava tube such as Indian Tunnel, to visiting a remote wild cave somewhere in the expanded portion of the Monument, to the potential to actually discover a previously unknown cave.

Monument caves differ from limestone caves in that they are lava tubes once formed by flowing lava. Although they exhibit flowstones and other speleothem and erosion features, those features are primarily associated with volcanism and lava transport.

Many easily accessible caves in the area have been known locally for a long and are frequently visited. Over time, some caves show signs of irresponsible use such as graffiti and vandalism, which can detract from the caving experience.

Cave exploration, discovery, survey, and mapping are important activities for local caving organizations. The local and regional chapters (Grottos) of the National Speleological Society play an important role in conserving the cave recreation resource. The groups engage in cleanup projects and other cave conservation activities, in addition to mapping, surveying, exploring, and educating users about caves and cave conservation.

Most caves do not appear on maps but can be explored upon discovery. Other caves require a permit for access. Some cave locations that appear on maps are the 15-mile-long Bear Trap Lava Tube along the Arco-Minidoka Road and the Lariat Cave near Kings Bowl.

Recreational camping in Cinder Butte

The best-known cave in the region is Crystal Ice Cave, which is a fissure cave rather than a lava tube cave. In 1964 a concessionaire, under permit from the Idaho Falls BLM District Office, developed the cave. When the cave was open, annual visitation was 5,000 to 10,000 people. Improvements at the cave included buildings, restrooms, and trails. Generators provided electricity to light the cave and run a refrigeration unit used to maintain the ice formations. Prompted by safety concerns and vandalism, BLM removed most outside facilities and signs, sealed the tunnel doors, and installed signs to inform the public of safety concerns entering the cave.
Health and Safety
Several factors are involved in health and safety concerns for Monument visitors and surrounding communities. These are discussed below.

- **Access in and Near the Monument**
  The Monument contains several hundred miles of roads of various qualities and levels of maintenance. Most of these roads and ways are not maintained at all. In addition to different types of roads, road conditions vary seasonally from impassable snow in winter to deep-rutted mud in spring and late autumn to dry and very dusty in summer. Nearly all the roads in the interior of the Monument require a high-clearance four-wheel drive vehicle equipped with good tires. At any time of year, rain can render the roads impassable to any vehicle.

Due to the size of the Monument and the complexity of the road system, navigation can be confusing. The BLM maintains a limited system of directional signs on the Monument; however, many roads and ways are not signed, making map-based navigation difficult. It is recommended that travelers in unfamiliar parts of the Monument use a good map and use automobile odometers to count mileage from landmark to landmark. The iron-rich nature of the lava and rocks underlying the sagebrush steppe of the Monument can cause compasses to give incorrect readings by as much as 40 degrees.

In many remote areas of the Monument, emergency services can be anywhere from hours to days away. It is advisable to carry a reliable form of emergency communication in these areas at all times.

Two main roads bisect the Monument, and a U.S. highway runs along its northern border. The Arco-Minizsoka Road starts near the town of Arco, on the north side of the Monument, and runs to Minidoka on the south side. Farther to the west, the Carey-Kimama Desert Road connects the town of Carey, along US 93 to SH 24 on the south end of the Monument near the town of Kimama. US 20/26/93 runs along the northern edge of the Monument.

- **Weather**
  South Central Idaho and the Monument experience various degrees and extremes of weather for all four seasons. Winter can bring high winds, subzero temperatures, and deep snow. Generally, the undeveloped portions of the Monument are inaccessible during winter to all but snowmobile and ski/snowshoe travel, and cross-country travel over lava fields in winter is discouraged for safety reasons. It is inadvisable to drive a wheeled vehicle in the Monument in winter because deep snow and fast-changing weather conditions can leave travelers stranded.

In spring, high winds, cold temperatures, rain, and thunderstorms can present safety hazards to Monument visitors. A sudden rain at any time of year can render the roads impassable to vehicles outside the Frontcountry Zone. In contrast, summer months can be very hot and dry. The average annual rainfall in south-central Idaho is below 14 inches, and it is not uncommon for areas of the Monument area to receive no rainfall at all in summer. The temperatures are typically dangerously hot, often exceeding 100 degrees Fahrenheit for days or weeks on end.

Visitors to areas outside the Frontcountry Zone are advised to come prepared for extreme hot weather and carry the necessary general and emergency supplies, including plenty of water, extra vehicle fuel, a first aid kit, food, navigation equipment such as maps, compasses, and Global Positioning System (GPS) units, and a reliable form of communication. Because there are few, if any, sources of potable water in the Monument, all water must be carried in. Livestock well water is usually not safe to drink. Dehydration from
exposure to extreme desert conditions is a serious hazard in the Monument.

- **Caves, Fissures, and Lava**
  Both the open lava areas and the sagebrush steppe of the Monument area contain lava tube-type caves. These caves range in size and complexity from small rock shelters to several-miles-long convoluted tube systems with ice formations and steep vertical drops. People who want to enter and explore caves should be experienced and familiar with all the provisions and contingencies of safe caving, and they should follow the Monument’s cave plan.

  Along the Great Rift are many open cracks and fissures, which can expose vertical drops varying from a few feet to an unknown depth. The basalt rock, of which these features are composed, is notoriously friable and can collapse without warning, leading to a serious or deadly fall.

  Exposed lava features in the Monument are very rough and difficult to traverse, and in summer the surface temperatures of the lavas can reach 140 degrees Fahrenheit. Hiking over lava surfaces, particularly a’ a flows, can be arduous and can present tripping, falling, and joint-twisting hazards. Long hikes over the lava can result in fatigue, dehydration, and disorientation. People hiking on the lava are advised to wear sturdy boots, protective gloves, and carry plenty of water and a reliable emergency form of communication.

- **Wildfire**
  During the annual wildfire season, approximately late-June through September, the Monument area receives little or no rainfall. Very dry vegetation and high wind contribute to hot, fast-moving wildfires that can present serious safety hazards to visitors and surrounding communities. Wildfires are primarily confined to the sagebrush steppe of the Monument. However, at times wildfire can “creep” through colonizing vegetation on the exposed lava flows. Visitors should familiarize themselves with the fire danger level and any warnings or restrictions currently in place.

  It is also very easy to start a wildfire on the Monument through the careless use of fire, smoking materials, and many other means. Fires are often started by the catalytic converter on vehicles coming into contact with dry vegetation.

- **Livestock**
  Many areas of the sagebrush steppe in the Monument are in cattle and sheep livestock use allotments. While generally not aggressive, cattle and sheep can be unpredictable and present a safety hazard to visitors. Shepherders often keep large sheep-guarding dogs with their bands of sheep. These animals are not human-friendly and may have little or no experience with humans or being treated as pets. Often, these dogs are left alone to tend a sheep band, and their only duty is to chase off or kill anything they deem to be a threat to the sheep. Visitors are advised to avoid these dogs and to prevent their pets from venturing near sheep-guarding dogs or the sheep.

- **Snakes**
  Rattlesnakes inhabit the Monument area and are usually active between mid-spring and late-fall. They are most commonly found on the sagebrush steppe, but they can also be found on the open lava. They often hide near cave entrances where there is shade and cool temperatures, which attract prey species. They represent a serious safety issue in that any rattlesnake bite should be treated as an emergency.
VISUAL RESOURCES

Viewscape

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

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

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

Visual Resource Management

Visual Resource Management (VRM) is a standard tool used by the BLM to identify and protect visual values on public lands (8400-Visual Resource Handbook and Manual Series). A VRM inventory of the Monument area was completed in 1989, including an evaluation of scenic quality, identification of viewsheds, and key observation points for visitors. This inventory data was analyzed and presented as visual resource classes. This Plan/EIS places all public land into one of four VRM management classes. VRM classes provide standards for planning, designing, and evaluating future management projects.

The four VRM management class designations are as follows:

- Class I – The objective of this class is to preserve the existing character of the landscape. Any contrast created within the characteristic landscape must not attract attention. This classification is applied to Visual ACECs, wilderness and WSAs, Wild and Scenic Rivers, and other similar situations.

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

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

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

Night Sky

Night sky is considered an important resource within the Monument. The night sky at the Monument is generally free of artificial light sources and related light pollution. As with daytime viewing of expansive vistas, one of the nation’s clearest airsheds creates conditions favorable for stargazing. Astronomy groups have been coming to the Monument for many years to take advantage of dark night skies.
SOUNDSCAPE

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

The area around the Visitor Center and the campground is adjacent to US 93 and subject to highway noise. Occasional noise from OHVs, ATVs, snowmobiles, and other vehicles occurs in the road portions of the expanded Monument. These noise intrusions are most prevalent during high-use periods, such as hunting season, and least prevalent during low-use periods, such as during winter.

Aircraft over flights create a small amount of unnatural sound intrusion year-round. The Federal Aviation Administration (FAA) has established an advisory ceiling of 2,000 feet above ground level over the Craters of the Moon Wilderness Area. Nonetheless, many over flights occur above 2,000 feet, including commercial aircraft from the airports in Idaho Falls and Hailey, Idaho. There are also small airports in Arco, Picabo, and Burley that support smaller private aircraft that may operate over the Monument. Perhaps the noisiest aircraft over flights are associated with the two military flight-training corridors that cross the Monument.

Helicopter use associated with public land management activities such as wildlife population inventories, livestock monitoring, and firefighting also contribute a small amount of noise. The two emergency airstrips in the Monument receive no regular use.

SOCIAL AND ECONOMIC CONDITIONS

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

Lincoln County has also experienced strong growth in the non-labor income and services and professional sectors, although government and agriculture continue to be key elements of the county’s economy. Power and Butte Counties are unusual in their dependence on a single employer – in the case of Power County, the American Falls Electrical Generating Station, and in Butte County, the Idaho National Engineering and Environmental Laboratory (INEEL). Both per capita income and average earnings per job in Power County are declining. Despite the relatively high wages paid by INEEL, few employees actually live in Butte County, which decreases the amount of income and spending that remain in the local economy.

This section will discuss changes in sectors known to be directly impacted by tourism in general and the Monument in particular, such as recreation and accommodation. It will also take a broader perspective in considering the Monument an important element of enhancing the setting that helps communities to retain long-term residents and businesses and to attract new ones.

Growth in the services and professional and non-labor income sectors has particularly important bearing on the management of public lands. Although the services and professional sector includes relatively low-paying jobs associated with tourism-based economies, such as hotel maids and
restaurant workers, it also includes small business owners and entrepreneurs, who generate most of the economic growth in the western United States. This group usually has choices about where it will locate, and natural amenities and protected areas are known to draw them to particular areas. This seems to be the case in Blaine County and in other parts of the study area to varying degrees.

Non-labor income is another key element of economic growth in the western United States. Those who contribute the most non-labor income in the forms of investment income, retirement, social security, etc. are another group that has flexibility in where to locate, since they tend not to be tied to particular employers. While many are drawn to scenic areas, they are also looking for the affordable housing and the slower pace of life offered by smaller towns such as those in the planning area.

Local economic changes are closely linked to the area’s natural amenities and protected areas, such as Craters of the Moon National Monument, as well as other factors. As is the case across the western United States, the counties and communities in the planning area that are experiencing the greatest economic prosperity are those like Blaine County. In addition to the ski areas and mountain scenery, it has a diverse mix of businesses, a well-educated population with many newcomers who have moved in within the past decade, an easily accessible airport in Hailey, and fairly easy access from the more populous areas of Idaho. Counties that are less prosperous, such as Lincoln County, are more reliant on traditional industries, are relatively isolated from larger population centers by long drives and the lack of an airport, and have less well-educated populations comprised largely of long-time residents.

Direct Monument Economic Impacts
The Monument contributes to the local economy through its employment of 15 part- or full-time workers and approximately 10 to 20 seasonal employees who live in various communities around the Monument. The NPS also uses concession contracts and commercial use licenses (formerly incidental business permits) to manage commercial activities within its units. Currently, the only concession contract is issued to the non-profit Craters of the Moon Natural History Association. This contract allows the association to offer convenience items such as sunscreen, film, and soft drinks, as well as books and educational materials, for purchase by visitors in the NPS Visitor Center. There are no current commercial use licenses or incidental business permits issued for activities on NPS lands in the Monument. The Idaho Department of Fish and Game (IDFG) offers commercial use licenses on BLM-administered lands.

Under the National Parks Air Tour Management Act of 2000 and FAA regulations, NPS, as a cooperating agency, will assist the FAA in developing an air tour management plan for parks with existing or proposed air tours. No air tours currently take place over NPS-administered lands in the Monument on any regular or frequent basis. There has been one inquiry, but no proposals.

As Figure 23 illustrates, the Monument receives approximately 200,000 visitors per year, with peak visitation occurring from mid-May through September. The principal visitor activities are touring the Visitor Center/Museum, taking the self-guided driving tour, and hiking the many trails off the 7-mile Loop Drive. Visitation to the Monument has been relatively stable over the past 35 years, with fluctuations in the 1970s and 1980s, possibly due to increases in gasoline prices and weakness in the national and regional economy.

The Monument is an integral part of central Idaho’s rich and varied network of protected lands, which offer boundless recreational opportunities and attract visitors and residents from around the world. However, the changing economy is affecting the various counties and communities within the planning area in different ways. In addition to skiing at the renowned Sun Valley ski area, winter visitors to Blaine County may enjoy snowmobiling, cross-country skiing, and ice-skating. Summer tourists may golf, play tennis, fish, river raft, and enjoy music and arts festivals. The nearby Sawtooth National Recreation Area, the largest national recreation area
in the National Forest System, averages more than one million visitor days per year. The Idaho Division of Tourism Development estimated in its 1997 Tourism Impacts Study that total tourism spending for Blaine County was $98.8 million (http://www.idoc.state.id.us/trdiv/pdfs/travelspendingbycounty.xls).

This is in contrast to total tourism spending in adjacent Lincoln County, which the same study estimated at $741,000, the lowest for any Idaho County. Despite the fact that the BLM Shoshone Field Office, located in Lincoln County, records an average of 900,000 visitors per year, most are passing through on their way to better-known tourism destinations. Throughout the planning region, residents of counties and communities that continue to depend more on traditional economic activities such as agriculture are not seeing the same increases in population, per capita income, or average earnings per job. However, as property values rise in the Sun Valley area, the search for affordable housing, along with the appeal of more traditional small town life, are pushing increasing numbers of residents into other communities in the Monument planning area. The Monument, and the recreational and environmental amenities it offers, may provide these communities with an important advantage over other Idaho towns in shaping themselves as appealing, unique places to retire, or locate new businesses.

The following section includes a summary of major changes in personal income and employment for each of the five counties of the planning area. Later sections will explore demographic and social distinctions between the counties and communities.

The largest portion of the Monument, 51 percent, is located within Blaine County, which includes the towns of Sun Valley, Ketchum, Hailey, Bellevue, and Carey. Blaine County, more so than the other counties in the planning area, has what might be called an “amenity-driven” economy. The linchpin of economic and population growth, especially in the Sun Valley/Ketchum/Hailey area, is the desire to live in a picturesque rural setting with ample recreational opportunities. As a result, Blaine County has in effect created a diverse, almost urban economy in a rural setting.

The major economic changes in Blaine County mirror those occurring in most of the western United States. Since 1970, overall personal income in real terms (adjusted for inflation) in the county has increased by $684 million, to $797 million. Employment in all sectors has grown by 13,929 jobs over the same time frame, to a total of 17,443. Much of the growth in both income and employment has been in the Services and Professional category, accounting for 42 percent of the new income and 9,570 new jobs. Within this sector, hotels and lodging have
Figure 24
Change in Personal Income in Blaine County, Idaho, 1970-2000

Table 26
New Income by Type in Blaine County, Idaho, 1970-2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Personal Income*</td>
<td>114</td>
<td>797</td>
<td>684</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm and Agricultural Services</td>
<td>11</td>
<td>9.9%</td>
<td>25</td>
<td>3.2%</td>
<td>14</td>
<td>2%</td>
</tr>
<tr>
<td>Farm</td>
<td>10</td>
<td>8.9%</td>
<td>6</td>
<td>0.7%</td>
<td>-4</td>
<td>NA</td>
</tr>
<tr>
<td>Ag. Services</td>
<td>1</td>
<td>1.1%</td>
<td>19</td>
<td>2.4%</td>
<td>18</td>
<td>3%</td>
</tr>
<tr>
<td>Mining</td>
<td>1</td>
<td>1.1%</td>
<td>7</td>
<td>0.9%</td>
<td>6</td>
<td>1%</td>
</tr>
<tr>
<td>Manufacturing (incl. forest products)</td>
<td>2</td>
<td>1.5%</td>
<td>15</td>
<td>1.9%</td>
<td>14</td>
<td>2%</td>
</tr>
<tr>
<td>Services and Professional</td>
<td>53</td>
<td>46.6%</td>
<td>338</td>
<td>42.4%</td>
<td>285</td>
<td>42%</td>
</tr>
<tr>
<td>Transportation &amp; Public Utilities</td>
<td>2</td>
<td>1.6%</td>
<td>13</td>
<td>1.7%</td>
<td>11</td>
<td>2%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>15</td>
<td>13.0%</td>
<td>61</td>
<td>7.7%</td>
<td>47</td>
<td>7%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>3</td>
<td>2.4%</td>
<td>58</td>
<td>7.3%</td>
<td>55</td>
<td>8%</td>
</tr>
<tr>
<td>Finance, Insurance &amp; Real Estate</td>
<td>32</td>
<td>28.1%</td>
<td>184</td>
<td>23.1%</td>
<td>152</td>
<td>22%</td>
</tr>
<tr>
<td>Services (Health, Legal, Business, Others)</td>
<td>11</td>
<td>9.4%</td>
<td>103</td>
<td>12.9%</td>
<td>92</td>
<td>14%</td>
</tr>
<tr>
<td>Construction</td>
<td>10</td>
<td>9.0%</td>
<td>47</td>
<td>5.9%</td>
<td>37</td>
<td>5%</td>
</tr>
<tr>
<td>Government</td>
<td>30</td>
<td>26.1%</td>
<td>311</td>
<td>39.1%</td>
<td>282</td>
<td>41%</td>
</tr>
<tr>
<td>Non-Labor Income</td>
<td>22</td>
<td>19.0%</td>
<td>275</td>
<td>34.5%</td>
<td>253</td>
<td>37%</td>
</tr>
<tr>
<td>Dividends, Interest &amp; Rent</td>
<td>8</td>
<td>7.0%</td>
<td>37</td>
<td>4.6%</td>
<td>29</td>
<td>4%</td>
</tr>
</tbody>
</table>

*The sum of the above categories do not add to total due to adjustments made for place of residence and personal contributions for social insurance made by the U.S. Department of Commerce.
grown from $15.5 million in 1990 to $26.6 million. Amusements and recreation has increased from $2.3 million to $34.1 million in the same time frame. It is likely that the majority of increases in these sectors are due to the ski resort economy, but some may be tied to the Monument.

Non-labor income, including investment and retirement income, has increased nearly as much in real terms, accounting for 41 percent of new income in the county. Blaine County’s rapid population growth (see the next section) has fueled strong growth in construction as well, adding 14 percent of the county’s new income and 2,441 jobs over the past 30 years. Government has grown more modestly, contributing 5 percent of the county’s new income and 836 new jobs.

Sectors that were traditionally more important to the area’s economy and identity, such as agriculture and forest products (included in the manufacturing category), have increased only slightly, each adding 2 percent of the county’s new income. Agriculture added 685 new jobs, while manufacturing added 362 over the past 30 years. The relatively modest growth in agricultural income is related to the subdivision of working ranches into smaller “ranchettes” that engage in little agricultural production. Mining has also increased very slightly, contributing about 1 percent of the county’s new income and 35 new jobs.

In Blaine County, per capita income in real terms from 1990 to 2000 increased by 27 percent, from $32,883 to $41,734, the highest by far of the counties within the planning area. Average earnings per job in real terms (adjusted for inflation) have risen from $25,062 in 1970 to $30,709 in 2000, and are higher than the state average of $28,302, but lower than the national average of $36,311. The average annual unemployment rate in Blaine County was 2.9 percent in 2001, compared to 5 percent for the state and 4.8 percent for the nation.

Despite Blaine County’s prosperity, it should be noted that most of the new business growth, along with higher income residents, is centered on the Sun Valley/Ketchum area, and decreases heading toward the Big Wood River Valley to Hailey, Bellevue, and Carey.

Lincoln County’s economy is unusual compared to many in the western United States in that the Services and Professional sector plays a relatively minor role, while agriculture accounts for a larger share of both jobs and income. Lincoln County had a 2002 population of 4,057, approximately 25 percent less than Blaine County. The city of Shoshone is the county’s largest population center, with 1,398 residents. Although only 2 percent of the Monument lies within Lincoln County, US 93 passes through the county before following the Monument’s northwestern boundary, and connects the area to the more populous Snake River Valley.

Data on personal income for all categories was not available until 1982; therefore, this section considers changes from 1982-2000. From 1982-2000, total personal income in Lincoln County increased by $26 million, to a total of $81 million in real terms (adjusted for inflation). New employment increased by 125 jobs among all sectors, reflecting the balance of gains and losses in various sectors. Non-labor income was the largest source of income in the county around 1980, contributing 33 percent of the total new income since 1982. Farm and agricultural services was the county’s second most important source of income in 2000, contributing 17.8 percent of the county’s total income and 16 percent of the new income since 1982, but losing 138 jobs over that time frame. This reflects the volatile nature of earnings from this sector. Government is the third most important sector, accounting for 16.9 percent of total county income, but adding only 3 percent of the county’s new income and 36 jobs.

Although Services and Professional is the fourth most important source of income in the county, it is the fastest growing source of employment; this sector contributed 17 percent of the county’s new income since 1982, and added 150 new jobs.
Figure 25
Change in Personal Income in Lincoln County, Idaho, 1982-2000

Source: BEA REIS 2002 CD Table CA05
Note: Data is in real terms (adjusted for inflation).
Data for all sectors was not available prior to 1982.

Table 27
New Income by Type in Lincoln County, Idaho, 1982-2000

<table>
<thead>
<tr>
<th>All figures in millions of 2000 dollars</th>
<th>1982</th>
<th>% of Total in 1982</th>
<th>2000</th>
<th>% of Total in 2000</th>
<th>New Income 1982 to 2000</th>
<th>% of New Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Personal Income*</td>
<td>54</td>
<td>81</td>
<td>81</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm and Agricultural Services</td>
<td>10</td>
<td>18.8%</td>
<td>14</td>
<td>17.8%</td>
<td>4</td>
<td>16%</td>
</tr>
<tr>
<td>Farm</td>
<td>9</td>
<td>17.4%</td>
<td>12</td>
<td>15.5%</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>Ag. Services</td>
<td>1</td>
<td>1.4%</td>
<td>2</td>
<td>2.3%</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Mining</td>
<td>2</td>
<td>4.4%</td>
<td>1</td>
<td>1.8%</td>
<td>-1</td>
<td>NA</td>
</tr>
<tr>
<td>Manufacturing (incl. forest products)</td>
<td>2</td>
<td>4.2%</td>
<td>4</td>
<td>4.8%</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>Services and Professional</td>
<td>7</td>
<td>12.9%</td>
<td>11</td>
<td>14.2%</td>
<td>4</td>
<td>17%</td>
</tr>
<tr>
<td>Transportation &amp; Public Utilities</td>
<td>3</td>
<td>5.5%</td>
<td>2</td>
<td>2.5%</td>
<td>-1</td>
<td>NA</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>0</td>
<td>0.7%</td>
<td>1</td>
<td>1.7%</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>2</td>
<td>3.1%</td>
<td>1</td>
<td>1.7%</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>Finance, Insurance &amp; Real Estate</td>
<td>1</td>
<td>1.2%</td>
<td>2</td>
<td>2.5%</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Services (Health, Legal, Business, Others)</td>
<td>1</td>
<td>2.4%</td>
<td>5</td>
<td>5.8%</td>
<td>3</td>
<td>13%</td>
</tr>
<tr>
<td>Construction</td>
<td>0</td>
<td>0.7%</td>
<td>4</td>
<td>4.6%</td>
<td>3</td>
<td>13%</td>
</tr>
<tr>
<td>Government</td>
<td>13</td>
<td>23.6%</td>
<td>14</td>
<td>16.9%</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Non-Labor Income</td>
<td>18</td>
<td>34.0%</td>
<td>27</td>
<td>33.8%</td>
<td>9</td>
<td>33%</td>
</tr>
<tr>
<td>Dividends, Interest &amp; Rent</td>
<td>11</td>
<td>19.6%</td>
<td>14</td>
<td>17.8%</td>
<td>4</td>
<td>14%</td>
</tr>
<tr>
<td>Transfer Payments</td>
<td>8</td>
<td>14.3%</td>
<td>13</td>
<td>16.0%</td>
<td>5</td>
<td>19%</td>
</tr>
</tbody>
</table>

*The sum of the above categories do not add to total due to adjustments made for place of residence and personal contributions for social insurance made by the U.S. Department of Commerce.
If trends across the West (and the rest of planning area) are indicative, continued growth can be expected for this sector. However, the subcategories within the sector that may be most influenced by an increase in Monument visitors have not fared well recently. From 1990 to 2000, personal income from hotels and other lodging decreased by $7,900, while amusements and recreation grew from $176,500 in 1990 to $251,000 in 2000.

While still a relatively minor income source, construction added 117 new jobs to the county’s economy and 13 percent of the new income, and has grown steadily over the past decade. Manufacturing contributed 6 percent of the new income and added 31 new jobs. Mining declines subtracted 1 percent from county’s income and accounted for 72 lost jobs.

Per capita income in Lincoln County increased in real terms by 2 percent from 1990 to 2000, from $19,465 to $19,843. Average earnings per job (adjusted for inflation) have risen from $22,932 in 1970 to $23,371 in 2000. However, average earnings in this county are lower than the state average ($28,103) and the nation ($36,316). The average unemployment rate in 2001 was 3.9 percent, compared to 5 percent for the state and 4.8 percent for the nation.

The northern portion of the Monument is located within Butte County, which accounts for 18 percent of the Monument. Arco is the largest Butte County town within the planning area and home to 1,026 of the county’s 2,896 people. As the graph above suggests, gaps in government data reporting, along with the reclassification of some jobs at the county’s largest employer (INEEL) from Manufacturing and Government to Services and Professional, make analysis of economic change in Butte County challenging. In some cases, the disclosure estimation system of the Economic Profile System (see www.sonoran.org/eps) was used to estimate data gaps.

Data for all sectors was not available until 1990; thus changes over the decade from 1990-2000 are described below.

Total personal income in Butte County was $373 million in 2000. The income mix in Butte County is unusual due to relatively low contributions of non-labor income, the reclassification by the U.S. Department of Commerce, and actual job losses from the manufacturing and government sectors. Even considering the reclassification of sectors for INEEL jobs, the county lost a total of 1,228 jobs over the past 30 years.

Despite the job losses, combined personal income in Butte County increased by $15 million, to $66 million, from 1990 to 2000 in real terms (adjusted for inflation). Non-labor income was the only other sector that expanded significantly from 1970 to 2000, by $6 million in real terms, compared to a $282 million increase in Blaine County.

Construction added $3 million in personal income and 38 jobs from 1990-2000, while mining income increased by $1 million and added five jobs. Although farm and agricultural services added four jobs, personal income from this sector declined by $4 million. The West-wide decline in agricultural income is often linked to the sale of working ranches to non-working “ranchettes” or subdivisions; but these factors seem to be less prevalent in Butte County, which does not attract the same level of “amenity buyers” that Blaine County does. Instead, the decline appears to be caused by international competition and the changing agricultural market.

An important feature of the Butte County economy is that despite the relatively high numbers of well-paying Engineering and Management Service jobs, almost four times as much money leaves the county as is generated in total personal income. INEEL is the county’s major employer; of the total $334 million generated by employment in Services, $332 million is subcategorized as Engineering and Management Services, most of which is linked to INEEL. However, many of its employees choose to live in Idaho Falls or other area towns, rather than in Arco, and take their income with them. In 2000, more than $282 million in personal earnings left the county. This also accounts for the relatively low
Figure 26
Change in Personal Income in Butte County, Idaho, 1990-2000

![Graph showing change in personal income from 1970 to 2000.](image)

Source: BEA REIS 2002 CD Table CA05
Note: Data is in real terms (adjusted for inflation).
Data for all sectors was not available prior to 1990.

Table 28
New Income by Type in Butte County, Idaho, 1990-2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Personal Income*</td>
<td>422</td>
<td>373</td>
<td>-50</td>
<td></td>
</tr>
<tr>
<td>Farm and Agricultural Services</td>
<td>6</td>
<td>1.5%</td>
<td>3</td>
<td>0.8%</td>
</tr>
<tr>
<td>Farm</td>
<td>6</td>
<td>1.4%</td>
<td>3</td>
<td>0.7%</td>
</tr>
<tr>
<td>Ag. Services</td>
<td>0</td>
<td>0.1%</td>
<td>0</td>
<td>0.1%</td>
</tr>
<tr>
<td>Mining</td>
<td>0</td>
<td>0.1%</td>
<td>1</td>
<td>0.4%</td>
</tr>
<tr>
<td>Manufacturing (incl. forest products)</td>
<td>90</td>
<td>21.4%</td>
<td>0</td>
<td>0.1%</td>
</tr>
<tr>
<td>Services and Professional</td>
<td>244</td>
<td>57.8%</td>
<td>334</td>
<td>89.6%</td>
</tr>
<tr>
<td>Transportation &amp; Public Utilities</td>
<td>1</td>
<td>0.2%</td>
<td>2</td>
<td>0.4%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>1</td>
<td>0.1%</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>3</td>
<td>0.7%</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Finance, Insurance &amp; Real Estate</td>
<td>0</td>
<td>0.1%</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Services (Health, Legal, Business, Others)</td>
<td>239</td>
<td>56.6%</td>
<td>329</td>
<td>88.3%</td>
</tr>
<tr>
<td>Construction</td>
<td>1</td>
<td>0.1%</td>
<td>3</td>
<td>0.9%</td>
</tr>
<tr>
<td>Government</td>
<td>63</td>
<td>14.9%</td>
<td>7</td>
<td>1.9%</td>
</tr>
<tr>
<td>Non-Labor Income</td>
<td>18</td>
<td>4.3%</td>
<td>24</td>
<td>6.3%</td>
</tr>
<tr>
<td>Dividends, Interest &amp; Rent</td>
<td>10</td>
<td>2.4%</td>
<td>12</td>
<td>3.3%</td>
</tr>
<tr>
<td>Transfer Payments</td>
<td>8</td>
<td>1.9%</td>
<td>12</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

*The sum of the above categories do not add to total due to adjustments made for place of residence and personal contributions for social insurance made by the U.S. Department of Commerce.
portion of non-labor income found here. One factor may be that when INEEL was founded, Bonneville County provided bus service to INEEL employees who wished to live there rather than in Butte County.

Services income within the subcategories of hotels and other lodging and amusements and recreation do not appear to be benefiting from Monument expansion. From 1990 to 2000, personal income from hotels and other lodging declined from $35,000 to $30,000, while no personal income from amusements and other recreation was recorded in either 1990 or 2000. The area is attempting to diversify its economy further through initiatives such as the Arco/Butte Business Incubation Center.

Despite the changes to the Butte County economy over the past 30 years, per capita income in real terms increased by 32 percent, from $17,202 to $22,625 from 1990 to 2000. Average earnings per job (adjusted for inflation) have increased from $40,103 in 1970 to $50,512 in 2000, the highest among the counties in the planning region. In 1999, average earnings per job in Butte County were higher than the average for the state of Idaho ($28,103) and higher than the national average ($36,316). The average unemployment rate in the county was 3.9 percent in 2001, compared to the state average of 5 percent and the national average of 4.8 percent.

Power County encompasses the southwestern corner of the Monument, accounting for 7 percent of the Monument, and had a total population of 7,515 in 2000. There are no communities within Power County that are considered part of the planning area, although the city of American Falls, where the American Falls Reservoir and hydroelectric generating plant are located, lies approximately 10 miles to the east of the Monument. In 2000, total personal income in the county was $164 million and 5,604 people were employed.

Power County has a high level of manufacturing income, due largely to jobs at the American Falls Electrical Generating Station (the county’s major employer) being classified in this sector. Employment in this sector has fluctuated, but declined by 209 jobs over the past three decades and accounted for 45.5 percent of earnings in real terms in the county in 2000. Non-labor income accounted for $46 million, or 28.3 percent, of county personal income in 2000. Although farm and agricultural income increased by $1 million to a total of $32 million between 1970 and 2000 and added 50 jobs, its share of total personal income declined from 31.7 percent to 19.6 percent over the same time span. Its share of employment declined from 28.9 to 21.4 percent of all jobs.

Missing data for the services and professional and mining sectors make long-term analysis of economic change in Power County challenging. However, it is possible to say that from 1994 to 2000, income from the services and professional sector contributed 48 percent of new income to the county for a total of $33 million, or 20 percent of total personal income adjusted for inflation. This sector added 37 jobs during that time frame to account for a total of 1,499 positions. The services subcategories of hotels and other lodging and amusements and recreation grew substantially in the county from 1990 to 2000. Hotels and other lodging increased from $36,600 in 1990 to $116,500, while amusements and recreation grew from $109,400 to $191,000. Construction has been the fastest growing sector from 1994-2000, contributing 53 percent of new income in the county and adding 139 jobs. Government jobs have steadily increased over the past three decades, and now account for 11.7 percent, or $19 million, in personal income in 2000, along with 735 jobs. Mining accounted for five jobs and 0.2 percent of total personal income in 2000.

From 1990 to 2000, per capita income in Power County decreased in real terms by 9 percent, from $23,825 to $21,782. Average earnings per job (in real terms) fell from $31,662 in 1970 to $30,113 in 1990, to $30,512 in 2000.
Figure 27

![Graph showing change in personal income from 1970 to 2000 in Power County, Idaho.](image)

Source: BEA REIS 2002 CD Table CA05  
Note: Data is in real terms (adjusted for inflation). Data for all sectors was not available prior to 1994.

Table 29
New Income by Type in Power County, Idaho, 1994-2000

<table>
<thead>
<tr>
<th>All figures in millions of 2000 dollars</th>
<th>1994</th>
<th>% of Total in 1994</th>
<th>2000</th>
<th>% of Total in 2000</th>
<th>New Income 1994 to 2000</th>
<th>% of New Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Personal Income*</td>
<td>155</td>
<td>164</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm and Agricultural Services</td>
<td>37</td>
<td>23.9%</td>
<td>33</td>
<td>20.3%</td>
<td>-4 NA</td>
<td></td>
</tr>
<tr>
<td>Farm</td>
<td>35</td>
<td>22.8%</td>
<td>30</td>
<td>18.6%</td>
<td>-5 NA</td>
<td></td>
</tr>
<tr>
<td>Ag. Services</td>
<td>2</td>
<td>1.1%</td>
<td>3</td>
<td>1.7%</td>
<td>1 14%</td>
<td></td>
</tr>
<tr>
<td>Mining</td>
<td>1</td>
<td>0.5%</td>
<td>0</td>
<td>0.2%</td>
<td>0 NA</td>
<td></td>
</tr>
<tr>
<td>Manufacturing (incl. forest products)</td>
<td>79</td>
<td>51.2%</td>
<td>74</td>
<td>45.5%</td>
<td>-5 NA</td>
<td></td>
</tr>
<tr>
<td>Services and Professional</td>
<td>29</td>
<td>18.5%</td>
<td>33</td>
<td>20.0%</td>
<td>4 48%</td>
<td></td>
</tr>
<tr>
<td>Transportation &amp; Public Utilities</td>
<td>11</td>
<td>7.0%</td>
<td>11</td>
<td>7.0%</td>
<td>1 6%</td>
<td></td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>6</td>
<td>3.7%</td>
<td>7</td>
<td>4.1%</td>
<td>1 11%</td>
<td></td>
</tr>
<tr>
<td>Retail Trade</td>
<td>5</td>
<td>3.1%</td>
<td>4</td>
<td>2.4%</td>
<td>-1 NA</td>
<td></td>
</tr>
<tr>
<td>Finance, Insurance &amp; Real Estate</td>
<td>1</td>
<td>0.9%</td>
<td>1</td>
<td>0.8%</td>
<td>0 NA</td>
<td></td>
</tr>
<tr>
<td>Services (Health, Legal, Business, Others)</td>
<td>6</td>
<td>3.6%</td>
<td>9</td>
<td>5.7%</td>
<td>4 44%</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>4</td>
<td>2.8%</td>
<td>9</td>
<td>5.3%</td>
<td>4 53%</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>17</td>
<td>11.1%</td>
<td>19</td>
<td>11.7%</td>
<td>2 23%</td>
<td></td>
</tr>
<tr>
<td>Non-Labor Income</td>
<td>38</td>
<td>24.8%</td>
<td>46</td>
<td>28.3%</td>
<td>8 93%</td>
<td></td>
</tr>
<tr>
<td>Dividends, Interest &amp; Rent</td>
<td>21</td>
<td>13.2%</td>
<td>24</td>
<td>14.9%</td>
<td>4 46%</td>
<td></td>
</tr>
<tr>
<td>Transfer Payments</td>
<td>18</td>
<td>11.5%</td>
<td>22</td>
<td>13.3%</td>
<td>4 47%</td>
<td></td>
</tr>
</tbody>
</table>

*The sum of the above categories do not add to total due to adjustments made for place of residence and personal contributions for social insurance made by the U.S. Department of Commerce.
2000. Average earnings here are higher than the state average ($28,103) but lower than the national average ($36,113). In 2001, the unemployment rate in Power County was 7.2 percent, compared to 5.0 percent for the state and 4.8 percent for the nation.

The south-central portion of the Monument, a total of 22 percent, lies within Minidoka County. The town of Minidoka (population 142) is within the planning area. Although non-labor and services are the most important sources of income in Minidoka County, and the service sector is the largest source of employment, this county depends on a more diverse range of economic sectors than many counties in the western United States. The county added 3,370 jobs between 1970 and 2000, bringing the total number to 11,033. Total personal income was $345 million in 2000. Non-labor income accounts for 32 percent of personal income in the county, and 60 percent of the new income generated between 1970 and 2000 in real terms (adjusted for inflation). Services is the second most important sector economically, accounting for 25 percent of income in the county, 28 percent of the new income, and 2,391, or 71 percent of new jobs. From 1990 to 2000, personal income within the hotels and other lodging subcategory for Minidoka County increased from $1.69 million in 1990 to $1.74 million in 2000. During that time frame, amusements and recreation increased by $99,000.

Manufacturing remains the third most important source of income and jobs in the county, although its share of total income has declined slightly from 18.5 to 17.9 percent. Although this sector contributed to 17 percent of the new income in the county, it only added 61 jobs, or 1.8 percent of the total, from 1970 to 2000.

Agriculture has been a key sector of the county’s economy over the past 30 years and is currently the fourth most important source of income and the second largest employer. However, the share that agriculture contributes to new personal income from 1970 to 2000 fell by $16 million in real terms, while 121 jobs were added. Government and construction have shown steady increases in both personal income and jobs in the county over the past 30 years. Income from the government sector added 17 percent of the total new income, and it generated 544 new jobs, or 16.1 percent of the total. Construction contributed $1 million, or 1 percent, of the county’s new income, and 180, or 5.3 percent, of the new jobs. Mining has not been an important economic sector in Minidoka County over the past 30 years, comprising only 0.1 percent of personal income in the county; however, 73 jobs were added in this sector during that time frame.

Per capita income for Minidoka County in real terms held steady from 1990 to 2000 at $17,589. Average earnings per job (in real terms) have declined from $25,231 in 1970 to $22,823 in 2000, and are lower than the state ($28,301) and national ($36,311) averages. Unemployment for 2001 was 6.4 percent, compared to 5.0 percent for the state and 4.8 percent for the nation. Although the economic profile of Minidoka County is common throughout the western United States, the county has the lowest income of any in the planning area; and the town of Minidoka magnifies this trend. The county and town also have some demographic features that differ from the rest of the planning area, as discussed in the following section.

Population Growth, Housing Values and Commuting Patterns
Some of the most notable distinctions among the communities within the planning area are in population growth rates and housing values. These factors have important implications for land use and planning in the vicinity of the Monument.

Between 1990 and 1999, the populations of Idaho and the Mountain West grew at more than twice the United States average. According to the U.S. Census Bureau, the fastest growing populations in the nation are intermountain western states: Nevada (1), Arizona (2), Idaho (3), Utah (4), and Colorado (5). Nevada and Idaho are predicted to be the two fastest growing states in the nation until at least 2005. Since
Figure 28

![Graph showing changes in personal income from 1970 to 2000.](image)

Source: BEA REIS 2002 CD Table CA05

Note: Data is in real terms (adjusted for inflation).

Table 30
New Income by Type in Minidoka County, Idaho, 1970-2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Personal Income*</td>
<td>233</td>
<td>26.5%</td>
<td>354</td>
<td>13.8%</td>
<td>121</td>
<td>13.8%</td>
</tr>
<tr>
<td>Farm and Agricultural Services</td>
<td>65</td>
<td>28.0%</td>
<td>49</td>
<td>13.8%</td>
<td>-16</td>
<td>NA</td>
</tr>
<tr>
<td>Farm</td>
<td>62</td>
<td>26.5%</td>
<td>40</td>
<td>11.4%</td>
<td>-21</td>
<td>NA</td>
</tr>
<tr>
<td>Ag. Services</td>
<td>3</td>
<td>1.5%</td>
<td>8</td>
<td>2.4%</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td>Mining</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.1%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Manufacturing (incl. forest products)</td>
<td>43</td>
<td>18.5%</td>
<td>63</td>
<td>17.9%</td>
<td>20</td>
<td>17%</td>
</tr>
<tr>
<td>Services and Professional</td>
<td>55</td>
<td>23.7%</td>
<td>89</td>
<td>25.0%</td>
<td>33</td>
<td>28%</td>
</tr>
<tr>
<td>Transportation &amp; Public Utilities</td>
<td>8</td>
<td>3.3%</td>
<td>26</td>
<td>7.3%</td>
<td>18</td>
<td>15%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>9</td>
<td>3.8%</td>
<td>23</td>
<td>6.6%</td>
<td>14</td>
<td>12%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>18</td>
<td>7.9%</td>
<td>13</td>
<td>3.8%</td>
<td>-5</td>
<td>NA</td>
</tr>
<tr>
<td>Finance, Insurance &amp; Real Estate</td>
<td>2</td>
<td>1.0%</td>
<td>3</td>
<td>0.8%</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>Services (Health, Legal, Business, Others)</td>
<td>18</td>
<td>7.8%</td>
<td>23</td>
<td>6.6%</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td>Construction</td>
<td>10</td>
<td>4.1%</td>
<td>10</td>
<td>2.9%</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Government</td>
<td>20</td>
<td>8.6%</td>
<td>41</td>
<td>11.5%</td>
<td>20</td>
<td>17%</td>
</tr>
<tr>
<td>Non-Labor Income</td>
<td>40</td>
<td>17.2%</td>
<td>113</td>
<td>31.9%</td>
<td>73</td>
<td>60%</td>
</tr>
<tr>
<td>Dividends, Interest &amp; Rent</td>
<td>23</td>
<td>9.8%</td>
<td>50</td>
<td>14.1%</td>
<td>27</td>
<td>22%</td>
</tr>
<tr>
<td>Transfer Payments</td>
<td>17</td>
<td>7.4%</td>
<td>63</td>
<td>17.8%</td>
<td>46</td>
<td>38%</td>
</tr>
</tbody>
</table>

*The sum of the above categories do not add to total due to adjustments made for place of residence and personal contributions for social insurance made by the U.S. Department of Commerce.
1990, Idaho’s statewide population has increased by more than 27,000 people per year. Two-thirds of these additional people have moved to the cities and towns of Idaho (Cooke 2000).

In the more than 200 cities and towns in Idaho, more than one-half of the towns have increased slightly in population size. Roughly 24 cities and towns have lost population since 1990. At the other extreme, approximately 24 cities have increased by more than 100 persons per year.

Table 31 summarizes population growth rates and current residents for the counties and communities within the Craters of the Moon National Monument planning area.

As the table shows, Blaine County has experienced the most rapid growth among the five counties in the planning area, adding 14,543 people and growing by 250 percent from 1970 to 2002. During this time frame, population growth has been steady, and has outpaced both the state of Idaho (87 percent) and the nation (41 percent). Blaine County is the most populous county in the planning area, just slightly larger than Minidoka County, and is likely to continue to grow at a much faster rate. Blaine County contains the largest community in the planning area, Hailey, which had 6,002 residents in 2000. It is also the location of Sun Valley (population 1,427), Ketchum (population 3,003), Bellevue (population 1,876) and Carey (population 513).

Power County had the second-fastest growth rate, although its 7,419 residents in 2000 and 55 percent growth rate are dwarfed by Blaine County’s figures. Power County has grown slower than the state (an 87 percent increase) but faster than the nation (41 percent) during this time frame. Much of the population growth occurred from 1970 to 1980, has slowed since then, and actually began declining in 1999.

Lincoln County grew by 1,143 people, or 37 percent, from 1970 to 2002, bringing its population to 4,057, or about one-fifth of Blaine County. This rate was slower than both the state and the nation. The county’s population was fairly stable from 1970 to 1990, and has been trending steadily upward since then. The town of Shoshone (population 1,398) is in Lincoln County.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Blaine</td>
<td>Sun Valley</td>
<td>5,815</td>
<td>20,358</td>
<td>250%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Ketchum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hailey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bellevue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arco</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minidoka</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minidoka</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Minidoka County, where the town of Minidoka (population 142) is located, grew by 22 percent, or 3,571 people, from 1970 to 2002, which is considerably slower than both the state at 87 percent and the nation at 41 percent. Most of this growth occurred between 1970 and 1980, and the population has been fairly stable since then. Minidoka County is the most populous county in the planning area, with 19,444 residents in 2002.

Butte County has experienced virtually no population growth over the past 32 years, adding only three residents to its population of 2,921. The town of Arco (population 1,029) accounts for more than one-third of the county’s population. Butte County’s population grew at a moderate rate from around 1978 to 1983, peaking at around 3,500 residents, and then began gradually declining.

**Housing Affordability and Commuting Patterns**

It is important to consider housing affordability in planning for Craters of the Moon because it will have significant impacts on future population growth (and potentially resource use) for the towns in the planning area. Housing values and affordability vary considerably among the communities of the planning area, as Figure 29 shows.

Table 32 shows where each community lies on the Housing Affordability Index (HFI), which is another means of illustrating the differences in housing affordability between communities. This measure considers median home value and median household income, and assumes a 20 percent down payment and that no more than 25 percent of a family’s income goes to paying the mortgage. It is based on an interest rate of 10.01 percent in 1990 and 8.03 percent in 2000. This statistic is most useful as a comparative, rather than absolute, measure. By this measure, a score of 100 or above means that the median family can afford the median house.

Sun Valley, Ketchum, and Hailey are experiencing one of the downsides of rapid economic and population growth: a serious lack of affordable housing. The problem is most severe in Sun Valley, where the median home value was $798,400 in 2000, and the income required to qualify to buy the median home was $225,603; but the median household income was only one-third of the income needed to qualify, or $71,000.

The situation is similar in Ketchum, where buying the $500,000 median value home requires an income of $142,217; but again, the median household income of $45,457 is only one-third of what would be

![Figure 29: Housing Affordability in Planning Area Communities](image-url)
required to qualify. The gap is narrower in Hailey, where the median-value $203,000 home requires an income of $56,599, and the median household income is $51,347.

Place of work and commuting patterns are valuable indicators of the various economic roles played by different communities within the study area, and are closely related to housing affordability. Ketchum had the highest percentage of residents (72 percent) who said they work in town, compared to 55 percent of Sun Valley residents and 39 percent of Hailey residents. As Figure 30 indicates, residents of Sun Valley and Ketchum are unlikely to commute more than 20 minutes to their jobs, which are presumably in these towns. Hailey lies approximately 13 miles, or about 20 minutes, from Sun Valley, and many of its residents are likely to work there or in Ketchum.

A few more miles down the Big Wood River Valley to Bellevue brings housing into the affordable range for more people and is a major reason for its population growth in recent years. In this community, the median value home of $159,200 requires an annual income of $44,985, while the median household income is $45,438. Bellevue lies 19 miles, or a 27-minute drive, from Sun Valley, which may explain why 39 percent of its residents commute for 20 to 45 minutes each way. Only 7 percent have commutes of longer than 45 minutes, while 51 percent commute for less than 20 minutes. Sixteen percent of residents said that they worked in town in 2000.

Some households with lower-than-median incomes that are employed in Sun Valley, Ketchum, or Hailey are looking to Carey, 42 miles or nearly a one-hour drive from Sun Valley, for more affordable housing. In 2000, 39 percent of residents said that they worked in town. The median home in Carey is valued at $95,000, requiring an income of $26,884 to qualify to purchase it; while median household income is $39,861. New subdivisions are being built in Carey to meet the demand for affordable housing. Commuting data for Carey illustrates its residents’ ties to other areas for work: 44 percent have commutes of less than 20 minutes, while 23 percent commute longer than 45 minutes. This traditional community is likely to grow quickly over the next several years, which may have implications for the Monument. Carey is adjacent to the western side of the Monument, and only 24 miles from the Visitor’s Center.

Shoshone is a larger community located 57 miles or one hour and 15 minutes from Sun Valley, and offers even more affordable housing options to those employed in the Sun Valley/Ketchum/Hailey

<table>
<thead>
<tr>
<th>COMMUNITY</th>
<th>SUN VALLEY</th>
<th>KETCHUM</th>
<th>HAILEY</th>
<th>BELLEVUE</th>
<th>CAREY</th>
<th>SHOSHONE</th>
<th>ARCO</th>
<th>MINIDOKA</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFI</td>
<td>38</td>
<td>52</td>
<td>100</td>
<td>110</td>
<td>157</td>
<td>175</td>
<td>240</td>
<td>173</td>
</tr>
</tbody>
</table>

Figure 30
Commuting Patterns in Planning Area Communities
area, as well as those who work closer to home. The median home value in Shoshone is $72,500, which requires an income of $20,486 to qualify for, compared to the median income of $31,036. Forty percent of residents said that they work in town. Commuting patterns for Shoshone indicate that it is a “bedroom community” for both the Sun Valley and Twin Falls (27 miles to the south) areas: only 40 percent of its residents over age 16 have a commute time of under 20 minutes, while 28 percent commute for more than 45 minutes each way. The residents of Shoshone are more likely to have longer commutes than others in the planning area.

As Figure 30 indicates, residents of Arco and Minidoka are more likely to work within 20 minutes of home and less likely to engage in long commutes to other towns. Most residents of Arco (59 percent) say that they work in town. Arco lies just north of the Monument, at least a 90-minute drive from Sun Valley/Ketchum, although some of its residents may commute to jobs at INEEL. The Monument’s Visitor Center is 18 miles from Arco, making this town geographically the closest to being a gateway community for the Monument. Housing is affordable in Arco: the median home value is $51,200, requiring an income of only $14,486 to qualify, while the median household income is nearly twice that, at $27,998.

Minidoka, on the southern side of the Monument, has the most affordable housing of the communities in the planning area. The median home value is $33,100, which requires an income of $9,353 to qualify for purchase; the median household income is $21,250. It lies more than 100 miles from Sun Valley and Ketchum, making commutes to those areas unlikely. No Minidoka residents reported that they work in town. Instead, they are more likely to commute to American Falls or the Rupert/Burley area to work.

There are three airports in the general area of the Monument – Hailey, Idaho Falls, and Twin Falls (60, 84, and 90 miles from Park Headquarters, respectively). From the nearest towns by vehicle, travel to the Monument is 18 miles west of Arco via US 20/26/93; 24 miles east of Carey via US 20/26/93; 84 miles from Idaho Falls; and 90 miles from Twin Falls.

**Demographic Change in the Planning Area**

In addition to differences in terms of economic changes, population growth, housing affordability, and commuting patterns, demographic shifts are also affecting the communities. This section examines some of these factors for each community, including length of time in the community, age of residents, race and ethnicity, and languages spoken.

**Length of Time in the Area**

Length of time in the community can indicate how quickly a community is changing and provide some insight into the perspectives of community members from different areas. Trends in aging among residents have important implications for communities as well. This section discusses these issues within the planning area communities. Table 33 summarizes information about long-term residents and more recent arrivals.

Most residents of the communities in the planning area were born in the United States – but there are important differences within this broad category. Carey and Arco have the highest percentages of people born in the United States (97 percent and 98 percent, respectively). These are also the locations with the largest proportion of people born in Idaho (71 percent and 56 percent, respectively). These communities are among the more stable, with 67 percent of Carey residents living in the same house as they did in 1995, and 82 percent living in the same county. Half of the population of Arco lives in the same house as in 1995, and 73 percent live in the same county.

These trends are in contrast to those seen in the wealthier, faster-growing communities of the planning area. Residents of Sun Valley and Ketchum, and to a lesser extent Hailey and Bellevue, are less likely to have been born in Idaho and more likely to have moved to these towns within the past decade. Only 13 percent of Sun Valley residents and 16 percent of Ketchum residents were born in
Idaho. In 1995, 14 percent of Sun Valley residents lived outside the United States. This is likely to be due to the fact that Sun Valley is an internationally renowned resort community, meaning that it draws both more wealthy international homeowners and more immigrant hotel and restaurant workers. Sun Valley also had the third-lowest percentage (84 percent) among towns in the planning area of people born in the United States. Bellevue had a similar percentage of foreign-born residents, presumably for the same reasons. These communities had the lowest proportions of residents who had lived in the same house or state in 1995, indicating that there are more residents who chose to move to these areas for natural or recreational amenities or for employment opportunities.

Shoshone has a mix of factors that indicate that both long-time residents and newcomers live in the community; it falls in the middle among the planning area communities for the factors listed below. For Carey, only 3 percent of its residents were not born in the United States, none of its residents lived outside of the United States in 1995, a majority of its residents live in the same house as in 1995, and it has the highest number of residents that were born in Idaho. The situation is similar in Arco, which had the highest percentage of U.S.-born residents, a majority of whom were born in Idaho and many of whom lived in the same state and county in 1995. These trends indicate that Carey and Arco are more traditional towns with many long-term residents whose views on the use of Monument resources may reflect more traditional land uses.

The town of Minidoka has by the lowest percentage of residents born in the United States at 65 percent. Despite the high number of foreign-born residents, the town appears to be fairly stable, with many residents living in the same house and county since 1995.

**Race, Ethnicity, and Language**

Another primary way that the communities of the planning area differ is in their racial and ethnic composition. Table 34 summarizes 2000 Census data for each community.

Data on language and ethnicity are in keeping with the data on place of birth and length of time in the same state, county, and house discussed above. Sun Valley has few residents who are not fluent in English, but also a fairly high number of residents who speak a language in addition to English. Most residents are white and few are Hispanic, indicating that relatively few immigrant service workers actually live in the town. Ketchum follows a similar pattern, although it has fewer residents who speak a language in addition to English, and more white and fewer Hispanic and/or “some other race”

<table>
<thead>
<tr>
<th>Place of Birth and Length of Residence in Planning Area Communities</th>
<th>BORN IN THE U.S.</th>
<th>BORN IN IDAHO</th>
<th>LIVED IN SAME STATE IN 1995</th>
<th>LIVED IN SAME COUNTY IN 1995</th>
<th>LIVED IN SAME HOUSE IN 1995</th>
<th>LIVED OUTSIDE THE U.S. IN 1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun Valley</td>
<td>86%</td>
<td>13%</td>
<td>76%</td>
<td>73%</td>
<td>42%</td>
<td>14%</td>
</tr>
<tr>
<td>Ketchum</td>
<td>89%</td>
<td>16%</td>
<td>71%</td>
<td>67%</td>
<td>39%</td>
<td>3%</td>
</tr>
<tr>
<td>Hailey</td>
<td>89%</td>
<td>33%</td>
<td>79%</td>
<td>68%</td>
<td>40%</td>
<td>3%</td>
</tr>
<tr>
<td>Bellevue</td>
<td>84%</td>
<td>37%</td>
<td>88%</td>
<td>83%</td>
<td>50%</td>
<td>4%</td>
</tr>
<tr>
<td>Carey</td>
<td>97%</td>
<td>71%</td>
<td>89%</td>
<td>82%</td>
<td>67%</td>
<td>0%</td>
</tr>
<tr>
<td>Shoshone</td>
<td>88%</td>
<td>52%</td>
<td>86%</td>
<td>70%</td>
<td>53%</td>
<td>1%</td>
</tr>
<tr>
<td>Arco</td>
<td>98%</td>
<td>56%</td>
<td>92%</td>
<td>73%</td>
<td>50%</td>
<td>0%</td>
</tr>
<tr>
<td>Minidoka</td>
<td>65%</td>
<td>58%</td>
<td>100%</td>
<td>91%</td>
<td>72%</td>
<td>3%</td>
</tr>
</tbody>
</table>
residents. Hailey is similar in terms of languages spoken, although it does have a more ethnically and racially diverse population. The fact that 9 percent of Bellevue’s residents are not fluent in English, nearly 20 percent of residents are Hispanic, and 13.4 percent are of a race other than English may indicate that lower-paid immigrant service workers who work in Sun Valley, Ketchum, or Hailey choose to live in Bellevue, perhaps to take advantage of the town’s lower housing costs.

Carey and Arco’s high percentages of English-only speakers and relatively low ethnic and cultural diversity highlight their status as more traditional towns with relatively few immigrants. Both towns are too far from the service-worker hubs of Sun Valley, Ketchum, and Hailey to be viable housing options for lower-paid employees who work in those towns. The mix of factors in Shoshone indicates that it is home to both long-term residents and some immigrant workers.

In Minidoka, 25 percent of its population speaks only English, 19 percent are not fluent in English, and more than 75 percent are Hispanic. This town is home to many immigrant workers who find jobs in the agricultural areas beyond the southern boundaries of the Monument, as well as some who are employed by the American Falls Electrical Generating Station.

### Trends in Aging

One of the key demographic trends in the western United States, including the Craters of the Moon National Monument planning area, is the aging of the baby boomers. This trend is relevant for resource management planning in that retiring baby boomers may be drawn to the recreational opportunities, lower cost of living, affordable housing and slower pace of life afforded by rural communities near protected areas, and can thus be a significant source of new residents. Providing services to these new residents, such as health care, arts and entertainment, and home-related services such as architects, builders, and maintenance can be a source of economic growth for the area. On the other hand, young adults and those with young children may choose to leave an area if they find limited higher-wage employment opportunities. The loss of such workers, particularly educated ones, can make it more difficult to attract well-paid jobs to the area.

Both of these trends are occurring to varying degrees in all counties of the planning area. As Table 35 indicates Blaine County has experienced the fastest growth of baby boomers (a 7 percent increase from 1990 to 2000), which is not surprising given its reputation as a desirable retirement and second-home destination. The increase in this age group for the other counties ranged from 3 to 6 percent.
Table 35
Aging Trends in Planning Area Counties

<table>
<thead>
<tr>
<th>COUNTY (COMMUNITIES)</th>
<th>MEDIAN AGE U.S. MEDIAN = 35.3</th>
<th>STATE MEDIAN = 33.2</th>
<th>BABY BOOMERS (AGED 40-54 IN 2000)</th>
<th>PERCENT OVER AGE 65</th>
<th>PERCENT UNDER AGE 20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33.3</td>
<td>37.4</td>
<td>21%</td>
<td>28%</td>
<td>7%</td>
</tr>
<tr>
<td>Lincoln (Shoshone)</td>
<td>34.2</td>
<td>34.3</td>
<td>16%</td>
<td>20%</td>
<td>14%</td>
</tr>
<tr>
<td>Butte (Arco)</td>
<td>33.2</td>
<td>38.3</td>
<td>17%</td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td>Power</td>
<td>29.8</td>
<td>31.6</td>
<td>16%</td>
<td>22%</td>
<td>10%</td>
</tr>
<tr>
<td>Minidoka (Minidoka)</td>
<td>30.3</td>
<td>33.5</td>
<td>16%</td>
<td>19%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Butte County has experienced the most rapid increase in median age, along with increases in its baby boomer and over-65 residents and a decrease in residents under-20 years of age. In keeping with this trend, several of the new businesses spawned with the help of the Arco/Butte Business Incubation Center relate to health care, such as hospice services and medical supplies. Although Lincoln County is not aging overall, it experienced a 12 percent decline in its under-20 population from 1990 to 2000. All other counties in the planning area experienced declines in the under-20 age group, ranging from 1 to 5 percent.

Income Distribution and Education Levels
Income levels are closely tied to educational attainment in the emerging Western economy, and as Tables 36 and 37 indicate, this holds true in the Monument planning area. While income distribution figures provide insight into current social conditions in the communities of the planning area, educational attainment is an important factor to consider for future economic planning. Having a well-educated workforce makes communities more appealing to businesses considering locating in them, and can thus be a key factor in economic prosperity.

Sun Valley has the highest median income, largest percentage of households earning more than $100,000 per year, smallest percentage of people with less than a high school diploma, and highest number of well-educated residents. However, it also has a fairly high number of individuals with incomes below the poverty level – most likely lower paid service workers.

Minidoka has the lowest median household income, the highest percentage of households earning under $30,000 per year, and the highest proportion of individuals with incomes below the poverty level. In addition, 88 percent of its residents lack a high school diploma, and none reported having a college degree in the 2000 Census.

The other communities fall at various points along the range. Those in the Big Wood River Valley (Sun Valley, Ketchum, Hailey, and Bellevue) tend to have median higher incomes, fewer households earning under $30,000, and fewer individuals in poverty. They also have better-educated residents. Carey residents have mid-range incomes and a fair number of households earning less than $30,000 per year, but very few residents in poverty. Shoshone and Arco residents have high percentages of total households earning less than $30,000 per year and relatively high proportions of individuals living in poverty (particularly Arco). About 25 percent of the residents of these communities did not graduate from high school, and a modest proportion are college graduates.
Table 36
Income Distribution in Planning Area Communities

<table>
<thead>
<tr>
<th>COMMUNITY</th>
<th>MEDIAN HOUSEHOLD INCOME</th>
<th>HOUSEHOLDS UNDER 30K</th>
<th>HOUSEHOLDS OVER 100K</th>
<th>INDIVIDUALS WITH INCOME BELOW POVERTY LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun Valley</td>
<td>$71,000</td>
<td>21%</td>
<td>36%</td>
<td>15%</td>
</tr>
<tr>
<td>Ketchum</td>
<td>$45,457</td>
<td>31%</td>
<td>20%</td>
<td>9%</td>
</tr>
<tr>
<td>Hailey</td>
<td>$51,347</td>
<td>29%</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>Bellevue</td>
<td>$45,438</td>
<td>30%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Carey</td>
<td>$39,861</td>
<td>33%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Shoshone</td>
<td>$31,036</td>
<td>47%</td>
<td>4%</td>
<td>14%</td>
</tr>
<tr>
<td>Arco</td>
<td>$27,993</td>
<td>57%</td>
<td>3%</td>
<td>23%</td>
</tr>
<tr>
<td>Minidoka</td>
<td>$21,250</td>
<td>78%</td>
<td>0%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Table 37
Educational Attainments in Planning Area Communities

<table>
<thead>
<tr>
<th>COMMUNITY</th>
<th>LESS THAN HIGH SCHOOL</th>
<th>COLLEGE DEGREE OR GREATER</th>
<th>ADVANCED COLLEGE DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun Valley</td>
<td>3%</td>
<td>60%</td>
<td>24%</td>
</tr>
<tr>
<td>Ketchum</td>
<td>5%</td>
<td>52%</td>
<td>14%</td>
</tr>
<tr>
<td>Hailey</td>
<td>10%</td>
<td>39%</td>
<td>10%</td>
</tr>
<tr>
<td>Bellevue</td>
<td>23%</td>
<td>19%</td>
<td>4%</td>
</tr>
<tr>
<td>Carey</td>
<td>17%</td>
<td>16%</td>
<td>2%</td>
</tr>
<tr>
<td>Shoshone</td>
<td>23%</td>
<td>14%</td>
<td>5%</td>
</tr>
<tr>
<td>Arco</td>
<td>24%</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>Minidoka</td>
<td>88%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Chapter 4
Environmental Consequences
Previous page, clockwise, from top left
Cinder garden
Lava tube
Devil’s Orchard walk
Blue dragon lava
INTRODUCTION

This chapter describes the environmental consequences of implementing any of the four planning alternatives previously described. Each program or management action that could impact resources or resource uses has been analyzed, and the conclusions of those analyses are described by resource topic below. Where data are limited, professional judgment has been used to project environmental impacts. Professional judgment was based, in part, on observation, analysis of conditions, and responses in similar areas.

ANALYSIS ASSUMPTIONS AND GUIDELINES

This document assesses the management actions proposed for implementing the proclamation and legislation creating the Craters of the Moon National Monument and Preserve (the Monument). The analysis is bounded by decisions identified in the proclamation or legislation and does not include alternatives to these decisions. These decisions are as follows:

- Land area included in or excluded from the Monument, Preserve, Wilderness Area, or Wilderness Study Areas (WSAs).
- Uses restricted or limited by the proclamations, legislation, federal regulations, or agency policy.
- Providing ongoing reasonable access to state and private land or interests.
- Continued grazing where currently permitted on BLM-administered lands.
- Regulation of hunting, fishing, and trapping by the State of Idaho, except that the Secretary of the Interior, in consultation with the state, may take certain steps to regulate hunting in the National Preserve for reasons such as public safety and protection of resources.

The following assumptions and guidelines were used to guide and direct the analysis of environmental consequences:

- The alternatives would be implemented substantially, including “Management Guidance Common to All Alternatives.”
- The Bureau of Land Management (BLM) and National Park Service (NPS) would have sufficient funding and personnel to implement any one of the alternatives.
- The planning period for the analysis is the next 15 to 20 years.
- The planning area for the analysis of impacts for each alternative is the area including the BLM and NPS lands included in Proclamation 7373 (see Figure 2). The area of analysis for cumulative impacts is described separately for each resource type.
- Specific actions to protect human life would be taken regardless of the management criteria in the plan alternatives.
- Livestock use on the BLM-managed portion of the Monument would continue to be governed by applicable laws and regulations, including Standards of Rangeland Health and Guidelines for Livestock Grazing Management, across all alternatives.
- Motorized and mechanized cross-country travel is prohibited.
- Recreational use of the planning area will continue to be similar to use in the past.
- Appendix B contains a list of the planning criteria used to develop the alternatives, including regulations and policies that can limit the range of actions.

INCOMPLETE OR UNAVAILABLE INFORMATION

As mandated by 43 Code of Federal Regulations (CFR) 1502.22, agencies evaluating reasonably foreseeable significant adverse effects of the human
environment in an EIS must identify incomplete or unavailable information, if that information is essential to a reasoned choice among alternatives. This Proposed Plan/FEIS is based on the best available data for each resource. However, data for many resource areas are limited. For the resources listed below, information was incomplete or unavailable.

**Cultural Resources:** Most of the planning area has not been surveyed for cultural resources. Estimates of the number, type, and significance of archaeological and historic sites were based on cultural resource inventories for approximately 5 percent of the planning area.

**Paleontological Resources:** Most of the planning area has not been surveyed for paleontological resources.

**Cave Resources:** Complete data are not available for cave resources, including location.

**Vegetation:** Complete data are not available for vegetation composition and condition.

**Wildlife:** Complete data are not available for wildlife species occurrence, habitat use, or habitat condition.

**Water Quality:** Detailed water quality data are available for Little Cottonwood Creek and Leech Creek. Limited data are available for most springs, playas, and reservoirs in the Monument.

**Noxious Weeds:** Most of the Monument has not been completely surveyed for noxious weeds.

**Visitor Use Data:** Data about visitor use are available for the original Monument, but such information for the remaining area is limited.

### TYPES OF IMPACTS

Effects (impacts) can be beneficial or adverse, direct or indirect, or cumulative. Beneficial effects are those that involve a positive change in the condition or appearance of a resource or a change that moves the resource toward a desired condition. Adverse impacts involve a change that moves the resource away from a desired condition or detract from its appearance or condition. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and occur later or farther away but are still reasonably foreseeable. Cumulative effects are the impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period of time.

Impacts are also described as to their context, intensity, and duration. Context generally refers to the geographic extent of impact (e.g., localized or widespread). Impact intensity is the magnitude or degree to which a resource would be beneficially or adversely affected. The criteria that were used to rate the intensity of the impacts for each resource topic are presented later in this section under each topic heading. Impact duration refers to how long an impact would last. For the purposes of this Proposed Plan/FEIS, the planning team used the following terms to describe the duration of the impacts (unless otherwise stated for any particular resource area).

**Short-term:** Impacts that would occur within 5 years, often during construction and recovery.

**Long-term:** Impacts that would occur beyond 5 years, often from operations.

Cumulative impacts are described at the end of the analysis for each resource by alternative. The period of potential cumulative impact is defined as the life of the plan.

### PROJECTS THAT MAKE UP THE CUMULATIVE IMPACT SCENARIO

To determine potential cumulative impacts, projects
in the area surrounding the Monument were identified. The area of primary concern is composed of the five Idaho counties in which the Monument is located: Blaine, Butte, Lincoln, Minidoka, and Power Counties. Projects outside this five-county area, however, are also considered if they have the potential to affect resources with broad regional importance. Projects included in this analysis were identified by examining other existing plans and by telephone calls to local governments and to state and federal land managers. Projects identified for the purposes of cumulative impact analyses are past actions, plans or actions that are currently being implemented, and reasonably foreseeable future plans or actions. These projects were considered regardless of what agency, organization, or person undertakes them. Projects included in the cumulative impact analysis do not affect all resources equally.

Cumulative impact analyses are presented in this document by resource topic. The projects that make up the cumulative impact scenario were analyzed in conjunction with the impacts of each alternative to determine if they would have any additive or interactive effects on a particular resource.

The Interior Columbia Basin Ecosystem Management Project. The ICBEMP has coordinated an extensive study of the Interior Columbia Basin. This study has determined that the sagebrush steppe ecosystem is at risk due to several past and existing impacts. These include grazing, road construction, human development, and disturbance-related invasions of exotic plant species. These disturbances will likely continue to contribute cumulatively to the impacts on vegetation communities in southern Idaho.

To address these risks to key ecosystem components, the BLM entered into a 2003 Memorandum of Understanding (MOU) to implement the ICBEMP. The implementation strategy includes direction to federal agencies to update or develop land use plans to provide direction to address the following:

- Maintain and promote a healthy, productive, and diverse ecosystem and restore, through a system of prioritization, areas that are degraded.
- Develop an integrated mix of restoration activities to provide for re-patterning successional and disturbance regimes and achievement of sustainable landscape conditions, thereby contributing to the reduction of events such as uncharacteristically large and severe wildland fires.
- Restore natural disturbance patterns in watersheds and hydrologic process to help restore and maintain riparian, aquatic, and wetland habitat.
- Develop integrated weed management strategies.
- Develop a coordinated multiscale and interagency approach to planning and decision-making.

Idaho Statewide Implementation Strategy for the National Fire Plan. The Idaho Department of Lands (IDL), in conjunction with the BLM and other federal agencies, signed the Idaho Statewide Implementation Strategy for the National Fire Plan. The implementation plan focuses on fire prevention and suppression, hazardous fuels reduction, restoration of fire-adapted ecosystems, and the promotion of community assistance in fire management (IDL 2002).

During 2002, IDL, in cooperation with federal agencies, disbursed $1.9 million to wildland-urban interface projects and development of defensible space. Additional money was used for hazardous fuels reduction programs for several communities. The development of risk assessments and mitigation plans would allow counties and communities in the district to determine their current fire hazard risk and to develop effective mitigation to minimize wildland-urban risks to persons and property. In addition, implementing community-based fuels reduction programs gives private landowners opportunities to work with public land management agencies to manage the wildland-urban interface.

National Forest Plan Revisions. In July 2003,
the Southwest Idaho Ecogroup, composed of the Sawtooth, Boise, and Payette National Forests, completed their revised Land Management Plans and the accompanying EIS. These Forest Plans set the course for future management of publicly owned lands within the National Forest System. Although they do not make site-specific decisions, the plans supply a path for all individual projects to follow.

The revised forest management direction responds to new initiatives such as the National Fire Plan and Healthy Forest Initiative and to concerns about listed species, habitat restoration, and commodity production. The revised Forest Plans differ from the original plans in that they emphasize restoring or maintaining vegetation and watershed conditions and focus on the condition of the forests rather than what they can produce.

More specifically, the Revised Sawtooth National Forest Plan affords direction for a strongly integrated noxious weed management program across the forest, in cooperation with other federal, state, and local agencies. The plan supports fire prevention and suppression and gives direction to reduce hazardous fuels, emphasizing actions in wildland-urban interface areas.

**Livestock Grazing.** Forty grazing allotments extend into the Monument. Much of the surrounding BLM and state lands has been and will continue to be grazed.

**Weed Management.** Cooperative weed management activities exist among the counties, private landowners, and government agencies.

**Irrigated Agriculture.** Substantial portions of the privately owned lands adjacent to the Monument are irrigated for agricultural production. Irrigated lands directly adjoin the Monument in three primary areas: east of the Wapi Lava Field, in the vicinity of the town of Carey near the west end of the Monument, and north of the Monument near the town of Arco.

**Arco-Minidoka Road.** In its comprehensive plan, Blaine County stipulates that the part of the Arco-Minidoka Road within its jurisdiction will continue to be maintained at its current level. Furthermore, the Blaine County Commissioners have specifically stated that this part of the road will be maintained in its current condition.

**Shoshone Field Office Land Tenure Adjustment.** In June 2002, the BLM prepared an Environmental Assessment (EA) for the Draft Amendments to Shoshone Field Office Land Use Plans for Land Tenure Adjustment and Areas of Critical Environmental Concern. These land tenure adjustments sought to facilitate a watershed approach to natural resource management, in order to improve efficiencies in the management of public lands. Under these amendments, the BLM sought to acquire high resource value lands made available by willing landowners. Acquisition priorities are established to reconnect habitats within priority watersheds. With these amendments, the BLM also proposed three previously nominated areas for designation as Areas of Critical Environmental Concern (ACECs). These areas — King Hill Creek, McKinney Butte, and Tee-Maze — support scenic values, wildlife or fish resources, and values associated with natural systems or processes. These plan amendments have been approved, and the three ACECs have been designated.

**Fire Management Direction Amendments.** Idaho BLM is proposing to amend 12 existing land use plans with direction to manage fire, fuels, and related vegetation. The area, which includes the Monument, is composed of public lands managed by the Burley, Shoshone, Upper Snake River, and Pocatello field offices, which are now part of the Twin Falls and Idaho Falls districts. The proposed land use plan amendments would form the foundation for district fire management plans and normal fire rehabilitation plans, and it would provide guidance for fuels treatments and vegetation management. Amending the land use plans would promote a more effective and economical approach to improving the health of public lands.

**Pocatello Resource Management Plan Revisions.** The BLM is revising the Pocatello Resource
Management Plan (1988) and the Malad Management Framework Plan (1981). These revisions will incorporate the fire, fuels, and related vegetation management direction resulting from the Fire Management Direction Amendment (above). It is likely that the land-use plan revisions would result in more aggressive treatment of noxious weeds (including cheatgrass and medusahead), with associated positive effects on low- and mid-elevation shrub communities.

South Central Idaho Visitor Center. It has been proposed that an expanded, multi-agency regional visitor center be developed along Interstate 84 near Twin Falls.

Little Wood River Irrigation District. The Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture (USDA) has announced its intention to prepare an EIS for the Little Wood River Irrigation District Gravity Pressurized Irrigation Delivery System. The objectives of this project, which is in Blaine County, are to save water and energy, promote public safety, and generate energy. The project, which includes a hydroelectric generating facility, would convert the open canal irrigation delivery system to a closed gravity pressurized delivery system. The alternatives under consideration to reach these objectives are No Action, Concrete-Lined Canals, Gravity Pressurized Irrigation Delivery System, and Gravity Pressurized Irrigation Delivery System with Hydroelectric Generation.

U.S. Highway 93 (US 93) Realignment. The Idaho Transportation Department (ITD) plans to realign and upgrade the part of US 93 that passes through and along the boundary of the Monument.

Idaho Standards and Guidelines for Livestock Grazing Management. The BLM will continue to assess all livestock use allotments in Idaho with the use of the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management. These standards are designed to provide resource measures and guidance needed to ensure healthy, functional rangelands. Livestock use allotments are evaluated to determine if standards and guidelines are being met or if significant progress toward meeting them is being achieved. If standards are not being met, the BLM is required to make changes that would help achieve these standards in the future.

Minidoka Internment National Monument. Minidoka Internment National Monument was established as the 385th unit of the National Park System on January 17, 2001. The Monument commemorates the hardships and sacrifices of the 120,000 people of Japanese ancestry, most of them American citizens, who were interned by the government during World War II. The 73-acre Monument, which is in Jerome County about 20 miles northeast of Twin Falls, preserves building foundations and remnant features such as the entry guard station and rock garden from the original camp. The National Park Service is in the process of developing a General Management Plan (GMP) to guide the management of the new Monument over the next 15 years. Although this management direction has not been established yet, it is anticipated the new Monument will draw increasing numbers of visitors to the area.

Lost River Off-Highway Vehicle Management Demonstration Project. The Idaho Department of Parks and Recreation (IDPR) has proposed a 475-mile loop ATV trail on both sides of US 93 in the Lost River Valley. The trail, which would follow existing Forest Service, BLM, and county roads, would connect the communities of Challis, Mackey, and Arco. No new road construction is proposed. As part of the proposal, IDPR is seeking exemptions from licensing requirements for off-highway vehicle (OHV) travel on the county roads and for crossing of US 93. The project is envisioned as a cooperative effort between IDPR, Salmon-Challis National Forest, BLM, and the Idaho Department of Fish and Game (IDFG). IDPR is interested in designating the route (with signs and maps) to provide a legitimate route for legal use of OHVs. In addition, the trail is seen as a way to increase tourism to the area, benefiting the local economy.
IMPAIRMENT OF RESOURCES

In addition to determining the environmental consequences of the alternatives, NPS policy (USDI NPS 2001) requires that potential effects be analyzed to determine whether or not proposed actions would impair the resources or values of the Monument.

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 resources and values. NPS managers always must seek ways to avoid or minimize adverse impacts on the resources and values to the greatest degree practicable. However, the laws do give the NPS the management discretion to allow impacts on the resources and values when necessary and appropriate to fulfill the purposes of a unit, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS this management discretion, that discretion is limited by the statutory requirement that the NPS must leave the resources and values unimpaired unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible manager, would harm the integrity of the resources and values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact on any resource or value may constitute impairment. An impact would be most likely to constitute an impairment if it affected a resource or value whose conservation would be (a) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the Monument, (b) key to the natural or cultural integrity of the unit or to opportunities to enjoy it, or (c) identified as a goal in the general management plan or other relevant NPS planning documents. Impairment might result from NPS activities in managing a unit (in this case, the Monument), visitor activities, or activities undertaken by concessionary, contractors, and others operating in the Monument. In this chapter, a determination about impairment is made in the conclusion section for each natural resource and cultural resource impact topic.

NATURAL RESOURCES

GEOLOGIC RESOURCES

METHODOLOGY AND ASSUMPTIONS

Information used in this assessment of effects on geologic resources was obtained from relevant literature, geologic maps, and consultation with other geologists, as well as from interdisciplinary team meetings, field trips, and site visits. Impacts were identified with the use of best professional judgment and were assessed according to the impact intensity criteria listed below.

Geologic Features

Negligible: Impacts on geologic features would not be detectable through standard observation.

Minor: Actions could result in a change to a geologic feature or natural physical resource, but the change would be local or small; that is, the total volume of disturbance would be nearly indiscernible. Monitoring probably would detect changes or loss of the features, and the loss of associated contextual information would be minimal.

Moderate: Actions would result in a measurable change to a geologic feature or natural physical resource that would be of consequence. The total volume of disturbance could still be small, but quite noticeable in a local area, or it would involve a unique or rare feature. Monitoring would identify most affected geologic features, but some features or associated contextual information would be lost.

Major: Actions would result in a dramatic change to a geologic feature or natural physical resource. The change would...
be measurable, and the amount of disturbance would be large. Even with monitoring, many features would be significantly altered, or associated contextual information likely lost.

Geologic Processes
The following impact thresholds are based on the frequency and magnitude of changes to geologic processes in comparison to the natural range of variability (NRV).

Negligible: The effects on geologic processes would not be detectable based on standard scientific methodologies. Actions would result in frequencies and magnitudes of disruption that would be well within the NRV.

Minor: Effects would be detectable. Frequencies and magnitudes of disruption would be expected to remain within the NRV.

Moderate: Impacts would be detectable. The frequencies and magnitudes of disruption would be outside the NRV for short periods of time but would return to the NRV.

Major: Impacts would be detectable. The frequencies and magnitudes of disruption would be outside the NRV for short to long periods of time or even permanent. Disruptions within the NRV may be long-term. Disruptions of key geologic processes or ecosystems might be long term or permanent.

Because almost all of the Eastern Snake River Plain (ESRP) is covered by basaltic volcanism, the area of analysis for cumulative impacts on geologic resources was defined as the ESRP.

IMPACTS FROM ALTERNATIVE A

Analysis
Roads and trails provide access to geologic features. Experience in the original NPS Monument for more than 75 years has shown that damage, theft, and vandalism are usually concentrated near roads and trails. Such impacts would occur under Alternative A, in which roads and trails would continue to be maintained per current standards.

Geologic resources would be subject to removal (theft), destruction, vandalism, graffiti, and trash. Resources affected could include lava flows, lava tubes, spatter cones, and cinder cones, as well as smaller scale features such as squeeze-ups, lava ropes, glassy crusts, and volcanic bombs. Vandalism already has caused moderate to major impacts to some caves near roads. For example, Lariat Cave has graffiti and large numbers of spent fireworks and other trash. Under Alternative A, such impacts would be site-specific, ranging broadly in intensity, depending on the attraction and ease of access to the geologic feature. Consequently, these actions would result in site-specific, long-term, and negligible to potentially major adverse impacts on individual features.

Experience has shown that foot traffic affects geologic processes such as downslope movement of unconsolidated or poorly consolidated material on cinder cones, spatter cones, hornitos, and spatter ramparts. Foot traffic also causes compaction and the formation of social trails. Comparisons of Robert Limbert photographs from the early 1900s with the present day view suggests that the spatter cones in the developed part of the original NPS Monument have lost at least 2 feet in elevation because of human disturbance (Clark 2003). This is deemed a direct long-term, major impact at these locations. Effects on geologic processes would be expected to occur under Alternative A. These site-specific, short- to long-term adverse impacts would range from negligible to potentially major.

Unpaved roads and parking lots are more vulnerable to eolian processes (wind erosion, transport, and deposition) than surrounding areas anchored by vegetation. Alternative A has 585 miles of Class B, C, and D roads inside the Monument that would be subject to eolian processes. Dust could coat geologic
formations, infiltrate into cinders, and be deposited in or fill cracks. In comparison to the aftermath of fire, these impacts would fall within the range of normal variability and therefore would cause a negligible impact on geologic processes.

The removal of vegetative cover by fire accelerates eolian processes. Erosion, transport, and deposition of sediment can be site-specific to regional context, depending on the acreage burned. Fire, either natural or human-caused, can affect eolian processes for two or more years. Because fires can be a natural process, the effects of fire then fall within the natural range of variability. Under Alternative A, all fires except those in designated Wilderness would be suppressed, thereby limiting the area affected by fire. However, suppression involves the use of heavy equipment and the construction of fire lines, which would affect geological features locally. The acceleration of eolian processes by fire would result in a negligible adverse impact on geologic processes, but fire suppression activities could cause limited direct minor to moderate adverse impacts.

Grazing can also affect geological resources. Fencing is often lacking where young lava flows form the boundaries of Monument grazing allotments. However, experience indicates that because of limited forage and lack of water, livestock do not frequently wander onto young lava flows or features adjacent to grazing allotments. In addition, livestock may occasionally stray onto young lava flows or features during trailing, especially where the trail corridor is narrow. Under Alternative A, direct effects on lava features would be site-specific, adverse, long-term, and range from negligible to minor. Trailing livestock would also affect eolian processes (wind erosion, transport, and deposition), but in comparison to fire, such effects would fall within the range of natural variability. Therefore, the trailing of livestock would result in negligible long-term effects on geologic processes.

Removing cinders from materials sites in the Monument for road construction and maintenance would directly affect the geologic features from which they would be removed. Extraction would be site-specific and could result in minor to moderate adverse impacts in the short term. With long-term use of a material site (i.e., more than 50 years), the total loss of the feature (e.g., a small cinder cone) could result, constituting a potential site-specific major adverse impact. However, under all alternatives, new material sites would be limited to those required for administrative purposes only, and any closed sites would be reclaimed. This would result in a long-term indirect negligible beneficial effect on the Monument’s geological features.

Sagebrush steppe restoration activities would be conducted on the older soil dominated areas of the Monument and not on the exposed lava. With the exception of occasional and very limited deposition of dust during high winds, restoration activities would cause minimal impact on geologic resources.

**Cumulative Impacts**

There are no known past or future projects outside the Monument that would affect geologic resources in the Monument. However, over the life of the plan, Southern Idaho’s population could increase substantially. A visitor center also may be built in the future in the Twin Falls area, which could increase visitation and consequently increase the likelihood of impacts on geologic features in the Monument. The effects, which would be site-specific or even feature-specific, could cover a broad range from negligible to potentially major adverse impacts.

The effect of the Monument expansion on the geology of the ESRP would be beneficial and would vary little by alternative. Monument expansion has withdrawn approximately 1,100 square miles or 750,000 acres of the area surrounding the Great Rift from extractive operations (with the exception of existing authorized materials sites in the Monument). Mechanized travel in the Monument is limited to roads. Outside the Monument, rock collecting and other extractive operations are permitted and travel is not as restricted; this is not expected to change. Further, as population grows, the demand for aggregate, landscape rock, etc., is likely to increase, leading to more and more loss of ESRP geologic resources outside of the Monument.
In contrast, almost all of the Great Rift, which is the best-developed example of a volcanic rift zone on the ESRP, lies in the Monument. In addition, of the eight geologically young lava fields found on the ESRP, the Monument encompasses the three youngest and therefore the least altered by natural processes, making them the best for observing geologic features. The Monument now includes almost all of the Craters of the Moon Lava Field, the largest young basaltic lava field in the lower 48 states.

Monument designation has resulted in a long-term major cumulative beneficial effect not only by protecting and preserving a sizeable chunk of the ESRP geology for future generations to enjoy, but also by preserving and protecting the best geologic examples. Therefore, this action, added to the negligible to potentially major adverse impacts associated with specific uses and locations in the Monument and the surrounding lands in the ESRP, would result in an overall long-term moderate beneficial effect on geological resources in the ESRP region.

**Conclusion**

Under Alternative A, geological resources would be affected by continued visitor access via roads and trails, as well as by wind erosion, fire, fire suppression, and grazing. These effects would be mainly direct and both short- and long-term in nature, ranging from negligible to potentially major levels. Indirect impacts would result from the deposition of dust and soils on geological features over time. The limitation on new mineral extraction sites would result in indirect long-term negligible beneficial effects on geological resources.

Although an individual geologic feature could suffer a major impact, in context of the entire Monument’s geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument’s land area or an individual type of geologic feature, of which there may be many).

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s geologic resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**

Under Alternative B, improved roads and trails would result in greater access, development, and visitation than would occur under Alternative A. Adverse impacts such as direct damage to or removal of features caused by these changes would also be greater. Intensities, which would be site-specific (e.g., a lava tube near a road or trail) or feature-specific (e.g., a hornito) and cover the same broad range of negligible to potentially major adverse impacts, would have a greater likelihood of more severe impacts from increased visitation and access. Areas of specific concern in Alternative B would include the following:

- South Grotto already has been moderately affected under existing and past management; there are several obvious social trails that mar the landform. The increased access under Alternative B could exacerbate this degradation, resulting in a long-term, potentially major adverse impact on the spatter cone or spatter rampart feature. Squeeze-ups present in Kings Bowl Lava Field are vulnerable to collection because of their small size. Increased ease of access and higher visitation under Alternative B could increase this vulnerability, representing a direct moderate to potentially major adverse impact over time.

- The shelly pahoehoe surrounding the Pillar Butte area of the Wapi Lava Field is extremely vulnerable to damage from foot traffic. Improved access into the Wapi Park area could increase visitation and resultant impacts on the shelly pahoehoe. Without estimates of how much visitation would increase, it is
not possible to predict the exact intensity of such impacts, but moderate to possibly major impacts could occur because of the feature's vulnerability to breaking under the weight of a hiker.

- Road improvements would be likely to facilitate increased visitation to caves that are shown on maps to be close to the improved roads. This could lead to in direct and indirect minor to potentially major long-term adverse impacts on the caves due to damage, vandalism, speleothem collection, and poor caving practices.

As mentioned under Alternative A, unpaved roads and parking lots are more vulnerable to eolian processes than surrounding areas anchored by vegetation. Alternative B has 575 miles of Class B, C, and D roads inside the Monument that would be subject to eolian processes. Increased motorized traffic under Alternative B would exacerbate sediment erosion, transport, and, ultimately, deposition. In comparison to the aftermath of fire, these impacts would fall within the range of normal variability and therefore would result in a negligible effect on geologic processes.

As with Alternative A, accelerated erosion, transport, and deposition of sediment would result from the removal of vegetative cover by fire. Alternative B would include a greater potential for human-caused fire associated with improved access or more widespread visitation and a greater potential for suppression activities involving heavy equipment and fire line construction. The acceleration of eolian processes by fire and the potential direct damage to features caused by suppression activities would result in a negligible to moderate direct adverse impact on geologic resources.

Livestock use would be managed the same under all the alternatives. However, the area in the Passage Zone would be larger in Alternative B. This could lead to more livestock developments, which could cause impacts to nearby geologic features through deposition of dust or direct damage. The resulting adverse impacts would be negligible to minor and long-term.

Short-term effects on materials sites would be the same as those of Alternative A: adverse impacts would be minor to moderate and site-specific. However, the possibility of maintaining more roads to a higher standard in Alternative B could accelerate long-term effects at individual sites, constituting a potentially major site-specific adverse impact. As with Alternative A, the limits on new mineral sites would result in long-term negligible beneficial effects on geological resources.

Alternative B would involve the use of more informational, interpretive, and educational materials. These could increase public understanding and appreciation of geologic resources, leading indirectly to their protection. This could be a long-term minor to moderate beneficial effect on geologic resources throughout the ESRP.

Developing visitor use facilities would attract more people to the Kings Bowl area. This additional visitation could result in more vandalism and unauthorized collection of geologic features and the development of social trails. Long-term direct and indirect adverse impacts on geologic resources would range from minor to potentially major, depending on site-specific conditions and accessibility. However, the informational and educational emphasis might help to mitigate these impacts, keeping impact levels to less than major in most cases.

Designating primitive campsites in the Passage Zone under Alternative B could cause direct, site-specific long-term, minor adverse impacts on geologic resources from construction or clearing. Encouraging more people to stay in the Monument overnight could cause site-specific long-term minor to moderate adverse impacts on geologic resources from theft and vandalism.

**Cumulative Impacts**

The cumulative impacts on geologic resources from Alternative B would be similar to those described for Alternative A. Although Alternative B would involve more visitor access compared to the No
Action Alternative, the related increased effects would not be substantially different. Therefore, the overall cumulative effects, considering all ESRP related actions and the protection provided by the Monument designation, would be long-term, moderate and beneficial.

**Conclusion**

Alternative B would have the most improved road access and the greatest number of improved roads and additional trail designations, which would result in the largest increase in visitation and/or access of all the alternatives. As a consequence, Alternative B could result in a slightly greater loss of geologic features or structures and a higher rate of degradation of geologic resources or damage from vandalism. Adverse impacts from increased access would range from negligible to potentially major, with specific concerns about direct major damage to features in the Kings Bowl and Wapi Lava Field areas. Increased fire suppression and continued grazing could result in minor to moderate adverse impacts, and small beneficial effects would result from the limits on new mineral extraction areas.

Although an individual geologic feature could suffer a major impact, in context of the entire Monument’s geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument’s land area or an individual type of geologic feature, of which there may be many).

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s geologic resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

Of all the alternatives, Alternative C would have the largest area of Pristine Zone, the fewest improved roads, and the greatest chance of road closures for resource protection. Therefore, it would result in slightly fewer adverse impacts on geologic resources than Alternative A. Impacts still could be caused by damage, vandalism, or theft. They would be site-specific or feature-specific and could range from negligible to potentially major. However, less access in this alternative would reduce the potential for major impacts.

There would be fewer impacts from eolian processes under Alternative C because this alternative would include fewer Class B, C, and D roads (532 total miles of B, C, and D roads inside the Monument). Impacts on geologic processes from wind erosion, transport, and deposition would be negligible and adverse.

The potential for human-caused fire would be less because of reduced access and presumably fewer visitations than in Alternative A. If fire occurred, wildland fire would occur in the Pristine Zone, which would minimize the amount of heavy equipment, fire line construction for suppression, and less damage overall related to fire. Overall, the adverse impacts on geologic resources from fire would be negligible.

Because grazing would not be managed any differently under this alternative, the same negligible to minor adverse impacts as described for Alternative A would result from the trampling of features and the development of trails.

The effects on materials sites under Alternative C would be the same as those of Alternative A: minor to moderate site-specific adverse impacts in the short term, with long-term negligible beneficial effects. However, because of fewer miles of roads and less maintenance of roads in Alternative C, there would be fewer long-term adverse impacts at individual sites; they would be only moderate because less material would be needed for road maintenance.

**Cumulative Impacts**

The cumulative impacts on geologic resources from
Alternative C would be similar to those described for the No Action Alternative, but in Alternative C, limited access would slightly decrease the potential for major impacts compared to the No Action Alternative. Therefore, the overall cumulative effects from Alternative C (considering all ESRP related actions and the protection afforded by the Monument designation) would be long-term, moderate, and beneficial.

Conclusion
Alternative C would have the largest area of Pristine Zone, which would afford the most natural protection to geologic features through difficult or remote, foot-only access. The closure of non-essential roads and limited access would lead to the smallest amount of dust-related impacts. Impacts from visitor damage, theft, or vandalism would range from negligible to potentially major locally, but the probability of major impacts would be lower because of decreased visitor access. Negligible to minor adverse impacts from fire and grazing would continue, and there would be slight beneficial effects from limits on new mineral extraction sites. Overall, Alternative C would cause the fewest adverse impacts on geologic resources of all the alternatives.

Although an individual geologic feature could suffer a major impact, in context of the entire Monument’s geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument’s land area or an individual type of geologic feature, of which there may be many).

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s geologic resources or values would not be impaired.

IMPACTS FROM ALTERNATIVE D
(PROPOSED PLAN)

Analysis
Under Alternative D (Proposed Plan), roads would be maintained as needed to enable access for restoration and fire management activities. Visitors could continue to use these roads, as in Alternative A, and impacts from damage, theft, and vandalism near roads and trails would be likely to be similar to those of Alternative A. Some modifications were made to Alternative D as presented in this FEIS to reduce Passage Zone in the Laidlaw Park area and to change some zoning along the edges of lava flows from Primitive to Pristine Zone. These changes would help limit access in those areas, thus reducing the potential for damage to geologic features. Any adverse impacts from visitor use would be site-specific or feature-specific and impacts would range from negligible to potentially major if an individual feature were to be irreparably damaged.

Under Alternative D (Proposed Plan), 557 miles of Class B, C, and D roads inside the Monument would be subject to wind erosion, transport, and deposition onto geological features. The unpaved roads in Alternative D would cause the same negligible adverse impacts on geologic processes that were described for Alternative A.

The potential for human-caused fires under Alternative D (Proposed Plan) could be less than in Alternative A because Alternative D would involve less accommodation of visitors in the expanded areas of the Monument through signs, developed recreation sites, and information. However, there would be more wildland fire use, thereby reducing certain impacts of wide-scale suppression activities. Prescribed burns under Alternative D (Proposed Plan) for resource management would result in negligible effects on geologic resources. Overall, negligible to minor adverse impacts would occur, similar to Alternative A.

Grazing and associated trailing would result in the same negligible to minor adverse impacts described for the other alternatives, since grazing would not be managed any differently under this alternative.
The use of materials sites under Alternative D (Proposed Plan) would also result in the same impacts as described for previous alternatives: minor to moderate site-specific adverse impacts in the short term and slight long-term beneficial effects from limits on new sites.

Alternative D (Proposed Plan) would include more emphasis on encouraging visitors to seek licensed guides and outfitters to lead them on ventures in the Monument. Properly trained outfitters and guides might reduce impacts to geologic resources through instruction and monitoring of their clientele, resulting in regional minor to moderate long-term beneficial effects on geologic resources in the ESRP. Emphasizing off-site education under Alternative D (Proposed Plan) could decrease visitation to the Monument, thus reducing the effects on geologic resources. This could result in a long-term, site-specific to regional minor beneficial effect on geologic resources.

Cumulative Impacts
The cumulative effects on geologic resources from Alternative D (Proposed Plan) would be similar to those described for the No Action Alternative. Although there would be some access improvements, generally these would not cause a great increase in visitor use, since the improvements would be limited to those needed for administrative uses. Therefore, the overall cumulative effects from Alternative D (considering all ESRP-related actions and the protection afforded by the Monument designation) would be long-term, moderate, and beneficial.

Conclusion
Alternative D (Proposed Plan), because of its aggressive restoration goals and emphasis on off-site experience, would result in beneficial effects because it would limit damage from visitors and result in the restoration of many features. The erosion of roads, fires, fire suppression, and grazing would result in site-specific, negligible to minor adverse impacts.

Although an individual geologic feature could suffer a major impact, in context of the entire Monument’s geologic features/resources, the impacts would be quite localized (that is, the effect would cover only a small part of the entire Monument’s land area or an individual type of geologic feature, of which there may be many).

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s geologic resources or values would not be impaired.

SOILS

METHODOLOGY AND ASSUMPTIONS
Information about soils and the response of soils to various actions was compiled from NRCS soil surveys, other agency maps and documentation, relevant literature, and resource experts. General soil types, erosion potential, structure, and function were discussed and impacts were analyzed. The analysis was based on reference information, anticipated effects of management prescriptions by alternative, and professional judgment.

The following threshold criteria to indicate intensity of potential impacts were established:

Negligible: The effects on soil productivity or fertility would be at or below the level of detection.

Minor: The effects on soil productivity or fertility would be small, as would the area affected. If mitigation was needed to offset adverse effects, it would be relatively simple to implement and would likely be successful.

Moderate: The effect on soil productivity or fertility would be readily apparent and result in a change in the soil character.
over a relatively wide area. Mitigating measures probably would be necessary to offset adverse effects and would likely be successful.

Major: The effect on soil productivity or fertility would be readily apparent and long-term and would substantially change the character of the soils over a large area in and outside of the Monument. Extensive mitigating measures to offset adverse effects would be needed, and their success could not be guaranteed.

The area of analysis for cumulative effects on soils, which was defined as approximately 50 miles beyond the Monument boundary, is referred to as South-Central Idaho. This incorporates areas of soil loss and deposition that would affect the Monument.

**IMPACTS FROM ALTERNATIVE A**

**Analysis**

Under Alternative A, roads would be maintained at current standards. Direct adverse impacts on soils from road maintenance and use would include road edge disturbance, isolated erosion, and compaction. The effects on soils from soil displacement and dust production would be local, minor, and long-term. Trail maintenance and construction, as well as recreational use, would involve some soil loss, compaction, and erosion, resulting in site-specific negligible to minor long-term adverse impacts on soils.

Wildland fires would be suppressed in all areas except in designated wilderness, where some fires might be allowed for resource benefit. Direct impacts on soils from wildland fires would vary, depending on soil types and fire severity, but localized major impacts would occur from suppression activities, including fire line construction. Erosion resulting from decreased vegetation cover and wildland fire suppression activities would be likely to occur on most soil types until erosion control measures or revegetation could take place. Soil fertility could be positively affected by fire, which often increases nutrient cycling. High-intensity wildland fires in localized places could sterilize soil and reduce overall productivity; however, the overall adverse impacts would be minor.

Weed control by herbicides or by mechanical means, along with the active restoration of 40,000 acres of degraded sagebrush steppe areas, would cause negligible to minor short-term adverse impacts on soil chemistry, structure, productivity, and abundance through herbicide applications, equipment disturbance and compaction, and wind erosion. The long-term benefits of weed control and a restored sagebrush steppe community would include stabilized soils and improved or restored natural fertility, productivity, and function. Such beneficial effects would be long-term and moderate in intensity.

With continued livestock use under Alternative A, it is assumed that guidelines would be used to achieve rangeland health standards. Under this scenario, the effects on soils would include compaction, erosion, and changes to soil fertility and production. Soil compaction or soil erosion, or both, would occur in areas where livestock concentrate (e.g., watering areas, salt licks, fence lines, and corrals) and vegetation has been reduced or removed. Additional livestock developments could increase such impacts. However, some of these developments might mitigate more widespread adverse impacts on soils by concentrating livestock use in specific areas.

Livestock use could result in negative or positive effects on soil fertility and production. The nature of the effects would depend on changes in nutrient cycling (e.g., reduced litter accumulation; incorporation of manure), seedbed characteristics, abundance and type of soil biota or soil biological crusts, and soil moisture. Overall, livestock use would result in short- and long-term minor to moderate adverse impacts on soils.

Facility development, including expanding the Visitor Center, installing waysides at Kings Bowl, and maintaining kiosks, signs, and wayside exhibits would be site-specific and would cause localized
long-term minor to moderate adverse impacts on soil. Wherever distinct soil disturbance and excavation would occur, best management practices (BMPs) such as those listed under “Mitigating Measures” in Chapter 2 would be implemented. For example, topsoil would be set aside and replaced to help retain the structure and fertility of soils and minimize impacts.

Cumulative Impacts
In the area surrounding the Monument, agricultural practices, including dryland farming, grazing, and ranching, have led to the erosion of soils by removing native vegetation and replacing it with plants not always suited to the local environment. This, along with tilling of the soil, periodic drought, and frequent wildfires, has left soils in the vicinity of the Monument exposed to erosion by wind. Agricultural and other land use activities, as well as development of homes, roads, and other developments, alter soil structure, productivity, and function.

Soil loss and movement resulting from the effects of these land management activities are the most notable adverse impacts inside and outside of the Monument. Stabilization and revegetation efforts by land management agencies and some private individuals help mitigate what could otherwise be described as major cumulative impacts for South Central Idaho during drought and wildfire years. Typically, however, such impacts, along with the effects of Alternative A, would be regional, moderate, adverse and long-term.

Conclusion
Soil disturbance, erosion, and compaction would be the primary adverse impacts associated with most management actions under Alternative A. Wildland fire and suppression, restoration activities, road and trail maintenance and use, and livestock use are the management activities most likely to affect soils. Overall, short- and long-term adverse impacts on soils would be minor to moderate in intensity, with long-term moderate beneficial effects from the restoration program.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s soil resources or values would not be impaired.

IMPACTS FROM ALTERNATIVE B
Analysis
In addition to the effects discussed for Alternative A, improved road and trail access and more recreational and interpretation facilities or structures in Alternative B could result in increased direct adverse impacts on site-specific soils. It is assumed that improved roads, trails, and facilities would lead to increased public use and recreation. The adverse effects would be similar to those described for Alternative A; predominantly, they would comprise minor increases in soil disturbance, erosion, and compaction. Off-trailing due to more public use probably would affect additional areas.

The extent of the effects would vary, and quantifying the impacts exactly is not possible because the specific roads to be improved and the number of recreational facilities have not yet been specified. However, under Alternative B, Class B (gravel surface) roads in the Passage Zone would increase from 45 miles in Alternative A to 67 miles in Alternative B. Class C roads would increase from 14 miles to 156 miles inside the Monument. The resulting road improvements and use in the Passage Zone would result in direct long-term minor to moderate adverse impacts and indirect adverse impacts related to greater access to areas along roadways.

Restoring 45,000 acres in the Monument would be 5,000 acres more than in Alternative A. This would not result in a substantial change in the characterization of the impacts described for Alternative A. Mechanical disturbance, compaction, herbicide use, and wind erosion would negatively affect soils in the short term at minor levels; however, weed management and restoration activities would improve
and restore soil conditions, resulting in moderate long-term beneficial effects. Under Alternative B, suppression activities would likely increase, causing minor to potentially major localized short-term adverse impacts on soils.

Because livestock management use would be similar in all alternatives, the effects on soils would be the same as those described for Alternative A. However, in Alternative B there would be a potential for more livestock developments in the Passage Zone due to the increase in access, and this would likely increase the magnitude of soils disturbance. This would result in short- and long-term minor to moderate adverse impacts on soils from grazing.

Facility development would be enhanced under this alternative, with a trail system and day use area in Kings Bowl and the potential to add to the Visitor Center facility. These actions would result in minor to moderate short-term construction-related adverse impacts, with the removal of soils and/or soil productivity in very limited areas, resulting in long-term localized moderate impacts.

**Cumulative Impacts**

As in Alternative A, the most notable long-term cumulative impact on soils from Alternative B would be soil erosion and displacement from the area in and around the Monument. There also would be a potential for more impacts from increased public use of the area, but the intensity of impacts still would be moderate.

Similar to Alternative A, in the area surrounding the Monument, agricultural practices, periodic drought, and frequent wildfires have left soils in the vicinity of the Monument exposed to erosion by wind. Agricultural and other land use activities, as well as the development of homes, roads, and other developments, can alter soil structure, productivity, and function and contribute to adverse soil impacts. The cumulative effects of these land management activities, in conjunction with the impacts of Alternative B, would be regional, moderate, adverse and long term.

**Conclusion**

Improved road and trail access, the development of recreation facilities, and increased visitor use of the Monument might increase the amount of soil area directly and indirectly affected. Additional construction of unpaved roads, trails, and day use areas and more extensive use of fire suppression would cause direct loss of soils locally, resulting in minor to moderate local adverse impacts. Grazing also would cause additional minor to moderate adverse impacts. Overall, the short- and long-term adverse impacts on soils from Alternative B would range from minor to moderate; the restoration program would result in long-term moderate beneficial effects.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s soil resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

An increase in short-term adverse impacts and long-term beneficial effects on soils would result from Alternative C from a larger proposed restoration area (55,000 total acres, compared to 40,000 acres in Alternative A). Mechanical disturbance, compaction, herbicide, and wind erosion all would negatively affect soils in the short term at minor levels. However, the weed management and restoration activities would stabilize soils and improve their structure and function, resulting in moderate long-term benefits.

There would be potential for more wildfire-influenced acreage under Alternative C because of reduced road access and increased response time on fewer miles of maintained roads. There would be less use of suppression and more emphasis on the use of fire for resource benefit, with fewer direct
impacts from these activities. More soils could potentially be exposed to the effects of wildfire, including adverse impacts such as the erosion of exposed soil and sterilization in hot spots. There also could be typically beneficial effects such as increased soil fertility and nutrient cycling. Direct soil disturbance from roads and access would be reduced by a reduction in road maintenance, less recreation and other visitor uses, and potential road closures.

Effects from livestock use such as compaction and soil nutrient alteration would be similar to those of Alternative A: short- and long-term minor to moderate adverse impacts on soils. Developments in Alternative C would be minimal, so short-term adverse impacts on soil from construction and long-term adverse impacts from the removal of soil would be negligible to minor.

**Cumulative Impacts**

As with Alternative A, cumulative soil erosion and displacement in and around the Monument would be the most notable long-term impacts. There is potential for increased cumulative impact intensity from increased restoration acreage and wildfire potential, but the intensity level would still be considered moderate.

Periodic drought, frequent wildfires, agricultural practices, and development have left soils in the vicinity of the Monument exposed to erosion by wind and have affected structure, productivity, and function. The cumulative effect of these activities, in conjunction with effects of Alternative C, would result in regional moderate adverse long-term impacts on soils.

**Conclusion**

The effects of Alternative C on soils would be substantially the same as those of Alternative A, with slightly more short-term erosion potential and slightly fewer long-term soil impacts. Impacts from facility construction maintenance and fire suppression would be reduced, and adverse impacts from grazing would remain minor to moderate. Overall, the intensity of the short- and long-term adverse impacts would be minor to moderate, with more long-term beneficial effects from a slightly expanded restoration program.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s soil resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)**

**Analysis**

The effects on soils from Alternative D (Proposed Plan) would be similar to those described for Alternative A, with the exception of the effects from doubling the proposed restoration acreage (from 40,000 acres in Alternative A to 80,000 acres in Alternative D). The exposure of the soils over this acreage would result in increased wind erosion and potential nutrient loss, resulting in short-term minor to moderate adverse impacts. However, as described for Alternative A, the long-term effects on soils would be beneficial at a moderate to potentially major level under this alternative.

Roads would mostly be maintained at current standards in Alternative D (Proposed Plan), but improvements could be made to allow access for resource management. The effects would be similar to those of Alternative A, in that direct adverse impacts on soils from road maintenance and use would include road edge disturbance, isolated erosion, and compaction. These impacts would be minor and long-term. Trail maintenance and construction would involve site-specific negligible to minor long-term adverse impacts on soils such as compaction and altered fertility. Emphasis on off-site programs and commercial outfitters would help limit the impacts on soils.
Adverse impacts such as soil loss resulting from wildland fire, wildfire use, and any suppression activities under Alternative D (Proposed Plan) would be minor because sufficient road access would be available in all areas, which would minimize response time and burned acreage. With wildland fire use in the Pristine Zone, the effects on soils exposed to fire typically would be beneficial - increased soil fertility and nutrient cycling.

As in Alternative A, livestock use under Alternative D (Proposed Plan) would cause short- and long-term minor to moderate adverse impacts on soils. Developments under Alternative D would include a possible center run by multiple agencies at the southern end of the Monument. Expanding the Visitor Center, adding interpretation and trails in Kings Bowl, and installing wayside exhibits and signs would result in local minor to moderate long-term adverse impacts on soils, including direct soil loss, soil erosion, and local compaction.

**Cumulative Impacts**

The cumulative impacts on soils from Alternative D (Proposed Plan) would be similar to those described for Alternative A. Agricultural practices, periodic drought, frequent wildfires, and development in the area would leave soils exposed to wind erosion, altering soil structure, productivity, and function. However, the greatly expanded restoration efforts of Alternative D (Proposed Plan) would contribute substantial benefits in the long run, helping to balance the many smaller-scale adverse impacts in the area of analysis. Overall, the cumulative effects of all actions outside the Monument, in conjunction with the actions of Alternative D, would result in regional minor to moderate long-term adverse impacts.

**Conclusion**

The effects of Alternative D (Proposed Plan) on soils would be similar to those of Alternative A, with more short-term erosion potential from road and trail use and maintenance, facility development, and fire. Long- and short-term minor to moderate adverse impacts could result from grazing and fire suppression. Overall, the short- and long-term adverse impacts would be minor to moderate. However, there would be moderate to major long-term beneficial effects on soils in the Monument, assuming successful restoration of the entire proposed acreage under this alternative.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s soil resources or values would not be impaired.

**VEGETATION, INCLUDING SPECIAL STATUS SPECIES, AND FIRE MANAGEMENT**

Vegetation is a fundamental and vitally important element among the Monument’s biological resources. The effects on vegetation resulting from any of the alternatives under consideration would also affect other resources. Adverse impacts can result in weed invasion and soil surface disturbance and can lead to changes in the composition of vegetation communities. These changes, in turn, can influence animal populations. Where vegetation cover is reduced and soil erosion results, archaeological, paleontological, and historic resources, as well as water and air quality, could be adversely affected.

**METHODOLOGY AND ASSUMPTIONS**

Effects on vegetation were assessed with the use of data about vegetation communities in the Monument and professional judgment. Effects on special status plants would be limited to BLM sensitive species, as there are no federally listed plants present in the Monument. The following categories were used to evaluate the potential impacts on vegetation:

Negligible: No native vegetation would be affected, or some individual native plants could be affected as a result of the alternative,
but there would be no effect on native plant communities. The effects would be on a small scale. No special status plants would be affected.

Minor: The action would affect some individual native plants and would also affect a relatively minor portion of the plant community. The use of standard operating procedures to offset adverse impacts, including special measures to avoid affecting special status plants, would be required and would be effective.

Moderate: The action would affect numerous individual native plants and would also affect a sizeable segment of the plant community over a relatively large area. The use of standard operating procedures to offset adverse effects could be extensive but the procedures probably would be successful. Special status plants could be affected.

Major: The action would cause a considerable effect on native plant populations, including special status plants, and the effects would cover a relatively large area inside and outside of the Monument. The extensive use of standard operating procedures to offset the adverse effects would be necessary, and their success would not be guaranteed.

Direct effects on vegetation generally are caused by any construction activities; by the establishment, use, maintenance, closing, or removal of roads and trails; by livestock trampling and herbivory; and by fire ignitions and suppression actions, including blading of fire lines, herbicide treatments, as well as by seeding treatments and the introduction, spread, and treatment of noxious and invasive weeds. Indirect impacts can be lowered vigor or death of plants immediately adjacent to roads from dust accumulation; changes in plant abundance and/or species composition resulting from modified nutrient cycling due to soil compaction; the accumulation of urine and feces; erosion associated with livestock; and nutrient modification and soil loss or deposition associated with fire.

The area of analysis for cumulative effects on vegetation was defined as the Monument and a zone of approximately 50 miles radius extending out from the perimeter. This was considered to be the distance within which wind-blown weed seed dispersal, soil removal and deposition, or fire-related impacts would be most likely to affect vegetation resources in the Monument. This influence would be greatest on the west side of the Monument because of the prevailing wind patterns.

**IMMITS FROM ALTERNATIVE A**

**Analysis**

Under Alternative A, no new roads or trails would be constructed, and maintenance would continue at current standards. Maintenance would result in minor adverse impacts resulting from dust deposition and occasional plant removal, with only the vegetation immediately adjacent to roads being affected. The maintenance of 585 miles of unpaved roads (Class B, C, and D) would continue.

The use of roads and trails would result primarily in short-term seasonal indirect minor adverse impacts on vegetation (which could include special status plants) primarily from the deposition of dust. This could cause a decrease in vigor and possibly result in the mortality of the affected plants. Trail users veering off the trail to avoid obstacles could cause long-term negligible to minor impacts by trampling vegetation and widening the trail. Long-term negligible to minor adverse impacts could result from soil compaction and erosion caused by illegal off-trail use. Road and trail use and maintenance could spread noxious weeds, with minor to moderate short- and long-term adverse impacts on native plant communities.

About 40,000 acres of degraded rangeland (31,000 acres of annual grassland and 9,000 acres of low-elevation sagebrush steppe, all currently in Fire
Condition Class [FCC] 2 or FCC3) would be treated for proactive sagebrush steppe restoration and/or post-fire rehabilitation following wildland fire. This process involves a combination of methods, usually herbicides, prescribed fire, and drill-seeding or aerial or broadcast seeding with chaining or harrowing, to control invasive and noxious weeds and then re-establish shrubs, perennial grasses, and forbs through seeding. The management goal would be to move the treated areas from FCC2 or FCC3 towards FCC1.

Sagebrush steppe restoration activities would result in a short-term minor adverse effect on some native plants and special status species due to mortality from prescribed burning, herbicide, or seeding treatments. Successful projects would lead to long-term moderate to major beneficial effects. Project-level design would help limit off-site impacts such as effects on non-target vegetation. Herbicides would be selected for specific target species and applied in limited areas by certified applicators. Prescribed fire operations would follow pre-approved burn plans that would restrict when and where fire could be used.

Livestock use would not vary by alternative. There would be no change in the management of livestock use from the current situation. Livestock developments such as fences and watering troughs guide the movement of livestock and result in long-term minor to moderate adverse effects, including localized removal and trampling of vegetation and the spread of invasive and noxious weeds. Indirectly, soil erosion and compaction and the deposition of urine and feces result in alteration of nutrient cycles and negatively affect vegetation causing a minor long-term impact.

Impacts caused by livestock use can include the mortality of long-lived native plants due to changes in the soil environment and the enhancement of conditions that support exotic annual species such as cheatgrass, the removal of native species, and an abundance of excess nitrogen. However, all allotments must meet or be making progress toward meeting Idaho Standards for Rangeland Health, which would minimize these impacts by ensuring that the effects on vegetation and soils would not result in a downward trend. Livestock management in any allotment not meeting the standards would have to be changed to improve the health of soils and vegetation.

Wildland fire management under Alternative A would consist of full suppression in all parts of the Monument except in the designated Wilderness. The existing NPS Monument Fire Management Plan (USDI NPS 2000) allows for limited wildland fire use. Aggressive suppression would minimize the loss of key sagebrush communities and vegetation that protects the Little Cottonwood Creek watershed, but it would result in short-term moderate local impacts from fire line construction, including the use of heavy equipment.

Visitor facilities would remain in the current condition, except that the existing Visitor Center would be expanded and some modest trail rehabilitation would be carried out, and safety information would be posted in the Crystal Ice Cave and Kings Bowl area. Expanding the Visitor Center would result in negligible adverse impacts on native vegetation, because the area has already been altered from the natural state. However, plans to convert existing exotic lawn to landscaping with the use of native, drought-tolerant plants (xeriscaping) would result in a long-term indirect minor beneficial effect by educating the public on the values of water conservation and native vegetation and the hazards of invasive and noxious weeds.

**Cumulative Impacts**

Activities affecting vegetation outside the Monument could negatively affect vegetation resources both in and outside of the Monument. Noxious weed populations, including rush skeletonweed, diffuse knapweed, Russian knapweed, and leafy spurge are well established to the west of the Monument. Increased visitor use could increase the migration of noxious and invasive weeds into the Monument. This would necessitate extensive cooperation with county weed cooperatives and IDL, as well as educating users about noxious weed manage-
ment. Aggressive weed management outside the Monument, in addition to the actions proposed in Alternative A, would result in a long-term negligible to moderate beneficial effect on vegetation by controlling the spread of noxious weeds.

Areas surrounding the Monument are affected by agricultural practices, including irrigated and dryland crop farming and livestock ranching. The primary impacts associated with agricultural use are (1) eliminating native vegetation through livestock grazing or by replacement by crops, (2) the drift of weeds; and (3) agricultural trespass, including the deposition of garbage or the removal of vegetation and planting crops on public lands adjacent to the Monument. The effects on vegetation from all the actions of Alternative A would be relatively minor, and overall, these actions would result in short- to long-term negligible to moderate adverse impacts.

Under Alternative A, direction from the Fire Management Direction Amendments (FMDA) would be used to guide treatment of lands both inside and outside of the Monument to convert areas dominated by cheatgrass to sagebrush with a perennial grass and forb understory. The restoration/rehabilitation treatments proposed in Alternative A could result in short-term negligible to moderate adverse effects from herbicide, prescribed fire, and seeding treatments. This would result in the loss of some native vegetation and possibly increased erosion. However, successful projects placed strategically over the landscape to protect and enhance vegetation in the Monument would result in a healthier, more resilient ecosystem, constituting long-term, large scale minor to major beneficial effects.

Overall, the benefits of the FMDA initiative, combined with the adverse impacts from various actions outside the Monument and all actions associated with Alternative A, would result in minor long-term cumulative adverse impacts on vegetation. The restoration program under Alternative A would contribute a sizeable amount to regional beneficial effects that would help offset various long-term adverse impacts.

**Conclusion**

Alternative A would result in both short- and long-term negligible to moderate adverse impacts on vegetation from continued use and maintenance of roads and trails, plus illegal off-road use, spread of noxious weeds, fire suppression and fire, and continued grazing. Restoration activities and construction of facilities would cause short-term negligible to minor direct adverse impacts, but they would result in long-term indirect minor to major beneficial effects as a result of vegetation restoration and public education.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s vegetation resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**

Under Alternative B, Passage Zone acreage would increase from 4,700 to 68,900 acres and Primitive Zone acreage would decrease from 290,200 to 226,900 acres. There would be a corresponding increase in the mileage of roads that would be upgraded or maintained. Road and trail maintenance in the enlarged Passage Zone north of U. S. Highway 20/26/93 (US 20/26/93), in Laidlaw Park, and in the vicinity of the Wapi Lava Field could cause the fragmentation of vegetation communities, including special status plant populations.

Depending on the density of roads, road and trail improvements under Alternative B would cause direct long-term minor to moderate adverse effects from the removal of vegetation. Maintenance would cause negligible to minor adverse impacts on vegetation adjacent to roads. Depending on the density of roads and the number of users, the use of roads and trails would result primarily in seasonal indirect
short-term minor to moderate impacts on vegetation, including special status plants, primarily from the deposition of dust. This could cause a decrease in vigor and possibly result in mortality of the affected plants. Trail users that might veer off trails to avoid obstacles could trample vegetation and widen trails, causing long-term negligible to minor adverse impacts. Such impacts would be exacerbated by the use of trails by motorized vehicles such as OHVs. Long-term negligible to minor adverse impacts on vegetation could result from soil compaction and erosion caused by illegal off-trail use. Increased road and trail construction could result in the spread of noxious weeds, with minor to moderate short- and long-term adverse impacts on native plants.

Under Alternative B, about 45,000 acres of degraded rangeland (31,000 acres of annual grassland and 14,000 acres of low-elevation sagebrush steppe, all currently in FCC2 or FCC3) would be treated for proactive sagebrush steppe restoration and/or post-fire rehabilitation following wildland fire, a 5,000-acre increase over Alternative A. This process involves a combination of methods, usually herbicides, prescribed fire, and drill-seeding or aerial or broadcast seeding with chaining or harrowing, to control invasive and noxious weeds and then re-establish shrubs, perennial grasses, and forbs through seeding. The management goal would be to move the treated areas from FCC2 or FCC3 towards FCC1. Fragmentation due to the greater density of roads and trails and increased access and maintenance would result in smaller blocks of restored vegetation than in Alternative A.

Sagebrush steppe restoration activities would result in some vegetation mortality from prescribed burning, herbicide, or seeding treatments, a short-term minor adverse effect on some native plants and special status species. Successful projects would lead to long-term moderate to possibly major beneficial effects. Project-level design, as described for Alternative A, would minimize adverse impacts. Limited prescribed fire (less than 500 acres over the life of the plan) would be used to improve areas in FCC2 or maintain areas in FCC1 in aspen, conifer, and mountain shrub vegetation types north of US 20/26/93. These projects would cause short-term minor effects consisting of vegetation removal by fire. The long-term results of this action would be a lower fuel load and plant communities with a greater diversity relative to structure and species composition, a moderate to major effect.

Since livestock use would not vary by alternative, there would be no change in the management of livestock use from the current situation under Alternative B. Having the Passage Zone larger could lead to more livestock developments, which would result in long-term minor to moderate adverse effects, including localized removal and trampling of vegetation and the spread of invasive and noxious weeds. Other effects, including soil erosion and compaction, the alteration of nutrient cycles, and the enhancement of conditions that support exotic annual species would be the same as described for Alternative A, generally minor to long-term. As previously discussed, all allotments must meet or be making progress toward meeting the Idaho Standards for Rangeland Health, which would minimize these impacts.

Wildland fire management under Alternative B would consist of full suppression in all parts of the Monument except in the Wilderness and Preserve. Aggressive suppression would minimize the loss of key sagebrush communities and vegetation that protects the Little Cottonwood Creek watershed. The larger Passage Zone, which would allow better access to the interior of the Monument, could result in more visitors, which in turn could increase the risk of fire from the ignition of vegetation adjacent to roads or in the center of two-track roads. This could be mitigated by education and by patrols during high-risk periods. The greater level of suppression under Alternative B would result in direct minor to moderate local adverse impacts from fire line construction and the use of heavy equipment.

Expanding the Visitor Center would cause negligible effects on native vegetation because the area already has been altered from the natural state, and converting the existing exotic lawn to native xeriscaping would educate the public about the value of water.
conservation and native vegetation and the hazards of invasive and noxious weeds, resulting in an indirect beneficial effect. Adding kiosks and signs would cause little disturbance or removal of vegetation, resulting in negligible effects. Interpretive signs could cause a minor to moderate long-term beneficial effect by minimizing visitor impacts, including the trampling or removal of vegetation and the frequency of human-caused fires.

Cumulative Impacts
The cumulative effects on vegetation from Alternative B would be similar to those described for Alternative A. Impacts related to the agricultural practices in areas surrounding the Monument would be the same as those described for Alternative A, including the elimination of native vegetation, the drift of weeds, and agricultural trespass. These actions would result in short- to long-term negligible to moderate adverse impacts. The movement of soil due to wind would have negligible cumulative long-term effects.

As in Alternative A, under Alternative B the direction from the FMDA would be used to guide the treatment of lands outside of the Monument to convert areas dominated by cheatgrass to sagebrush with a perennial grass and forb understory. This would result in associated short-term negligible to moderate adverse effects and long-term large scale minor to major beneficial effects. Overall, all the above-described actions, combined with the effects of actions specific to Alternative B, would result in minor long-term cumulative adverse impacts. The restoration program would contribute a sizeable amount to cumulative benefits that would offset the various adverse impacts on vegetation in the region.

Conclusion
Alternative B would result in a greater possibility of fragmentation, increased risk of noxious weed spread, and greater risk of human-caused fire because of increased visitation and access and more road and trail maintenance. The effects on vegetation would be both short- and long-term, ranging from negligible to moderate, but they would be more widespread than in Alternative A. Facility development would cause some long-term negligible to minor negative impacts on vegetation, but increased public education would result in minor to moderate long-term beneficial effects. Restoration acreage would be slightly greater than in Alternative A, with short-term minor adverse impacts and long-term moderate to major beneficial effects.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s vegetation resources or values would not be impaired.

IMPACTS FROM ALTERNATIVE C
Analysis
The Passage Zone acreage in Alternative C would decrease from 4,700 to 3,200 acres; the Primitive Zone would decrease from 290,200 to 201,000 acres; and the Pristine Zone would increase from 448,800 to 539,500 acres. There would be a corresponding decrease in access due to expansion of the Pristine Zone, with a higher potential for road closures and a reduced number of better-maintained roads.

Road and trail maintenance would cause negligible to minor impacts on vegetation adjacent to roads. The deposition of dust from the use of roads and trails would result in short-term, seasonal indirect minor to moderate impacts on vegetation, including special status plants. This could cause a decrease in vigor and possibly result in the mortality of the affected plants adjacent to roads and trails. The roads that are open to travel might be used more because there would be fewer opportunities for dispersal. Trail users might veer off the trail to avoid obstacles, possibly trampling vegetation and widening the trail, causing long-term negligible to minor impacts. Such impacts would be exacerbated by motorized vehicles such as OHVs being used on trails. Long-term negligible to minor adverse impacts could result
from soil compaction and erosion caused by illegal off-trail use. Decreased road density would reduce the opportunity for noxious weed dispersal, but it also would reduce the probability of detection and treatment by Monument staff. This would result in a minor to moderate adverse impact on the Monument’s vegetation.

Under Alternative C, about 55,000 acres of degraded rangeland (31,000 acres of annual grassland and 24,000 acres of low-elevation sagebrush steppe, all currently in FCC2 or FCC3) would be treated for proactive sagebrush steppe restoration and/or post-fire rehabilitation, an increase of about 38 percent over the area targeted under Alternative A. This process involves a combination of methods, usually herbicides, prescribed fire, and drill-seeding or aerial or broadcast seeding with chaining or harrowing, to control invasive and noxious weeds and then re-establish shrubs, perennial grasses, and forbs through seeding. The management goal would be to move the treated areas from FCC2 or FCC3 towards FCC1. Under this alternative the restoration would occur more slowly than in the other alternatives because lower-impact methods (such as reduced use of herbicides and seeding methods that reduce soil surface disturbance) would be used.

Sagebrush steppe restoration activities could cause mortality from prescribed burning, herbicide, or seeding treatments, resulting in short-term negligible to minor adverse impacts on some native plants and special status species. Successful projects would cause long-term minor to major beneficial effects. It is unlikely that all acreage would reach FCC1 within the 15- to 20-year life of the plan because of slower implementation of projects and use of lower impact methods. Project-level design, as described for Alternative A, would minimize impacts.

Limited prescribed fire (less than 500 acres over the life of the plan) would be used to improve areas in FCC2 or maintain areas in FCC1 in aspen, conifer, and mountain shrub vegetation types north of US 20/26/93. These projects would cause short-term minor effects consisting of vegetation removal by fire. The long-term results of this action would be a lower fuel load and plant communities with a greater diversity relative to structure and species composition, a moderate to major effect.

Since livestock use would not vary by alternative, there would be no change in the management of livestock use from the current situation under Alternative C. Because developments such as fences and watering troughs guide the movement of livestock, such developments could result in long-term minor to moderate adverse effects, including localized removal and trampling of vegetation and the spread of invasive and noxious weeds. Other effects, including soil erosion and compaction, the alteration of nutrient cycles, and the enhancement of conditions that support exotic annual species also would occur. However, new facilities in Alternative C would be limited to those necessary for resource protection; therefore, the impacts from concentrations of livestock would be less widespread than in Alternative B. All allotments must meet or be making progress toward meeting Idaho Standards for Rangeland Health, which would minimize these impacts.

Wildland fire management under Alternative C would consist of full suppression in all parts of the Monument except in the Wilderness and Preserve. Aggressive suppression would minimize loss of key sagebrush communities and vegetation that protects the Little Cottonwood Creek Watershed. However, with more Pristine Zone acreage and less access, the chance of larger wildland fires would be greater in Alternative C.

In this alternative the enhancement of visitor facilities would be limited to expanding the Visitor Center. This would cause negligible impacts on native vegetation because the area has already been altered from the natural state. However, as in Alternative A, plans to convert existing exotic lawn to native xeriscaping would educate the public on the values of water conservation and native vegetation and the hazards of invasive and noxious weeds, an indirect beneficial effect. The interpretive displays in the Visitor Center, along with brochures and off-site signs, could help to minimize visitor
impacts, including trampling or the removal of vegetation and the frequency of human-caused fire. This would be in a minor to moderate long-term beneficial effect.

Designating a 10,500-acre ACEC in North Laidlaw Park would eliminate future livestock water developments in that area, thus maintaining livestock use at a low level (Appendix F). This would be a long-term negligible to minor beneficial effect. An implementation-level management plan would have to be prepared following designation of the ACEC. Such a plan would specifically guide proactive management for the vegetative community. This could offer a greater level of protection than imposing the same management without the ACEC designation. Livestock management associated with the ACEC could result in the use of new or existing water facilities elsewhere in the Monument, thus concentrating that use in areas other than North Laidlaw Park, resulting in a negligible to minor negative effect on vegetation in those areas.

Cumulative Impacts
The cumulative impacts on vegetation from Alternative C would be similar to those described for Alternative A, but the adverse impacts would be fewer because accessibility and visitation would be less and there would be more restoration efforts. Impacts related to agricultural practices in areas surrounding the Monument would be the same as those described for Alternatives A and B, including the elimination of native vegetation, the drift of weeds, and agricultural trespass. These actions would result in short- to long-term negligible to moderate adverse impacts. The movement of soil by wind would cause negligible cumulative long-term adverse impacts.

As in Alternatives A and B, under Alternative C the direction from the FMDA would be used to guide the treatment of lands outside of the Monument to convert areas dominated by cheatgrass to sagebrush with a perennial grass and forb understory. This would result in associated short-term negligible to moderate adverse impacts and long-term large-scale minor to major beneficial effects. Overall, the benefits of the FMDA initiative, combined with other impacts of actions inside and outside the Monument and the expanded restoration program in the Monument under Alternative C, would result in long-term cumulative negligible to minor adverse impacts on vegetation. The restoration program described for Alternative C plus the limits on access to more areas would contribute a sizeable amount to regional beneficial effects.

Conclusion
Alternative C would involve less opportunity for extensive visitor access, less access for fire suppression, less active management of noxious weeds, and a slower rate of restoration over a larger area than any other alternative. Adverse impacts on vegetation from access would be minor and limited, with few impacts from facility development and maintenance. Restoration efforts would cause long-term minor to major beneficial effects, but these would occur more slowly because fewer herbicides and low-impact methods would be used. Fires, fire suppression, and continued grazing would lead to minor to moderate adverse impacts.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s vegetation resources or values would not be impaired.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
The size of the Passage Zone in Alternative D (Proposed Plan) would increase from 4,700 to 6,700 acres; the Primitive Zone would decrease from 290,200 to 218,700 acres; and the Pristine Zone would increase from 448,800 acres to 518,300 acres, as compared to Alternative A. There would be a slight increase in access from some expansion of the Passage Zone; however, the modifications made
to Alternative D in the FEIS would reduce Passage Zone and add more Pristine Zone in some of the more sensitive areas of the Monument, such as the Laidlaw Park area and edges of the lava fields. Removal of vegetation for road and trail construction that could occur under the designated zoning in Alternative D would cause direct minor to moderate adverse effects, depending on the density of roads.

Road and trail maintenance would cause negligible to minor impacts on vegetation adjacent to roads. The deposition of dust from road and trail use would result primarily in short-term, seasonal indirect minor to moderate impacts on vegetation, including special status plants. This could cause a decrease in vigor and possibly result in mortality of the affected plants. Trail users might veer off trails to avoid obstacles, trampling vegetation and widening the trial; this could cause long-term negligible to minor adverse impacts. The use of motorized vehicles on trails, such as OHVs, would exacerbate these adverse impacts. Long-term negligible to minor adverse impacts could result from soil compaction and erosion from illegal off-trail use. Greater road density would increase the potential for the dispersal of noxious weeds, but this also would increase the probability of detection and treatment by Monument staff. This would result in minor to moderate short- and long-term negative impacts on native plants.

Under Alternative D (Proposed Plan), approximately 80,000 acres of degraded rangeland (31,000 acres of annual grassland and 49,000 acres of low-elevation sagebrush steppe, all currently in FCC2 or FCC3) would be treated for proactive sagebrush steppe restoration and/or post-fire rehabilitation, a 100 percent increase over the area targeted under Alternative A. This is the most proactive restoration program of all the alternatives - all available methods would be used, and large areas would be treated within short timeframes. This process involves a combination of methods, usually herbicides, prescribed fire, and drill-seeding or aerial or broadcast seeding with chaining or harrowing, to control invasive and noxious weeds and then re-establish shrubs, perennial grasses, and forbs through seeding. The management goal would be to move the treated areas from FCC2 or FCC3 towards FCC1. Sagebrush steppe restoration activities could cause mortality from prescribed burning, herbicide, or seeding treatments, resulting in short-term minor adverse impacts on some native plants and special status species. Successful projects would lead to long-term moderate to major beneficial effects. Project-level design, as described for Alternative A, would minimize impacts.

Limited prescribed fire (less than 500 acres over the life of the plan) would be used to improve areas in FCC2 or maintain areas in FCC1 in aspen, conifer, and mountain shrub vegetation types north of US 20/26/93. These projects would cause short-term minor effects consisting of vegetation removal by fire. The long-term results of this action would be a lower fuel load and plant communities with a greater diversity relative to structure and species composition, a moderate to major beneficial effect.

Since livestock use would not vary by alternative, there would be no change in the management of livestock from the current situation under Alternative D (Proposed Plan). Because developments such as fences and watering troughs guide the movement of livestock, such developments could result in long-term minor to moderate adverse effects, including localized removal and trampling of vegetation and the spread of invasive and noxious weeds. Other effects, including soil erosion and compaction, the alteration of nutrient cycles, and the enhancement of conditions that support exotic annual species also would be the same as those described for Alternative A, generally minor and long term.

In Alternative D (Proposed Plan), future livestock water developments would not be permitted in North Laidlaw Park or Bowl Crater; thus, livestock use would be maintained at a low level in those areas. This could result in the placement of new facilities or increased use of existing watering facilities elsewhere in the Monument, thus concentrating that use in other areas. However, all allotments must meet or be making progress toward meeting Idaho Standards for Rangeland Health, which would minimize grazing-related impacts.
Wildland fire management under Alternative D (Proposed Plan) would consist of full suppression in all parts of the Monument except in the Wilderness and Preserve. Aggressive suppression would minimize the loss of key sagebrush communities and the vegetation that protects the Little Cottonwood Creek Watershed. Good access, particularly in remote areas, would reduce the response time and keep fires small to the highest degree in this alternative.

In Alternative D (Proposed Plan), the enhancement of visitor facilities would be limited to expanding the Visitor Center and some minor development in the Kings Bowl and Crystal Ice Caves areas. Expanding the Visitor Center would result in negligible effects on native vegetation because the area has already been altered from the natural state. However, as in Alternatives A and C, plans to convert existing exotic lawn to native xeriscaping would educate the public on the values of water conservation and native vegetation and the hazards of invasive and noxious weeds, an indirect beneficial effect.

The interpretive displays in the Visitor Center, along with brochures and off-site signs, could help to minimize visitor impacts, including trampling or the removal of vegetation and the frequency of human-caused fire. This would be a minor to moderate long-term beneficial effect. Constructing trails and installing a vault toilet and other primitive visitor facilities in the Kings Bowl area would cause minor adverse impacts. Increased visitor use could have minor adverse effects that could be mitigated by interpretive signs focused on resource protection.

**Cumulative Impacts**

The cumulative impacts from Alternative D (Proposed Plan) would be similar to those described for Alternative A, but with a much greater beneficial effect from the expanded restoration program (80,000 acres). As with the other alternatives, there would be impacts related to agricultural practices in Alternative D (Proposed Plan), including the elimination of native vegetation, the drift of weeds, and agricultural trespass. The long-term effects from the movement of soil by wind would be negligible.

As in the other alternatives, the direction from the FMDA would be used to guide the treatment of lands outside of the Monument to convert areas dominated by cheatgrass to sagebrush with a perennial grass and forb understory. This would result in short-term negligible to moderate adverse impacts and long-term large-scale minor to major beneficial effects. Overall, the benefits of the FMDA initiative, plus the impacts from various actions outside the Monument combined with the restoration program and all other actions under Alternative D (Proposed Plan), would result in long-term cumulative minor beneficial effects on vegetation in the region. The restoration program, plus the educational emphasis that would accompany the program, would contribute a large part to the overall cumulative beneficial effects.

**Conclusion**

In Alternative D (Proposed Plan), there would be more access for fire suppression and more aggressive noxious weed control programs. This would result in short-term minor to moderate adverse impacts but long-term moderate to major beneficial effects, occurring in a shorter time than in the other alternatives. Strategically placed restoration projects would increase the size and continuity of healthy vegetation patches and reduce the extent of poor quality vegetation. Adverse impacts from visitor access, fire and fire suppression, grazing, and facility development would be similar to those described for Alternative A, with both short- and long-term minor to moderate adverse impacts. Impacts from increased access in more sensitive areas of the Monument, including Laidlaw Park, would be limited by the reduction in Passage Zone and increase in Pristine Zone designations made in response to public comments on the Draft Plan/EIS.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant
NPS planning documents, the Monument’s vegetation resources or values would not be impaired.

WATER RESOURCES

Methodology and Assumptions
To assess the magnitude of water quality impacts on Monument waters under the various alternatives, state water quality standards governing the waters of the Monument were examined and baseline water quality data (where available) were examined. The effects on water resources were assessed with the use of available data and best professional judgment. The impact intensity thresholds used are as follows:

Negligible: Any chemical, physical, or biological effects would not be detectable, would be well below water quality standards or criteria, and would be within historical or desired water quality conditions.

Minor: Chemical, physical, or biological effects would be detectable but would be well below water quality standards or criteria and within historical or desired water quality conditions.

Moderate: Chemical, physical, or biological effects would be detectable but would be at or below water quality standards or criteria; however, historical baseline or desired water quality conditions would be altered on a short-term basis.

Major: Chemical, physical, or biological effects would be detectable and would be frequently altered from the historical baseline or desired water quality conditions and/or chemical, physical, or biological water quality standards or criteria would be slightly and singularly exceeded on a short-term basis.

For water resources, impact duration was defined as follows:

Short-term: An effect that occurs in a short period of time (generally one or two days but no more than seven days).

Long-term: A change in a resource or its condition that lasts longer than seven days.

The area of analysis for cumulative impacts on water resources was defined as the surface water bodies both in the Monument and extending into or out of the Monument.

IMPACTS FROM ALTERNATIVE A

Analysis
The relative scarcity of surface water in the Monument means the effects of management actions would usually be localized to individual water bodies. Where surface waters do exist, recreational uses, livestock use, and facility developments would be the primary management activities affecting water resources in the Monument. Alternative A represents a continuation of most existing management activities that could affect water resources. Maintaining access and facilities in the current condition would not be likely to substantially increase recreational use or its effects on water resources beyond current levels, and new construction or maintenance would include measures to limit erosion and protect water quality where appropriate.

Recreational uses could contaminate waters or compete with wildlife at water sources found in ice caves. Easily accessible ice caves have been found to have higher levels of nutrients than caves located in remote areas. Fecal coliform bacteria and nutrient contamination of ice caves has been documented in heavily visited caves located in the original Monument (Falter and Freitag 1996). However few ice caves are accessible to this degree, and recreational use of the vast majority appears to be very limited. Maintaining access and facilities in the current condition would not be likely to substantially increase recreational use or its effects on water resources beyond current levels. The effects on water quality from recreational use would be expected to remain
short-term and range from negligible to moderate intensity in localized circumstances.

Livestock often concentrate in the vicinity of water sources. Livestock would contaminate surface water bodies with fecal coliform bacteria and nutrients from manure deposited in or near water bodies. Smaller water bodies have little capacity to dilute added nutrients. Most water bodies affected by livestock in the Monument would be ephemeral water bodies known as playa lakes located on BLM-administered areas. Many of the naturally formed playas have been modified to increase their storage capacity for livestock watering.

Effects on water quality from livestock use would be expected to be long-term with intensity ranging from negligible to potentially major in local sites, depending on the concentration and duration of livestock use.

**Cumulative Impacts**

Past actions to divert portions of Little Cottonwood Creek to provide potable water for the development of recreational facilities, diversions of water from the Little Wood River, and modifications of many of the playas to enhance stock watering opportunities all have affected water resources up to the present time. In some instances, such as the Little Wood River, the effects of upstream water diversions are major and long-term. However, the limited extent of this surface stream in the Monument results in impacts that are localized to very small segments (total less than 400 yards) of the stream on the edge of the Monument boundary.

A future action that may affect Monument water resources is a proposed project to replace irrigation channels that carry water from the Little Wood River to agricultural fields near Carey with an enclosed pipeline delivery system. The effect this action would have on wetlands or water resources just inside the western boundary of the Monument (parallel and in some cases including portions of the Little Wood River channel) is unknown.

The past, present, and future actions relating to water diversions, grazing and agricultural areas continue to result in adverse impacts on water quality. Impacts on the water quality in creeks and playas in the Monument that are related to these actions, in conjunction with the actions of Alternative A, would result in long-term minor adverse cumulative impacts. The actions of Alternative A would contribute a minuscule increment to the overall adverse impacts.

**Conclusion**

Implementing Alternative A would continue the current local long-term effects on water resources at intensity levels generally ranging from negligible to potentially major, although any major effects would be localized to small areas. The effects of intense recreational use of ice cave pools or from livestock watering on individual playas could create minor to moderate changes in nutrient concentrations, bacteria levels, and turbidity. The duration of effects would depend on the intensity of recreational use at each site. The effects would tend to be localized to the individual water bodies, because no surface waters connect them. The overall effect of livestock use on playas would be widespread and long-term and could range from minor to potentially major intensity, depending on the location.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s water resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**

The effects on water quality from Alternative B would be similar to those described for Alternative A, with localized effects at negligible to potentially major intensities depending on the location and concentration of activity and livestock. The relative scarcity of surface water in the Monument means...
the effects of management actions would be limited to certain areas. Where surface waters do exist, recreational uses, livestock use, and facility developments would be the primary management activities affecting the Monument’s water resources.

In addition to the effects discussed for Alternative A, improved road and trail access and potential new recreational facilities in Alternative B could result in an increase in recreational use of the area, which would lead to higher intensity impacts on ice cave water resources. These effects would be most likely to occur at ice caves more easily reached by improved roads. Class B (gravel surface) roads in the Passage Zone would be increased from 45 miles inside the Monument in Alternative A to 67 miles in Alternative B. Depending the numbers of people coming to ice caves and other water bodies via newly improved roads, the impacts would be likely to be short-term and of negligible to moderate intensity.

Because the management of livestock use would not vary among alternatives, the effects on water resources from Alternative B would be similar to those from Alternative A; that is, minor to moderate local impacts on ephemeral ponds and playas from trampling of shorelines and aquatic vegetation and from contaminants from fecal coliform and nutrients from manure. The larger area in the Passage Zone in Alternative B might accommodate new livestock developments. If developed, these water sources could distribute livestock to areas currently too remote from water to be grazed substantially, adversely affecting the water quality of any nearby playas. Proposed road improvements in this alternative (intended to facilitate recreation) could also facilitate recreational access or water hauling for livestock.

**Cumulative Impacts**

The cumulative effects on water quality from Alternative B would be similar to those described for Alternative A. The offsite actions related to diversions and agricultural use, combined with the impacts expected from the actions of Alternative B, would result in long-term minor adverse impacts on water quality. The actions of Alternative B would contribute slightly more to the cumulative impact than under the No Action Alternative because this alternative would lead to increased visitation and possibly to more livestock development.

**Conclusion**

The effects of Alternative B would be substantially the same as those of Alternative A, but with a somewhat higher likelihood of more indirect adverse effects on local ice caves and playas resulting from road improvements and increased recreational use, plus a possible increase in livestock developments. Impacts would generally range from negligible to potentially moderate, but they would be localized. Depending on the site-specific circumstances, the effects could be either short term or long term.

Because there would be no major adverse impacts on a resource or value whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s water resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

Alternative C, which would involve fewer maintained access roads and less facility development than Alternative B, could limit recreational use. The effects on water resources from recreational use and livestock use in this alternative would be similar to those described for Alternative A (negligible to potentially moderate adverse impacts from bacterial and nutrient contamination and from trampling of wetland/water resources). However, because of the reduced recreational access, moderate impacts could be less frequent. Class B (gravel surface) roads inside the Monument in Alternative B would total 37 miles, compared to 45 for Alternative A. With much less scheduled maintenance and reduced road standards, the indirect impact of recreational uses on
water resources in the immediate vicinity of those roads might increase under Alternative C.

The larger area zoned as Primitive could affect the number and type of new livestock developments allowed in the Primitive and Pristine Zones. Within these zones, the tendency of livestock to concentrate near livestock developments would reduce the adverse effects on nearby surface waters.

**Cumulative Impacts**
The cumulative effects on water quality from Alternative C would be similar to those described for Alternative A. The offsite actions related to diversions and agricultural use, combined with the effects caused by the actions of Alternative C, would result in long-term minor adverse impacts on water quality. The reduced road access under Alternative C possibly would limit the direct impacts on ice caves and other water bodies.

**Conclusion**
The effects of Alternative C could be substantially the same as those of Alternative A because there still would be a chance that recreational use could affect ice caves, and there could be limited impacts from grazing. However, moderate adverse impacts would potentially be less widespread or frequent because road access would be reduced.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s water resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)**

**Analysis**
The effects on water resources from recreational use and livestock use under Alternative D (Proposed Plan) would be similar to those of Alternative A. Road improvements intended to facilitate response to wildfires and vegetative restoration projects in this alternative also could facilitate recreational access or water hauling for livestock. Increased recreational use would not be as likely in this alternative as in Alternative B because few other recreational facilities would be added in this alternative. Improved access roads could facilitate water hauling for livestock, indirectly leading to a greater percentage of allowable AUMs than the current number.

Having a larger area of Passage Zone than in Alternatives A and C could accommodate more livestock water developments. If developed, these water sources could distribute livestock to areas currently too remote from water to receive substantial livestock grazing; this would adversely affect water quality in any nearby playas. The reduction in Passage Zone in the Laidlaw park area done in response to public comment on the Draft Plan/EIS would help to limit indirect adverse impacts on water resources in that area, since livestock development occurs mainly along Passage Zone corridors.

**Cumulative Impacts**
The cumulative impacts on water quality from Alternative D (Proposed Plan) would be similar to those described for Alternative A. The off-site actions related to diversions and agricultural use, combined with the impacts from Alternative D, would result in long-term minor adverse impacts on water quality. The actions under Alternative D (Proposed Plan) would contribute slightly more to the cumulative adverse impacts than would those of the No Action Alternative because the road maintenance for administrative purposes would also allow visitor access to many areas, and livestock development could be greater in the Passage Zone.

**Conclusion**
The effects on water resources from Alternative D (Proposed Plan) would be much the same as Alternative A, with localized long-term effects at negligible to major intensities, depending on site location (proximity of ice caves to roads) or concentration of...
livestock. Implementing Alternative D (Proposed Plan) could cause local long-term effects on water resources at intensity levels ranging from negligible to potentially major. Intense recreational use could affect ice cave pools, and livestock watering could affect individual playas, causing minor to moderate changes in nutrient concentrations, bacteria levels, and turbidity. The effects would tend to be localized to individual water bodies because no surface waters connect them.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s water resources or values would not be impaired.

**WILDLIFE, INCLUDING SPECIAL STATUS SPECIES**

**METHODOLOGY AND ASSUMPTIONS**

The available information used in this analysis was obtained from relevant scientific literature, wildlife databases, consultation with other biologists, interdisciplinary team meetings, and site visits. The impacts were assessed with the use of this information, knowledge of the Monument, and professional judgment.

The following impact thresholds were used for analyzing the intensity of effects on wildlife-related resources:

**Negligible:** Wildlife would not be affected, or the effects would be at or below the level of detection, and the changes would be so slight that they would not be of any measurable or perceptible consequence to the population of any wildlife species.

**Minor:** The effects on wildlife would be detectable but localized, small, and of little consequence to the population of any species. Mitigating measures, if needed to offset adverse effects, would be simple and successful.

**Moderate:** The effects on wildlife would be readily detectable and localized, with consequences at the population level. Mitigating measures, if needed to offset adverse effects, would be extensive and probably would be successful.

**Major:** The effects on wildlife would be obvious and would result in substantial consequences to the populations in the region. Extensive mitigating measures would be needed to offset adverse effects, and their success would not be guaranteed.

For wildlife, impact duration was defined as follows:

**Short-term:** An effect that generally would last less than a single year or season.

**Long-term:** A change in a resource or its condition that would last longer than a single year or season.

The area of analysis for cumulative effects on wildlife was defined as the Monument and the five-county area surrounding the Monument, which contains habitat that may be used by Monument wildlife and may also support the same species of special concern.

**IMPACTS FROM ALTERNATIVE A**

**Analysis**

Four classes of roads would be maintained in the Monument under Alternative A. This use and related maintenance activities could continue to disturb wildlife species. The use of some higher standard roads such as US 20/26/93 would continue to result in road-killed animals and could adversely affect migration corridors for some species, including mule deer, pronghorn, and sage-grouse. The use of secondary roads, especially Class B roads adjacent to sensitive wildlife areas, could cause periodic
disturbance ranging from minor to moderate intensity.

Substantial vehicle traffic in mornings in April and early May could continue to adversely affect sage-grouse through disturbance and road kill. Many large mammals, including cougar, deer, elk, pronghorn, and bears, respond negatively to vehicle traffic. The presence of higher standard roads could lead to increased use and disturbance. There could be higher losses of some species, including marmots, near these roads. Better access could also lead to greater hunting pressure on animal populations in those areas. Most of these adverse impacts would be seasonal and of negligible to minor intensity. There is a potential for short-term moderate adverse impacts on some species in high use areas. Under the current management scenario, sage-grouse leks, and presumably sage-grouse populations, have declined 36 percent over the past 25 years. Sage-grouse are generally considered an indicator species for sagebrush steppe habitat and sagebrush-obligate species health. The decline of sage-grouse indicates management that is not only detrimental to sage-grouse, but also to their habitat and the other species which also use that habitat.

While there are numerous factors contributing to the range-wide decline of sage-grouse and sagebrush steppe habitat throughout the western United States, there are two primary contributing factors within the Monument. The first is livestock grazing. Heavy historical use by sheep and consistent early-season (pre-July) grazing use are primarily responsible for the declines in forb production and declines in native perennial grass production and composition. Additionally, the use of sage-grouse leks as sheep bedding grounds (as observed by IDFG) contributes to decreased sage-grouse recruitment. These issues are major contributors to much of the area not meeting BLM Rangeland Health Standards. The second primary factor affecting the health of the Monument’s sagebrush steppe is wildfire and the invasion of cheatgrass. While it is difficult to determine which of these (fire or cheatgrass) originally preceded the other, it is clear that the combination is self-perpetuating in the absence of substantial intervention. Fire creates ideal conditions for cheatgrass establishment, and cheatgrass is a highly flammable fuel. The spread of cheatgrass is also exacerbated when the native perennial grass and forb community is weakened as a result of excessive livestock grazing. These issues are addressed in the Desired Future Conditions statements applicable to all alternatives.

The goals of establishing and maintaining a plant community that reflects site potential and protecting sage-grouse leks from disturbance will each assist in improving habitat conditions for sage-grouse and sagebrush steppe obligates. Additionally, the goal of rehabilitating 40,000 acres (under Alternative A) of degraded habitat (mostly cheatgrass) will provide for the long-term improvement of habitat conditions. Habitat restoration depends on the successful implementation of Rangeland Health Standards and Guidelines as well as this plan’s Desired Future Conditions.

This alternative would involve the implementation of statewide sage-grouse habitat guidelines for vegetation management. The State of Idaho’s sage-grouse guidelines have been implemented throughout the state, and their implementation should improve the habitat in the Monument. These guidelines include protecting quality grouse habitat and restoring potential habitat where feasible. Existing high-quality habitat would be a priority for protection.

To achieve a mosaic of shrubs, forbs, and grasses capable of sustaining native animal populations, 40,000 acres of degraded sagebrush steppe habitats would be restored. Although there would be short-term minor adverse impacts on certain species from the clearing and burning associated with the initial stages, sagebrush steppe restoration should eventually provide an increase in forage and cover for many wildlife species. Shrub steppe-associated animal populations should eventually increase in areas of habitat restoration. This would be especially beneficial for 19 sensitive sagebrush steppe species that are declining throughout the region. The long-term effect of habitat restoration would be the re-establishment of a healthy native perennial
herbaceous understory under a canopy of sagebrush. Sagebrush obligate species in general, and sage-grouse in particular will benefit from achieving this desired result. Pygmy rabbits may also benefit from such restoration where other habitat factors, such as soil depth and friability, are also present. Under optimal conditions, benefits to pygmy rabbits would take 20 to 40 years to be realized because of their unique habitat requirements.

Alternative A would use Integrated Weed Management principles to control or eradicate existing populations and to prevent the establishment of new populations of exotic and invasive plants. Communities of such plants are generally used by a significantly smaller complement of animal species than are native habitats. Eliminating invasive plant species would have a negligible short-term adverse affect on a few animal species, but would benefit most animal species found in the Monument. The long-term effects of invasive species control would be a reduction or elimination of competition with native plant species thereby allowing the later to achieve higher levels of vigor and ultimately providing increased amounts of wildlife forage and cover.

Fire management under this alternative would involve suppression of wildland fires in most areas, with wildland fire use limited to the Wilderness and Preserve Areas. Outside of Wilderness, fire would be managed to maintain vegetative communities in their current successional state. Suppression would protect habitat for species that occupy climax habitats, including most shrub steppe species. Allowing wildland fire use would supply habitat for species that need early successional habitat and species that use burned habitats. Regardless of whether a fire was suppressed or allowed to burn for resource benefit, some species would be affected adversely and others would benefit.

Many sensitive sagebrush steppe species (pygmy rabbits, sage-grouse, sage sparrow, and others) would benefit from fire suppression in sagebrush steppe (Welch 2002). Some sensitive woodland species (Lewis’ woodpecker, red-naped sapsucker, and others) would be adversely affected by the same activity in aspen or pine habitats. Some sensitive species that use grasslands (grasshopper sparrow, long-billed curlew, and others) might also be negatively affected by suppression if open grasslands were not created or maintained (Welch 2002). The degree of the adverse effects can range from negligible to moderate, depending the size of fires in a given year. Rehabilitating burned sagebrush steppe should result in long-term beneficial effects in a manner similar to the restoration efforts discussed previously.

Riparian areas and wetlands in the planning area would be maintained, restored, or enhanced. Riparian woodlands, shrubs, and wetland vegetation used by animals for food and shelter would be maintained or increased, increasing forage and cover for riparian and wetland species. This would result in minor to moderate long-term beneficial effects on many riparian/wetland species, including 11 BLM sensitive species and many species of migratory birds.

Livestock use would continue, but the distribution of livestock could change, depending on the distribution of any new livestock developments. Where livestock developments encourage use in areas previously not used or rarely used by livestock, like the edges of Laidlaw Park, effects on native wildlife, including but not limited to sage-grouse, can be expected. Impacts would take the form of increased disturbance, loss of forage, and loss of hiding cover.

Another impact of livestock to wildlife is the use of ephemeral spring water. There are numerous natural playas across the area that capture winter water. These are used as water sources by the spring grazing sheep flocks. The herders use these waters as bedding areas and often do not move until the water is substantially used. Although this water would dry up naturally each year, it would be available for longer periods without the sheep use. This is perhaps most important to species like pronghorn that could use the water at fawning times.

Water development associated with livestock grazing might also affect wildlife. New water developments would increase animal density around the water source. Increased density would change
the normal distribution of desert animals. Birds and bats might suffer direct mortality from drowning in developments with open water troughs and open tanks. The migration routes of large animals might be altered if the animals used the artificial water sources. These adverse impacts would be minor to moderate and long-term.

Livestock use would be managed in accordance with the Idaho Standards for Rangeland Health and Guidelines for grazing management. Adverse effects on wildlife resulting from competition for forage would be long-term. Many species of migratory birds and small mammals would be adversely affected by the removal of cover and forage, and grazing could remove nesting cover for sage-grouse (Connelly et al. 2000). Several ground-nesting species could be trampled when grazing coincides with the breeding season.

Wildlife habitat would continue to be fragmented by roads, trails, and facilities, and wildlife habits and movements would continue to be altered by employees and visitors. People concentrate at the developed area in the original Monument, disturbing wildlife by their physical presence and associated noise. These intermittent adverse impacts would continue to be minor, but long-term. Visitors to less-used sites, such as Carey Kipuka Trail, Wapi Park, Wood Road Trail, and backcountry areas, would continue to cause intermittent minor disruption of wildlife. If the increases in visitation were only modest, this intermittent adverse impact would be long-term but of negligible intensity. The intensity of this impact would increase if the increases in visitation were greater.

The adverse impacts on wildlife from the management of geologic features would be negligible. For many species, the disturbance would be negligible to minor and short-term. For other species, including five species of bats and the blind cave beetle (which are sensitive species and regionally or nationally declining), the effects could be moderate to potentially major if the disturbance occurred at a sensitive time or place, such as during hibernation or at maternity sites, disrupting breeding or other life-cycle functions. However, the adverse impacts would be reduced or eliminated by restricting access to certain important caves either permanently or seasonally during the times of the year when particular sites are important. This could reduce the adverse impacts to minor levels, at most.

Two species listed as threatened or endangered are in the Monument area. Both the bald eagle and the gray wolf, which are occasionally found in the Monument, are peripheral species, and the impacts on them from any actions of Alternative A probably would involve short-term minor disruption of their activities in the Monument, resulting in negligible to minor adverse effects.

Cumulative Impacts
Agriculture, including both irrigated and dryland farming and ranching, has greatly reduced native animals in the area around the Monument. Animals perceived as pests have been displaced or killed, and habitat has been lost through agriculture and the introduction of nonnative animals.

Future development of private lands such as those near Carey for residential, tourist-related, or other uses could alter wildlife habitat and habits and cause a loss of wildlife in areas adjacent to the Monument. Habitat loss due to conversion to agriculture or residential and urban development has been identified as one of the leading causes of declines in sagebrush steppe wildlife in the region (Wisdom et al. 2000). Such habitat modifications are expected to continue at a regional level. Water use in these developments (or for other purposes) could reduce the amount of water available to wildlife, particularly in the Little Wood River or Huff Creek. Road kill of small mammals, large mammals, and birds would increase because the expected development of private lands would increase traffic.

Under direction from the ICBEMP and the BLM Sagebrush Steppe Restoration Program, lands both inside and outside of the Monument would be treated to convert areas dominated by cheatgrass to sagebrush with a perennial grass and forb understory. This could cause short-term negligible to
moderate adverse effects from herbicide, prescribed fire, and seeding treatments, which could cause the loss of some native habitat. Successful projects placed strategically over the landscape, resulting in a healthier, more resilient ecosystem, would constitute long-term, large scale, minor to major beneficial effects on many sagebrush steppe species. BLM is developing a national and an Idaho Sage-grouse Habitat Conservation Strategy. When these plans are finalized and implemented, they should lead to a long-term beneficial effect on grouse throughout the region, including the Monument. Many other sagebrush steppe species, including several sensitive species, should benefit from these strategies.

Agriculture and ranching can adversely affect wildlife in large areas of the Monument. Competition for forage from domestic livestock and past and continuing use of water from Lava Lake, Huff Creek, and the Little Wood River have contributed to adverse impacts on wildlife. Many habitats for native species have been lost or highly fragmented as lands have been converted to agricultural or other uses. The effects on wildlife from current and anticipated future actions outside the Monument, along with the actions of Alternative A, would be moderate, long-term, and adverse. Most of the impacts would result from development outside the Monument, and the impacts might or might not be mitigated. The actions of Alternative A would contribute a small increment to the overall cumulative impact.

Conclusion
Under Alternative A, which would continue current conditions, the effects on wildlife would continue to result primarily from conflicts with human uses of the Monument, including disturbance by people and vehicles and conflicts and competition with livestock use. Access and roads and associated visitor recreation would result in minor long-term adverse impacts, plus short-term moderate local adverse impacts on some species in high use areas. Sagebrush steppe restoration and weed management actions would cause some short-term minor impacts, with minor to major beneficial impacts over the long-term, depending on the species involved. Similarly, fire and suppression of fire would benefit some species but adversely affect others. The 50 sensitive species, which all use major habitats in the Monument and have a variety of life histories, would experience the same range of impacts as other wildlife.

The bald eagle and the gray wolf, which are listed as threatened and endangered, are occasionally found in the area of the Monument, but both are peripheral species, and the impacts on them would be negligible to minor.

Current livestock use and potential new livestock developments, which would be authorized in accordance with the Idaho Standards for Rangeland Health and Guidelines, could result in minor to moderate adverse impacts on sagebrush steppe habitat and/or sagebrush obligate wildlife species. In the long term, the restoration of 40,000 acres of degraded sagebrush steppe would mitigate a portion of any adverse effects on wildlife resources.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s wildlife resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**
Anticipated increased use in the Passage Zone, which includes prime quality Key sage-grouse habitat in North Laidlaw Park, would (1) increase disturbance near lek sites which could depress sage-grouse breeding success resulting in decreased sage-grouse population levels, (2) increase disturbance in sage-grouse nesting habitat which could decrease nesting success directly as well as indirectly through increased predation of nests (it is common for predators to observe and/or track humans to
nest sites), and (3) increase the likelihood of human caused fires which would degrade sagebrush steppe habitat for all sagebrush obligate species, including sage-grouse.

Protection of active leks would assist in maintaining sage-grouse populations; however, it would not assist in enlarging sage-grouse populations to historic levels. Additionally, this level of protection would be minimized in North Laidlaw Park as a result of the expanded Passage Zone and increased use.

The effects on wildlife from Alternative B generally would be similar to those from Alternative A. Some activities, such as transportation and vegetation management, would take place at different levels in this alternative, leading to corresponding changes in the impacts.

More roads in the Monument would be maintained under Alternative B, which would result in greater use and more visitor access. This use would continue to disturb wildlife species in the manner described for Alternative A. There would potentially be high numbers of road-killed animals along high-use highway corridors. Secondary roads, especially Class B roads adjacent to sensitive wildlife areas, could cause periodic minor to moderate disturbance. The presence of more high quality roads would increase disturbances not directly resulting from motor vehicles, and there probably would be greater hunting pressure on animal populations in those areas under this alternative. These effects would be seasonal and negligible to minor, with a potential for moderate impacts on some species in high use areas. A larger Passage Zone and the possibility of improved access and more motor vehicles in that zone could result in more adverse impacts than those described for Alternative A.

The effects of shrub steppe restoration should be similar to those described for Alternative A. With about 5,000 more acres targeted for restoration under Alternative B, there would be a corresponding increase in beneficial effects on wildlife habitat.

Fire management under this alternative would involve suppression of fires in most areas, with fire for resource benefit in the Pristine Zone. The greater emphasis on suppression to ensure public safety would protect existing habitat for species that occupy climax sagebrush habitats. Allowing burning for resource benefit would provide habitat for species that need early successional habitat and species that use burned habitats.

As described under Alternative A, regardless of whether a fire would be suppressed or allowed to burn for resource benefit, there would be adverse effects on some species and beneficial effects on others. Greater emphasis on rehabilitating burned sagebrush steppe would result in long-term beneficial effects, as was discussed previously. The possibility of burns for resource benefit in the Pristine Zone would allow greater flexibility for case by case habitat improvement than in Alternative A.

Livestock use would be managed in accordance with the Idaho Standards for Rangeland health and Guidelines for Grazing Management, as described under Alternative A, but a larger Passage Zone in Alternative B could lead to more concentrated livestock developments. The effects from competition for forage, removal of cover, and water distribution would be minor to moderate, long term, and limited to areas heavily used for grazing.

As in Alternative A, wildlife habitat would continue to be fragmented by roads, trails, and facilities, and wildlife habits and movements would continue to be altered by employees and visitors. People would concentrate at the developed area in the original Monument, disturbing wildlife and degrading habitat. Newly developed areas in Kings Bowl and at designated primitive campsites would cause more disturbances. These adverse impacts would be minor and generally long-term, with short-term minor to moderate impacts during the construction and development of new visitor use areas.

Cumulative Impacts
The cumulative effects from Alternative B would be essentially the same as those from Alternative A, with a slightly higher possibility of visitor-related disturbances and road kills. The cumulative effects
of agricultural use and ranching and other actions outside the Monument, along with the actions of Alternative B, would be moderate, long-term, and adverse. Most of the impacts would result from development actions outside the Monument, which might or might not be mitigated. The actions of Alternative B would contribute a small increment to the overall cumulative impact.

Conclusion
The impacts on wildlife from Alternative B would largely be the same as those of Alternative A, but the slight increase in acres restored would result in a related increase in improved habitat for sagebrush steppe species, a long-term minor to major beneficial effect. There could be a modest increase in adverse impacts from traffic disturbance in the larger Passage Zone area and the potential for increased or improved access to motor vehicles in that zone, as well as the development of a visitor use area in Kings Bowl and multiuse trails. The effects on wildlife would vary from species and species, but most effects would be long-term, minor to moderate, and localized.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s wildlife resources or values would not be impaired.

IMpactS FROM ALTERNATIVE C
Analysis
The protection of both active and historic leks from disturbance during the breeding season as well as the closure of all roads in Key habitat during this same period would have a maximum effect (of all alternatives) leading to increasing sage-grouse breeding success and subsequent expansion of sage-grouse population levels. When combined with other management actions that assist in achieving site potential in Key sage-grouse habitat, this alternative could have a significant effect on regional sage-grouse populations by increasing the number of birds available for expansion into nearby habitats (the basic definition of source or stronghold habitat).

The effects on wildlife from Alternative C would generally be similar to those described for Alternative A. Some activities, including transportation and vegetation management, would occur at different levels, with corresponding changes to the impacts. Alternative C would involve the fewest miles of maintained roads, with most in the Primitive Zone. Any use of roads and trails would continue to disturb wildlife species, but the disturbance from road use and associated visitor access would be less than in Alternative A. Hunting pressure might decline in certain areas not served by highly maintained roads. These effects would be seasonal and negligible to minor, with the potential for moderate impacts on some species in high use areas and with a modest decrease in adverse impacts from those described for Alternative A because the Primitive Zone would be larger in Alternative C, with a corresponding decrease in the potential for more motor vehicle access in that zone.

About 55,000 acres would be targeted for restoration in Alternative C (15,000 more acres than in Alternative A), with less intrusive methods being used than in Alternative A. Thus, there could be fewer initial adverse impacts from site clearing and preparation; they could be reduced to minor levels. The greater acreage to be restored in Alternative C would lead to a related increase in improved habitat for sagebrush steppe species, but the time in which the beneficial effect would be achieved might be extended.

Fire management in Alternative C would involve suppressing wildfires in all areas except the Pristine Zone, where fire might be used for resource benefit. This is the same policy as in Alternative B, so the effects should be similar. As with Alternative A, wildlife habitat would continue to be fragmented by roads, trails, and facilities, and wildlife habits and movements would continue to be altered by employees and visitors. However, this impact would
be less under Alternative C because it would have the fewest maintained roads, with a corresponding decrease in visitor use. People would continue to concentrate at the developed area in the original Monument, disturbing wildlife somewhat. These intermittent adverse impacts would be minor and long-term.

**Cumulative Impacts**
The cumulative impacts from Alternative C would be similar to those from Alternative A, with slightly more beneficial effects from the expanded reclamation program and the limited access to many areas. The cumulative impacts on wildlife from current and anticipated future actions outside the Monument, along with the actions under Alternative C, would be moderate, long-term, and adverse. Most of the impacts would result from development actions outside the Monument, which might or might not be mitigated. The actions of Alternative C would contribute a small increment to the overall cumulative effects.

**Conclusion**
The effects on wildlife from Alternative C would largely be the same as those described for Alternative A, but 15,000 more acres would be restored in Alternative C, resulting in more improved habitat for sagebrush steppe species. There would be fewer adverse impacts from traffic disturbance because the Passage Zone would be smaller in Alternative C, and the Primitive Zone would be larger. These designations would include the potential for decreased access for motor vehicles and related recreational use overall, resulting in fewer direct and indirect adverse impacts on all wildlife species.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s wildlife resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)**

**Analysis**
The effects to sage-grouse would be only slightly reduced from those described in Alternative C. The exact amount of different would depend on the number of permits issued for morning road use (effectively sage-grouse breeding observation) during the sage-grouse breeding season.

The effects on wildlife from Alternative D (Proposed Plan) would generally be similar to those of the other alternatives, but an expanded restoration program in Alternative D (Proposed Plan) would lead to a greater benefit. Some activities, including transportation and vegetation management, would occur at different levels, with corresponding changes in the effects.

Selected roads in the Passage Zone would be upgraded and maintained for restoration and administration use under Alternative D (Proposed Plan). Minor rerouting of roads could lessen site-specific known wildlife impacts. The use of these roads would continue to disturb wildlife species, possibly severing some migration corridors for some species, including mule deer, pronghorn, and sage-grouse, and there would be road kill along high use corridors. Better access would lead to greater hunting pressure on animal populations in those areas. These seasonal impacts would be negligible to minor with a potential for moderate impacts on some species in high-use areas. Modest changes in the adverse impacts should result from changes in the Passage Zone and in the potential for increased or improved access for motor vehicles in that zone.

An aggressive program to restore 80,000 acres of sagebrush steppe habitat would be carried out in Alternative D (Proposed Plan). The effects on wildlife from this program would be similar to those from Alternative A, but with a substantially larger acreage slated for restoration, there also would be more improved habitat for sagebrush steppe species, a major long-term beneficial effect. Fire management under this alternative would involve suppressing fires in all areas except the Pristine Zone,
where fires might be allowed to continue burning for resource benefit. This is the largely the same as Alternative B, and the effects should be similar.

As in Alternative A, wildlife habitat would continue to be fragmented by roads, trails, and facilities, and wildlife habits and movements would continue to be altered by employees and visitors. People would concentrate at the developed area in the original Monument, disturbing wildlife and degrading habitat. However, emphasizing the use of outfitters and guides might educate visitors, reducing widespread human-caused impacts, a beneficial effect. Adverse impacts would be minor but long-term.

**Cumulative Impacts**
The cumulative effects of Alternative D (Proposed Plan) would be similar to those described for Alternative A, but the overall intensity would be slightly lower because the effects of the restoration would be highly beneficial. The cumulative effects on wildlife from current and anticipated future actions outside the Monument, along with the actions of Alternative D (Proposed Plan), would be minor, long-term, and adverse. Most of the impacts would result from development actions outside the Monument, which might or might not be mitigated. The actions of Alternative D (Proposed Plan) would contribute a substantial amount to the beneficial cumulative effects.

**Conclusion**
The effects on wildlife from Alternative D (Proposed Plan) would be largely the same as those described for Alternative A, but twice as much acreage would be restored in Alternative D, resulting more improved habitat for sagebrush steppe species, a major long-term beneficial effect. Modest changes in the adverse impacts could result from increases in the Passage Zone roads for restoration and administration uses and in the potential for increased or improved access for motor vehicles in that zone.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s wildlife resources or values would not be impaired.

**AIR RESOURCES**

**METHODOLOGY AND ASSUMPTIONS**
To assess air quality impacts, air quality standards and designations for the surrounding area were determined, and the results from nearby air monitoring sites were examined. Any reductions in pollutants resulting from implementing control strategies were taken into account. The effects on air quality from each alternative were assessed by considering existing air quality levels and the air quality related values present, with the use of available data and best professional judgment, and with modeling where possible.

For assessing emissions from fires, the quantity of particulate matter was based on the First Order Fire Effects Model. The annual area treated with prescribed fire was based on an annual average of total area targeted for restoration over a period of 15 years and an assumption that burning sagebrush produces 62.5 pounds per acre (lbs/acre) of PM10 particles and 53.0 lbs/acre of PM2.5 particles (First Order Fire Effects Model 5.1 2002).

The following impact thresholds were used for analyzing the intensity of effects on human health and air quality related values.

**Negligible:** No changes would occur, or changes in air quality would be below or at the level of detection and if detected, the effects would be considered slight.

**Minor:** Changes in air quality would be measurable, although the changes would be small and local. No air quality mitigating measures would be necessary.

**Moderate:** Changes in air quality would be
measurable and would have appreciable consequences, although the effect would be relatively local. Air quality mitigating measures would be necessary, and they probably would be successful.

Major: Changes in air quality would be measurable, would have substantial consequences, and would be noticed regionally. Air quality mitigating measures would be necessary, and their success would be uncertain.

For air quality, the duration of impacts was defined as follows:

Short-term: An effect that would last a short period of time (generally one or two days but no more than seven days).

Long-term: A change in a resource or its condition that would last longer than seven consecutive days.

The area of analysis for the cumulative effects on air quality was defined as the Monument and BLM’s Twin Falls District, including Southeast and South Central Idaho.

**IMPACTS FROM ALTERNATIVE A**

**Analysis**

Under Alternative A, the primary air pollutants would come from fires and from vehicles using roads and trails. The continued use and management of roads at current standards would result in the creation of fugitive dust. There would be 585 miles of unpaved roads inside the Monument, and road disturbance would result in soil displacement and dust production, which could adversely affect air quality and selected air quality related values such as visibility.

The amount of particulate matter emissions (smoke) produced from both prescribed fire and wildland fire use was predicted for Alternative A. The prediction was based on an annual average area burned with prescribed fire over the previous 15 years and the estimated number of acres in Craters of the Moon Wilderness burned in the previous 15 years (Table 38). The actual amount of PM10 and PM2.5 particles produced from fire would be higher in areas where limber pine or junipers are interspersed with brush. This applies only to wildland use fires because no restoration treatments are proposed in areas with limber pine or juniper. The actual acreage burned annually would vary depending on the severity of wildland fire conditions and available funding. Fugitive dust could be generated from burned areas until sufficient vegetation recovered to hold the soil in place. Fugitive dust from wildland use fire probably would be negligible because soil development in the lava fields is limited to small areas such as those found within kipukas.

As shown in Table 38, Alternative A would produce the fewest emissions of smoke from prescribed and wildland use fires of all the alternatives considered. With the exception of the Wilderness Area, wildfires would be suppressed through the Monument. Prescribed fires to meet restoration objectives would continue, but at the lowest acreage level of all the alternatives.

The effects from road-related fugitive dust would be short-term, negligible, and limited to areas near roads and vehicle traffic. Impacts due to smoke from planned burns for restoration would be short-term (1 to 2 days) but could be of moderate intensity in areas in the immediate vicinity of the fire, diminishing rapidly downwind. The effects on air quality from wildland use fires would potentially be of longer duration (up to 7 days) than planned ignitions, depending on the vegetation types involved. Smoke impacts would be an important factor in decisions to initiate or terminate a wildland use fire; therefore, the effects on air quality would also be of moderate to potentially major intensity in areas in the immediate vicinity of the fire, but diminishing rapidly downwind. In Alternative A, wildland fire use could be used only for natural fire ignitions (such as lightning) in the designated Wilderness Area, which would limit potential major impacts.
Table 38
Summary of Emissions Produced from Prescribed and Wildland Use Fires by Alternative

<table>
<thead>
<tr>
<th>Type of Fire Burning in Sagebrush</th>
<th>Average Area Burned/year (acres)</th>
<th>PM10 Emissions Produced (lbs)</th>
<th>PM2.5 Emissions Produced (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescribed Fire (maximum potential)</td>
<td>2,666</td>
<td>166,666</td>
<td>141,333</td>
</tr>
<tr>
<td>Wildland Use Fire</td>
<td>200</td>
<td>12,500</td>
<td>10,600</td>
</tr>
<tr>
<td>Alternative B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescribed Fire (maximum potential)</td>
<td>3,000</td>
<td>187,500</td>
<td>159,000</td>
</tr>
<tr>
<td>Wildland Use Fire (maximum potential</td>
<td>1,250</td>
<td>78,125</td>
<td>66,250</td>
</tr>
<tr>
<td>should all fires within Pristine Zone be managed for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>resource benefit)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescribed Fire (maximum potential)</td>
<td>3,666</td>
<td>229,166</td>
<td>194,298</td>
</tr>
<tr>
<td>Wildland Use Fire (maximum potential</td>
<td>1,250</td>
<td>78,125</td>
<td>66,250</td>
</tr>
<tr>
<td>should all fires within Pristine Zone be managed for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>resource benefit)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescribed Fire (maximum potential)</td>
<td>5,333</td>
<td>333,333</td>
<td>282,649</td>
</tr>
<tr>
<td>Wildland Use Fire (maximum potential</td>
<td>1,250</td>
<td>78,125</td>
<td>66,250</td>
</tr>
<tr>
<td>should all fires within Pristine Zone be managed for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>resource benefit)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cumulative Impacts
Other sources of smoke and dust in the region are wildfires and prescribed fires on public and private lands, fugitive dust from nearby roads, recently burned lands, and agricultural fields after tilling. Wildfires have burned a total of 730,800 acres in the Twin Falls District since 1996. BLM fire management activities (fire for resource benefit and prescribed fire) alone could produce up to 52,512 tons of PM10 particulate matter in the Twin Falls District over a 10-year period (BLM FMDA 2004). Other haze-causing pollutants (mostly fine particles) are emitted into the atmosphere by activities such as electric power generation; various industrial and manufacturing processes; truck and auto emissions; forest fires’ and construction at considerable distances from the Monument. Off-site sources, added to the sources of air pollution caused by the actions of Alternative A, would create negligible to minor long-term adverse effects and moderate short-term adverse effects over the entire area. This would be similar for all alternatives.

Conclusion
Prescribed fire, wildland use fire, and fugitive dust from roads result in smoke or dust containing particles that adversely affect human health and air quality related values such as visibility. The effects on air quality from smoke and dust caused by the management activities of Alternative A typically would be short-term and local. The intensity of effects could range from negligible to moderate, depending on weather conditions and the location and size of fires. Most prescribed and wildland use fires would cause minor short-term effects. Fugitive dust from roads with current traffic use
would produce short-term local adverse effects of negligible intensity.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s air resources or values would not be impaired.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**
The effects on air quality from Alternative B would be similar to those described for Alternative A, but with somewhat greater intensity. Under Alternative B, higher standard roads would be added to the expanded the Passage Zone. Therefore, vehicle traffic and vehicle speed could increase, resulting in a proportional increase in fugitive dust, a negligible to minor short-term local adverse impact.

The particulates (smoke) that would be produced by prescribed fire and wildland fire use was predicted for Alternative B with the use of the same assumptions as were described for Alternative A. More emissions of smoke would be produced under Alternative B than in Alternative A because a slightly larger area would be burned in Alternative B (see Table 29). Some naturally ignited fires in the Pristine Zone would be managed for resource benefit; these would be more likely to generate smoke over a longer period of time than if the fire was suppressed aggressively. Prescribed fires to meet restoration objectives could increase to a maximum of 45,000 acres over the life of the plan.

The effects from road-related fugitive dust could be higher in Alternative B than in Alternative A, but those effects still would be short-term, negligible, and localized to areas near road traffic. The effects from planned burns for restoration would be short-term (1 to 2 days) and of moderate intensity in areas in the immediate vicinity of the fire, diminishing rapidly downwind. The effects on air quality from wildland use fires would potentially last longer (up to 7 days) than planned ignitions, depending on the vegetation types involved. Smoke impacts would be an important factor in decisions to initiate or terminate a wildland use fire; therefore, the impacts on air quality would be moderate to major in areas in the immediate vicinity of the fire but diminishing rapidly downwind. In Alternative B, potential wildland fire use could be expanded to most of the Preserve (409,460 acres).

**Cumulative Impacts**
The cumulative effects on air quality from other sources of smoke and dust in the area would be the same as those described for Alternative A: particulates from wildfires and prescribed fires on public and private lands in the region, fugitive dust from nearby roads, recently burned lands, agricultural fields following tilling, and industrial and construction activities plus regional truck and auto emissions. Off-site sources, added to the sources of air pollution from the actions of Alternative B, would create negligible to minor long-term effects and moderate short-term effects over the entire area; this would be similar for all the alternatives.

**Conclusion**
The adverse effects on air quality from the management actions of Alternative B typically would be short term and limited to the local region. The intensity of effects would range from negligible to moderate, with most prescribed and wildland use fires having minor effects. Fugitive dust from roads with potentially increased vehicle traffic use on unpaved roads would produce short-term local effects of negligible to minor intensity. A substantial increase in traffic would be required to elevate this impact to the moderate levels.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to
opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s air resources or values would not be impaired.

IMPACTS FROM ALTERNATIVE C

Analysis
Alternative C would involve fewer high standard roads that Alternative B; therefore, vehicle traffic and speed would remain the same as in Alternative A or possibly decrease, with a proportional decrease in fugitive dust from this source, resulting in negligible short-term local impacts on air quality and visibility.

The particulates (smoke) that would be produced by prescribed fire and wildland fire use was predicted for Alternative C with the use of the same assumptions as were described for Alternative A. More emissions of smoke would be produced under Alternative C than in Alternatives A or B because a there would a slightly larger area of prescribed fires (see Table 29). Some naturally ignited fires in the Pristine Zone would be managed for resource benefit; these would be more likely to generate smoke over a longer period of time than if the fire was suppressed aggressively. Prescribed fires to meet restoration objectives could increase to a maximum of 55,000 acres over the life of the plan.

Cumulative Impacts
The cumulative effects on air quality from other sources of smoke and dust in the area would be the same under Alternative C as those described for Alternative A: particulates from wildfires and prescribed fires on public and private lands in the region, fugitive dust from nearby roads, recently burned lands, agricultural fields following tilling, and industrial and construction activities plus regional truck and auto emissions. Off-site sources, added to the sources of air pollution from the actions of Alternative C, would create negligible to minor long-term effects and moderate short-term effects over the entire area; this would be similar for all the alternatives.

Conclusion
The adverse effects on air quality from Alternative C typically would be short term and limited to the local region. The intensity of effects would range from to negligible to moderate, with most prescribed and wildland use fires causing minor effects. Fugitive dust from roads with decreased traffic use and vehicle speeds would produce short-term local effects of negligible intensity.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s air resources or values would not be impaired.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
Unpaved roads would be maintained to a high standard under Alternative D (Proposed Plan) to facilitate restoration and fire-related activities. Overall, increases in vehicle traffic and speed could be similar to those described for Alternative B, resulting in more road-related fugitive dust. Short-term increases in local areas could result from vehicle traffic from restoration projects. The adverse effects on air quality would be short-term, negligible, and localized.

The particulates (smoke) that would be produced by prescribed fire and wildland fire use was predicted for Alternative D (Proposed Plan) with the use of the same assumptions as were described for Alternative A. More emissions of smoke would be produced under Alternative D (Proposed Plan) than in any of the other alternatives because there would more prescribed fires (see Table 29). Some naturally ignited fires in the Pristine Zone would be managed for resource benefit; these would be more likely to generate smoke over a longer period of time than if
the fire was suppressed aggressively. Prescribed fires to meet restoration objectives could increase to a maximum of 80,000 acres over the life of the plan.

Cumulative Impacts
The cumulative effects on air quality from other sources of smoke and dust in the area would be the same under Alternative C as those described for Alternative A: particulates from wildfires and prescribed fires on public and private lands in the region, fugitive dust from nearby roads, recently burned lands, agricultural fields following tilling, and industrial and construction activities plus regional truck and auto emissions. Off-site sources, added to the slightly increased sources of air pollution from the actions of Alternative D (Proposed Plan), would create negligible to minor long-term effects and moderate short-term effects over the entire area; this would be similar for all the alternatives.

Conclusion
The adverse effects on air quality from the actions of Alternative D (Proposed Plan) typically would be short term and limited to the local region. The intensity of effects would range from negligible to moderate, with most prescribed and wildland use fires causing minor effects. Fugitive dust from roads with current traffic use would produce short-term local effects of negligible intensity. The addition of non-Monument sources occurring during the same time period could produce more intense but still moderate effects throughout the Monument.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s air resources or values would not be impaired.

Cultural Resources (Archaeological and Historic Resources)

Methodology and Assumptions
The impact analysis for cultural resources is limited to the effects on archaeological and historic resources, since other cultural resource areas were dismissed from detailed analysis (see Chapter 1); also, effects on Native American treaty rights, trust resources, and ethnographic resources are addressed in a separate section. The NHPA requires agencies to take into account the effects of their actions on properties listed or eligible for listing on the National Register of Historic Places (NRHP). The process begins with identification and evaluation of cultural resources for NRHP eligibility, followed by an assessment of effect on those eligible resources, and concludes after a consultation process. If an action could change in any way the characteristics that qualify the resource for inclusion on the NRHP, it is considered to have an effect. No adverse effect means there could be an effect, but the effect would not be harmful to those characteristics that qualify the resource for inclusion on the NRHP. Adverse effect means the effect could diminish the integrity of the characteristics that qualify the resource for the NRHP.

Section 110 of the NHPA also provides direction to agencies to ensure that properties under agency jurisdiction are identified, evaluated and nominated to the National Register of Historic Places. In addition, eligible properties are to be managed and maintained for their historic preservation values. Preservation of these properties is to be given full consideration in planning.

In order to analyze the effects of the plan alternatives on archaeological resources, all available information on known archaeological sites was compiled. Map locations of archaeological sites were compared with locations of proposed developments and modifications to existing facilities. Certain assumptions were made regarding management of cultural resources in the future. These assumptions include:
• Some proactive Section 110 inventory (i.e., non-project-related inventory) would be completed within the Monument each year.

• Section 106 inventory would be conducted for all proposed development projects as required by FLPMA under each of these alternatives.

• NRHP listed and eligible sites would be monitored for vandalism and protected/stabilized as necessary.

Archaeological sites are continually deteriorating due primarily to the effects of weather and gravity. Left alone, sites will inevitably degrade over time. Impacts from concentrated human and livestock visitation and use can contribute to the effects to natural agents of deteriorations, and they can substantially increase the rate of site deterioration, in areas such as parking lots, livestock water troughs, trailheads, and corrals. Although it is impossible to entirely eliminate deterioration caused by natural elements, actions such as restoration, protection, and stabilization measures may be used to slow deterioration. In contrast, it is possible to control the effects of human impacts through careful planning of activities and new developments, by educating visitors and agency staff, and by limiting or directing locations of human activity in and around archaeological sites.

If impacts caused by deliberate vandalism or artifact collection are excluded, most impacts resulting from visitor use are relatively minor when considered on an individual basis. However, for the purpose of this plan, it is necessary to consider the effects caused by large amounts of visitors at a given location over the life of this plan. For example, while a single hiker may have a negligible effect on site integrity, the cumulative impact of many hikers over 15 to 20 years can be substantial. In the following section, impacts are analyzed for each alternative based on the numbers of sites that would be affected in conjunction with the effects of various types of activities over the life of the plan. For the purposes of this analysis, levels of impacts to archaeological resources were defined as follows:

Negligible: The impact on archaeological sites is at the lowest levels of detection – barely measurable with any perceptible consequences, either beneficial or adverse, to archaeological resources. For purposes of Section 106, the site’s NRHP eligibility is not threatened and the determination of effect would be no adverse effect.

Minor: The adverse minor impact on archaeological sites is measurable or perceptible, but it is slight and localized within a relatively small area for a site or group of sites. The impact does not affect the character diminish features of an NRHP eligible or listed archaeological site and would not have a permanent effect on the integrity of any archaeological sites. For the purposes of Section 106, the site’s NRHP eligibility is intact and the determination of effect would be no adverse effect.

The beneficial minor impact involves maintenance and preservation of sites. For purposes of Section 106, the determination of effect would be no adverse effect.

Moderate: The adverse moderate impact is measurable and perceptible. The impact changes one or more character-defining features of an archaeological resource, but does not diminish the integrity of the resource to the extent that its NRHP eligibility is entirely lost. For purposes of Section 106, the site’s NRHP eligibility is threatened and the determination of effect would be adverse effect.

The beneficial moderate impact involves site stabilization. For purposes of Section 106, the determination of effect would be no adverse effect.

Major: The adverse major impact on archaeological sites is substantial, noticeable, and permanent. For NRHP-eligible or
-listed archaeological sites, the impact changes one or more character-defining features of an archaeological resource, diminishing the integrity of the resource to the extent that it is no longer eligible for listing in the NRHP. For purposes of Section 106, the site’s NRHP eligibility is lost and the determination of effect would be adverse effect.

The beneficial major impact involves active intervention to preserve and improve sites. For purposes of Section 106, the determination of effect would be no adverse effect.

The area of analysis for cumulative impacts to Cultural Resources was defined as south central and eastern Idaho.

**IMPACTS FROM ALTERNATIVE A**

**Analysis**

Cultural resource management within the Monument would continue under current laws, policies, and regulations under Alternative A. The cultural resource database for this area would expand slowly each year as data are collected from Section 106 projects and Section 110 inventory, a moderate beneficial impact to cultural resources.

Rocks within the Monument would remain in their current condition at current maintenance levels. Remote areas of the Monument would remain difficult to access by vehicle, and most areas would be inaccessible by sedan. The broad network of repetitive, two-track Class D roads would remain open. Travel on poorly maintained Class D roads could increase erosion that could impact nearby sites. Difficult travel would keep the majority of visitors out of the most remote areas and away from many cultural resources. There could be long-term, minor adverse impacts to cultural resources from erosion due to vehicle traffic. There would be a long-term, minor beneficial impact in keeping cultural resources inaccessible.

Under this alternative, 40,000 acres are targeted for sagebrush steppe restoration, which involves the use of prescribed fire and drill seeding to return the vegetation to a mix of perennial plants and shrubs. Any fire, wild or prescribed, exposes cultural resources on the ground surface, placing them at risk for unauthorized collection and increased soil erosion. Any restoration projects would be subject to Section 106 inventory as they arise to ensure that cultural resources are not impacted. Flagging cultural resources for avoidance often attracts attention to those sites and increases the risk of unauthorized collection. Sagebrush steppe restoration activities would have a short-term, minor adverse effect on cultural resources resulting from flagging, but the long-term stabilization of the soils and the reduced potential for wildfire would have a long-term, moderate beneficial effect.

Wildfire management under this alternative consists of full suppression on all lands outside designated wilderness. Full suppression reduces the number of acres that burn, which limits the acres of ground surface exposed, thereby protecting cultural resources from increased risk of unauthorized collection. Cultural resources may receive intense, short-term vehicle traffic during active fire suppression activities, as well as possible heavy equipment impacts as a result of fire line construction. This could constitute a short-term, moderate adverse impact during suppression activities. Overall, full suppression of wildfire would have a long-term, major beneficial impact on cultural resources.

There would be no change in livestock use management under Alternative A. Currently, livestock cause some erosion at playa sites and water trough locations, which may impact cultural resources. Fence construction could cause livestock congregation in certain areas. Livestock can create trails and denude areas of vegetation where they congregate, which adds to surface soil erosion and can damage cultural resources in the area. Livestock use could have a short-term, site-specific (at a temporary water trough, for example), minor to moderate adverse effect on cultural resources.

Chapter 4: ENVIRONMENTAL CONSEQUENCES 247
Visitor facilities would remain the way they currently are, with cultural resource interpretation at specific locations at the north end of the Monument, some minor trail maintenance of existing trails and some safety information posted on waysides at the Crystal Ice Cave/Kings Bowl area. Keeping the majority of visitors on developed trails and providing interpretative materials at specific locations minimizes the amount of foot traffic, unauthorized collection, and vandalism at the majority of cultural resource sites within the Monument. For those locations with interpretive materials, there would be a long-term, minor adverse effect from foot traffic, unauthorized collection and vandalism. Interpretive materials may stress resource protection, which may reduce the amount of damage to cultural resources. There would be a long-term, minor beneficial effect for cultural resources away from trails without interpretive waysides because visitors would not be drawn to those areas.

The Monument currently includes all four Visual Resource Management (VRM) classifications (Classes I through IV). This allows for a relatively wide range of developments outside WSAs and Wilderness areas. A Section 106 inventory would be required to prevent adverse impacts to sites on a case-by-case basis, but over time more developments within the Monument could increase the amount of visual intrusion, which can have an indirect impact on cultural resources. Class III and IV VRM designations within the Monument would have a long-term, minor adverse impact to cultural resources.

Cumulative Impacts
For the most part, use of adjacent federal lands outside the Monument would contribute similar impacts to cultural resources as described above. At current staffing levels, the amount of proactive cultural resource inventory and monitoring would be limited, and site looting could go undetected in the backcountry areas.

Adjacent private land development, including use of land for agriculture and grazing, can severely affect cultural resources, since there is no federal oversight or regulation of these activities. This makes the preservation of sites on public lands more urgent, as the overall number of undisturbed archaeological resources is dwindling.

It is possible that information distributed in visitor centers in the neighboring communities, such as Twin Falls and Idaho Falls, may draw increased visitors to the Monument, although it seems unlikely given the current visitation levels. This could increase pressure on cultural resources from foot and vehicle traffic, as well as unauthorized collection and vandalism. This increased visitation, in conjunction with the impacts already occurring, may have a long-term, negligible to minor, adverse impact on cultural resources. Overall, cumulative impacts to cultural resources from actions outside the Monument boundary, plus those of this alternative, would be long term and generally adverse, ranging from minor to moderate in intensity.

Conclusion
Alternative A would have a negligible to minor, adverse impact on maintaining the long-term integrity of the majority of archaeological resources within the Monument. The restoration program outcome and fire suppression would have a long-term, moderate beneficial effect, while initial restoration, suppression actions, grazing, and vehicle travel would result in short-term, minor to moderate adverse impacts.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s cultural resources or values would not be impaired.

IMPACTS FROM ALTERNATIVE B
Analysis
Cultural resource management within the Monu-
ment would continue under current laws, policies, and regulations. The cultural resource database for this area would expand each year as data is collected from Section 106 projects and Section 110 inventory, a moderate beneficial impact to cultural resources. Increased recreation use would require more intense monitoring of cultural resources in the Passage Zone to prevent or minimize damage.

Under Alternative B, the road and trail system would provide a high level of access to a wide variety of destinations, recreation activities, and both motorized and non-motorized trails. Improved access to the more remote regions of the Monument could increase the visitor use of those areas, as well as increasing the impacts of vehicle and foot traffic, unauthorized collections and vandalism to cultural resources. Increased vehicle access may lead to an increase in wildfires, leaving cultural resources exposed to vandalism, illegal collection, and excessive erosion. This alternative includes the largest number of acres within the Passage Zone, which provides more opportunities for trail development within that zone. There would be a long-term, moderate adverse effect to cultural resources under this alternative.

Under this alternative, 45,000 acres are targeted for sagebrush steppe restoration, which involves the use of prescribed fire and drill seeding to return the vegetation to a mix of perennial plants and shrubs. Any fire, wild or prescribed, exposes cultural resources on the ground surface placing them at risk for unauthorized collection and increased soil erosion. Any restoration projects would be subject to a Section 106 inventory as they arise to assure cultural resources are not impacted. Flagging cultural resources for avoidance often attracts attention to those sites and increases the risk of unauthorized collection. Sagebrush steppe restoration activities would have a short-term, minor adverse effect on cultural resources resulting from flagging, but the long-term stabilization of the soils and the reduced potential for wildfire would have a long-term, moderate beneficial effect.

Wildfire management under this alternative consists of full suppression on all lands outside the Pristine Zone, especially those with existing, healthy sagebrush steppe. Full suppression reduces the number of acres that burn, which limits the acres of ground surface exposed, thereby protecting cultural resources from increased risk of unauthorized collection. Cultural resources may receive intense, short-term vehicle traffic during active fire suppression activities, as well as possible heavy equipment impacts as a result of fire line construction. This could constitute a short-term, moderate adverse impact during suppression activities. Overall, full suppression of wildfire would have a long-term, major beneficial impact on cultural resources.

In Alternatives B, C, and D, any new livestock water facilities would be more likely in the Passage Zone, although few new developments are anticipated. Since livestock tend to congregate around water sources, there could be long term, site specific, minor to moderate adverse effects on cultural resources located near water sources.

Visitor facilities would be expanded under Alternative B, with cultural resource interpretation at specific locations, new trail designations and interpretive/safety information posted on waysides at the Crystal Ice Cave/Kings Bowl area. Increasing the number of designated, developed trails and providing more interpretative materials at specific locations, increases the potential for vehicle and foot traffic, unauthorized collection and vandalism at cultural resource sites within the Passage Zone. For those locations with interpretive materials, there would be a long-term, minor adverse effect from vehicle and foot traffic, unauthorized collection and vandalism. Interpretive materials may stress resource protection, which may reduce the amount of damage to cultural resources. There would be a long-term, minor beneficial effect for cultural resources away from trails without interpretive waysides because visitors would not be drawn to those areas.

This alternative would designate all lands within the Monument as VRM Class I or II. This minimizes the visual intrusion of possible developments outside WSAs and Wilderness areas. A Section 106 inven-
tory would be required to prevent adverse impacts
to development sites on a case-by-case basis. Over
time, less intrusive developments resulting from
more restrictive VRM classes within the Monument
would have a long-term, negligible to minor benefi-
cial impact on cultural resources.

Cumulative Impacts
For the most part, use of adjacent federal lands
outside the Monument would contribute similar
impacts to cultural resources as described above.
Adjacent private land development, including use of
land for agriculture and grazing, can severely affect
cultural resources, since there is no federal oversight
or regulation of these activities. This makes the
preservation of sites on public lands more urgent,
as the overall number of undisturbed archaeological
resources is dwindling.

It is possible that information distributed in visitor
centers in the neighboring communities, such as
Twin Falls and Idaho Falls, may draw increased visi-
tors to the Monument. This could increase pressure
on cultural resources from foot and vehicle traffic,
as well as unauthorized collection and vandalism.
This increased visitation, in conjunction with the
impacts already occurring, may have a long-term,
negligible to minor, adverse impact on cultural
resources. Increased proactive cultural resource
inventory, interpretation and monitoring under
this alternative would help minimize that impact.
Overall, cumulative impacts to cultural resources
from actions outside the Monument boundary, plus
those of this alternative, would be long term and
generally adverse, ranging from minor to moderate
in intensity.

Conclusion
Alternative B would have a moderate adverse
effect on maintaining the long-term integrity of
the majority of archaeological resources within the
Monument by emphasizing recreational opportuni-
ties and vehicle access. The restoration program
outcome and fire suppression would have a long-
term, moderate beneficial impact, where vehicle
travel, grazing, initial restoration, and suppression
actions would result in short-term minor to moderate
adverse impacts.

Because there would be no major adverse impacts
on a resource or value whose conservation is (1)
necessary to fulfill specific purposes identified
in the establishing legislation or proclamation of
Craters of the Moon National Monument; (2) key to
the natural or cultural integrity of the Monument or
to opportunities for its enjoyment; or (3) identified
as a goal in its management plan or other relevant
NPS planning documents, the Monument’s cultural
resources or values would not be impaired.

IMPACTS FROM ALTERNATIVE C
Analysis
Cultural resource management within the Mono-
ument would continue under current laws, policies
and regulations. The cultural resource database for
this area would expand each year as data is collected
from Section 106 projects and Section 110 inventory,
a moderate beneficial impact to cultural resources.

Under Alternative C, fewer roads within the Monu-
ment would be maintained to a high standard and
more roads would be closed. Decreased access to
the more remote regions of the Monument would
decrease the visitor use of those areas, and concur-
rently decrease the impacts of vehicle and foot
traffic, unauthorized collections, and vandalism to
cultural resources. Decreased vehicle access may
lead to a decrease in human caused wildfires, which
would protect cultural resources from exposure and
erosion. This alternative includes the largest number
of acres within the Pristine Zone, which provides
fewer opportunities for trail development within
the Monument. There would be a long-term, minor
beneficial effect to cultural resources under this
alternative.

Under this alternative, 55,000 acres are targeted for
sagebrush steppe restoration, which involves the
use of prescribed fire and drill seeding to return the
vegetation to a mix of perennial plants and shrubs.
Any fire, wild or prescribed, exposes cultural
resources on the ground surface placing them at
risk for unauthorized collection and increased soil erosion. Any restoration projects would be subject to Section 106 inventory as they arise to assure cultural resources are not impacted. Flagging cultural resources for avoidance often attracts attention to those sites and increases the risk of unauthorized collection. Sagebrush steppe restoration activities would have a short-term, minor adverse effect on cultural resources resulting from flagging, but the long-term stabilization of the soils and the reduced potential for wildfire would have a long-term, moderate beneficial effect.

Wildfire management under this alternative consists of full suppression on all lands outside the Pristine Zone, especially those with existing, healthy sagebrush steppe. Full suppression reduces the number of acres that burn, which limits the acres of ground surface exposed, thereby protecting cultural resources from increased risk of unauthorized collection. Cultural resources may receive intense, short-term vehicle traffic during active fire suppression activities, as well as possible heavy equipment impacts as a result of fire line construction. This could constitute a short-term, moderate adverse impact during suppression activities. Overall, full suppression of wildfire would have a long-term, major beneficial impact on cultural resources.

In Alternatives B, C, and D, any new livestock water facilities would be more likely in the Passage Zone, although few new developments are anticipated. Since livestock tend to congregate around water sources, there could be long-term, site-specific, and minor to moderate adverse effects on cultural resources located near water sources.

Visitor facilities would be minimal under Alternative C, with cultural resource interpretation at a few specific locations, no new trail designations and interpretive/safety information posted on waysides at the Crystal Ice Cave/Kings Bowl area. For those locations with interpretive materials, there would be a long-term, minor adverse effect from vehicle and foot traffic, unauthorized collection, and vandalism. Interpretive materials may stress resource protection, which may reduce the amount of damage to cultural resources. There would be a long-term, minor beneficial effect for cultural resources away from trails without interpretive waysides because visitors would not be drawn to those areas.

This alternative would designate all lands within the Monument as VRM Class I or II. This minimizes the visual intrusion of possible developments outside WSA's and Wilderness areas. A Section 106 inventory would be required to prevent adverse impacts to development sites on a case-by-case basis. Less intrusive developments resulting from more restrictive VRM classes within the Monument would have a long-term, negligible to minor beneficial impact on cultural resources.

**Cumulative Impacts**

For the most part, use of adjacent federal lands outside the Monument would contribute similar impacts to cultural resources as described above. Adjacent private land development, including use of land for agriculture and grazing, can severely affect cultural resources, since there is no federal oversight or regulation of these activities. This makes the preservation of sites on public lands more urgent, as the overall number of undisturbed archaeological resources is dwindling.

It is possible that information distributed in visitor centers in the neighboring communities, such as Twin Falls and Idaho Falls, may draw increased visitors to the Monument. This could increase pressure on cultural resources from foot and vehicle traffic, as well as unauthorized collection and vandalism. This increased visitation, in conjunction with the impacts already occurring, may have a long-term, negligible to minor adverse impact on cultural resources. Increased proactive cultural resource inventory and monitoring under this alternative would help minimize that impact. Overall, cumulative impacts to cultural resources from actions outside the Monument boundary, plus those of this alternative, would be long-term and generally adverse, ranging from minor to moderate in intensity.
Conclusion
Alternative C would have a minor beneficial effect on maintaining long-term integrity of the majority of archaeological resources within the Monument by minimizing the amount of human and vehicle traffic into the Primitive and Pristine Zones. The restoration program outcome, fire suppression, and restricted access would all contribute to long-term, minor to moderate beneficial impacts. Vehicle traffic (limited), grazing, initial restoration, and suppression actions would result in short-term, minor to moderate adverse impacts.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s cultural resources or values would not be impaired.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
Cultural resource management within the Monument would continue under current laws, policies and regulations. The cultural resource database for this area would expand each year as data is collected from Section 106 projects and Section 110 inventory, a moderate beneficial impact to cultural resources.

Under Alternative D (Proposed Plan), existing Class B and C roads in the Primitive Zone would remain open, their maintenance driven by natural resource management needs, primarily fire suppression, weed management, and restoration activities. Many Class D roads in the Primitive and Pristine Zones would be converted to trails or closed for resource protection. The restrictions proposed on Class D roads could decrease visitor use in the Primitive and Pristine Zones, thereby decreasing the risk of cultural resource vandalism and illegal collection. The occurrence of human caused wildfires may also decrease, lowering the risk of cultural resource site erosion. Upgrading the primary access routes outside the Monument (south end of Arco-Mindoka Road and the Carey-Kimama Road,) to a consistent B classification may encourage more visitors in the Passage Zone and may increase pressure on cultural resources within the Passage Zone, but overall this alternative would have a long-term, minor beneficial effect to cultural.

Under this alternative, the largest amount of land (80,000 acres) is targeted for sagebrush steppe restoration, a substantial increase over the other three alternatives. This involves the use of prescribed fire and drill seeding to return the vegetation to a mix of perennial plants and shrubs. Any fire, wild or prescribed, exposes cultural resources on the ground surface placing them at risk for unauthorized collection and increased soil erosion. Any restoration project would be subject to Section 106 inventory as they arise to assure cultural resources are not impacted. Flagging cultural resources for avoidance often attracts attention to those sites and increases the risk of unauthorized collection. Sagebrush steppe restoration activities would have a short-term, minor to possibly moderate adverse effect on cultural resources due to the amount of area and aggressive program, which would expose more area at any one time. However, the long-term stabilization of the soils and the reduced potential for wildfire would have a long-term, moderate beneficial effect.

Wildfire management under this alternative consists of full suppression on all lands outside the Pristine Zone, especially those with existing, healthy sagebrush steppe. Full suppression reduces the number of acres that burn, which limits the acres of ground surface exposed, thereby protecting cultural resources from increased risk of unauthorized collection. Cultural resources may receive intense, short-term vehicle traffic during active fire suppression activities, as well as possible heavy equipment impacts as a result of fire line construction. This could constitute a short-term, moderate adverse impact during suppression activities. Overall, full suppression of wildfire would have a long-term,
major beneficial impact on cultural resources.

In Alternatives B, C, and D, any new livestock water facilities would be more likely in the Passage Zone, although few new developments are anticipated. Since livestock tend to congregate around water sources, there could be long-term, site-specific, and minor to moderate adverse effects on cultural resources located near water sources. The modifications made in the FEIS to Alternative D reduce Passage Zone in the Laidlaw Park area compared to the Draft Alternative D. This would likely limit some development of livestock facilities and reduce the potential for associated adverse impacts to cultural resources in or near these areas.

Visitor facilities would be focused outside the Monument under Alternative D (Proposed Plan). For those few cultural resource locations with on-site interpretive materials, there would be a long-term, minor adverse effect from vehicle and foot traffic, unauthorized collection, and vandalism. Interpretive materials would stress resource protection, which may reduce the amount of damage to cultural resources. There would be a long-term, minor beneficial effect for cultural resources away from roads and trails without interpretive waysides because visitors would not be drawn to those areas.

This alternative would designate all lands within the Monument as VRM Class I or II. This minimizes the visual intrusion of possible developments outside WSAs and Wilderness areas. A Section 106 inventory would be required to prevent adverse impacts to development sites on a case-by-case basis. Less intrusive developments resulting from more restrictive VRM classes within the Monument would have a long-term, negligible to minor beneficial impact on cultural resources.

Cumulative Impacts
For the most part, use of adjacent federal lands outside the Monument would contribute similar impacts to cultural resources as described above. Adjacent private land development, including use of land for agriculture and grazing, can severely affect cultural resources, since there is no federal oversight or regulation of these activities. This makes the preservation of sites on public lands more urgent, as the overall number of undisturbed archaeological resources is dwindling.

It is possible that information distributed in visitor centers in the neighboring communities, such as Twin Falls and Idaho Falls, may draw increased visitors to the Monument. This could increase pressure on cultural resources from foot and vehicle traffic, as well as unauthorized collection and vandalism. This increased visitation, in conjunction with the impacts already occurring, may have a long-term, negligible to minor adverse impact on cultural resources. Increased proactive cultural resource inventory, interpretation and monitoring under this alternative would help minimize that impact. Overall, cumulative impacts to cultural resources from actions outside the Monument boundary, plus those of this alternative, would be long-term, negligible to minor adverse impacts.

Conclusion
Alternative D (Proposed Plan) would have a moderate beneficial effect on maintaining the long-term integrity of the majority of archaeological resources within the Monument by emphasizing off-site interpretation and visitor services, and by emphasizing aggressive range restoration. Short-term minor to moderate adverse impacts would also occur from vehicle travel, initial restoration activities, suppression actions, and grazing.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the Monument’s cultural resources or values would not be impaired.
NATIVE AMERICAN RIGHTS AND INTERESTS

METHODOLOGY AND ASSUMPTIONS

Federal agencies are required to take into account the effects of their actions on Native American values, such as tribal treaty rights/trust resources, ethnographic resources, access to traditional use areas and/or religious/sacred sites, preservation of archaeological sites, the handling of Native American Graves Protection and Repatriation Act (NAGPRA) materials and the maintenance of suitable habitat for subsistence species of importance to tribes.

In order to analyze the effects of the plan alternatives on Native American values, several meetings were held with interested tribal staff to collect their comments on the alternatives. Certain assumptions were made regarding Native American values within the Monument. These assumptions include:

- Section 106 archaeological inventory would be conducted for all proposed development projects as required by the National Historic Preservation Act (NHPA) under each of these alternatives. As part of the agencies’ mandated tribal consultation responsibilities, any proposed development determined to have impacts to cultural resources or Native American values would be discussed with the tribes to develop alternatives and/or mitigation measures.
- Tribes regulate their own members’ hunting on the Preserve and the expanded areas of the Monument.
- In addition to the agencies’ mandated tribal consultation responsibilities, BLM and NPS staff would continue to meet with interested tribal staff on a regular basis to discuss and address issues of concern as they arise.
- The current road network provides sufficient access to traditional use areas for tribal members.
- The handling of NAGPRA materials would follow the guidance provided in the law and would not vary by alternative.

For the purposes of this analysis, levels of impacts to Native American values were defined as follows:

Negligible: The impact to Native American values is at the lowest levels of detection - barely measurable, without perceptible consequences, either beneficial or adverse.

Minor: A minor adverse impact on Native American values is measurable or perceptible, but it is slight and localized within a relatively small area. The impact does not diminish the character of trust resources, ethnographic resources, traditional use areas or the exercise of treaty rights and would not have a permanent effect on the integrity of any ethnographic resource, traditional use area, or treaty right.

A minor beneficial impact involves maintenance and preservation of traditional use areas, trust resources, ethnographic resources and/or habitat for treaty species.

Moderate: A moderate adverse impact is measurable and perceptible. The impact changes one or more characteristics or defining features of trust resources, ethnographic resources, traditional use areas or treaty rights, but does not diminish the integrity of the resource to the extent that it is jeopardized.

A moderate beneficial impact involves stabilization of trust resources, ethnographic resources, traditional use areas, and/or habitat for treaty species.

Major: A major adverse impact on Native American values is substantial, noticeable, and permanent. The impact changes one or more character-defining features of trust resources, ethnographic
resources, traditional use areas or treaty rights, diminishing the integrity of the resource to the extent that it is no longer able to sustain traditional uses or support the exercise of treaty rights.

A major beneficial impact involves active intervention to preserve trust resources, ethnographic resources, traditional use areas, and/or habitat for treaty species.

The area of analysis for cumulative impacts to Native American Values was defined as the Eastern Snake River Plain.

**IMPACTS FROM ALTERNATIVE A**

**Analysis**
Under Alternative A, 40,000 acres are planned for sagebrush steppe restoration, which involves the use of prescribed fire and drill seeding to return the vegetation to a mix of native plants and shrubs. Any fire, wild or prescribed, temporarily displaces wildlife and may change the character of traditional use areas. Sagebrush steppe restoration activities could have a short term, minor adverse effect on ethnographic resources, traditional use areas and the exercise of treaty rights, but the long term improvement in habitat and the reduced potential for wildfire would have a long term, moderate beneficial effect on Native American values.

Wildfire management under this alternative consists of full suppression on all lands outside the Pristine Zone. Full suppression reduces the number of acres that burn, thereby protecting traditional use areas from loss of habitat for treaty species. Traditional use areas may receive intense, short-term vehicle traffic during active fire suppression activities, as well as possible heavy equipment impacts as a result of firebreak construction. This could constitute a short-term, moderate adverse impact during suppression activities. Overall, full suppression of wildfire would have a long-term, minor beneficial impact on ethnographic resources, traditional use areas and habitat for treaty species.

The Monument currently includes all four Visual Resource Management (VRM) classifications (Classes I – IV). This allows for a wide range of developments outside WSAs and Wilderness areas. Over time, Class III and IV area developments within the Monument could increase the amount of visual intrusion, which could have an indirect impact on the character and integrity of ethnographic resources and traditional use areas. Class III and IV VRM designations within the Monument could have a long-term, negligible to minor adverse impact to Native American values.

Under Alternative A, roads within the Monument would remain in their current condition at current maintenance levels. Remote areas of the Monument would remain difficult to access by vehicle and most areas would be inaccessible by sedan. The broad network of two-track Class D roads would remain open. Because tribal members have not identified any access concerns, for the purpose of this analysis the agencies assume the existing road network is adequate for tribal access to traditional use areas. There would be a long-term, negligible to minor beneficial impact to Native American values.

**Cumulative Impacts**
Tribal treaty rights exercised on adjacent federal lands outside the Monument are consistent with those exercised within the expanded Monument and Preserve. It is possible that information distributed in existing visitor centers in the neighboring communities, such as Twin Falls and Idaho Falls, may draw increased visitors to the Monument, but it seems unlikely given the current visitation levels. Increased visitation, in conjunction with the impacts already occurring, could have a long-term, negligible to minor, adverse impact on ethnographic resources and traditional use areas.

**Conclusion**
Alternative A would have a negligible to minor, beneficial impact on maintaining the long-term integrity of ethnographic resources and traditional use areas within the Monument.
Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, there would be no impairment of Native American rights and interests.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**

Under Alternative B, 45,000 acres are planned for sagebrush steppe restoration, which involves the use of prescribed fire and drill seeding to return the vegetation to a mix of native plants and shrubs. Any fire, wild or prescribed, temporarily displaces wildlife and may change the character of traditional use areas. Sagebrush steppe restoration activities could have a short-term, minor adverse effect on ethnographic resources, traditional use areas and the exercise of treaty rights, but the long term improvement in habitat and the reduced potential for wildfire would have a long-term, moderate beneficial effect on Native American values.

Wildfire management under this alternative consists of full suppression on all lands outside the Pristine Zone, especially those with existing, healthy sagebrush steppe. Full suppression reduces the number of acres that burn, thereby protecting traditional use areas from loss of habitat for treaty species. Traditional use areas may receive intense, short-term vehicle traffic during active fire suppression activities, as well as possible heavy equipment impacts as a result of firebreak construction. This could constitute a short term, moderate adverse impact during suppression activities. Overall, full suppression of wildfire would have a long-term, minor beneficial impact on ethnographic resources, traditional use areas and habitat for treaty species.

This alternative would designate all lands within the Monument as VRM Class I or II. This minimizes the visual intrusion of potential developments outside WSAs and Wilderness areas. Over time, less intrusive developments resulting from more restrictive VRM classes within the Monument would have a long term, negligible to minor, beneficial impact on the character and integrity of ethnographic resources and traditional use areas.

Under Alternative B, the road and trail system would provide a high level of access to a wide variety of destinations and recreation activities. Improved access to the more remote regions of the Monument could increase the visitor use of those areas, as well as increasing the impacts of vehicle and foot traffic, unauthorized collections and vandalism to cultural and/or ethnographic resources. Increased vehicle access may lead to an increase in wildfires. This alternative includes the largest number of acres within the Passage Zone, which provides more opportunities for trail development within that zone. As a result, there could be a long-term, minor adverse effect to ethnographic resources and traditional use areas under this alternative.

With the increased acres in the Passage Zone under Alternative B, there would be an increased area of potential livestock facility development. Livestock-caused erosion at water trough locations and water pipeline developments would be confined to the Passage Zone. The concentration of livestock within the Passage Zone could increase pressure on any ethnographic resources and traditional use areas within that zone. Under Alternative B, livestock grazing would have a long-term, site specific, minor adverse effect on ethnographic resources and traditional use areas within the Passage Zone. Livestock grazing would have a short-term, negligible to minor adverse effect on ethnographic resources and traditional use areas within the Frontcountry, Primitive, and Pristine Zones.

Visitor facilities would be expanded under Alternative B, with natural and cultural resource interpretation at specific locations, new trail designations and interpretive/safety information posted on waysides at recreation areas. Increasing the number of designated, developed trails and providing more interpretative materials at specific locations,
increases the potential for vehicle and foot traffic within the Passage Zone. For those locations with increased recreation use, there could be a long-term, minor adverse effect from vehicle and foot traffic, unauthorized collection, and vandalism. Interpretive materials may stress resource protection, which may reduce the amount of damage to natural and cultural/ethnographic resources in traditional use areas.

**Cumulative Impacts**

Tribal treaty rights exercised on adjacent federal lands outside the Monument are consistent with those exercised within the expanded Monument and Preserve. It is possible that information distributed in existing visitor centers in the neighboring communities, such as Twin Falls and Idaho Falls, and the proposed road improvements may draw increased visitors to the Monument. This could increase pressure on traditional use areas from foot and vehicle traffic and possibly result in conflicts between tribal members and the public. This increased visitation, in conjunction with the impacts already occurring, may have a long-term, negligible to minor, adverse impact on ethnographic resources, traditional use areas and the exercise of tribal treaty rights.

**Conclusion**

Alternative B would have a minor to moderate adverse effect on maintaining the long-term integrity of ethnographic resources and traditional use areas within the Monument by emphasizing recreational opportunities and vehicle access.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, there would be no impairment of Native American rights and interests.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

Under Alternative C, 55,000 acres are planned for sagebrush steppe restoration, which involves the use of prescribed fire and drill seeding to return the vegetation to a mix of native plants and shrubs. Any fire, wild or prescribed, temporarily displaces wildlife and may change the character of ethnographic resources and traditional use areas. Sagebrush steppe restoration activities could have a short-term, minor adverse effect on traditional use areas and the exercise of treaty rights, but the long-term improvement in habitat and the reduced potential for wildfire would have a long-term, moderate beneficial effect on Native American values.

Wildfire management under this alternative consists of full suppression on all lands outside the Pristine Zone, especially those with existing, healthy sagebrush steppe. Full suppression reduces the number of acres that burn, thereby protecting ethnographic resources and traditional use areas from loss of habitat for treaty species. Traditional use areas may receive intense, short-term vehicle traffic during active fire suppression activities, as well as possible heavy equipment impacts as a result of firebreak construction. This could constitute a short term, moderate adverse impact during suppression activities. Overall, full suppression of wildfire would have a long-term, minor beneficial impact on ethnographic resources, traditional use areas and habitat for treaty species.

This alternative would designate all lands within the Monument as VRM Class I or II. This minimizes the visual intrusion of potential developments outside WSAs and Wilderness areas. Over time, less intrusive developments resulting from more restrictive VRM classes within the Monument would have a long-term, negligible to minor, beneficial impact on the character and integrity of ethnographic resources and traditional use areas.

Under Alternative C, fewer roads within the Monument would be maintained to a high standard and more roads would be closed. Decreased access to the more remote regions of the Monument may decrease
the amount of visitor use of those areas. Decreased vehicle access may lead to a decrease in human-caused wildfires, which would protect traditional use areas. Road closures may make access to ethnographic resources, traditional use areas or sacred sites difficult for tribal elders who may not be able to walk long distances over rough terrain. This alternative includes the largest number of acres within the Pristine Zone, which provides fewer opportunities for trail development within the Monument. There would be a long-term, minor beneficial effect to traditional use areas and habitat for treaty species under this alternative, but there may also be a minor adverse impact to Native Americans resulting from decreased vehicle access.

With the increased acres in the Pristine Zone under Alternative C, there would be a decreased area of potential livestock facility development. Livestock-caused erosion at water trough locations and water pipeline developments would be confined to the relatively small Passage Zone. The concentration of livestock within the Passage Zone could increase pressure on traditional use areas within that zone, as well as decrease pressure on traditional use areas in the Primitive and Pristine Zones. Under Alternative C, livestock grazing would have a long-term, site-specific, minor to moderate adverse effect on traditional use areas within the Passage Zone. Livestock grazing would have a short-term, negligible to minor adverse effect on ethnographic resources and traditional use areas within the Frontcountry, Primitive, and Pristine Zones.

Cumulative Impacts

Tribal treaty rights exercised on adjacent federal lands outside the Monument are consistent with those exercised within the expanded Monument and Preserve. It is possible that information distributed in existing visitor centers in the neighboring communities, such as Twin Falls and Idaho Falls, may draw increased visitors to the Monument, but the decrease in visitor facilities and the road network would confine most visitors to the Passage Zone. This increased visitation, in conjunction with the impacts already occurring, may have a long-term, negligible to minor, adverse impact on ethnographic resources and traditional use areas within the Passage Zone.

Conclusion

Alternative C would have a minor beneficial effect on maintaining long-term integrity of ethnographic resources and traditional use areas within the Monument by minimizing the amount of human and vehicle traffic in the Primitive and Pristine Zones, but may also cause some hardship for elderly tribal members due to lack of vehicle access.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, there would be no impairment of Native American rights and interests.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis

Under Alternative D (Proposed Plan), 80,000 acres are planned for sagebrush steppe restoration, which involves the use of prescribed fire and drill seeding to return the vegetation to a mix of native plants and shrubs. Any fire, wild or prescribed, temporarily displaces wildlife and may change the character of traditional use areas. Sagebrush steppe restoration activities could have a short-term, minor adverse effect on ethnographic resources and traditional use areas and the exercise of treaty rights, but the long-term improvement in habitat, and the reduced potential for wildfire would have a long-term, moderate beneficial effect on Native American values.

Wildfire management under this alternative consists of full suppression on all lands outside the Pristine Zone, especially those with existing, healthy sagebrush steppe. Full suppression reduces the number of acres that burn, thereby protecting ethnographic resources and traditional use areas from loss of
habitat for treaty species. Traditional use areas may receive intense, short-term vehicle traffic during active fire suppression activities, as well as possible heavy equipment impacts as a result of firebreak construction. This could constitute a short-term, moderate adverse impact during suppression activities. Overall, full suppression of wildfire would have a long-term, minor beneficial impact on ethnographic resources, traditional use areas and habitat for treaty species.

This alternative would designate all lands within the Monument as VRM Class I or II. This minimizes the visual intrusion of potential developments outside WSAs and Wilderness areas. Over time, less intrusive developments resulting from more restrictive VRM classes within the Monument would have a long-term, negligible to minor, beneficial impact on the character and integrity of ethnographic resources and traditional use areas.

Under Alternative D (Proposed Plan), existing Class B and C roads would remain open in the Primitive Zone, their maintenance driven by natural resource management needs, primarily fire suppression, weed management, and restoration activities. Many Class D roads in the Primitive and Pristine Zones would be converted to trails or closed for resource protection. The restrictions proposed on Class D roads could decrease visitor use in the Primitive and Pristine Zones, thereby decreasing impacts to ethnographic resources and traditional use areas.

The occurrence of vehicle-caused wildfires may also decrease, lowering the risk of habitat loss. Upgrading the primary access routes outside the Monument (south end of the Arco-Minidoka Road, and the Carey-Kimama Road) to a consistent B classification may encourage more visitors in the Passage Zone and may increase pressure on ethnographic resources and traditional use areas within the Passage Zone; but overall, this alternative would have a long-term, minor beneficial effect on ethnographic resources and traditional use areas.

In Alternatives B, C and D, any new livestock water facilities would be more likely in the Passage Zone, although few new developments are anticipated. Since livestock tend to congregate around water sources, there could be long-term, site-specific, and minor to moderate adverse effects on ethnographic resources and traditional use areas near water sources in the Passage Zone. The modifications made in the FEIS to Alternative D reduce Passage Zone in the Laidlaw Park area compared to the Draft Alternative D. This would likely limit some development of livestock facilities and reduce the potential for associated adverse impacts to cultural resources in or near these areas.

With the increased acres in the Passage Zone under Alternative D (Proposed Plan), there would be an increased area of potential livestock facility development. Livestock-caused erosion at water trough locations and water pipeline developments would be confined to the Passage Zone. The concentration of livestock within the Passage Zone could increase pressure on ethnographic resources and traditional use areas within that zone. Under Alternative D (Proposed Plan), livestock grazing would have a long-term, site-specific, minor to moderate adverse effect on traditional use areas within the Passage Zone. Livestock grazing would have a short-term, negligible to minor adverse effect on ethnographic resources and traditional use areas within the Frontcountry, Primitive, and Pristine Zones.

Also emphasized under this alternative would be more visitor facilities and information located outside the Monument boundary, near highways. There is the potential to educate a large public audience about Monument resources and preservation without having the increased visitor pressure on the Monument resources. The increased visibility is likely to increase the amount of visitors to the Monument to some degree, but the majority of the public would be satisfied with a short stop at a convenient visitor center outside the Monument. This alternative would provide a long-term, minor beneficial impact on maintaining the character and integrity of ethnographic resources and traditional use areas by satisfying the public’s interest with off-site visitor facilities.
**Cumulative Impacts**

Tribal treaty rights exercised on adjacent federal lands outside the Monument are consistent with those exercised within the expanded Monument and Preserve. It is possible that information distributed in proposed off-site visitor centers along major highways could draw increased visitors to the Monument, but the majority of the public probably would not visit the actual Monument. This could decrease pressure on ethnographic resources and traditional use areas from foot/vehicle traffic and potential conflicts between tribal members and the public. This emphasis on off-site visitor services, in conjunction with the impacts already occurring, may have a long-term, negligible to minor, adverse impact on ethnographic resources, traditional use areas and the exercise of tribal treaty rights.

**Conclusion**

Alternative D (Proposed Plan) would have a minor to moderate beneficial effect on maintaining the long-term integrity of ethnographic resources and traditional use areas within the Monument by emphasizing off-site interpretation and visitor services, and by emphasizing range restoration. Lack of vehicle access in Pristine Zone could cause some hardship for elderly tribal members who are not able to physically reach certain areas on foot.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to the natural or cultural integrity of the Monument or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, there would be no impairment of Native American rights and interests.

**LAND USE AND TRANSPORTATION**

**TRAVEL AND ACCESS**

**METHODOLOGY AND ASSUMPTIONS**

Road system standards and maintenance influence the amount and type of access to a given area. Use generally increases when road conditions improve and decreases as conditions degrade.

To analyze the effects of the alternatives on travel and access, available information on existing roads and trails in the Monument was compiled. Certain assumptions were made regarding the management of travel and access in the future, as follows:

- A Comprehensive Travel Management Plan would be prepared for the Monument and made available to the public. This would provide specific guidance to Monument managers, local road and bridge cooperators, and the general public of the standards for improvement and/or maintenance of the various classes of roads described in this Proposed Plan/FEIS or potential road closures. It would also include a road map/brochure of the Monument for public use. This would show road standards, maintenance levels and appropriate uses.

- There would be no net increase in road mileage in the Monument.

- The road system in the planning area would provide access for visitors, permittees, non-federal landowners, and administrative needs without adversely affecting the resources and values that the Monument was established to preserve.

- The agencies would coordinate road management inside and outside of the Monument cooperatively with local government agencies so that the transportation system would be managed in a comprehensive, logical manner.

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

The road standard classifications that were developed for the purpose of identifying and defining roads at Craters of the Moon National Monument and Preserve are described in the Affected Environment section.

For the purposes of this analysis, the intensity of impacts on travel and access were defined as follows:

- **Negligible**: The effects would not be detectable and would have no discernible effect on traffic flow and/or road conditions.

- **Minor**: The effects would be slightly detectable but there would not be an overall effect on traffic flow and/or road conditions.

- **Moderate**: The effects would be clearly detectable, and the action could have an appreciable effect on traffic flow and/or road conditions.

- **Major**: The effects would be substantial, with a highly noticeable influence, and the traffic flow and/or road conditions could be permanently altered.

The area of analysis for cumulative impacts was defined as the Monument and the surrounding 50-mile radius.

**IMPACTS FROM ALTERNATIVE A**

**Analysis**

Under Alternative A, the roads in the Monument would remain in their current condition at current maintenance levels. The majority of the road network consists of Class C and D roads in the Primitive Zone, with some higher standard Class B roads in the Passage Zone. Class A roads are restricted to the Frontcountry Zone, and Class 1 (non-motorized) trails are mainly found in the Primitive Zone (see Table 3 for mileage). Remote areas of the Monument would remain difficult to reach by vehicle, and most areas would be accessible only to high clearance vehicles. The broad network of two-track roads would remain open. Difficult travel would keep most visitors out of the most remote areas. Vehicle traffic could cause erosion on access routes, a long-term minor adverse impact on visitors desiring better access.

Under this alternative, 40,000 acres of degraded rangeland would be proactively treated for sagebrush steppe restoration, which would involve the use of herbicides, prescribed fire, drill seeding, and other methods. These activities could cause short-term minor disruptions to travel and access in the Monument if certain areas or roads were restricted during the activities. However, the reduced potential for large wildfires would result in a long-term moderate beneficial effect by reducing the amount of road use by firefighting equipment.

Wildfire management in Alternative A would consist of full suppression on all lands outside the designated wilderness. There could be intense, short-term vehicle traffic on access routes during active fire suppression activities, and the use of heavy equipment to construct firebreaks also might affect such routes. Fire management impacts on roads, whether from suppression or prescribed burning, would include heavy use of roads by large fire engines, small fire engines, pickup trucks and SUVs, equipment transport (low-boys) and bulldozers, as well as bulldozing and widening existing roads for use as fuel breaks. Suppression activities could cause a short-term moderate adverse impact. This could constitute a short-term moderate adverse impact during and immediately after suppression activities.

There would be no change in the management of livestock use under Alternative A. Permittees would continue to haul water to troughs on the existing road network and to trail livestock along road corridors. This would result in a long-term minor adverse effect on access roads, and periodic maintenance would be necessary to retain existing conditions.
Visitor facilities would remain as they are at present, with interpretation at specific locations at the original NPS Monument, some minor trail maintenance of existing trails, and some safety information posted on waysides at the Crystal Ice Cave/Kings Bowl area. Visitor use would cause a negligible effect on access and transportation routes with interpretive waysides.

New mineral material permits would be authorized inside the Monument only for administrative use, but the existing pits would continue to be used until expended.

Road maintenance efforts would cause minor short-term adverse impacts on road conditions but would result in a long-term minor beneficial effect on road conditions. When mineral material pits were closed, reclamation efforts would cause minor short-term adverse impacts from heavy equipment and work on the ground. Obliterating short material-site access roads during reclamation efforts would cause a negligible to minor adverse impact on access.

**Cumulative Impacts**
Access and transportation management on adjoining federal lands outside the Monument would affect the numbers of visitors able to reach the expanded portion of the Monument. The planned realignment of US 93 would straighten some curves in the Highway, making this access route safer for motorists. It is possible that information distributed in visitor centers in neighboring communities such as Twin Falls and Idaho Falls would attract more visitors to the Monument. Informational kiosks at access points to the Monument also could increase visitation. All these factors could potentially increase the pressure on access routes in the Monument, necessitating more road maintenance. Increased visitation, in conjunction with the impacts already occurring under Alternative A, would result in a long-term negligible to minor adverse impact on access and transportation.

**Conclusion**
Actions under Alternative A would cause minor adverse impacts on travel and access in the Monument, with long-term minor beneficial effects resulting from completed restoration and road maintenance activities.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**
Alternative B would involve more opportunities over the life of the plan for improving access to the Monument both inside and outside of the Monument boundary. With emphasis on providing greater access for recreation, the subsequent increase in Passage Zone acreage could result in higher maintenance costs, as could the expense of converting some Class D roads to Class 1 and 2 trails. The recommended improvement of the Arco-Minidoka Road could result in an upgrade of approximately 25 miles from Class C to Class B inside the Passage Zone (see Table 8 for mileage). This improved access would cause minor to moderate long-term adverse impacts on travel and access by attracting more visitors and increasing the frequency and level of needed maintenance. Alternative B would result in substantial increases in road upgrade/reconstruction costs for the agencies, counties, and local highway districts, as well as increasing annual road maintenance costs.

Improved access and more emphasis on road signs and interpretive signs in the Passage Zone would result in moderate long- and short-term beneficial effects by increasing visitor access to the Monument and by offering visitors more orientation and direction. Remote areas of the Monument still would be difficult to reach by vehicle, but some areas might become more accessible for lower clearance type vehicles. The broad network of existing Class D roads would remain, providing access to the Pristine Zone.

Multiple use trails developed under this alternative could improve access for forms of travel other than cars and trucks, leading to minor to moderate beneficial effects. However, erosion and more use of multiple use trails would degrade such trails, necessitating more maintenance. This would result in minor to moderate short- and long-term adverse impacts.
Designating the Carey-Kimama and Arco-Minizooka roads as Backcountry Byways would cause moderate long-term adverse impacts from more visitor use and related increases in maintenance expenses.

Treating about 45,000 acres of degraded rangeland would be treated for proactive sagebrush steppe restoration under Alternative B would be a 5,000-acre increase over Alternative A. As in Alternative A, the sagebrush steppe restoration process would cause a short-term minor disruption of access and transportation. However, the reduced potential for large wildfires would reduce the amount of road use by firefighting equipment, a long-term moderate beneficial effect.

Wildfire management in Alternative B would consist of full suppression on all lands outside the Pristine Zone. During active fire suppression activities, access routes might be subject to intense short-term vehicle traffic and possible impacts from the use of heavy equipment to construct fire lines. The effects on roads from fire management, whether suppression or prescribed burning, would be caused by heavy use of roads by large fire engines, small fire engines, pickup trucks, SUVs, equipment transporters, and bulldozers, as well as bulldozing and widening existing roads for use as fuel breaks. Active fire suppression would result in temporary road closures, a short-term moderate adverse effect on access and transportation.

More livestock developments (such as water troughs) in the expanded Passage Zone could increase the use of the road network to reach these sites, causing minor to moderate short- and long-term adverse impacts on transportation and access. More water-truck traffic would create the potential for road congestion and could create dusty conditions on roads during the grazing season, resulting in a long-term minor to moderate adverse effect on access routes.

Placing interpretive waysides in the Passage Zone under Alternative B would cause negligible effects on travel and access. Constructing designated primitive campsites would increase visitor use, leading to increased needs for road maintenance. This would be a negligible to minor long-term adverse impact. Designating dispersed campsites would concentrate visitation in specific areas, relieving pressure on the overall transportation system, a long-term negligible to minor beneficial effect.

Improved access to destination sites in the Monument such as Baker Caves and Kings Bowl would lead to increased visitation, resulting in a long-term minor beneficial effect on visitor access. Increased road maintenance and traffic could create short-term minor adverse impacts on transportation safety.

New mineral material sites could be authorized inside the Monument for administrative use only, but the existing pits would continue to be used until expended. New mineral material pits might be necessary to complete the road upgrades and resulting maintenance in this alternative. Using heavy equipment to maintain Monument roads would cause minor short-term adverse impacts on transportation safety, but there would be a long-term minor beneficial effect from such maintenance efforts. When mineral material pits were closed, reclamation efforts would result in minor short-term adverse impacts from heavy equipment and work on the ground. Obliterating short material-site access roads during reclamation efforts would cause negligible to minor adverse impacts on access.

Cumulative Impacts
The principal access routes outside the Monument would be upgraded and maintained in conjunction with counties and other BLM offices, causing minor to moderate long-term benefits by improving access to and from gateway sites around the Monument. The planned realignment of US 93 would straighten some curves in the Highway, making this access route safer for motorists. This realignment would increase visitation to the Monument, necessitating more road maintenance. This would cause minor to moderate long-term adverse impacts on transportation safety in the Monument. All these factors, along with the emphasis on visitor use of the Monument under this alternative, would result in a long-term minor beneficial effect on visitor access.
**Conclusion**

By emphasizing recreational opportunities and increased access, Alternative B would cause a long-term minor to moderate adverse effect on road conditions in the Monument, but it also would lead to a long-term moderate beneficial effect on the availability of access and ease of travel to many locations in the Monument.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

Alternative C would involve reducing access to and within the Monument over the life of the plan because the Pristine Zone would be larger. By definition, the Pristine Zone does not allow any roads, and this would result in closing or converting to trails approximately 50 miles of Class C and D roads. Fewer miles of roads with limited Passage Zone areas would be maintained to Class B and C standards (see Table 8 for mileage). The road closures and possible road removal would be a potential loss of access, a long-term minor to moderate adverse impact. Having fewer miles of roads maintained under Alternative C would cause minor to moderate adverse impacts on Monument access because a smaller range of vehicles would be accommodated by the transportation system. Over time, this alternative would result in a reduction in road maintenance expenses for the agencies, counties, and local Highway Districts.

Placing interpretive facilities off-site would reduce the number of visitors to the Monument, resulting in long-term minor beneficial effects on transportation safety. Less visitation would result in less erosion, degradation, and other forms of damage to roads, thereby reducing the need for road maintenance.

The large land area in the Pristine Zone in this alternative would include some roads along lava edges and in sagebrush steppe areas. Alternative C would close the two-track roads by signing and blocking, ripping and seeding, or converting them to Class 1 trails. This would result in moderate long-term adverse impacts on motorized access and a moderate long-term beneficial effect on foot/horse access.

A total of 55,000 acres of degraded rangeland would be proactively treated for sagebrush steppe restoration under Alternative C, 15,000 acres more than in Alternative A. As in Alternative A, the restoration activities would result in a short-term minor adverse effect on travel and access, but in this alternative the effects would be evident possibly over a larger area or for a longer time. However, the reduced potential for large wildfires would reduce the amount of road used by firefighting equipment, a long-term moderate beneficial effect.

As in Alternative B, wildfire management under Alternative C would consist of full suppression on all lands outside the Pristine Zone. During active fire suppression activities, access routes might be subject to intense short-term vehicle traffic and possible impacts from the use of heavy equipment to construct fire lines. The effects on roads from fire management, whether suppression or prescribed burning, would be caused by heavy use of roads by large fire engines, small fire engines, pickup trucks, SUVs, equipment transporters, and bulldozers, as well as bulldozing and widening existing roads for use as fuel breaks. Active fire suppression would result in temporary road closures, a short-term moderate adverse effect on access and transportation.

Existing livestock developments would remain, with the possibility of some closures. Closing livestock facilities would cause long-term minor beneficial effects on access and transportation safety. Fewer water-hauling vehicles would use the transportation system, reducing traffic, damage to roads, and the frequency of needed maintenance.

Using heavy equipment to maintain Monument roads would cause minor short-term adverse impacts on transportation safety, but there would be a long-term minor beneficial effect from such maintenance efforts. When mineral material pits were closed, reclamation efforts would result in minor short-term adverse impacts from heavy equipment and work
on the ground. Obliterating short material-site access roads during reclamation efforts would cause negligible to minor adverse impacts on access.

Existing mineral material sites in the Monument would be used until expended, and no new material sites would be developed. Having fewer miles of maintained road under this alternative would reduce the presence of heavy equipment on roads and congestion in the transportation system, resulting in minor to moderate long-term beneficial effects on travel safety in the Monument. Travel on lower standard roads in the Monument could cause long-term minor to moderate adverse impacts on travel safety.

**Cumulative Impacts**
Access and transportation management on adjoining federal lands outside the Monument would affect the numbers of visitors who could reach the Primitive and Pristine Zones of the Monument. The planned realignment of US 93 would straighten some curves in the highway, making this route safer for motorists. Visitor travel on roads maintained to a lower standard would result in minor to moderate long-term adverse impacts the road network in the Monument. Placing interpretive materials such as waysides and printed products outside the Monument boundaries would cause minor to moderate beneficial effects because fewer visitors would actually enter the Monument and use the transportation network. Overall, the effects of these actions, along with the effects from the actions of Alternative C, would result in long-term minor adverse impacts on travel and access.

**Conclusion**
By closing more miles of road in the Monument, Alternative C would cause minor to moderate adverse impacts on access. Reduced vehicle traffic could result in minor beneficial effects on transportation safety, but there also might be minor adverse impacts on travel safety from visitors using lower standard roads.

---

**IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)**

**Analysis**
Under Alternative D (Proposed Plan), the main purposes of the road network would be to protect resources and to facilitate fire suppression. This alternative would allow opportunities for modest improvements in existing Monument access over the life of the plan by providing needed road maintenance in the Passage and Primitive Zones (see Table 8 for mileage). This would improve public access and road quality, creating a long-term minor beneficial effect on access and transportation. Some reduction was made to Passage Zone in the Laidlaw Park area in the FEIS Alternative D, in response to public comment on the Draft Plan/EIS. However, a main loop drive in designated Passage Zone was retained to serve the needs of visitors and park staff for access, while reducing the potential for adverse impacts to resources in the Laidlaw Park area. Other modifications to Alternative D were done to change some areas from Primitive to Pristine Zone that were intruding from roads into the interior of the Monument along the edges of the lava fields. Although this would limit access beyond the immediate road corridors, it would not cause adverse conditions for most visitor or park staff access, and would serve to further protect the Monument’s interior resources. Some Class C and D roads in the Primitive Zone could also be closed for resource benefit, resulting in long-term negligible to minor adverse impacts on access. There would be modest increases in road maintenance costs for the agencies, the counties, and the Highway Districts.

Most Monument roads would be maintained at current levels, with some minor improvements to protect resources and improve the response time for fire suppression. In places where maintenance is currently lacking, this could result in minor adverse impacts from continued degradation of the roadways and access. In areas where roads are currently well maintained, this would prevent the degradation of roadways and access from possible higher levels of use, a minor beneficial effect. The use of heavy equipment for temporary road improvements,
along with short-term road closures associated with restoration efforts, would cause minor short-term impacts on access and transportation.

A total of 80,000 acres of degraded rangeland would be proactively treated for sagebrush steppe restoration under Alternative D (Proposed Plan), double the acreage planned for Alternative A. These more extensive sagebrush steppe restoration activities would cause a short-term minor to moderate adverse effect on travel and access. However, the reduced potential for large wildfires in this alternative (stemming from the provision of additional fire stations and adequate access to reach wildfires at their initial stages) would reduce the amount of road used by firefighting equipment, a long-term moderate beneficial effect. As in Alternatives B and C, wildfire management under Alternative D (Proposed Plan) would consist of full suppression on all lands outside the Pristine Zone. Naturally ignited fires in the Pristine Zone could be allowed to burn when and where suitable conditions and planning exist. During active fire suppression activities, access routes might be subject to intense short-term vehicle traffic and possible impacts from the use of heavy equipment to construct fire lines. The effects on roads from fire management, whether suppression or prescribed burning, would be caused by heavy use of roads by large fire engines, small fire engines, pickup trucks, SUVs, equipment transporters, and bulldozers, as well as bulldozing and widening existing roads for use as fuel breaks. Access roads in the Monument would be maintained under this alternative for fire suppression, a minor long-term beneficial effect on Monument access.

Offering off-site interpretation would reduce the number of visitors using the Monument’s transportation network, a long-term minor beneficial effect. Placing some visitor facilities outside the Monument would reduce pressure on the transportation network, a long-term minor beneficial effect. Rehabilitating Kings Bowl could involve temporary road closures and the use of heavy equipment, resulting in a negligible to minor short-term adverse impact.

New mineral material sites could be authorized inside the Monument for administrative use only, but the existing pits would continue to be used until expended. New mineral material pits might be necessary to complete the road maintenance required in this alternative. Using heavy equipment to maintain Monument roads would cause minor short-term adverse impacts on transportation safety, but there would be a long-term minor beneficial effect from such maintenance efforts. When mineral material pits are closed, reclamation efforts would result in minor short-term adverse impacts from heavy equipment and work on the ground. Obliterating short-material-site access roads during reclamation efforts would cause negligible to minor adverse impacts on access.

**Cumulative Impacts**

Access and transportation management on adjoining federal lands outside the Monument could affect the numbers of visitors who are directed toward the Monument entrances and use existing roads and trails to access Monument features and recreational facilities. The planned realignment of US 93 would straighten some curves in the highway, making this route safer for motorists. Distributing information in visitor centers in neighboring communities such as Twin Falls and Idaho Falls might attract more visitors to the Monument. Informational kiosks now at access points to the Monument also could attract more visitors, increasing the pressure on access routes within the Monument. Placing interpretive materials such as waysides and printed products outside the Monument boundaries would cause minor to moderate beneficial effects because fewer visitors would actually enter the Monument and use the transportation network. Overall, the effects of these actions, along with the effects from the actions of Alternative D (Proposed Plan), would result in long-term negligible to minor beneficial effects on travel and access.

**Conclusion**

By emphasizing off-site interpretation, visitor services, and long-term range restoration, Alternative D (Proposed Plan) would cause long-term minor beneficial effects on access and road conditions in the Monument.
LIVESTOCK GRAZING

METHODOLOGY AND ASSUMPTIONS
Available information was obtained through relevant literature, Best Management Practices, standards and guidelines assessments, monitoring, existing land use plans, and consultation with the public, permittees, and interdisciplinary teams. Impacts were assessed using best professional judgment and the following criteria to define impact intensities:

Negligible  Grazing operations would not be appreciably affected.

Minor  The effect would be perceptible, and the action would result in a slight change in grazing operations, but the change would be localized.

Moderate  The effects would be apparent, and the action would result in a limited change in grazing operations.

Major  The effects would be readily apparent or widespread, and the action would result in a substantial change in grazing operations.

The area of analysis for cumulative impacts was defined as Craters of the Moon National Monument and Preserve and the surrounding communities within approximately 50 miles.

IMPACTS FROM ALTERNATIVE A

Analysis
Under this alternative about 40,000 acres of degraded rangeland would be targeted for proactive sagebrush steppe restoration. The restoration would involve a combination of manipulation techniques such as herbicides, prescribed fires, and seeding to return the plant communities to proper functioning condition. Natural wildfires generally would be suppressed, but some fires would occur throughout the Monument, disrupting grazing. The restoration and fire-related activities could result in closure to grazing for two years or more. Such a substantial change in grazing operations would result in a short-term moderate adverse impact. In addition to the allotment directly affected by the closure, adjacent allotments might be indirectly affected by the redistribution of displaced livestock. Such changes might include altering the number of grazing livestock, the season of use, or the duration of grazing. However, the long-term effects would be moderate and beneficial because restoration would improve rangeland health.

In this alternative the Frontcountry Zone would cover approximately 2,300 acres; the Passage Zone, 4,700 acres; the Primitive Zone, 290,200 acres; and the Pristine Zone, 448,800 acres. Road upgrading and facility development would be allowed in the Passage Zone. This would cause short- and long-term minor beneficial effects on livestock use. Road improvements would benefit livestock permittees by facilitating and reducing the cost of water hauling, facility development, and maintenance. New livestock developments in the Passage Zone could improve livestock distribution. The size of the Pristine Zone could result in short- and long-term moderate adverse impacts on permittees by increasing the cost of grazing and limiting access through potential road closures, a lack of road maintenance, and not allowing new livestock developments.

Over time, increased recreational use in the Frontcountry and Passage Zones could cause minor to moderate adverse impacts on livestock operations. More recreational use could create conflicts with livestock or livestock-associated equipment on the roads, at camping or parking locations, at livestock watering sites, and at popular recreation locations.

Cumulative Impacts
The BLM would continue to assess all livestock use allotments in Idaho, using the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management. These standards are designed to provide resource measures and guidance needed to ensure healthy, functional rangelands. Livestock allotments are evaluated to determine if standards and guidelines are being met or if significant progress is being made toward meeting them. If the standards are not being met, the BLM is required to
make changes that would help achieve these standards in the future. Required changes could affect allotments both inside and adjacent to the Monument by reducing or increasing livestock numbers, season of use, allocated AUMs, and livestock-associated developments.

The ICBEMP has coordinated an extensive study of the Interior Columbia Basin, including District lands. This study has determined that the sagebrush steppe ecosystem is at risk due to several past and existing impacts. These include grazing, road construction, human development, and disturbance-related invasion of exotic plant species. These disturbances would be likely to continue to contribute cumulatively to the impacts on vegetation communities in southern Idaho. The BLM has entered into a 2003 MOU to implement the ICBEMP. The implementation strategy includes direction to federal agencies to update or develop land-use plans to provide direction to address the major issues.

The economic status of surrounding local communities directly impacts livestock use within the 50-mile radius. Economic changes can affect the livelihood of the livestock permittees and their employees. Dramatic economic changes could potentially increase the number of people and available jobs or force people in the surrounding communities to find employment elsewhere or even move out of the area. Overall, the effects of the actions that would or could occur on adjacent lands, combined with the actions of Alternative A, would result in negligible to minor adverse impacts on grazing.

**Conclusion**

Restoration activities and restrictions in the Pristine Zone in Alternative A could restrict grazing operations and/or increase costs associated with grazing, resulting in short- and long-term minor to moderate adverse impacts. The use of the Passage Zone for potential road improvement and facility development would result in short- and long-term minor beneficial effects, but the potential increased recreational use of this area could cause minor to moderate adverse impacts. Alternative A would have the third largest Pristine Zone, which could restrict or increase the costs associated with grazing.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**

Under this alternative about 45,000 acres of degraded rangeland would be treated for sagebrush steppe restoration, a 5,000-acre increase from Alternative A. Wildfires would be suppressed in all areas except in the Pristine Zone, where wildland fire use would be prescribed. As in Alternative A, the restoration and actions for fire suppression and the recovery of burned areas could result in closure to grazing for two years or more, which could result in a substantial change in grazing operations, causing a short-term moderate adverse impact. In addition to the allotment directly affected by the closure, adjacent allotments might be indirectly affected by the redistribution of displaced livestock. Such changes might include altering the number of grazing livestock, the season of use, or the duration of grazing. However, the long-term effects would be moderate and beneficial because restoration would improve rangeland health.

In this alternative the Frontcountry Zone would cover approximately 2,300 acres; the Passage Zone, 68,900 acres inside the Monument and 9,000 acres outside the Monument; the Primitive Zone, 226,900 acres; and the Pristine Zone, 447,900 acres. Road upgrading and facility development would be allowed in the Passage Zone. This would cause short- and long-term minor to moderate beneficial effects on livestock use because the acreage in the Passage Zone would be greater in this alternative than in all the other alternatives. Road improvements would benefit livestock permittees by facilitating and reducing the cost of water hauling, facility development, and maintenance, but there could be conflicts between road users and livestock. New livestock developments in the Passage Zone could improve livestock distribution. The size of the Pristine Zone, although it would be slightly smaller than in Alternative A, could result in short- and long-term moderate adverse impacts on permittees by increasing the cost of grazing and limiting...
access through potential road closures, a lack of road maintenance, and not allowing new livestock developments.

Over time, increased recreation use in the Frontcountry and adjacent Passage Zone areas could cause minor to moderate adverse impacts on livestock operations. More recreation could create conflicts with livestock or livestock-associated equipment on the roads, at camping or parking places, at livestock watering sites, and at popular recreation settings. The larger Passage and Frontcountry Zones probably would increase the amount of recreational use.

**Cumulative Impacts**

The cumulative effects of Alternative B on livestock grazing would be similar to those described for Alternative A, with both more beneficial effects and more adverse impacts from the additional access available in the expanded Passage Zone. Overall, the effects of the actions that would occur on adjacent lands, combined with the actions of Alternative B, would result in negligible to minor adverse impacts on grazing.

**Conclusion**

Restoration activities and restrictions in the Pristine Zone under Alternative B could restrict or increase the costs of grazing operations, resulting in short- and long-term moderate adverse impacts in grazing, but larger Passage Zone areas and the development of good access could result in road improvement and facility development, which would cause short- and long-term minor to moderate beneficial effects. The increased recreational use and access in this area could cause minor to moderate adverse impacts.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

A total of 55,000 acres of degraded rangeland would be proactively treated for sagebrush steppe restoration under Alternative C, 15,000 more acres than in Alternative A. Natural wildfires would be managed for resource benefit in the Pristine Zone, which would be much larger in this alternative than in Alternatives A or B. As in Alternative A, the restoration and related actions could result in closure to grazing for two years or more, which could result in a substantial change in grazing operations, causing a short-term moderate adverse impact. In addition to the allotment directly affected by the closure, adjacent allotments might be indirectly affected by redistribution of displaced livestock. Such changes might include altering the number of grazing livestock, the season of use, or the duration of grazing. The long-term effects would be moderate and beneficial because restoration would improve rangeland health.

In this alternative the Frontcountry Zone would cover approximately 2,300 acres; the Passage Zone, 3,200 acres; the Primitive Zone, 201,000 acres; and the Pristine Zone, 539,500 acres. Road upgrading and facility development would be allowed in the Passage Zone. The Passage Zone would be smaller than in Alternative A, but road upgrading and facility development still would be possible. Having a somewhat reduced Passage Zone would result in negligible to minor beneficial effects on livestock use. Road improvements would benefit livestock permittees by facilitating and reducing the cost of water hauling, facility development, and maintenance, but there could be conflicts between road users and livestock. New livestock developments in the Passage Zone could improve livestock distribution. The large Pristine Zone could result in could result in short- and long-term moderate adverse impacts on permittees by increasing the cost of grazing and limiting access through potential road closures, a lack of road maintenance, and not allowing new livestock developments.

Over time, increased recreational use could cause minor adverse impacts on livestock operations. More recreation could create conflicts with livestock or livestock-associated equipment on the roads, at camping or parking places, at livestock watering sites, and at popular recreation settings. Because of the smaller amount of Passage Zone in Alternative C, there would not be a large increase in the amount of recreational use.
Cumulative Impacts
The cumulative effects of Alternative C on livestock operations would be similar to those described for Alternative A, with some additional adverse impacts from the expanded restoration activities. Overall, the effects from the actions that could occur on adjacent lands, combined with the actions of Alternative C, would result in minor adverse impacts on grazing.

Conclusion
Restoration activities and restrictions in the Pristine Zone under Alternative C could restrict or increase the costs associated with grazing, resulting in a moderate short- and long-term adverse impact on grazing. The smaller number of areas in the Passage Zone would allow for some access and facility development, a negligible to minor beneficial effect, but any increased recreational use would cause minor adverse impacts on grazing operations. The large amount of Pristine Zone could increase costs and limit access, causing moderate adverse impacts on grazing.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
A total of 80,000 acres of degraded rangeland would be proactively treated for sagebrush steppe restoration under Alternative D (Proposed Plan). This is twice as much acreage as in Alternative A and the largest amount proposed for restoration in any alternative. As in Alternative C, natural wildfires would be managed for resource benefit in the Pristine Zone, and various land use treatments would be similar. The restoration and fire-related actions could result in closure to grazing for two years or more, and the restoration program would be accelerated in this alternative. Closure to grazing could cause a short-term moderate adverse impact. In addition to the allotment directly affected by the closure, adjacent allotments might be indirectly affected because livestock numbers could be reduced, or they might go to adjacent allotments to graze. Such a substantial change in grazing operations would cause a short-term moderate adverse impact. There could be changes in livestock numbers, the season of use, or the duration of grazing. The long-term effects would be substantial and beneficial because restoration would improve rangeland health over a large acreage.

In this alternative the Frontcountry Zone would cover about 2,300 acres; the Passage Zone, 6,700 acres inside the Monument and 4,100 acres outside the Monument; the Primitive Zone, 218,700 acres; and the Pristine Zone, 518,300 acres. A larger Passage Zone (compared to Alternative A) and emphasis on maintaining good access for restoration and resource management in that zone would allow for road upgrading and facility development, which would result in short- and long-term beneficial effects on livestock operations. Some reduction in Passage Zone and an increase in Pristine Zone was included in this FEIS in certain areas such as Laidlaw Park and on the fringes of the lava flows, in response to public comment to provide for resource protection and reduce fragmentation of habitat. These designations may limit some grazing and livestock development along some roads, but not significantly. Road improvements would benefit livestock permittees by facilitating and reducing the cost of water hauling, facility development, and maintenance, but there could be conflicts between road users and livestock. New livestock developments in the Passage Zone could improve livestock distribution. As in Alternative A, the large Pristine Zone could result in could result in short- and long-term moderate adverse impacts on permittees by increasing the cost of grazing and limiting access through potential road closures, a lack of road maintenance, and not allowing new livestock developments.

The additional Passage Zone provided in this alternative (compared to Alternative A) probably would result in slightly more recreational use, which could cause minor to moderate adverse impacts on livestock operations. More recreation could result in conflicts with livestock or livestock-associated equipment on the roads, at camping or parking places, at livestock watering sites, and at popular recreation settings.
Cumulative Impacts
The cumulative effects of Alternative D (Proposed Plan) on livestock operations would be similar to those described for Alternative A. The most long-term beneficial effects would result from the eventual restoration of rangeland and the improved access for administrative purposes. Overall, the effects from the actions that could occur on adjacent lands, combined with the actions of Alternative D (Proposed Plan), would result in negligible to minor adverse impacts on grazing.

Conclusion
Alternative D (Proposed Plan) would involve the largest acreage identified for restoration; this would cause short-term moderate adverse impacts on grazing operations, but the long-term effects would be beneficial. Compared to Alternative A, the increase in Passage Zone could result in more road improvement and facility development, and potentially more recreation use would result in minor to moderate beneficial effects from increased access and more ability to create new facilities. The Pristine Zone, which was increased in this FEIS, could restrict or increase the costs associated with grazing, a moderate adverse impact.

OTHER LAND USES (ADMINISTRATIVE FACILITIES, REALTY, AND MINERALS)

METHODOLOGY AND ASSUMPTIONS
To analyze the effects of the alternatives on various land uses, such as the existing NPS Visitor Center facility, realty actions, and mineral material sites, all available information on these land uses in the Monument was compiled, and the following assumptions were made about the management of these land uses in the future:

- The existing NPS Visitor Center, including the previously approved expansion and renovation, would continue to offer visitor services to the public.
- No new mineral material sites would be authorized except for administrative use within the Monument because Proclamation 7373 withdrew all Monument lands from location, entry, and patent under the mining laws, mineral leasing laws, and mineral material laws.
- The agencies would seek to exchange lands with or purchase private and state inholdings in the Monument from willing sellers.

For the purposes of this analysis, the levels of effects on administrative facilities, realty, and minerals were defined as follows:

Negligible: The effect would be barely detectable, and/or the public would not be affected.

Minor: The effect would be slight, but detectable, and/or the public might be affected.

Moderate: The effect would be readily apparent and/or the public would be affected.

Major: The effect would be severely adverse or exceptionally beneficial and/or the public would be affected.

The area of analysis for cumulative impacts is defined as the Monument boundary and the surrounding 50-mile radius.

IMPACTS FROM ALTERNATIVE A

Analysis
Under Alternative A, the existing administrative facilities would undergo some enlargement and reconstruction as planned, and the costs of doing day-to-day business would not change from what is currently budgeted. This alternative would result in a negligible impact on administrative facilities.

Realty actions would continue to be processed on demand, as they are now. There would be no effects on valid existing rights such as the existing emergency airstrips and county road rights-of-way. Retaining the existing utility corridors would accommodate existing utilities and encourage the
placement of future utilities within them. Granting utility rights-of-way where in conformance with constraints would accommodate the demand for such services along the US 93 corridor. Considering the acquisition of private lands in the Monument would improve the ability of private property owners to dispose of their property with appropriate compensation and would reduce the number of inholdings. For Monument lands outside WSAs, considering and granting rights-of-way case by case would accommodate the limited demand on public lands while allowing for reasonable access and services on private lands. This alternative would result in a negligible effect on realty.

Proclamation 7373 closed Monument lands to new mineral material leases. The Idaho Transportation Department (ITD) currently holds several old rights-of-way for material sources along US 93. The agencies would work with ITD on the relinquishment of those rights-of-way. The agencies would continue to use existing mineral sources for maintaining Monument roads at current levels as necessary. This alternative would cause long-term minor beneficial effects on mineral materials.

**Cumulative Impacts**

Few actions within the area of analysis would affect Monument facilities, realty, and minerals. Per Proclamation 7373, agencies or private entities without prior existing rights would have to look elsewhere for mineral materials. ITD might or might not feel the need to use its existing mineral rights-of-way in the Monument, depending on proposed highway improvements in the area. This would not affect Monument minerals because ITD normally needs higher quality gravel than is available from Monument sources. The agencies also might have to look outside the Monument for higher quality gravel. Given the remote nature of the area, few realty actions are foreseeable within the area of analysis. Overall, these limited actions, along with the effects of Alternative A, would result in long-term negligible cumulative adverse impacts on administrative facilities, realty, and minerals.

**Conclusion**

The No Action Alternative would result in negligible impacts on administrative facilities, realty, and minerals in the Monument.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**

Under Alternative B, the existing administrative facilities might have to be expanded to serve more visitors, which would increase the day-to-day cost of doing business and maintenance. This alternative would cause a long-term minor adverse impact on administrative facilities.

As in Alternative A, this alternative would not affect valid existing rights. Retaining the existing utility corridors would accommodate existing utilities and encourage placing utilities within those corridors in the future. Granting utility rights-of-way (where in conformance with constraints) would accommodate the demand for such services along US 93. Considering the acquisition of private lands in the Monument would improve the ability of private property owners to dispose of their property with appropriate compensation and would reduce the number of inholdings. For Monument lands outside WSAs, considering and granting rights-of-way case by case would accommodate the limited demand on public lands while allowing for reasonable access and services on private lands.

An improved transportation system might lead to a slight increase in unauthorized use and a potential for conflicts between leaseholders and recreational visitors. Increased potential for wildfires might cause short-term adverse impacts on existing rights-of-way. This alternative would cause a negligible impact, with the possibility of some short-term minor adverse impacts on realty.

Proclamation 7373 closed Monument lands to new mineral material leases. The ITD holds several old rights-of-way for material sources along US 93. The agencies would work with ITD on the relinquishment of those rights-of-way. The agencies would continue to use existing mineral sources for...
maintaining Monument roads as necessary. Because there would be more high-standard, maintained miles of road in the Monument in this alternative, the use of more mineral materials would be necessary, and new cinder pits might be required to meet that need. The Monument contains a high volume of cinder material; therefore, this alternative would result in negligible impacts on mineral materials. If higher quality gravel were needed for Monument road maintenance, it would have to be obtained from a source outside the Monument.

**Cumulative Impacts**
The cumulative effects from Alternative B on administrative facilities, realty, and minerals would be similar to those described for Alternative A. The maintenance of more high-standard roads in the Monument would increase the administrative use of existing mineral material sites. The limited actions that would affect these other land uses, plus the actions of Alternative B, would result in cumulative long-term negligible to minor adverse impacts on administrative facilities, realty, and minerals.

**Conclusion**
Alternative B would cause negligible effects on realty and minerals in the Monument and a minor adverse impact on administrative facilities.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**
Under Alternative C, the existing administrative facilities would be unchanged, and the day-to-day cost of doing business would be unchanged because there would be no added expenses beyond the current foreseeable levels. This alternative would result in negligible effects on administrative facilities.

Realty actions would continue to be processed on demand, as at present. There would be no effects on valid existing rights such as the existing emergency airstrips and county road rights-of-way. Retaining the existing utility corridors would accommodate existing utilities and encourage the placement of future utilities within them. Granting utility rights-of-way where in conformance with constraints would accommodate the demand for such services along the US 93 corridor. Considering the acquisition of private lands in the Monument would improve the ability of private property owners to dispose of their property with appropriate compensation and would reduce the number of inholdings. For Monument lands outside WSAs, considering and granting rights-of-way case by case would accommodate the limited demand on public lands while allowing for reasonable access and services on private lands. Having fewer miles of high-standard, maintained roads in the Monument could result in less unauthorized use. This alternative would result in a negligible to minor long-term beneficial effect on realty.

Proclamation 7373 closed Monument lands to new mineral material leases. The ITD holds several old rights-of-way for material sources along US 93. The agencies would work with ITD on the relinquishment of those rights-of-way. The agencies would continue to use existing mineral sources for maintaining Monument roads as necessary. Maintaining fewer miles of high-standard roads might decrease the use of mineral materials. This alternative would result in long-term minor beneficial effects on mineral materials.

**Cumulative Impacts**
The cumulative effects from Alternative C on administrative facilities, realty, and minerals would be similar to those described for Alternative A, but the demand for minerals would be slightly reduced because less road maintenance would be needed. Overall, the limited actions that would affect other land uses, plus the actions of Alternative C, would result in negligible cumulative effects on administrative facilities, realty, and minerals.

**Conclusion**
By minimizing the amount of human and vehicle traffic into the Primitive and Pristine Zones, Alternative C would cause long-term minor beneficial effects on administrative facilities, realty, and minerals in the Monument.
IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
Under Alternative D (Proposed Plan), the existing administrative facilities would remain, and a new multi-agency/private sector visitor center would be built along the I-84 corridor outside the Monument. The agencies would actively promote public education about the Monument at this new visitor center, possibly alleviating some visitor pressure on the Monument itself. This alternative would result in a negligible effect on administrative facilities in the Monument.

Realty actions would continue to be processed on demand, as at present. There would be no effects on valid existing rights such as the existing emergency airstrips and county road rights-of-way. Retaining the existing utility corridors would accommodate existing utilities and encourage the placement of future utilities within them. Granting utility rights-of-way where in conformance with constraints would accommodate the demand for such services along the US 93 corridor. Considering the acquisition of private lands in the Monument would improve the ability of private property owners to dispose of their property with appropriate compensation and would reduce the number of inholdings. For Monument lands outside WSAs, considering and granting rights-of-way case by case would accommodate the limited demand on public lands while allowing for reasonable access and services on private lands. This alternative would result in negligible effects on realty.

Proclamation 7373 closed Monument lands to new mineral material leases. The ITD holds several old rights-of-way for material sources along US 93. The agencies would work with ITD on the relinquishment of those rights-of-way. The agencies would continue to use existing mineral sources for maintaining Monument roads as necessary. Maintaining fewer miles of high-standard roads might decrease the use of mineral materials. This alternative would result in long-term beneficial effects on mineral materials. Because there would be more high-standard, maintained miles of road in the Monument in this alternative, the use of more mineral materials would be necessary, and new cinder pits might be required to meet that need. The Monument contains a high volume of cinder material; therefore, this alternative would result in negligible impacts on mineral materials. If higher quality gravel were needed for Monument road maintenance, it would have to be obtained from a source outside the Monument.

Cumulative Impacts
The cumulative effects from Alternative D (Proposed Plan) on administrative facilities, realty, and minerals would be similar to those described for Alternative A, with administrative facility impacts occurring both inside and outside the Monument. Overall, the actions that would affect these other land uses, plus the actions of Alternative D (Proposed Plan), would result in cumulative long-term negligible impacts on administrative facilities, realty, and minerals.

Conclusion
Because of its emphasis on off-site interpretation and visitor services, Alternative D (Proposed Plan) would result in negligible effects on administrative facilities, realty, and minerals in the Monument.

SPECIAL DESIGNATION AREAS (WILDERNESS, WILDERNESS STUDY AREAS, RESEARCH NATURAL AREA/ AREAS OF CRITICAL ENVIRONMENTAL CONCERN)

METHODOLOGY AND ASSUMPTIONS
The characteristics of each area that qualified it to receive a special designation and the purpose of the designation were examined. The locations of areas with special designations were compared to the locations of proposed actions, when possible. The potential impacts of each alternative on the areas were then evaluated, including pertinent issues identified during the scoping process. Predictions
about short- and long-term impacts were based on past studies of land use and visitor impacts on the regional ecosystem, including some studies at the Monument. The predicted intensity of impacts was assessed according to the following criteria:

Negligible: A change to the characteristics of the area that supported its designation could occur, but the change would be so small that it would not be of any measurable or perceptible consequence.

Minor: Changes to the characteristics of the area that supported its designation would occur, but they would be small and, if measurable, would be very localized.

Moderate: Changes to the characteristics of the area that supported its designation would occur. The changes would be measurable but would remain localized.

Major: Changes to the characteristics of the area that supported its designation would occur. The changes would be perceptible, measurable, and widespread.

The area of analysis for cumulative impacts was defined as the specially designated area and all surrounding lands affecting the special designation, including those beyond the Monument boundary.

**IMPACTS FROM ALTERNATIVE A**

**Analysis**

Special designation areas are affected primarily by the continuation of current management actions related to off-highway vehicle use, road system maintenance, and livestock use. These primarily affect portions of WSAs that are near roads and, in some cases, where they are allotted for livestock use. The wilderness area and the RNAs are isolated from most roads.

Off-highway vehicles, by design, have greater capability than standard highway vehicles to leave existing routes and create new routes. Unauthorized vehicle use could lead to the creation of new travel routes in WSAs emanating from existing routes or ways. Vehicle use of both authorized and unauthorized ways could spread invasive weeds from infested areas into currently uninfested areas, altering natural conditions if not controlled. The direct effect of illegal vehicle use on natural conditions would be local, with the intensity and duration varying depending on the frequency of use. In general, the level of illegal off-road use would be higher near existing roads. Depending on the site, these impacts would vary from negligible to moderate and from short term to long term, but they could potentially be widespread in the vicinity of roads.

Road system maintenance influences the amount and type of access to a given area. Road use generally increases as road standards improve and decreases if road standards degrade. The level of use and any associated effects decrease with distance from roads. Road standards, use levels, and effects on WSAs in this alternative would remain the same. Existing recreational use in the WSA would remain low and would not require substantial management restrictions that would limit opportunities for unconfined primitive recreation. Dust plumes from vehicles traveling on roads through Little Park and the northern end of Laidlaw Park and the sight and sounds of truck traffic on US 93 would continue to be noticeable from many locations in the wilderness area. The amount of traffic through Little Park and Laidlaw Park would remain light, resulting in short-term negligible effects on opportunities for solitude.

Livestock use affects wilderness characteristics in WSAs by altering natural animal and plant communities. These characteristics also are affected by the continued maintenance of livestock developments (such as fences and watering sites) and motor vehicle routes to manage livestock and related developments. Natural animal populations and distribution are altered when livestock compete with native wildlife for forage and when predator control activities are undertaken to protect livestock. The effects vary, since livestock do not use the WSA lands uniformly. Livestock use is authorized only on
the WSA lands administered by BLM (16 percent of the total WSA acreage). Even within that 16 percent, the use of the lands by livestock is not uniform.

Vegetative cover in sheep bed grounds can be substantially altered by repeated annual use, and many areas near the edge of the lava field are grazed only lightly, if at all. Therefore, the adverse effects would range from negligible to moderate, depending on location. Most effects would be short-term, but potential changes to sagebrush steppe plant and animal communities through the spread of exotic annual grasses could be long-term and difficult to reverse. The presence of temporary roads and livestock developments would not disqualify the area from potential legislative designation as wilderness.

**Cumulative Impacts**
Changes in the county or state road standards in or adjacent to the Monument could influence the use patterns, increasing or decreasing use, depending on the location and nature of each change. Improvements to the Arco-Minizdoka Road would be likely to increase the use of Great Rift WSA portions just west of the road. Population growth in Blaine County would include growth in the area in and around the city of Carey. This could result in increased use of the Raven’s Eye WSA just east of Carey. The impact of illegal off-road vehicle use emanating from state, county, and private roads inside and outside of the Monument would be similar to the effects resulting from the management of NPS and BLM roads within the Monument boundaries. In general, the level of illegal off-road use would be higher near access roads. These adverse impacts would vary from negligible to moderate and from short-term to long-term, depending on the site, but they could be widespread near roads.

Existing or future development of communication towers could affect the views of natural conditions and the perceptions of solitude within the wilderness area by adding constructed structures to the skyline. Outdoor lights on these and other structures would alter natural night sky conditions. The effects of such developments on opportunities for solitude and natural conditions in the wilderness area could be negligible to minor, but their duration could be long-term over large areas.

The effects of the actions outside the Monument described above would be adverse. These impacts, in conjunction with the impacts from the actions of Alternative A, would result in cumulative long-term negligible to moderate adverse impacts on special designation areas, primarily WSAs.

**Conclusion**
The effects on the characteristics and purposes of special designation areas from Alternative A would be primarily negligible to minor and short-term, but the effect of livestock use on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and the vegetative structure would be altered for long periods of time (5+ years). Road system management and limited regulation of off-highway vehicle use could cause negligible to moderate adverse indirect effects through the spread of invasive weeds and the creation of unauthorized routes.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to its natural or cultural integrity or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the resources or values of the Monument’s special designation areas would not be impaired.

**IMPACTS FROM ALTERNATIVE B**
**Analysis**
Improvements to the road system through Paddelford Flat, Little Park, Laidlaw Park, and the Kings Bowl area could result in more use and a higher level of indirect effects on WSA lands than would occur in Alternative A. Since the specific road segments that would be improved are not identified at the current level of planning, detailed effects cannot be described accurately; however, the impacts
probably would vary from negligible to moderate and from short term to long term, depending on the site, but they could be widespread in the vicinity of roads.

Livestock use would affect the wilderness characteristics of WSAs, as described for Alternative A. However, Alternative B would have more acreage in the Passage Zone, and there would be more opportunities to develop livestock facilities. This could result in beneficial effects on special designation areas because grazing might be concentrated in a limited area outside of WSAs. However, there might be more adverse impacts on WSA areas bordering Passage Zone areas with new livestock developments, leading to minor adverse long-term impacts.

**Cumulative Impacts**

The cumulative impacts on special designation areas from Alternative B would be similar to those described for Alternative A relating to changes in the county or state road standards undertaken in or adjacent to the Monument, including improvements to the Arco-Minidoka Road. The effects from population growth in Blaine County and the effect of illegal off-road vehicle use from the management of state, county, and private roads inside and outside of the Monument would be similar to those described for Alternative A. In general, the level of illegal off-road use would be higher near access roads. These effects would vary from negligible to moderate and from short term to long term, depending on the site, but they could be widespread near roads.

As in Alternative A, existing or future development of communication towers would affect views of natural conditions and perceptions of solitude from within the wilderness area. This could result in effects of negligible to minor intensity, but with long-term duration and affecting large areas.

The effects of the actions outside the Monument described above would be adverse. Current and future outside actions, in conjunction with the actions of Alternative B, would result in cumulative long-term minor to moderate adverse impacts on special designation areas, primarily WSAs.

**Conclusion**

The effects on the characteristics and purposes of special designation areas from Alternative B would be primarily negligible to minor and short term, but the effects from livestock use on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and vegetative structure would be altered for long periods of time (5+ years). The improvements to the road system could cause higher levels of indirect adverse effects through the spread of invasive weeds and the creation of unauthorized routes.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to its natural or cultural integrity or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the resources or values of the Monument’s special designation areas would not be impaired.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

In the Primitive and Pristine Zones, some spur roads adjacent to or inside WSAs could be closed to motorized vehicles under Alternative C. This could decrease the incidence of unauthorized OHV routes and the spread of invasive weeds in those specific areas. Because the specific road segments that might be closed under this alternative have not been identified at the current level of planning, detailed effects cannot be described, but the effects probably would vary from negligible to moderate and from short term to long term, depending on the site. They could potentially be widespread near roads. The effects of livestock use would be similar to those described for Alternative A, but in Alternative C the Passage Zone would be smaller and the Pristine Zone would be larger, and there would be fewer opportunities for adding livestock developments in the vicinity of the WSAs.

As part of this management plan, the potential for an
ACEC designation in Laidlaw Park was investigated. The purpose of an ACEC designation would be to focus management attention on special resources in the area. The BLM used a screening process - the ACEC Criteria Review Checklist (see Appendix G) - as an initial evaluation to determine if the nominated area met the basic relevance and importance criteria for designation. The BLM considered the appropriate amount of land needed to protect the resource values reflected in the nomination. The ACEC evaluation was based on guidance provided by 43 CFR 1610.7-2 and BLM Manual Section 1613, which state that potential ACECs must meet specified criteria for relevance and importance. Relevance is based on the presence of a significant

- Historic, cultural, or scenic value;
- Fish or wildlife resource or other natural system or process; or
- Natural hazard.

Upon meeting the relevance criteria, a nominated site must then have substantial significance and values that meet one or more of the following “importance” criteria:

- Has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.
- Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
- Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.
- Has qualities that warrant highlighting in order to satisfy public or management concerns about safety and public welfare.
- Poses a significant threat to human life and safety or to property.

North Laidlaw Park met the relevance criteria for scenic values, wildlife resources, and natural processes or systems and importance criteria for scenic values and wildlife resources. In Alternative C, 10,500 acres encompassing North Laidlaw Park, north of the Turnbull Fence, would be designated as an ACEC. The following actions would be implemented to protect the high quality native vegetation, wildlife habitat, and scenic values of the area:

a) Develop standards and indicators for vegetation health that would allow for natural disturbance and processes while ensuring that degradation due to invasion of invasive or noxious weeds would not occur.

b) Develop a low-use transportation network with no new routes, trails, or signs.

c) Limit new development of livestock watering facilities to ensure that the existing light use of the area would continue.

d) Use off-site interpretive resources such as brochures and displays in the Visitor Center to highlight the grazing management, native vegetation, and scenic qualities of the area.

The ACEC designation under Alternative C would constitute a long-term minor beneficial effect. It is uncertain that ACEC designation would be necessary to provide special management for the identified resources or values because current management, regulation, and law provide sufficient protection for the values identified. Therefore, ACEC designation may not be necessary. In any case, other actions under Alternative C, including grazing and road use/access, would result in minor adverse impacts on the ACEC, similar to effects noted for other special designated areas.

Cumulative Impacts
The cumulative effects on special designation areas from Alternative C would be similar to those described for Alternative A relating to changes in the county or state road standards undertaken in or adjacent to the Monument, including improvements to the Arco-Minidoka Road. The effects from population growth in Blaine County and the effect of illegal off-road vehicle use from the management of state, county, and private roads inside and outside of the Monument would be similar to those described
for Alternative A. In general, the level of illegal off-road use would be higher near access roads. These effects would vary from negligible to moderate and from short term to long term, depending on the site, but they could be widespread near roads.

As in Alternative A, existing or future development of communication towers would affect views of natural conditions and perceptions of solitude from within the wilderness area. This could result in effects of negligible to minor intensity, but with long-term duration and affecting large areas.

The effects of the actions outside the Monument described above would be adverse. Current and future outside actions, in conjunction with the actions of Alternative C, would result in cumulative long-term minor adverse impacts on special designation areas, primarily WSAs.

Conclusion
The adverse effects on the characteristics and purposes of special designation areas from most actions under Alternative C would be primarily negligible to minor and short term. The effect of livestock on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and vegetative structure would be altered for long periods of time (5+ years). The lack of access and limited Passage Zone acreage could cause indirect adverse effects if grazing was expanded to certain areas, with potential indirect adverse effects through the spread of invasive weeds and the creation of unauthorized routes. Designating a new ACEC in North Laidlaw Park would lead to minor beneficial effects on the adjacent Craters of the Moon Wilderness and Great Rift WSA.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to its natural or cultural integrity or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the resources or values of the Monument’s special designation areas would not be impaired.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
In Alternative D (Proposed Plan), some roads in the Passage Zone might be improved to speed up the response time for wildland fire suppression. Such road improvements might lead to more recreational use and indirectly to more use of adjacent WSAs. Because the specific road segments that would be improved would not be identified at the current stage of planning, the effects cannot be described in more detail. Vegetative restoration projects could improve the natural conditions in the WSA, but it is not indicated where the projects would occur in this alternative, so the exact impacts that would result are not known. Aggressive noxious weed control could prevent the spread of weeds into the WSA, thereby preserving natural conditions. Under the modified Alternative D presented in this FEIS, several areas in and around the Laidlaw Park area were changed from Passage to Primitive Zone, and more Pristine Zone was added around the lava field edges. This was done in response to public comment and concerns about potential fragmentation of the Laidlaw Park area by looping roads and protection of sensitive resources. Therefore, although Alternative D would not officially designate the North Laidlaw Park area as an ACEC, it would provide many of the same benefits by limiting access and visitor use in this and other sensitive areas of the Monument, a minor beneficial impact.

Cumulative Impacts
The cumulative effects on special designation areas from Alternative D (Proposed Plan) would be similar to those described for Alternative A relating to changes in the county or state road standards undertaken in or adjacent to the Monument, including improvements to the Arco-Minidoka Road. The effects from population growth in Blaine County and the effect of illegal off-road vehicle use from the management of state, county, and private roads inside and outside of the Monument also would...
be similar to those described for Alternative A. In general, the level of illegal off-road use would be higher near access roads. These effects would vary from negligible to moderate and from short term to long term, depending on the site, but they could be widespread near roads.

As in Alternative A, existing or future development of communication towers would affect views of natural conditions and perceptions of solitude from within the wilderness area. This could result in effects of negligible to minor intensity, but with long-term duration and affecting large areas.

The effects of the actions outside the Monument described above would be adverse. Current and future outside actions, in conjunction with the actions of Alternative D (Proposed Plan), would result in cumulative long-term minor to moderate adverse impacts on special designation areas, primarily WSAs.

**Conclusion**

The adverse effects on the characteristics and purposes of special designation areas from Alternative D (Proposed Plan) would be mostly negligible to minor and short-term, with potential for more intense effects if restoration activities took place in or near any of the areas. The effect of livestock on natural conditions in WSAs could be moderate in some local areas where livestock concentrate, and vegetative structure would be altered for long periods (5+ years). Road system management and limited regulation of off-highway vehicle use could cause indirect adverse effects through the spread of invasive weeds and the creation of unauthorized routes. The additional Pristine Zone and reduction of Passage Zone in the Laidlaw Park area, compared to Alternative D as presented in the Draft Plan/EIS, would provide indirect beneficial impacts to an area that had been discussed as an ACEC candidate during the scoping for this project.

Because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Craters of the Moon National Monument; (2) key to its natural or cultural integrity or to opportunities for its enjoyment; or (3) identified as a goal in its management plan or other relevant NPS planning documents, the resources or values of the Monument’s special designation areas would not be impaired.

**VISITOR EXPERIENCE**

The following discussions of effects on the visitor experience cover the effects on visitor understanding of the Monument’s resources (interpretation), recreation, visual resources, and soundscape.

**METHODOLOGY AND ASSUMPTIONS**

To evaluate the potential impacts on the visitor experience from each alternative, information gathered from the Visitor Services Project Report (USDI NPS 1989) was used, along with public input during the planning process. For analysis purposes, impact intensities for all visitor experience topics were defined as follows:

- **Negligible**: The impact would be barely detectable, affecting the experience of few visitors in the applicable setting.
- **Minor**: The impact would be detectable, affecting the experience of many visitors in the applicable setting.
- **Moderate**: The impact would be readily apparent, affecting the experience of the majority of visitors in the applicable setting.
- **Major**: The impact would be severely adverse or exceptionally beneficial, affecting the experience of nearly all visitors in the applicable setting.

The area of analysis for cumulative impacts was defined as the Monument and approximately 50 miles beyond the Monument boundary, considering other nearby areas that could affect or contribute to visitor experience within the Monument.
INTERPRETATION AND VISITOR UNDERSTANDING

IMPACTS FROM ALTERNATIVE A

Analysis
Under Alternative A, posting information and orientation materials at all primary backcountry access points and at proposed fire stations in Carey and Kimama would mean that visitors would be exposed to this interpretive information before entering the Monument and when leaving; this would result in a long-term minor beneficial effect.

Continuing to focus educational programs for schools and other groups on site at the original NPS Monument would result in continued long-term minor beneficial effects.

In addition, in Alternative A, a variety of interpretive media would continue to be developed for on- and off-site use, interpretive programs still would be offered, and exhibits and waysides would be available. Visitor safety and resource protection still would be emphasized, and some interpretation of archaeological and historic sites would continue. All these actions would result in long-term minor beneficial effects.

Modest development of the Kings Bowl area, with the installation of previously approved signs and wayside exhibits, would emphasize safety and resource protection. This would result in long-term minor beneficial effects.

The existing Visitor Center and administrative building would be enlarged and undergo reconstruction, as previously approved. This would enable Monument visitors to benefit from a greater variety of interpretive materials and programs, a long-term major beneficial effect on visitors’ understanding of the Monument.

When practicable, NPS and BLM facilities and staff would help qualified researchers and educational institutions to conduct authorized studies or field classes. Both agencies would facilitate the transfer of research information to the public. These actions would result in long-term minor beneficial effects.

Cumulative Impacts
The five Cooperative Weed Management Areas that include lands in the Monument facilitate weed management activities cooperatively among counties, private landowners, and government agencies, including the BLM and NPS. An important component of those activities is educating the public about the threats posed by invasive weeds. Typically, the Cooperative Weed Management Areas use a variety of print and other media to disseminate information about identifying and controlling the spread of weeds. These educational materials and programs, combined with the interpretive media, programs, exhibits, and waysides in Alternative A that would emphasize resource protection, would result in cumulative long-term minor beneficial effects on interpretation.

Conclusion
Posting information at backcountry access points and fire stations; offering school programs at the original NPS Monument; interpreting cultural resources; adding interpretive media, programs, exhibits, and waysides; and modest development in the Kings Bowl area would cause long-term minor beneficial effects on interpretation and visitor understanding, as would agency assistance to research and educational institutions. In addition, long-term major benefits would result from expanding the existing Monument Visitor Center.

IMPACTS FROM ALTERNATIVE B

Analysis
Adding interpretive facilities along the corridor of US 20/26/93 and at sites in the Passage Zone and upgrading interpretive kiosks, wayside exhibits, and the associated trail system and day-use area at Kings Bowl under Alternative B would result in long-term moderate beneficial effects on interpretation and visitor understanding.

Designating the Carey-Kimama and Arco-Minidoka roads as “Backcountry Byways” under Alternative B would upgrade the maintenance of these road-
ways. Designating single-use and multiuse trails and improving the trail system at Kings Bowl also would constitute transportation system upgrades. Increased visitation resulting from these improvements would enlarge the target audience for gateway and on-site interpretive materials, resulting in long-term minor beneficial effects. More visitation could cause proportional increases in vandalism of interpretive resources, resulting in short-term negligible adverse impacts.

Continuing to focus educational programs for schools and other groups on site at the original NPS Monument and expanding these programs under Alternative B would help to increase public education. Greater public understanding of cultural resources would result from offering interpretation of such resources at various dispersed recreation sites. These actions would result in continued long-term minor beneficial effects.

As in Alternative A, continuing to develop a variety of interpretive media for on- and off-site use and continuing to offer interpretive programs and to display exhibits and waysides emphasizing visitor safety and resource protection would result in long-term minor beneficial effects. Developing a variety of portable media to interpret the expanded portion of the Monument (such as maps, tapes, and guidebooks) also would result in long-term minor beneficial effects.

Expanding the NPS Headquarters Visitor Center under Alternative B or developing new facilities beyond the previously approved plan (to accommodate more visitation) would give Monument visitors access to an even greater variety of interpretive materials and programs, resulting in long-term major beneficial effects.

Help offered by NPS and BLM staff to qualified researchers and educational institutions (when practicable) in conducting authorized studies or field classes would result in long-term minor beneficial effects, as would facilitating the transfer of research information to the public by both agencies.

Initiating a restoration program to remove cave graffiti and foster public understanding of the need to protect these resources under Alternative B would result in long-term minor beneficial effects.

Restoration projects would give staffs the opportunity to interpret the decline of sagebrush steppe and the efforts to restore this dwindling resource. In addition, integrated weed management would include an education and interpretation component to increase visitor understanding of the treatment, containment, and prevention of weed infestations in the Monument. These efforts would result in long-term minor beneficial effects.

**Cumulative Impacts**

The cumulative effects on interpretation and visitor understanding from Alternative B would be similar to those described for Alternative A. The five Cooperative Weed Management Areas that include lands in the Monument would disseminate educational materials to the public. These educational materials and programs, combined with additional interpretive media, programs, exhibits, and waysides in Alternative B, would result in cumulative long-term minor beneficial effects on interpretation.

**Conclusion**

Upgrading the Carey-Kimama and Arco-Minidoka Roads; offering school programs at the original NPS Monument; interpreting cultural resources; adding interpretive media, programs, exhibits, and waysides; and developing portable interpretive media would result in long-term minor beneficial effects on interpretation, as would agencies assisting research and educational institutions, developing a cave restoration program, and interpreting sagebrush steppe restoration and integrated weed management. Short-term negligible adverse impacts would result from upgrading the Carey-Kimama and Arco-Minidoka Roads. Long-term minor beneficial effects on interpretation would result from adding interpretive facilities along US 20/26/93, at significant sites within the Passage Zone, and at Kings Bowl. Long-term major beneficial effects would come from expanding and developing new facilities at the existing Visitor Center.
IMPACTS FROM ALTERNATIVE C

Analysis
Posting information and orientation materials at all primary backcountry access points and at proposed fire stations in Carey and Kimama would mean that visitors would be exposed to this interpretive information before entering the Monument and when leaving. This would result in long-term minor beneficial effects on interpretation and visitor understanding.

Continuing to focus educational programs for schools and other groups on site at the original NPS Monument would result in continued long-term minor beneficial effects.

Developing a variety of portable media such as maps, tapes, and guidebooks to interpret the expanded part of the Monument would result in long-term minor beneficial effects.

As in Alternative A, the existing Visitor Center and Administrative Building would be enlarged and undergo reconstruction, as previously approved. This would enable Monument visitors to benefit from a greater variety of interpretive materials and programs, a long-term major beneficial effect on visitors’ understanding of the Monument.

Help offered by NPS and BLM staff to qualified researchers and educational institutions (when practicable) in conducting authorized studies or field classes would result in long-term minor beneficial effects, as would facilitating the transfer of research information to the public by both agencies.

Initiating a restoration program to remove cave graffiti and foster public understanding of the need to protect these resources under Alternative C would result in long-term minor beneficial effects.

Cumulative Impacts
The cumulative effects on interpretation and visitor understanding from Alternative C would be similar to those described for Alternative A. The five Cooperative Weed Management Areas that include lands in the Monument would disseminate educational materials to the public. These educational materials and programs, combined with additional interpretive media, programs, exhibits, and waysides in Alternative C, would result in cumulative long-term minor beneficial effects on interpretation.

Conclusion
Posting information at backcountry access points and fire stations, offering school programs at the original NPS Monument, developing portable interpretive media, and establishing a limited cave restoration program under Alternative C would result in long-term minor beneficial effects on interpretation. There would be cumulative effects from Cooperative Weed Management Area programs. Long-term, major benefits would result from expanding the existing visitor center.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
Adding interpretive signs along the corridor of US 20/26/93 and placing safety and resource protection information at Monument access points under Alternative D (Proposed Plan) would result in long-term minor beneficial effects on interpretation and visitor understanding.

To facilitate dispersing information and orientation materials about recreation, safety, and resource concerns in gateway communities around the Monument, one or more proposed visitor centers would be operated in cooperation with local partners within the I-84 corridor. Forming partnerships with communities and organizations to develop new interpretive and educational materials and programs, along with the materials and programs mentioned above, would give many more people interpretive information about the Monument, resulting in long-term moderate beneficial effects.

In addition to the programs provided at the original NPS Monument, educational programs for schools and other groups would be expanded to include off-site locations, and public education and understanding of cultural resources would be increased.
through various interpretation methods at several sites. These actions would result in long-term minor beneficial effects.

As in Alternative A, a variety of interpretive media would be developed for on- and off-site use, interpretive programs would be offered, and exhibits and waysides would be available. Visitor safety and resource protection would be emphasized, and a variety of portable media (such as maps, tapes, and guidebooks) would be developed to interpret the expanded part of the Monument. Interpretive publications, web sites, and other off-site media also would be used. All these actions would result in long-term minor beneficial effects.

As in Alternative A, modest development of the Kings Bowl area, with the installation of previously approved signs and wayside exhibits, would emphasize safety and resource protection. This would result in long-term minor beneficial effects. The existing Visitor Center and Administrative Building would be enlarged and undergo reconstruction, as previously approved. As in Alternative A, this would enable Monument visitors to benefit from a greater variety of interpretive materials and programs, a long-term major beneficial effect on visitors’ understanding of the Monument.

When practicable, NPS and BLM facilities and staff would help qualified researchers and educational institutions to conduct authorized studies or field classes. Both agencies would facilitate the transfer of research information to the public. These actions would result in long-term minor beneficial effects.

Initiating an intensive restoration program to remove cave graffiti and foster public understanding of the need to protect these resources under Alternative D (Proposed Plan) would result in long-term minor beneficial effects.

Encouraging commercial outfitters and guides to offer a range of guided experiences would enable visitors who otherwise might not have appropriate knowledge, vehicles, or preparation to experience the interior of the Monument, gaining first-hand knowledge of its resources. Such activities would be readily apparent, affecting not only the experience of the people engaged in the guided services, but also the experience of those visiting the interior of the Monument without a guide. The resulting effects would be minor and either beneficial or adverse, depending on the expectations of the visitor.

**Cumulative Impacts**

The cumulative effects on interpretation and visitor understanding from Alternative D (Proposed Plan) would be similar to those described for Alternative A. The five Cooperative Weed Management Areas that include lands in the Monument would disseminate educational materials to the public. These educational materials and programs, combined with additional interpretive media, programs, exhibits, and waysides in Alternative C, would result in cumulative long-term minor beneficial effects on interpretation. Proposals for two multi-agency visitor centers in south central Idaho, one near Twin Falls and another near the junction of I-84 and I-86, would enable chambers of commerce, tourism development organizations, and other government agencies to contact and provide information to area visitors. The multi-agency visitor centers would reach a broad audience of potential Monument visitors. The effect of information made available outside of the Monument, combined with the interpretive media and programs of Alternative D (Proposed Plan), would result in cumulative long-term moderate beneficial effects on interpretation.

**Conclusion**

Long-term minor beneficial effects on interpretation under Alternative D (Proposed Plan) would result from placing interpretive signs and information along the US 20/26/93 corridor and at access points; offering school programs (including off-site efforts) and off-site interpretation of cultural resources; posting interpretive media, programs, exhibits, and waysides; developing portable off-site interpretive media; and modest development in the Kings Bowl area. Agency assistance to research and educational institutions and an intensive cave restoration program also would cause long-term minor beneficial effects.
Long-term moderate beneficial effects would come from placing interpretive materials, facilities, and programs outside the Monument, in gateway communities and at a visitor center along the I-84 corridor, as well as from offering commercially guided services in the Monument. Long-term major benefits would accrue from expanding the existing Visitor Center.

Commercial guide services could cause long-term minor adverse impacts on people visiting the interior of the Monument without a guide.

RECREATION AND PUBLIC SAFETY

IMPACTS FROM ALTERNATIVE A

Analysis
Under Alternative A, efforts to protect geologic features would increase, in part, through interpretation efforts. Curbing vandalism and other forms of resource damage would improve recreational experiences associated with geologic formations such as viewing, nature study, hiking, and photography. This would result in long-term moderate beneficial effects in the original NPS Monument and long-term minor beneficial effects in the expanded part of the Monument. Interpretation efforts would also emphasize safety, resulting in improvements in safety, a long-term minor beneficial effect on recreational visitors.

Rehabilitating or restoring 40,000 acres of sagebrush steppe communities and controlling weed infestations would return vegetated areas to a more natural, healthy state, contributing to improved photography, nature study, and other experiences. The restoration activities also would contribute to better opportunities for primitive and unconfined experiences free of human influence. This would result in long-term minor beneficial effects, but initial restoration treatment might cause short-term major adverse impacts on recreational users if certain areas were closed or restricted. These restoration efforts would improve habitat for game species, resulting in indirect long-term moderate beneficial effects on hunting experiences.

The suppression of wildland fire would continue in almost all areas under Alternative A. This would result in short-term minor beneficial effects. Fast and effective response to wildland fire would cause less fire-related interference with recreation opportunities. Reduced smoke and fewer area closures (which can interfere with recreational users’ experiences) would result in short-term minor beneficial effects in or near burned areas.

Nearly all roads would remain open to motorized use under Alternative A, but some roads could be closed individually to protect resources. This continued level of access to Monument features and destinations would lead to long-term minor beneficial effects. However, this level of access, and its associated use, would result in long-term minor adverse effects on visitors seeking solitude. A few new Class I and Class II trails might be developed in certain areas, and trails in the Kings Bowl area would be rehabilitated or maintained; these actions would result in long-term minor beneficial effects.

Continuing livestock operations in the BLM part of the Monument would result in the presence of cattle and sheep and the attendant facilities and equipment. This could interfere with many types of recreational experiences such as driving (cars and OHVs) for pleasure, hunting, solitude, or sightseeing. Ongoing livestock operations would cause long-term minor to moderate adverse impacts on these experiences, particularly in locations where livestock operations and recreation activities occur in the same area at the same time.

Livestock operations and the concept of “open range” appeal to some Monument visitors. Given the long cultural history of livestock operations on public lands, some opportunities for recreational experiences related to seeing and appreciating sheepherding, cattle driving, and other activities would be possible, creating long-term negligible to minor beneficial effects.

Facility developments and improvements related to recreation in Alternative A would include enlarging
and improving the visitor center at the original NPS Monument. Fire stations at Carey and Kimama would offer visitor information. Portal kiosks would be established at key access points to the Monument, and signs and wayside exhibits would be installed at Kings Bowl. These facility improvements would offer recreational users maps, information, and some direction/safety messages for people who value such materials as part of a high-quality experience. These improvements would lead to long-term minor beneficial effects for many recreational users.

The agencies would pursue the purchase or exchange of private inholdings in the Monument on the basis of initiation by a willing seller. Such acquisitions would result in long-term negligible to minor beneficial effects by increasing the amount of land available for recreation.

No additional water developments or other habitat manipulations would be allowed in Wilderness areas or WSAs, and ways in WSAs not identified during the wilderness inventory would be closed and rehabilitated. These actions would improve primitive and unconfined experiences and opportunities for solitude, a long-term minor beneficial effect.

Continuing to authorize commercial outfitters and guides would add to the overall range of opportunities by offering a variety of backcountry and other remote experiences for recreational users who otherwise might not be able to enter the area. It also would improve monitoring at sensitive locations in the Monument. These authorizations would result in continuing long-term minor beneficial effects.

Programs such as Leave No Trace and Tread Lightly! emphasize responsible conservation-oriented recreation experiences. These programs would be promoted to encourage visitors to use the resources in a more responsible and sustainable way, resulting in long-term minor beneficial effects.

Opportunities for camping in the expanded part of the Monument would remain undeveloped and dispersed, with no designated sites. This would result in long-term minor beneficial effects on visitors who prefer this type of experience and long-term minor adverse impacts on people who prefer a more developed camping experience.

**Cumulative Impacts**

Poor air quality caused by activities originating outside of the Monument could hinder recreational experiences. Under Alternative A, the agencies would work proactively with the Idaho Department of Environmental Quality (IDEQ), businesses, and other relevant organizations to protect and preserve the excellent air quality in the Monument, resulting in long-term moderate beneficial effects.

Other local, state, and federal agencies and private organizations have developed promotional materials that include information about the Monument. The agencies would continue consultation with outside public and private organizations to coordinate these programs with recreational needs. This would result in long-term minor beneficial effects.

According to the State Comprehensive Outdoor Recreation and Tourism Plan (2003), statewide and regional visitation is expected to increase at a slow pace over the life of the plan due to general demographic trends. When combined with expected visitation increases for the Monument, these regional increases would result in long-term minor beneficial effects on recreation but also result in long-term minor adverse impacts on people seeking solitude.

Overall, the cumulative effects on recreational users from the actions of Alternative A, combined with the expected (primarily beneficial) effects from other activities and plans, would result in cumulative long-term minor to moderate beneficial effects on recreation.

**Conclusion**

Alternative A would result in a wide range of negligible to moderate adverse and beneficial effects on recreation and public safety, depending on the recreational experience desired.

Acquiring private inholdings would result in long-term negligible to minor beneficial effects, as would greater protection of geological features in the expanded part of the Monument; safety emphasis
through interpretation; restoring sagebrush steppe communities; trail development and rehabilitation in the Kings Bowl area; developing or improving facilities; closing certain ways in Wilderness areas and WSAs; and authorizing commercial outfitters and guides. Short-term minor beneficial effects would result from wildland fire suppression.

Long-term moderate beneficial effects would result from greater protection of geological features in the original NPS Monument and indirectly from restoring of sagebrush steppe communities. Keeping almost all existing roads open to motorized travel would result in long-term minor beneficial effects on certain recreational experiences, but such access also could affect other recreational experiences, resulting in long-term minor adverse impacts.

Long-term minor beneficial effects would result from the availability of undeveloped and dispersed camping, but this also could affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts.

Ongoing livestock operations would result in long-term minor to moderate adverse impacts on certain recreational experiences, but this also could affect other recreational opportunities, resulting in long-term negligible to minor beneficial effects.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**

In Alternative B, the effects on recreation from increased efforts to protect geologic features would be the same as those described for Alternative A, resulting in long-term moderate beneficial effects in the original NPS Monument and long-term minor beneficial effects in the expanded part of the Monument. Interpretation efforts would also emphasize safety, resulting in safety improvements that would cause long-term minor beneficial effects on recreational visitors.

Rehabilitating or restoring 45,000 acres of sagebrush steppe communities in the expanded part of the Monument, 5,000 acres more than in Alternative A, would cause about the same effects as the No Action Alternative - long-term minor beneficial effects, as well as indirect long-term moderate beneficial effects on hunting experiences.

Reduced smoke and fewer area closures (which can interfere with recreational users’ experiences) would result in short-term minor beneficial effects in or near burned areas.

Nearly all roads would remain open to motorized use under Alternative B, but some roads could be closed individually to protect resources. This continued level of access to Monument features and destinations would lead to long-term minor beneficial effects. However, this level of access, and its associated use, would result in long-term minor adverse effects on visitors seeking solitude. A few new Class I and Class II trails might be developed in certain areas, and trails in the Kings Bowl area would be rehabilitated or maintained; these actions would result in long-term minor beneficial effects.

As in Alternative A, continuing to suppress wildland fire in most areas in Alternative B would result in short-term minor beneficial effects. Fast and effective response to wildland fire would cause less fire-related interference with recreation opportunities, resulting in short-term minor beneficial effects in or near burned areas. Some wildland fire use would be allowed in the Wilderness and Preserve in Alternative B, resulting in short-term negligible adverse impacts.

Because the Passage Zone would be large in Alternative B, this alternative would offer the greatest opportunity of all the alternatives for motorized and mechanized recreational experiences. The entire length of both the Carey-Kimama and Arco-Minidoka roads would be designated Backcountry Byways, including an upgrade to Class B standards. This would be likely to increase visitation to the Monument, causing long-term moderate adverse impacts on visitors seeking solitude, but it would result in long-term moderate beneficial effects on people who prefer improved access for experiences like hunting, driving for pleasure, sightseeing, and going to points of interest along those routes.
Multiuse and single-use trails would be designated under Alternative B, including both Class I and Class II designations. This would increase the opportunities for hiking, mountain biking, off-highway motorcycle riding, horseback riding, and OHV use, resulting in long-term moderate beneficial effects on visitors wanting experiences in those activities.

Continuing livestock operations in the BLM part of the Monument would result in the presence of cattle and sheep and the attendant facilities and equipment. This could interfere with many types of recreational experiences, causing long-term minor to moderate adverse impacts on these experiences, particularly in locations where livestock operations and recreation activities occur in the same area at the same time. However, given the long cultural history of livestock operations on public lands, some opportunities for recreational experiences related to seeing and appreciating sheepherding, cattle driving, and other activities would be possible, creating long-term negligible to minor beneficial effects.

Alternative B would involve the highest level of facility development and improvements related to recreation, including additional enlargement and improvement of the Visitor Center at the original NPS Monument. The fire stations at Carey and Kimama would offer agency staff assistance and visitor information. Portal kiosks would be established at key access points to the Monument, and more facilities, signs, and wayside exhibits would be installed at Kings Bowl. These facility improvements would offer recreational users maps, information, and some direction/safety messages for people who value such materials as part of a high-quality experience. These improvements would lead to long-term moderate beneficial effects for many recreational users.

As in Alternative A, acquiring private inholdings would increase the amount of land available for recreation, resulting in long-term negligible to minor beneficial effects. Not allowing added water developments or other habitat manipulations in Wilderness areas or WSAAs and closing and rehabilitating ways in WSAs that were not identified during the wilderness inventory would result in long-term minor beneficial effects by improving primitive and unconfined experiences and opportunities for solitude.

Continuing to authorize commercial outfitters and guides would add to the overall range of opportunities by offering a variety of backcountry and other remote experiences for recreational users who otherwise might not be able to enter the area. It also would improve monitoring at sensitive locations in the Monument. These authorizations would result in continuing long-term minor beneficial effects.

As in Alternative A, programs such as Leave No Trace and Tread Lightly! would be promoted to encourage visitors to use the resources in a more responsible and sustainable way, resulting in long-term minor beneficial effects.

Opportunities for camping in the expanded part of the Monument would increase in Alternative B’s larger Passage Zone, but camping would remain generally undeveloped and dispersed, with the potential development of only 12 designated campsites. This would result in long-term minor beneficial effects on visitors who prefer this type of experience and long-term minor adverse impacts on people who prefer more developed, dispersed camping experiences.

Cumulative Impacts
The cumulative effects on recreational users under Alternative B would be similar to those described for Alternative A. There would be minor to moderate beneficial effects from cooperative efforts to limit air quality impacts and to supply promotional materials with information about the Monument. The agencies would continue to consult with outside public and private organizations to coordinate these programs with recreational needs. This would result in long-term minor beneficial effects.

According to the State Comprehensive Outdoor Recreation and Tourism Plan (2003), general demographic trends indicate that statewide and regional visitation will increase at a slow pace over the life of the plan. The expected slow growth, combined with expected visitation increases for the Monument, would result in long-term moderate
beneficial effects on recreation but also would result in long-term moderate adverse impacts on people seeking solitude.

Overall, the cumulative effects on recreational users from the actions of Alternative B, combined with the expected (primarily beneficial) effects from other activities and plans, would result in cumulative long-term moderate beneficial effects on recreational activities.

**Conclusion**

The added access available in Alternative B would contribute both beneficial and adverse effects, depending on the type of recreation desired.

Acquiring private inholdings would result in long-term negligible to minor beneficial effects, as would greater protection of geological features in the expanded part of the Monument, safety emphasis through interpretation, restoring sagebrush steppe communities, developing and rehabilitating trails in the Kings Bowl area, developing or improving facilities, closing certain ways in Wilderness areas and WSAs, and authorizing of commercial outfitters and guides. Short-term minor beneficial effects would result from wildland fire suppression, and short-term negligible adverse impacts would result from wildland fire use.

Long-term moderate beneficial effects would result from greater protection of geological features in the original NPS Monument, from designating multiuse and single-use trails, and from developing or improving facilities. There would be indirect long-term moderate benefits from restoring sagebrush steppe communities.

Improving motorized access would result in long-term moderate beneficial effects on certain recreational experiences, but it also could result in long-term moderate adverse impacts on other recreational experiences.

Long-term moderate beneficial effects would result from the availability of undeveloped and dispersed camping, but this also could result in long-term minor adverse impacts on people who prefer more developed, dispersed camping.

Ongoing livestock operations would result in long-term minor to moderate adverse impacts on certain recreational experiences, but this also could affect other recreational opportunities, resulting in long-term negligible to minor beneficial effects.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

In Alternative C, the effects on recreation from increased efforts to protect geologic features would be the same as those described for Alternative A, resulting in long-term moderate beneficial effects in the original NPS Monument and long-term minor beneficial effects in the expanded part of the Monument. Interpretation efforts would also emphasize safety, resulting in safety improvements that would cause long-term minor beneficial effects on recreational visitors.

Rehabilitating or restoring 55,000 acres of sagebrush steppe communities and controlling weed infestations would result in slightly more effects, both beneficial and adverse, than in Alternative A, because the area would be 10,000 acres larger. The restoration would result in long-term minor beneficial effects, and these efforts also would improve the habitat for game species, resulting in indirect long-term moderate beneficial effects on hunting experiences.

As in Alternative A, continuing to suppress wildland fire in most areas in Alternative C would result in short-term minor beneficial effects. Fast and effective response to wildland fire would cause less fire-related interference with recreation opportunities, resulting in short-term minor beneficial effects in or near burned areas. Some wildland fire use would be allowed in the Wilderness and Preserve in Alternative C, resulting in short-term negligible adverse impacts.

Alternative C would involve the least opportunity for motorized and mechanized travel. Many Class D roads in the Primitive Zone would be converted...
to non-motorized trails. This would result in long-term minor beneficial effects on experiences like hiking, mountain biking, and solitude and long-term minor adverse impacts on motorized experiences. The Pristine Zone would be larger in Alternative C than in the other alternatives, and all roads and ways in that zone would be closed to motorized and mechanized vehicle use. This would result in long-term minor adverse impacts on motorized and mechanized vehicle experiences; long-term moderate beneficial effects on visitors seeking a specifically non-motorized experience, solitude, and self discovery; and long-term moderate adverse impacts on people seeking access to certain destinations in the Primitive and Pristine Zones.

As in Alternative B, continuing livestock operations in the BLM part of the Monument would result in the presence of cattle and sheep and the attendant facilities and equipment. This could interfere with many types of recreational experiences, causing long-term minor to moderate adverse impacts on these experiences, particularly in locations where livestock operations and recreation activities occur in the same area at the same time. However, given the long cultural history of livestock operations on public lands, some opportunities for recreational experiences related to seeing and appreciating sheepherding, cattle driving, and other activities would be possible, creating long-term negligible to minor beneficial effects.

In Alternative C facility development and improvements related to recreation would be kept to a minimum, but the Visitor Center at the original NPS Monument would be enlarged and improved. The fire stations at Carey and Kimama would offer visitor information. Portal kiosks would be established at key access points to the Monument, and more facilities, signs, and wayside exhibits would be installed at Kings Bowl. These facility improvements would offer recreational users maps, information, and some direction/safety messages for people who value such materials as part of a high-quality experience. These improvements would lead to long-term minor beneficial effects.

As in Alternatives A and B, acquiring private inholdings would result in long-term negligible to minor beneficial effects by increasing the amount of land available for recreation. Allowing no additional water developments or other habitat manipulations in Wilderness areas or in WSAs, closing certain ways in Wilderness areas and WSAs, and authorizing commercial outfitters and guides would result in long-term minor beneficial effects by improving primitive and unconfined experiences and opportunities for solitude.

Continuing to authorize commercial outfitters and guides would add to the overall range of opportunities by offering a variety of backcountry and other remote experiences for recreational users who otherwise might not be able to enter the area. It also would improve monitoring at sensitive locations in the Monument. These authorizations would result in long-term minor beneficial effects.

As in Alternatives A and B, programs such as Leave No Trace and Tread Lightly! would be promoted to encourage visitors to use the resources in a more responsible and sustainable way, resulting in long-term minor beneficial effects.

Opportunities for camping in the expanded part of the Monument would increase in Alternative C, but camping would remain generally undeveloped and dispersed, with the potential development of only four designated campsites. This would result in long-term minor beneficial effects on visitors who prefer this type of experience and long-term minor adverse impacts on people who prefer more developed, dispersed camping experiences.

**Cumulative Impacts**

The cumulative effects on recreational users under Alternative C would be similar to those described for Alternatives A and B. There would be minor to moderate beneficial effects from cooperative efforts to limit air quality impacts and to supply promotional materials with information about the Monument. The agencies would continue to consult with outside public and private organizations to coordinate these programs with recreational needs. This would result
The expected slow growth in regional visitation over the life of the plan, combined with expected visitation increases for the Monument, would result in long-term minor beneficial effects on recreation but also would result in long-term minor adverse impacts on people seeking solitude.

Overall, the cumulative effects on recreational users from the actions of Alternative C, combined with the expected (primarily beneficial) effects from other activities and plans, would result in cumulative long-term moderate beneficial effects on recreational activities.

Conclusion
The restricted access of Alternative C would contribute both beneficial and adverse effects, depending on the type of recreation desired.

Acquiring private inholdings would result in long-term negligible to minor beneficial effects, as would greater protection of geological features in the expanded part of the Monument; safety emphasis through interpretation; restoring sagebrush steppe communities; limited facility developments and improvements; closing certain ways in Wilderness areas and WSAs; and authorizing commercial outfitters and guides. Short-term minor beneficial effects would result from wildland fire suppression, and short-term negligible adverse impacts would result from wildland fire use.

Long-term moderate beneficial effects would result from greater protection of geological features in the original NPS Monument, and there would be indirect long-term moderate benefits from restoring sagebrush steppe communities.

Long-term minor beneficial effects on certain recreational experiences would come from converting many Class D roads to non-motorized trails, but such conversion also would affect other recreational experiences, causing long-term minor adverse impacts. Closing certain roads and ways in the Pristine Zone to motorized and mechanized vehicle travel would result in long-term moderate beneficial effects on certain recreational experiences, but long-term minor adverse impacts also would result from such closures, affecting other recreational experiences. These closures also would result in long-term moderate adverse impacts from reduced access.

Long-term minor beneficial effects would result from the availability of undeveloped and dispersed camping, but this also could adversely affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts.

Ongoing livestock operations would result in long-term minor to moderate adverse impacts on certain recreational experiences, but this also could affect other recreational opportunities, resulting in long-term negligible to minor beneficial effects.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
In Alternative D (Proposed Plan), the effects on recreation from increased efforts to protect geologic features through interpretation efforts would be the same as those described for Alternative A, resulting in long-term moderate beneficial effects in the original NPS Monument and long-term minor beneficial effects in the expanded part of the Monument. Interpretation efforts would also emphasize safety, resulting in safety improvements that would cause long-term minor beneficial effects on recreational visitors.

Rehabilitating or restoring 80,000 acres of sagebrush steppe communities and controlling weed infestations would result in more effects, both beneficial and adverse, than in Alternative A, because the area would be twice as large. The restoration could cause minor to moderate short-term adverse effects during the treatments, but in the long term there would be moderate beneficial effects. These efforts also would improve the habitat for game species, resulting in indirect long-term moderate beneficial effects on hunting experiences.
Alternative D (Proposed Plan) would involve the most aggressive fire suppression and rehabilitation program of all the alternatives. Wildland fire would continue to be suppressed in almost all areas, resulting in short-term minor beneficial effects. Fast, effective response to wildland fire would result in less fire-related interference with recreation opportunities. A reduced amount of smoke and fewer area closures that might interfere with recreational users’ experiences would lead to short-term minor beneficial effects in or near burned areas, but aggressive rehabilitation would result in short-term minor adverse impacts on recreational experiences in these areas. Some wildland fire use would be allowed in the Wilderness and Preserve under Alternative D (Proposed Plan), resulting in short-term negligible adverse impacts.

Existing Class B and C roads would remain open to motorized use under Alternative D (Proposed Plan), and select Class D roads in the Primitive and Pristine Zones could be converted to trails or closed for resource protection. This reduced level of access to Monument features and destinations in the Primitive and Pristine Zones would result in long-term minor adverse impacts on motorized experiences and long-term minor beneficial effects on remote backcountry trail experiences, solitude, and self-discovery. Upgrading primary access roads leading to the Monument to facilitate fire management (subject to county government approval and coordination) would result in long-term moderate beneficial effects. Select, limited improvements of Class C and D roads in the Primitive and Pristine Zones could be authorized to accommodate fire suppression, restoration, or other natural resource protection activities; this would result in improved access to remote areas, a short-term negligible to minor beneficial effect.

As in Alternatives B and C, continuing livestock operations in the BLM part of the Monument would result in the presence of cattle and sheep and the attendant facilities and equipment. This could interfere with many types of recreational experiences, causing long-term minor to moderate adverse impacts on these experiences, particularly in locations where livestock operations and recreation activities occur in the same area at the same time. However, given the long cultural history of livestock operations on public lands, some opportunities for recreational experiences related to seeing and appreciating sheepherding, cattle driving, and other activities would be possible, creating long-term negligible to minor beneficial effects.

Under Alternative D (Proposed Plan), partnerships would be encouraged to develop new information facilities in gateway communities. Facility development and improvements related to recreation would include enlarging and improving the Visitor Center at the original NPS Monument. The fire stations at Carey and Kimama would offer visitor information. Portal kiosks would be established at key access points to the Monument, and more facilities, signs, and wayside exhibits would be installed at Kings Bowl. These facility improvements would offer recreational users maps, information, and some direction/safety messages for people who value such materials as part of a high-quality experience. These improvements would lead to long-term minor beneficial effects.

Acquiring private inholdings would result in long-term negligible to minor beneficial effects by increasing the amount of land available for recreation. Allowing no additional water developments or other habitat manipulations in Wilderness areas or in WSAs and closing and rehabilitating certain ways in Wilderness areas and WSAs would result in long-term minor beneficial effects by improving primitive and unconfined experiences and opportunities for solitude.

Increasing the authorizations for commercial outfitters and guides would add to the overall range of opportunities by offering a variety of backcountry and other remote experiences for recreational users who otherwise might not be able to enter the area. It also would improve monitoring at sensitive locations in the Monument. These authorizations would result in long-term moderate beneficial effects.

As in Alternative A, programs such as Leave No
Trace and Tread Lightly! would be promoted to encourage visitors to use the resources in a more responsible and sustainable way, resulting in long-term minor beneficial effects.

Opportunities for camping in the expanded part of the Monument would increase in Alternative D (Proposed Plan), but camping would remain generally undeveloped and dispersed, with the potential development of only six designated campsites. This would result in long-term minor beneficial effects on visitors who prefer this type of experience and long-term minor adverse impacts on people who prefer more developed, dispersed camping experiences.

Cumulative Impacts
The cumulative effects on recreational users under Alternative D (Proposed Plan) would be similar to those described for the other alternatives. There would be minor to moderate beneficial effects from cooperative efforts to limit air quality impacts and to supply promotional materials with information about the Monument. The agencies would work proactively with outside public and private organizations, as well as continuing to consult with local, state, and other federal agencies and private organizations to coordinate these programs with recreational needs. This would result in long-term minor beneficial effects.

The expected slow growth in regional visitation over the life of the plan, combined with expected visitation increases for the Monument under Alternative D (Proposed Plan), would result in long-term minor beneficial effects on recreation but also would result in long-term minor adverse impacts on people seeking solitude.

Overall, the cumulative effects on recreational users from the actions of Alternative D (Proposed Plan), combined with the expected (primarily beneficial) effects from other activities and plans, would result in cumulative long-term moderate beneficial effects on recreational activities.

Conclusion
The added access related to administrative needs and the aggressive restoration program in Alternative D (Proposed Plan) would contribute both beneficial and adverse effects, depending on the type of recreation desired.

Acquiring private inholdings would result in long-term negligible to minor beneficial effects, as would greater protection of geological features in the expanded part of the Monument, safety emphasis through interpretation, developing or improving facilities, and closing certain ways in Wilderness areas and WSAs.

Short-term negligible to minor beneficial effects would result from temporary improvements to Class C and D roads that could accommodate certain authorized activities, as well as from wildland fire suppression. Short-term negligible adverse impacts would result from wildland fire use, and short-term minor adverse impacts would result from aggressive rehabilitation.

Long-term minor to moderate beneficial effects would result from authorizing commercial outfitters and guides, and long-term moderate beneficial effects would come from greater protection of geological features in the original NPS Monument and from restoring sagebrush steppe communities.

Long-term minor beneficial effects on certain recreational experiences would result from closing Class D roads or converting them to trails in the Primitive and Pristine Zones, but such conversion also would affect other recreational experiences, causing long-term minor adverse impacts. Long-term moderate beneficial effects would result from the availability of undeveloped and dispersed camping, but this also could affect people who prefer more developed, dispersed camping, resulting in long-term minor adverse impacts.

Ongoing livestock operations would result in long-term minor to moderate adverse impacts on certain recreational experiences, but this also could affect other recreational opportunities, resulting in long-term negligible to minor beneficial effects.
**VISUAL RESOURCES**

**IMPACTS FROM ALTERNATIVE A**

**Analysis**
Any new surface disturbing activities proposed in the Monument would be subject to NEPA analysis, including a Visual Resource Management (VRM) Contrast Rating. New facilities and developments that could be allowed in the Frontcountry and Passage Zones are livestock facilities, recreation sites, and interpretive facilities. Surface-disturbing activities would have to comply with VRM management class standards, which include several Class III and IV areas in Alternative A. This would result in long-term minor beneficial effects on the Monument’s visual resources.

Efforts to protect geologic features from damage would be increased. Stopping vandalism and other forms of damage to frequently viewed geologic resources would lead to long-term minor beneficial effects.

Rehabilitating or restoring 40,000 acres of sagebrush steppe communities and controlling weed infestations would return those vegetated areas to their natural appearance, a long-term minor beneficial effect on viewscapes in the Monument.

Wildland fires and prescribed fires would result in smoke, causing short-term minor to moderate adverse impacts on visual resources, including the night sky. Other visual impacts would result from increased vehicle traffic, fire lines, and the contrast between burned and unburned areas. Burned areas could vary in size from a few acres to tens of thousands of acres.

Vehicles and dust plumes caused by the use of Class B roads would cause short-term minor adverse impacts. Existing livestock facilities, which are primarily in the Passage Zone, would result in minor visual contrasts and long-term minor adverse impacts. Continued use of the three existing mineral material sites would cause long- and short-term minor adverse impacts.

**Cumulative Impacts**
Visibility in the Monument can be affected by regional haze, dust from agricultural activities, smoke from western wildland fires, and other outside sources of air pollution. These things would cause short-term negligible to moderate adverse impacts on the Monument’s viewscapes and night sky.

Several communication sites outside the Monument are visible from inside the Monument. These communication sites would cause long-term minor adverse impacts on visual resources during the day and long-term moderate adverse impacts on visual resources at night. Artificial light sources and light pollution from neighboring towns would affect the Monument’s night sky, causing long-term negligible adverse impacts.

Overall, the beneficial and adverse effects from the actions of Alternative A, plus the adverse impacts from regional or neighboring sources, would result in cumulative minor adverse impacts on the Monument’s visual resources.

**Conclusion**
Long-term minor beneficial effects would result from greater protection of geological features, from restoring sagebrush steppe communities, and from holding surface disturbing activities to the VRM management class standards that apply under Alternative A.

Artificial light sources would cause long-term negligible cumulative adverse impacts. Long-term minor adverse impacts would result from existing livestock facilities and, cumulatively, from communications sites during the day. Long- and short-term minor adverse impacts would result from the use of existing mineral material sites. Long-term moderate adverse impacts would result from communications sites at night.

Class B road use would cause short-term minor adverse impacts, and short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.
IMPACTS FROM ALTERNATIVE B

Analysis
Any new surface disturbing activities proposed in the Monument under Alternative B would be subject to NEPA analysis, including a VRM Contrast Rating. Under this alternative, all of the Monument would be designated VRM Class I or Class II. New facilities and developments that could be allowed in the Frontcountry and Passage Zones are livestock facilities, mineral material sites for administrative use, recreation sites, and interpretive facilities. Surface-disturbing activities would have to comply with VRM management class standards, which would result in long-term minor to moderate beneficial effects on the Monument’s visual resources.

As in Alternative A, efforts to protect geologic features from damage would be increased, and rehabilitating or restoring 45,000 acres of sagebrush steppe communities and controlling weed infestations would return those vegetated areas to their natural appearance, a long-term minor beneficial effect on viewscapes in the Monument.

Short-term minor to moderate adverse impacts on visual resources, including the night sky, would result from wildland fires and prescribed fires (smoke), increased vehicle traffic, fire lines, and the contrast between burned and unburned areas. Burned areas could vary in size from a few acres to tens of thousands of acres. Increased suppression activities in this alternative would result in short-term impacts on the landscape from fire line construction, but these effects would be temporary.

Vehicles and dust plumes caused by the use of Class B roads would cause short-term minor to moderate adverse impacts. Existing livestock facilities, which are primarily in the Passage Zone, would result in minor visual contrasts and long-term minor adverse impacts. Continued use of the three existing mineral material sites would cause long- and short-term minor adverse impacts.

Cumulative Impacts
The cumulative effects on visibility in the Monument would be similar to those described for Alternative A. Visibility can be affected by regional haze, dust from agricultural activities, smoke from western wildland fires, and other outside sources of air pollution, including communication sites near the Monument. These things would cause long-term negligible to moderate adverse impacts on the Monument’s viewscapes and night sky. Artificial light sources and light pollution from neighboring towns would affect the Monument’s night sky, causing long-term negligible adverse impacts.

The use of vehicles, and the resultant dust plumes, would affect visibility in the Monument. Upgrades to the Arco-Minidoka and Carey-Kimama roads outside the Monument by county governments, as well as upgrades to certain roads within the Monument, would result in short-term minor adverse impacts on visibility from vehicles and the resultant dust plumes.

Several communication sites outside the Monument are visible from inside the Monument. These communication sites would cause long-term minor adverse impacts on visual resources during the day and long-term moderate adverse impacts on visual resources at night.

Overall, the beneficial and adverse effects from the actions of Alternative B, plus the adverse impacts from regional or neighboring sources, would result in long-term cumulative minor adverse impacts on the Monument’s visual resources.

Conclusion
Long-term minor beneficial impacts on visual resources would result from greater protection of geological features and from restoring sagebrush steppe communities. Long-term minor to moderate beneficial effects would result from holding surface-disturbing activities to VRM management class standards that apply in Alternative B.

Artificial light sources would cause long-term negligible adverse cumulative impacts. Long-term minor adverse impacts would result from existing livestock facilities and, cumulatively, from communications sites during the day. Long- and short-term minor adverse impacts would be caused by the use of...
existing mineral material sites. Long-term moderate, adverse impacts would result from communications sites at night.

Road upgrades would cause short-term minor cumulative adverse impacts, and short-term minor to moderate adverse impacts would result from Class B road use. Short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

Any new surface disturbing activities proposed in the Monument under Alternative C would be subject to NEPA analysis, including a VRM Contrast Rating. Under this alternative, all of the Monument would be designated VRM Class I or Class II. New facilities and developments that could be allowed in the Frontcountry and Passage Zones are livestock facilities, recreation sites, and interpretive facilities. Surface-disturbing activities would have to comply with VRM management class standards, which would result in long-term moderate beneficial effects on the Monument’s visual resources.

As in Alternative A, efforts to protect geologic features from damage would be increased, and rehabilitating or restoring 55,000 acres of sagebrush steppe communities and controlling weed infestations would return those vegetated areas to their natural appearance, a long-term minor to moderate beneficial effect on viewscapes in the Monument.

Wildland fires and prescribed fires would result in smoke, causing short-term minor to moderate adverse impacts on visual resources, including the night sky. Other visual impacts would result from increased vehicle traffic, fire lines, and the contrast between burned and unburned areas. Burned areas could vary in size from a few acres to tens of thousands of acres.

Vehicles and dust plumes caused by the use of Class B roads would cause short-term minor adverse impacts. Existing livestock facilities, which are primarily in the Passage Zone, would create minor visual contrasts and long-term minor adverse impacts. Continued use of the three existing mineral material sites would cause long- and short-term minor adverse impacts.

**Cumulative Impacts**

The cumulative effects on visibility in the Monument would be similar to those described for Alternative A. Visibility can be affected by regional haze, dust from agricultural activities, smoke from western wildland fires, several communication sites that are near the Monument, and other outside sources of air pollution. These things would cause long-term negligible to moderate adverse impacts on the Monument’s viewscapes and night sky. Artificial light sources and light pollution from neighboring towns would affect the Monument’s night sky, causing long-term negligible adverse impacts.

Overall, the cumulative impacts on visual resources from the actions outside the Monument, added to the effects of Alternative C, would result in long-term minor adverse impacts on visual resources.

**Conclusion**

Long-term minor beneficial effects would result from greater protection of geological features. Long-term minor to moderate beneficial effects would result from restoring sagebrush steppe communities. Long-term moderate beneficial effects would come from holding surface disturbing activities to VRM class standards that apply under Alternative C.

Artificial light sources would cause long-term negligible cumulative adverse impacts. Long-term minor adverse impacts would result from existing livestock facilities and, cumulatively, from communications sites during the day. Long- and short-term minor adverse impacts would result from the use of existing mineral material sites. Long-term moderate adverse impacts would result from communications sites at night.

Class B road use would cause short-term minor adverse impacts, and short-term minor to moderate
adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
Any new surface disturbing activities proposed in the Monument under Alternative D (Proposed Plan) would be subject to NEPA analysis, including a VRM Contrast Rating. Under this alternative, all of the Monument would be designated VRM Class I or Class II. New facilities and developments that could be allowed in the Frontcountry and Passage Zones are livestock facilities, mineral material sites for administrative use, recreation sites, and interpretive facilities. Surface-disturbing activities would have to comply with VRM management class standards, which would result in long-term minor to moderate beneficial effects on the Monument’s visual resources.

As in Alternative A, efforts to protect geologic features from damage would be increased, and rehabilitating or restoring 80,000 acres of sagebrush steppe communities and controlling weed infestations would return those vegetated areas to their natural appearance. This more aggressive restoration program would cause long-term moderate beneficial effect on viewscapes in the Monument.

Wildland fires and prescribed fires would result in smoke, causing short-term minor to moderate adverse impacts on visual resources, including the night sky. Other visual impacts would result from increased vehicle traffic, fire lines, and the contrast between burned and unburned areas. Burned areas could vary in size from a few acres to tens of thousands of acres.

Vehicles and dust plumes caused by the use of Class B roads would cause short-term minor adverse impacts. Existing livestock facilities, which are primarily in the Passage Zone, would create minor visual contrasts and long-term minor adverse impacts. The reduction of passage Zone in the Laidlaw Park area included in the FEIS version of Alternative D would help to limit this visual intrusion and the visual fragmentation of that area. Continued use of the three existing mineral material sites would cause long- and short-term minor adverse impacts.

Cumulative Impacts
The cumulative effects on visibility in the Monument would be similar to those described for Alternative A. Visibility can be affected by regional haze, dust from agricultural activities, smoke from western wildland fires, several communication sites that are near the Monument, and other outside sources of air pollution. These things would cause long-term negligible to moderate adverse impacts on the Monument’s viewscapes and night sky. Artificial light sources and light pollution from neighboring towns would affect the Monument’s night sky, causing long-term negligible adverse impacts.

Overall, the cumulative impacts on visual resources from the actions outside the Monument, added to the effects of Alternative D (Proposed Plan), would result in long-term minor adverse impacts on visual resources.

Conclusion
Long-term minor beneficial effects on visual resources would result from greater protection of geological features; long-term minor to moderate beneficial effects would come from holding surface disturbing activities to VRM management class standards, and restoring sagebrush steppe communities would cause long-term moderate beneficial effects.

Artificial light sources would cause long-term negligible cumulative adverse impacts. Long-term minor adverse impacts would result from existing livestock facilities and, cumulatively, from communications sites during the day. Long- and short-term minor adverse impacts would result from the use of existing mineral material sites. Long-term moderate adverse impacts would result from communications sites at night.

Class B road use would cause short-term minor
adverse impacts, and short-term minor to moderate adverse impacts would be caused by wildland fires and prescribed fires. Short-term negligible to moderate cumulative adverse impacts would result from outside sources of air pollution.

**SOUNDSCAPES**

**IMPACTS FROM ALTERNATIVE A**

**Analysis**

Natural soundscapes in the Monument would be affected by a number of sources. Vehicle and road noise from the US 20/26/93 corridor, which passes though the Monument on the north side, would cause long-term minor adverse impacts, particularly affecting campers at the original NPS Monument. Areas of the expanded Monument along this corridor also would incur similar long-term minor adverse impacts from the noise. The sounds associated with car, truck, motorcycle, OHV, and snowmobile use in the Monument would cause short-term adverse impacts on natural soundscapes in a number of areas in the Monument that would be mostly negligible to minor.

The noise from regular grazing operations and firefighting/fire suppression actions would cause short-term negligible to minor adverse impacts. For example, administrative and fire suppression air operations, using both fixed-wing aircraft and helicopters over the Monument, would cause short-term adverse impacts in the area in which they were used for the duration of the fire.

**Cumulative Impacts**

Trains using railroad lines outside the southern boundary of the Monument can be heard from some locations in the Monument, causing long-term negligible to minor adverse impacts. Occasional over flights of commercial jets at cruising altitudes, small private aircraft, and military jets using training flyways at both high and low altitudes might be heard. Combined with the various sources of noise from the actions of Alternative A, these noise intrusions would result in cumulative long-term negligible to minor adverse impacts.

**Conclusion**

The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**

The effects on natural soundscapes in Alternative B would be almost the same as those described for Alternative A. There probably would be a higher incidence of short-term negligible to minor adverse impacts from vehicle use in the expanded Passage Zone because the roads would be maintained to a higher degree, allowing better access for more vehicles.

Activities associated with fire management and livestock operations would be the same as those described for Alternative A, resulting in short-term minor adverse impacts.

**Cumulative Impacts**

The cumulative effects on soundscapes in the Monument from Alternative B would be the same as those described for Alternative A, with slightly more noise caused by the increased access and associated transportation, more visitation, and more grazing in the Passage Zone. Overall, combined with the various sources of noise from the actions of Alternative B, the outside noise intrusions would result in cumulative long-term minor adverse impacts.

**Conclusion**

The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. Some increased noise would come from more use of the Passage
Zone. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**
The effects on natural soundscapes in Alternative C would be almost the same as those described for Alternative A, but there would be less road-related noise and therefore fewer impacts from vehicle use.

**Cumulative Impacts**
The cumulative effects on soundscapes in the Monument from Alternative C would be the same as those described for Alternative A, but slightly less noise would be expected in the Passage Zone areas. Overall, combined with the various sources of noise from the actions of Alternative C, the outside noise intrusions would result in cumulative long-term minor adverse impacts on soundscapes.

**Conclusion**
The effects on natural soundscapes in the Monument from Alternative C would result mainly from transportation, administrative uses, and grazing. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.

**IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)**

**Analysis**
The effects on natural soundscapes in Alternative D (Proposed Plan) would be similar to those described for Alternative A, but some roads would be maintained to a higher degree, and the maintenance of others would be decreased. This would mean that there probably would be a slightly higher incidence of short-term negligible to minor adverse impacts from vehicle use in the Monument.

The fire management and livestock operations would be the same in this alternative as in Alternative A, resulting in short-term minor adverse impacts.

**Cumulative Impacts**
The cumulative effects on soundscapes in the Monument from Alternative D (Proposed Plan) would be the same as those described for Alternative A, but with slightly more short-term noise from restoration, road improvement, and fire management activities. Overall, the outside noise intrusions, combined with the various sources of noise from the actions of Alternative D (Proposed Plan), would result in cumulative long-term minor adverse impacts on soundscapes.

**Conclusion**
The effects on natural soundscapes in the Monument would result mainly from transportation, administrative uses, and grazing. The use of the US 20/26/93 corridor would cause long-term minor adverse impacts. Short-term negligible to minor adverse impacts would result from the use of various vehicles in the Monument, from fire management operations, and from livestock operations. Air operations would cause short-term minor adverse impacts.

**SOCIAL AND ECONOMIC CONDITIONS**

**METHODOLOGY AND ASSUMPTIONS**
This section identifies the potential impacts on the population, housing, social conditions, employment, and regional economy that might result from implementing each alternative. To assess socioeconomic impacts of each alternative, the following methods and assumptions were used:

- For the baseline condition, it is assumed that the Monument's annual operating budget and number of employees would not increase more than 10 percent over the next 10 years.
Effects on economic conditions would result primarily from a long-term (more than 10 years) increase in the number of visitors to the Monument, an increase in the average time visitors stay at the Monument or at gateway communities, and/or more visitor spending, as well as an increase in the number of new permanent residents drawn to the area by a wider range of recreational opportunities and greater appreciation of the Monument’s resources.

The following impact thresholds were defined for analyzing impacts to socioeconomic conditions.

Negligible: No changes would occur, or changes to socioeconomic indicators (population, employment/unemployment rate, per capita income, property values, poverty level, crime rates, characteristics, quality and satisfaction of visitors’ experience, or effects on the rural character around the Monument and Preserve) would be below or at the level of statistical error (about 3 percent) and, if detected, the effects would be considered slight and short term.

Minor: There would be increases in the number of visitors to the Monument and Preserve or changes in socioeconomic indicators between 4 and 10 percent.

Moderate: There would be increases in the number of visitors to the Monument and Preserve or changes in socioeconomic indicators by 10 to 20 percent.

Major: There would be increases in the number of visitors to the Monument and Preserve or changes in socioeconomic indicators by more than 20 percent.

The area of analysis for all impacts was defined as the county census tracts in the five counties surrounding Craters of the Moon National Monument and Preserve.

IMPACTS FROM ALTERNATIVE A

Analysis

Economic Conditions

Under Alternative A, continuation of present interim management actions, the number of annual visitors would remain consistent at about 200,000. Alternative A would not substantially change the number of annual visitors, the length of stay, or visitor spending, nor would substantial new facilities be developed. Other than changes related to minerals development (see below), there would be no direct effects on the regional economy, population, employment/unemployment rates, per capita income for workers in the counties surrounding the Monument, change in property values, or the need for additional services. Although this alternative is unlikely to draw additional residents to nearby communities, existing population growth in the area will probably continue at similar rates, which could increase pressure on Monument resources and gradually increase local property values as available land becomes more scarce.

Existing mineral permits are valued at approximately $5 per ton. Replacement costs for the Monument mineral permits are estimated to be about $25 per ton, plus transportation costs of $1 to $2 per mile at distances of up to 100 miles to sites where needed. As mineral leases expired and could not be renewed, there would be long-term moderate adverse economic impacts on county leaseholders, who would have to obtain minerals from other sources. However, given that employment and income from mining total no more than one percent in any of the five counties in the planning area, this would be a negligible effect on the local economy.

Social Conditions

No activities under Alternative A would affect the social value (characteristics, quality, satisfaction) of local resident or visitor experiences at the Monument or substantially change the number of visitors to the Monument, nor would there be any changes to Monument management. None of the actions of this alternative would directly or indirectly affect the rural character around the Monument or affect...
local residents’ use and appreciation of Monument resources.

**Cumulative Impacts**
The Minidoka Internment National Monument was designated in January 2001. An administrative facility for the Minidoka National Wildlife Refuge has been proposed, as has the development of a multi-agency South Central Idaho Visitor Center along I-84 near Twin Falls. These actions would have the potential to minimally increase the number of visitors to Craters of the Moon National Monument and Preserve. Blaine County’s comprehensive plan stipulates that the portion of the Arco-Minidoka Road within its jurisdiction would continue to be maintained at its current level. No other regional economic activities were identified that would contribute to the cumulative effects on economic conditions under this alternative (i.e., any activities that would further stimulate increased visitation or draw additional new residents to the Monument area). However, current population growth rates in some of the communities near the Monument are likely to increase pressure on Monument resources even without changes in resource management.

**Conclusion**
Alternative A would result in a negligible adverse or beneficial effect on local communities, the number of annual visitors to the Monument, length of stay, or visitor spending. There would be no direct, indirect, or cumulative effects on the regional economy or any economic or social indicator, other than negligible adverse impacts related to a gradual loss of mineral leases. Alternative A would not affect the rural character around the Monument.

**IMPACTS FROM ALTERNATIVE B**

**Analysis**

**Economic Conditions**
Alternative B, which would involve the highest level of visitor recreational opportunities, would entail more public education and interpretation of cultural resource sites, more designated primitive campsites, interpretation of select caves, Kings Bowl Frontcountry Zone development, expansion and development of new facilities, and more travel and access in the Monument. Under this alternative a range of recreational opportunities would be available, including commercial helicopter landings. This alternative also would produce the highest level of Monument development.

The state of Idaho’s 2002 “Outdoor Recreation Demand Assessment” found that 52 percent of residents were willing to travel 1 to 2 hours to engage in recreational activities, and the top three recreational activities for adults were walking, hiking, or watching wildlife - activities that would be available at the Monument. More opportunities for recreational activities would directly result in a moderate increase in the annual number of visitors, a longer visitor’s stay in the area, and more recreational spending per visit. Such development could also have a minor impact in attracting additional permanent residents and businesses to the area, although it is difficult to estimate how many. Beyond those who would be directly employed by such new activities, a greater range of recreational opportunities and an enhanced appreciation of Monument resources might draw more retirees, commuters and entrepreneurs to the area. This could increase population and economic growth rates in nearby communities, which may increase pressure on Monument resources.

A moderate increase in visitors and visitor spending would result in the addition of about 100 new jobs directly or indirectly to the local economy, a negligible increase of about 1 percent of the workforce in the five-county/census tract region surrounding the Monument. These new jobs would be dispersed throughout the region in a wide variety of visitor support services such as hotels, restaurants, auto service stations, and recreational outfitters and in services that would support increased business at these facilities. However, such services would likely be concentrated in the communities closest to the Monument, such as Carey and Arco, which could result in minor to moderate impacts in these communities.

This increased economic stimulus would be
long-term and permanent. Although important, this increased stimulus would cause a negligible to minor impact on local employment rates and per capita income. However, it could have a more substantial impact on the local economy due to an increase in personal income brought by new residents circulating in the community. It could also increase population growth rates and property values in nearby communities, and the use of Monument resources by local residents.

As in Alternative A, mineral material site permits in the Monument would be terminated upon expiration, and those areas would be closed to further use except as needed administratively. This would cause moderate long-term beneficial effects on access and transportation by reducing heavy equipment damage to roads and related maintenance, as well as reducing congestion in the Monument’s transportation system. However, as mineral leases expired and could not be renewed, there would be long-term moderate adverse economic impacts on county leaseholders, who would have to obtain minerals from other sources. Given that employment and income from mining total no more than 1 percent in any of the five counties in the planning area, this would be a negligible effect on the local economy.

**Social Conditions**

As was discussed above, this alternative would involve management actions that would result in more visitation to the Monument and more revenue from tourism, which would stimulate the need for approximately 100 new jobs. It might also attract larger numbers of permanent residents to the area than would occur otherwise, which could have a minor impact on population growth rates in local communities. Although important, this level of economic stimulation would result in a negligible to minor effect on, health care, education, and crime rates around the Monument. These effects could be concentrated in nearby communities.

More visitors and more recreational activities could result in both positive and negative effects on the visitor experience, based on each visitor’s recreational objectives. For some visitors, more recreational opportunities would mean a moderate decline in satisfaction for those who want to see the Monument protected from recreational impacts on the land. Other visitors could experience a moderate increase in satisfaction as a result of having a wide variety of recreational opportunities.

Likewise, more visitors and recreational activities could have both positive and negative effects on the quality of life of permanent residents and its attractiveness to newcomers. Although some residents value the area’s quiet, rural atmosphere, others might prefer a wider range of recreational opportunities.

**Cumulative Impacts**

Population growth in southern Blaine County (U.S. Census Tract 9601) increased by 31 percent between 1990 and 2000. Similarly, the population in the town of Carey in Blaine County has increased greatly, and the town is currently undergoing a building boom. If new Monument-oriented recreational businesses should locate around Carey and southern Blaine County, they could exacerbate existing trends that are leading to more rapid population and economic growth.

As was described for Alternative A, the Minidoka Internment National Monument was designated in January 2001. An administrative facility for the Minidoka National Wildlife Refuge has been proposed, as has the development of a multi-agency South Central Idaho Visitor Center along I-84 near Twin Falls. These actions would have the potential to minimally increase the number of visitors to Craters of the Moon National Monument and Preserve. No other regional economic activities were identified that would contribute to the cumulative effects on economic conditions under this alternative (i.e., any activities that would further stimulate increased visitation or attract new residents to the Monument area).

**Conclusion**

Alternative B would result in a moderate increase in the annual number of visitors, would lengthen visitor’s stay, and would increase recreational spend-
ing per visit. It could also cause a larger proportion of the region’s rapidly growing population to locate in communities near the Monument, such as Carey and Arco. This moderate increase in local residents, visitors and visitor spending would result in a negligible to minor effect on the local economy, a negligible or minor effect on local employment rates and per capita income, a negligible to minor effect on the local population, health care, education, and crime rates around the Monument, and a moderate adverse or beneficial effect on local resident and visitor satisfaction. A negligible adverse impact would result from the gradual loss of mineral leases, given that employment and income from mining total no more than one percent in any of the five counties in the planning area.

**IMPACTS FROM ALTERNATIVE C**

**Analysis**

**Economic Conditions**

Alternative C would create a visitor experience that would be similar to Alternative A, except that off-site interpretation would be emphasized and livestock developments might be reduced because there would be fewer acres in the Passage Zone.

Alternative C would not entail any new opportunities for visitor recreation that would stimulate additional Monument visitation or increase the length of visitors’ stay or visitor spending, nor offer greater incentives to newcomers to locate to the area. Substantial new facilities would not be developed. The effects on the regional economy or population would be negligible. The annual number of visitors would remain consistent at about 200,000. There would be negligible direct and indirect effects on the regional economy, population, employment/unemployment rates, per capita income for workers in the counties surrounding the Monument, change in property values, or the need for additional services.

As in Alternative A, mineral material site permits in the Monument would be terminated upon expiration, and those areas would be closed to further use except as needed administratively. This would cause moderate long-term beneficial effects on access and transportation by reducing heavy equipment damage to roads and related maintenance, as well as reducing congestion in the Monument’s transportation system. However, as mineral leases expired and could not be renewed, there would be long-term moderate adverse economic impacts on county leaseholders, who would have to obtain minerals from other sources. However, given that employment and income from mining total no more than one percent in any of the five counties in the planning area, this would be a negligible effect on the local area.

**Social Conditions**

Alternative C would be similar to Alternative A in its development of new opportunities for visitor and local resident recreation. No actions of this alternative would affect the social value (characteristics, quality, satisfaction) of visitor or local resident experiences at the Monument or substantially change the number of visitors to the Monument, nor would there be any changes to Monument management. None of the actions of this alternative would directly or indirectly affect the rural character around the Monument or population or economic growth rates.

**Cumulative Impacts**

As was described previously, the Minidoka Internment National Monument was designated in January 2001. An administrative facility for the Minidoka National Wildlife Refuge has been proposed, as has the development of a multi-agency South Central Idaho Visitor Center along I-84 near Twin Falls. These actions would have the potential to minimally increase the number of visitors to Craters of the Moon National Monument and Preserve. No other regional economic activities were identified that would contribute to the cumulative effects on economic conditions under this alternative (i.e., any activities that would further stimulate increased visitation or attract new residents to the Monument area).
Conclusion
Alternative C would result in a negligible adverse or beneficial effect on the annual number of visitors to the Monument and Preserve, the length of visitors’ stay, and the amount of visitor spending. There would be negligible direct, indirect, or cumulative effects on the regional economy or any economic or social indicator, other than the negligible adverse impacts from the gradual loss of mineral leases. Alternative C would not affect the rural character around the Monument.

IMPACTS FROM ALTERNATIVE D (PROPOSED PLAN)

Analysis
Economic Conditions
Alternative D (Proposed Plan), which would involve a moderate amount of public education, also would entail interpretation of cultural resource sites, expanding and developing new facilities as well as new visitor facilities outside the Monument, a high level of recreation and visitor opportunities, a high level of visitor service development in the gateway communities, and the authorization of commercial outfitters and guides (ecotourism emphasis). This alternative also offers opportunities for partnering with local communities to increase resource interpretation and restoration, which is likely to increase the local communities’ appreciation of the Monument and make the area more attractive to new residents and businesses. This could increase local population and economic growth rates. More opportunities for visitor recreation would result in a moderate increase in the annual number of visitors, a longer stay for visitors, and more recreational spending per visit.

Alternative D (Proposed Plan) would be similar to Alternative B in its potential for new visitor and local resident recreation opportunities and the stimulation of more Monument visitations. A moderate increase in visitors and visitor spending would result in the addition of about 100 new jobs directly or indirectly to the local economy, a negligible increase of about 1 percent of the workforce in the region surrounding the Monument and Preserve. This would be a negligible or minor effect on local employment rates and per capita income.

Alternative D could have more substantial effects on local population growth rates and personal income from non-labor (primarily retirement) income. This alternative could attract additional permanent residents to the area, although it is difficult to estimate how many. Beyond those who would be directly employed by such new activities, more retirees, commuters and entrepreneurs might be drawn to the area by the greater range of recreational opportunities. It could also increase property values in nearby communities, particularly since the emphasis on restoration could enhance scenic values and wildlife watching opportunities. This increased economic stimulus would be long-term and permanent.

As in Alternative A, mineral material site permits in the Monument would be terminated upon expiration, and those areas would be closed to further use except as needed administratively. This would cause moderate long-term beneficial effects on access and transportation by reducing heavy equipment damage to roads and related maintenance, as well as reducing congestion in the Monument’s transportation system. However, as mineral leases expired and could not be renewed, there would be long-term moderate adverse economic impacts on county leaseholders, who would have to obtain minerals from other sources. Given that employment and income from mining total no more than one percent in any of the five counties in the planning area, this would be a negligible effect on the local economy.

Social Conditions
Alternative D (Proposed Plan) would be similar to Alternative B in actions that would stimulate more visitation to the Monument, increasing revenue from tourism and new jobs, and increasing the number of new residents who choose to settle in the area. Economic stimulation under Alternative D (Proposed Plan) would result in minor effects on the local population, health care, education, and crime...
rates around the Monument. More visitors and more recreational activities would result in both adverse and beneficial moderate effects on the visitor and local resident experience, based on each visitor or resident’s recreational objectives. For some visitors and residents, more recreational opportunities would mean a moderate decline in visitor satisfaction for those who want to see the Monument protected from recreational impacts on the land. Other visitors and residents could experience a moderate increase in satisfaction as a result of having a wide variety of recreational opportunities.

**Cumulative Impacts**

Population growth in southern Blaine County (U.S. Census Tract 9601) increased by 31 percent between 1990 and 2000. Similarly, the population in the town of Carey in Blaine County has increased greatly. If new Monument and Preserve-oriented recreational businesses should locate around Carey and southern Blaine County, they would cause a minor effect on the area’s population and economic growth. An increase in local awareness and appreciation of the Monument’s resources and recreational opportunities could cause potential new residents and businesses to decide to settle in communities near the Monument rather than elsewhere.

As was described for Alternative A, the Minidoka Internment National Monument was designated in January 2001. An administrative facility for the Minidoka National Wildlife Refuge has been proposed, as has the development of a multi-agency South Central Idaho Visitor Center along I-84 near Twin Falls. These actions would have the potential to minimally increase the number of visitors to Craters of the Moon National Monument and Preserve. Blaine County’s comprehensive plan stipulates that the portion of the Arco-Minidoka Road within its jurisdiction would continue to be maintained at its current level. No other regional economic activities were identified that would contribute to the cumulative effects on economic conditions under this alternative (i.e., any activities that would further stimulate increased visitation at the Monument).

**Conclusion**

Alternative D (Proposed Plan) would result in a moderate increase in the annual number of visitors, the length of visitors’ stay, and the amount of recreational spending per visit. It could also have a minor impact on the number of new residents drawn to nearby communities. This would result in a minor effect on the local economy, a negligible or minor effect on local employment rates and per capita income, a minor effect on the local population, health care, education, and crime rates around the Monument, and a moderate adverse or beneficial effect on quality of life for local residents and visitor satisfaction. A negligible adverse impact would result from the gradual loss of mineral leases.

**UNAVOIDABLE ADVERSE IMPACTS**

The following paragraphs describe the more important (moderate and major intensity) adverse impacts that would unavoidably result from implementing the alternatives described above. These are residual impacts that would remain after mitigation was complete.

**ALTERNATIVE A**

**Natural Resources**

Damage, theft, vandalism, foot traffic, and other human-caused disturbances to geologic resources, although site-specific, could reach moderate to major intensity in some instances, depending, among other things, on their proximity to roads and trails. Removing cinders from materials sites in the Monument for road construction and maintenance could result in moderate to major adverse impacts on geologic resources. Fire suppression activities could result in moderate adverse impacts on geologic processes.

Localized major impacts to soils would result from fire suppression activities under Alternative A, including fire line construction. Livestock use, especially in areas where livestock concentrate, could cause moderate adverse impacts, including compaction, erosion, and changes in soil fertility.
and production. Facility development, including expanding the Visitor Center, creating interpretation and trails in Kings Bowl, and installing kiosks, signs, and wayside exhibits, would also cause moderate adverse impacts on soils. Soil loss and movement resulting from the actions of Alternative A, along with the cumulative effects of agricultural and other land uses in the vicinity of the Monument, would constitute moderate adverse impacts.

Road and trail use and maintenance could result in the spread of noxious weeds, causing moderate short- and long-term adverse impacts on native plant communities. Livestock would trample vegetation, causing the removal of vegetation and the spread of invasive and noxious weeds. Areas surrounding the Monument would be affected by agricultural practices, including irrigated and dryland crop farming and livestock ranching. Associated impacts that could reach moderate intensity are (a) the elimination of native vegetation by heavy livestock use or by its replacement by crops, (b) drift of weeds, (c) drift of herbicides, and (d) agricultural trespass, including the deposition of garbage or the removal of vegetation and planting crops on public lands adjacent to the Monument.

Intense recreational use of ice cave pools could create moderate changes in nutrient concentrations and bacteria levels. The duration of these local effects would depend on the specific site.

Under Alternative A, fires could result in major adverse impacts on some sensitive woodland and grassland wildlife species. Secondary roads and associated visitor use adjacent to sensitive wildlife areas could cause moderate disturbances of wildlife. Moderate long-term adverse impacts on wildlife from livestock use would result from competition for forage, trampling, loss of habitat, and disruption of migration corridors. The cumulative effects of agriculture and ranching on adjacent lands could adversely affect wildlife over large areas of the Monument through long-term competition for resources and habitat conversion.

Cultural Resources
Livestock use under Alternative A would cause erosion, create trails, and denude areas of vegetation, which could damage cultural resources in the area.

Land Use and Transportation
Livestock permitees would haul water to Laidlaw Park on the existing road network. This practice could cause a long-term moderate adverse effect on access routes.

The restoration and other actions associated with fire suppression and recovery of burned areas could result in closure to grazing for up to three years, a moderate adverse impact. Over time, increased recreation, especially in the Passage Zone, could result in conflicts, a moderate adverse impact on livestock operations.

Visitor Experience
VRM inventory classifications outside the Monument boundary that would allow visual intrusions such as cell towers could cause long-term moderate adverse impacts on the natural night sky.

Social and Economic Conditions
As mineral leases expired and could not be renewed, there would be moderate long-term adverse economic impacts on county leaseholders, who would have to obtain minerals from other sources. However, given that employment and income from mining total no more than 1 percent in any of the five counties in the planning area, this would be a negligible effect on the local economy.

ALTERNATIVE B
Natural Resources
Improved roads and trails and the resultant increased access and visitation to geologic features would lead to greater damage, theft, vandalism, foot traffic, and other human-caused disturbances that would reach moderate to major intensities at some sites. Removing cinders from materials sites in the Monument for road construction and maintenance could result in moderate to major adverse impacts on geologic resources. Fire suppression activities also could cause moderate adverse impacts on geologic processes.
Better road and trail access in Alternative B and the associated increase in public use could result in long-term moderate adverse impacts on soils. As in Alternative A, local major adverse impacts on soils would result from fire suppression activities in Alternative B, including fire line construction. Livestock use, especially in areas where livestock concentrate, would result in moderate adverse impacts, including compaction, erosion, and changes in soil fertility and production. Facility development, including the expansion of the Visitor Center, the creation of interpretation and trails in Kings Bowl, and the installation of kiosks, signs, and wayside exhibits, also would cause moderate adverse impacts on soils. Soil loss and movement resulting from the actions of Alternative B, along with the cumulative effects of agricultural and other land uses in the vicinity of the Monument, would constitute moderate adverse impacts.

More road and trail construction under Alternative B would remove vegetation and could result in spread of noxious weeds, with moderate short- and long-term negative impacts on native plants. Livestock would trample vegetation, causing its removal and the spread of invasive and noxious weeds. More fire suppression under Alternative B could result in moderate adverse local impacts from fire line construction and heavy equipment. Areas around the Monument would be affected by agricultural practices, including irrigated and dryland crop farming and livestock ranching. Associated impacts that could reach moderate intensity are (a) the elimination of native vegetation by heavy livestock use or by its replacement by crops, (b) drift of weeds, (c) drift of herbicides, and (d) agricultural trespass, including the deposition of garbage or the removal of vegetation and planting crops on public lands adjacent to the Monument.

Intense recreational use of ice cave pools could create moderate changes in nutrient concentrations and bacteria levels. The duration of these local effects would depend on the specific site.

Under Alternative B, fires could result in major adverse impacts on some sensitive woodland and grassland wildlife species. Secondary roads and associated visitor use adjacent to sensitive wildlife areas could cause moderate disturbances of wildlife. Moderate long-term adverse impacts on wildlife from livestock use would result from competition for forage, trampling, loss of habitat, and disruption of migration corridors. The cumulative effects of agriculture and ranching on adjacent lands could adversely affect wildlife over large areas of the Monument through long-term competition for resources and habitat conversion.

**Cultural Resources**

Under Alternative B, improved access to the more remote regions of the Monument could increase visitation to those areas, as well as increasing the impacts of vehicle and foot traffic, unauthorized collections, and vandalism of cultural resources. Livestock use under Alternative B would cause erosion, create trails, and denude areas of vegetation, which could damage cultural resources in the area.

**Land Use and Transportation**

Under Alternative B, the Carey-Kimama and Arco-Minizoka roads would be designated as Backcountry Byways, which would cause moderate to major long-term adverse impacts from more visitation and related increases in maintenance and road degradation caused by erosion or overuse. In addition, roads and trails in the Monument would be improved, causing minor to moderate long-term adverse impacts on travel and access by attracting more visitors and increasing the frequency of needed maintenance. More livestock developments (such as water troughs) in the expanded Passage Zone under this alternative could cause moderate adverse impacts on transportation and access associated with more use of the road network.

The restoration and other actions associated with fire suppression and recovery of burned areas could result in closure to grazing for up to three years, a moderate adverse impact. Over time, increased recreation, especially in the Passage Zone, could result in conflicts, a moderate adverse impact on livestock operations.
Visitor Experience
VRM Inventory classifications outside the Monument boundary that would allow visual intrusions such as cell towers could cause long-term moderate adverse impacts on the natural night sky.

Social and Economic Conditions
As mineral leases expired and could not be not renewed, there would be moderate long-term adverse economic impacts on county leaseholders, who would have to obtain minerals from other sources. However, given that employment and income from mining total no more than 1 percent in any of the five counties in the planning area, this would be a negligible effect on the local economy.

ALTERNATIVE C
Natural Resources
Damage, theft, vandalism, foot traffic, and other human-caused disturbances of geologic resources, although site-specific, could reach moderate to major intensity in some instances, depending on their nearness to roads and trails. However, with less availability of maintained access under Alternative C, these impacts would be less likely. Removing cinders from materials sites in the Monument for road construction and maintenance could result in moderate to major adverse impacts on geologic resources. Fire suppression activities also could cause moderate adverse impacts on geologic processes.

Under Alternative C, livestock use could cause moderate adverse impacts on soils, including compaction, erosion, and changes in soil fertility and production, especially in areas where livestock congregate. Soil loss and movement resulting from the actions of Alternative C, along with agricultural and other land uses near the Monument, would result in cumulative moderate adverse impacts on soils.

Decreased road density under Alternative C would reduce the opportunity for noxious weeds to be dispersed, but this would also reduce the probability of detection and treatment by Monument staff. This could result in a moderate adverse impact on Monument vegetation. Livestock would trample vegetation, causing its removal and the spread of invasive and noxious weeds.

Fire suppression activities under Alternative C could result in moderate adverse local impacts on vegetation. Areas around the Monument would be affected by agricultural practices, including irrigated and dryland crop farming and livestock ranching. Associated impacts that could reach moderate intensity are (a) the elimination of native vegetation by heavy livestock use, (b) drift of weeds, (c) drift of herbicides, and (d) agricultural trespass, including the deposition of garbage or the removal of vegetation and planting crops on public lands adjacent to the Monument.

Intense recreational use of ice cave pools could create moderate changes in nutrient concentrations and bacteria levels. The duration of these local effects would depend on the specific site.

Under Alternative C, fires could result in major adverse impacts on some sensitive woodland and grassland wildlife species. Secondary roads and associated visitor use adjacent to sensitive wildlife areas could cause moderate disturbances of wildlife. Moderate long-term adverse impacts on wildlife from livestock use would result from competition for forage, trampling, loss of habitat, and disruption of migration corridors. The cumulative effects of agriculture and ranching on adjacent lands could adversely affect wildlife over large areas of the Monument through long-term competition for resources and habitat conversion.

Cultural Resources
Livestock use under Alternative C would cause erosion, create trails, and denude areas of vegetation, which could damage cultural resources in the area.

Land Use and Transportation
Fewer miles of roads would be maintained under Alternative C, which would cause minor to moderate adverse impacts on Monument access because a smaller range of vehicles would be accommodated by the transportation system. In this alternative, the WSA boundaries would serve as the boundaries for the Pristine Zone. Two-track roads in this area
would be either closed or obliterated, resulting in moderate long-term adverse effects on access.

The restoration and other actions associated with fire suppression and recovery of burned areas could result in closure to grazing for up to three years, a moderate adverse impact. Over time, increased recreation, especially in the Passage Zone, could result in conflicts, a moderate adverse impact on livestock operations.

**Visitor Experience**

VRM Inventory classifications outside the Monument boundary that would allow visual intrusions such as cell towers could cause long-term moderate adverse impacts on the natural night sky.

**Social and Economic Conditions**

As mineral leases expired and could not be renewed, there would be moderate long-term adverse economic impacts on county leaseholders, who would have to obtain minerals from other sources. However, given that employment and income from mining total no more than 1 percent in any of the five counties in the planning area, this would be a negligible effect on the local economy.

**ALTERNATIVE D (PROPOSED PLAN)**

**Natural Resources**

Damage, theft, vandalism, foot traffic, and other human-caused disturbances of geologic resources, although site-specific, could reach moderate to major intensity in some instances, depending on their closeness to roads and trails, among other things. Removing cinders from materials sites in the Monument for road construction and maintenance could result in moderate to major adverse impacts on geologic resources. Fire suppression activities also could cause moderate adverse impacts on geologic processes.

Restoring 80,000 acres of sagebrush steppe communities under Alternative D (Proposed Plan) would lead to the exposure of the soils over this acreage, which would result in more wind erosion and potential nutrient loss, resulting in short-term moderate adverse impacts. Livestock would cause compaction, erosion, and changes in soil fertility and production, especially in areas where livestock congregate. This would cause moderate adverse impacts.

Facility development, including expanding the Visitor Center, adding interpretation and trails in Kings Bowl, and installing kiosks, signs, and wayside exhibits, would cause moderate adverse impacts on soils. Soil loss and movement resulting from the actions of Alternative D (Proposed Plan), along with the cumulative effects of agricultural and other land uses in the vicinity of the Monument, would constitute moderate adverse impacts.

More road density in Alternative D (Proposed Plan) would increase the potential for noxious weed dispersal, but it also would increase the probability of detection and treatment by Monument staff. This could result in moderate short- and long-term negative impacts on native plants. Livestock would trample vegetation, causing its removal and the spread of invasive and noxious weeds. Fire suppression activities could result in moderate local impacts from fire line construction and the use of heavy equipment.

Areas around the Monument would be affected by agricultural practices, including irrigated and dryland crop farming and livestock ranching. Associated impacts that could reach moderate intensity are (a) the elimination of native vegetation by heavy livestock use or by its replacement by crops, (b) drift of weeds, (c) drift of herbicides, and (d) agricultural trespass, including the deposition of garbage or the removal of vegetation and planting crops on public lands adjacent to the Monument.

Intense recreational use of ice cave pools could create moderate changes in nutrient concentrations and bacteria levels. The duration of these local effects would depend on the specific site.

Under Alternative D (Proposed Plan), fires could result in major adverse impacts on some sensitive woodland and grassland wildlife species. Secondary roads and associated visitor use adjacent to sensitive wildlife areas could cause moderate disturbances of wildlife. Moderate long-term adverse impacts
on wildlife from livestock use would result from
competition for forage, trampling, loss of habitat,
and disruption of migration corridors. The cumula
tive effects of agriculture and ranching on adjacent
lands could adversely affect wildlife over large areas
of the Monument through long-term competition for
resources and habitat conversion.

Cultural Resources
Livestock use under Alternative D (Proposed Plan)
would cause erosion, create trails, and denude
areas of vegetation, which could damage cultural
resources in the area.

Land Use and Transportation
Access to many routes would be limited to admin
istrative use under Alternative D (Proposed Plan),
which would cause moderate adverse impacts on
access and transportation.

The restoration and other actions associated with
fire suppression and recovery of burned areas could
result in closure to grazing for up to three years,
a moderate adverse impact. Over time, increased
recreation, especially in the Passage Zone, could
result in conflicts, a moderate adverse impact on
livestock operations.

Visitor Experience
VRM inventory classifications outside the Monu
ment boundary that would allow visual intrusions
such as cell towers could cause long-term moderate
adverse impacts on the natural night sky.

Social and Economic Conditions
As mineral leases expired and could not be renewed,
there would be moderate long-term adverse
economic impacts on county leaseholders, who
would have to obtain minerals from other sources.
However, given that employment and income from
mining total no more than 1 percent in any of the
five counties in the planning area, this would be a
negligible effect on the local economy.

IRREVERSIBLE AND
IRRETRIEVABLE
COMMITS OF
RESOURCES

ALTERNATIVE A
If roads or trails are improved, the resultant in
creased access and visitation would lead to greater
damage, theft, or vandalism of geologic features.
In most cases, such changes would be irreversible
and the resources lost would be irretrievable. The
possibility of this occurring would be greatest in the
Passage Zone, 4,700 acres under this alternative.
Cinders removed from materials sites in the Monu
ment for road construction and maintenance also
would be irretrievable.

Soil loss resulting from the cumulative effects of
Alternative A and agricultural and other land uses in
the vicinity of the Monument would be irreversible
and irretrievable.

In some circumstances, the loss of sagebrush steppe
habitat either by direct disruption or by the spread
of noxious weeds or other invasive species would
be irreversible. In other instances, reversing the loss
of this habitat would take many years to complete.
Wildlife that depend on habitats irreversibly lost
would be similarly affected.

Irreversible and irretrievable losses of resources
would result from unauthorized collection and
vandalism of cultural resources and from the
disruption of cultural resource sites by livestock or
vehicles. It is anticipated that such losses would be
commensurate with the level of access and visitation
to the Monument, which is low under this alterna
tive.

For all alternatives, the materials and energy used
for habitat restoration and facility improvements
or maintenance would be irretrievably lost. The
funds expended for labor and materials for habitat
restoration, facility improvements and maintenance,
and Monument operations would be irreversibly and
irretrievably committed.
**ALTERNATIVE B**

If roads or trails are improved, the resultant increased access and visitation would lead to greater damage, theft, or vandalism of geologic features. In most cases, such changes would be irreversible and the resources lost would be irretrievable. The possibility of this occurring would be greatest in the Passage Zone (68,900 acres inside the Monument and 9,000 acres outside the Monument) in Alternative B. Cinders removed from materials sites in the Monument for road construction and maintenance also would be irretrievable.

Soil loss resulting from the cumulative effects of Alternative B and agricultural and other land uses in the vicinity of the Monument would be irreversible and irretrievable.

In some circumstances, the loss of sagebrush steppe habitat either by direct disruption or by the spread of noxious weeds or other invasive species would be irreversible. In other instances, reversing the loss of this habitat would take many years to complete. Wildlife that depend on habitats irreversibly lost would be similarly affected.

Irreversible and irretrievable losses of resources would result from unauthorized collection and vandalism of cultural resources and from the disruption of cultural resource sites by livestock or vehicles. It is anticipated that such losses would be commensurate with the level of access and visitation to the Monument, which is greatest under Alternative B.

For all alternatives, the materials and energy used for habitat restoration and facility improvements or maintenance would be irretrievably lost. The funds expended for labor and materials for habitat restoration, facility improvements and maintenance, and Monument operations would be irreversibly and irretrievably committed.

**ALTERNATIVE C**

Even though few roads or trails would be improved under this alternative, some damage, theft, or vandalism of geologic features would occur. In most cases, such changes would be irreversible and the resources lost would be irretrievable. The possibility of this occurring would be greatest in the Passage Zone, 3,200 acres under this alternative. Cinders removed from materials sites in the Monument for road construction and maintenance also would be irretrievable.

Soil loss resulting from the cumulative effects of Alternative C and agricultural and other land uses in the vicinity of the Monument would be irreversible and irretrievable.

In some circumstances, the loss of sagebrush steppe habitat either by direct disruption or by the spread of noxious weeds or other invasive species would be irreversible. In other instances, reversing the loss of this habitat would take many years to complete. Wildlife that depend on habitats irreversibly lost would be similarly affected.

Irreversible and irretrievable losses of resources would result from unauthorized collection and vandalism of cultural resources and from the disruption of cultural resource sites by livestock or vehicles. It is anticipated that such losses would be commensurate with the level of access and visitation to the Monument, minimal under this alternative.

For all alternatives, the materials and energy used for habitat restoration and facility improvements or maintenance would be irretrievably lost. The funds expended for labor and materials for habitat restoration, facility improvements and maintenance, and Monument operations would be irreversibly and irretrievably committed.

**ALTERNATIVE D (PROPOSED PLAN)**

If roads or trails are improved, the resultant increased access and visitation would lead to greater damage, theft, or vandalism of geologic features. In most cases, such changes would be irreversible and the resources lost would be irretrievable. The possibility of this occurring would be greatest in the Passage Zone, 6,700 acres inside the Monument and 4,100 acres outside the Monument, under this alternative. Cinders removed from materials sites in the
Monument for road construction and maintenance also would be irretrievable.

Soil loss resulting from the cumulative effects of Alternative D (Proposed Plan) and agricultural and other land uses in the vicinity of the Monument would be irreversible and irretrievable.

In some circumstances, the loss of sagebrush steppe habitat either by direct disruption or by the spread of noxious weeds or other invasive species would be irreversible. In other instances, reversing the loss of this habitat would take many years to complete. Wildlife that depend on habitats irreversibly lost would be similarly affected.

Irreversible and irretrievable losses of resources would result from unauthorized collection and vandalism of cultural resources and from the disruption of cultural resource sites by livestock or vehicles. It is anticipated that such losses would be commensurate with the level of access and visitation to the Monument, moderate under this alternative.

For all alternatives, the materials and energy used for habitat restoration and facility improvements or maintenance would be irretrievably lost. The funds expended for labor and materials for habitat restoration, facility improvements and maintenance, and Monument operations would be irreversibly and irretrievably committed. This commitment would be largest under Alternative D (Proposed Plan), with 80,000 acres slated for restoration.

**RELATIONSHIP OF SHORT-TERM USES OF THE ENVIRONMENT TO LONG-TERM PRODUCTIVITY**

Under all alternatives, the short-term disturbances of soils, vegetation, wildlife habitat, and possibly visitor enjoyment of the Monument from the restoration efforts and limited facility construction would be more than offset by the long-term productivity of the restored sagebrush-steppe habitat and the enhanced facilities available for visitor use. This would be particularly true for Alternative D (Proposed Plan), with its greater emphasis on long-term restoration of habitat. Developing and constructing improved roads and facilities, especially under Alternative B, would result in short-term socioeconomic benefits. After construction work was finished, long-term benefits would result from the improved facilities, access, and programs.

Under all alternatives, grazing and mineral extraction would constitute short-term uses of the environment in various locations. These short-term uses would be balanced by the long-term productivity of these industries overall. The disturbance of soils, vegetation, and wildlife habitat from these uses and from visitor use would reduce the long-term productivity of the environment in local areas where revegetation or the restoration of the natural environment could not be fully realized over time.
Chapter 5
Consultation and Coordination with Others
Previous page, clockwise, from top left
Blazing star
Devil’s Orchard blocks
Blocky a’a
Crater
Big Cinder Butte
Public involvement, consultation, and coordination have been integral parts of the planning process leading to this Proposed Plan/Final EIS. A public participation plan and schedule were prepared and implemented during the preparation of the Plan. Methods to inform and involve the public included Federal Register notices, news releases, public meetings and workshops, invited presentations at special interest group meetings, individual meetings with interested publics, newsletter mailings, and website postings.

**BUREAU OF LAND MANAGEMENT-NATIONAL PARK SERVICE COLLABORATION**

Proclamation 7373, which enlarged the boundaries of the Monument, directed that the “National Park Service and the Bureau of Land Management manage the Monument cooperatively and shall prepare an agreement to share, consistent with applicable laws, whatever resources are necessary to properly manage the Monument.” Further direction from the Secretary of the Interior tasked both agencies to complete a single, combined RMP/GMP and EIS that would meet the legal, regulatory, and policy requirements of both agencies.

In the spirit of this collaboration, a planning team was formed to complete the Management Plan for the enlarged Monument. Staffed by specialists from both the BLM and NPS, this team has worked cooperatively to compile and release the Draft Plan/EIS, analyze public comments, and prepare this Proposed Plan/FEIS.

**Planning Consistency**

NEPA regulations require the NPS and BLM to try to achieve consistency between management plans and the following:

a. The officially approved or adopted resource-related plans, policies, and programs of Native American tribes, other federal agencies, state and local governments.

b. In the absence of officially approved or adopted resource-related plans of Native American tribes, other federal agencies, state and local governments, then the officially approved and adopted resource-related policies and programs of Native American tribes, other federal agencies, state and local governments, and, so long as the guidance and resource management plans are consistent with the policies, programs, and provisions of federal laws and regulations applicable to public lands.

Many other plans were reviewed and considered in the development of the Draft Plan/EIS. This document was made available to Native American tribes, the Governor of Idaho, other federal agencies, state and local governments for comment. The resulting comments were addressed in the Proposed Plan/FEIS. A formal 60-day consistency review by the Governor occurs after the Proposed Plan is published (USDI.BLM.2000).

**AGENCY CONSULTATION AND COORDINATION**

Title II, Section 202, of the Federal Land Policy and Management Act, provides guidance for coordinating planning efforts with Native American tribes, other federal departments and agencies of the state and local governments. The following sections document the consultation and coordination efforts undertaken by BLM and NPS during the planning process. Appendix I contains copies of letters exchanged during the agency consultation process leading up to preparation of the Draft Plan/EIS. Appendix K contains copies of consultation letters received following release of the Draft Plan/EIS.

In May 2002, the Secretary of the Interior contacted
the Idaho Governor’s Office about the planning process for the Craters of the Moon National Monument. In addition, a letter to the Governor, signed by the Director of the BLM and the BLM Idaho State Director, invited the State to become a full cooperating agency in this and other planning efforts scheduled for completion no later than 2007. Letters were also sent to tribal, county, city and local governments with an invitation to partner with the BLM and NPS in a cooperating agency relationship. Although these governments declined to formalize a legal Cooperating Agency (CA) position with the federal government, they were contacted and consulted extensively throughout the planning process.

**CONSULTATION WITH NATIVE AMERICAN TRIBES**

Formal government to government consultation has been initiated with the Shoshone-Bannock tribes, has been on-going through out the planning process and will be completed when the Plan is final (see Shoshone-Bannock tribal letters in Appendices I and K). In addition to formal consultation, staff to staff meetings have been held through out the planning process to solicit and incorporate the suggestions of tribal staff.

Formal government to government consultation through the Wings and Roots process with the Shoshone-Paiute was initiated late in 2004 pursuant to the creation of the new Twin Falls District within the BLM. Shoshone-Paiute comments and suggestions resulting from the Wings and Roots process have been incorporated into this Proposed Plan/FEIS.

**CONSULTATION WITH THE STATE HISTORIC PRESERVATION OFFICER AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION**

The State Historic Preservation Officer (SHPO) must be consulted concerning any resource management proposals that might affect a cultural property listed on or eligible for the National Register of Historic Places. Consultation with SHPO has been ongoing throughout the planning process. Letters received from SHPO are included in Appendices I and K.

**CONSULTATION WITH THE U.S. FISH AND WILDLIFE SERVICE**

The Endangered Species Act of 1973 (ESA), as amended, directs every federal agency to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the existence of any federally-listed species or destroy or adversely modify critical habitat (50 CFR 400). The ESA authorizes federal agencies to enter into early consultation with the U.S. Fish and Wildlife Service (USFWS) to make those determinations. A USFWS biologist is a consultant on the planning team. Informal consultation with USFWS under Section 7b of the ESA was initiated on April 25, 2002. In August 2004, members of the planning team met with USFWS biologists to discuss their comments on the Draft Plan/EIS.

In December 2004, the USFWS concurred that the proposed Craters of the Moon National Monument Land Use Plan may affect, but is not likely to adversely affect gray wolves (*Canis lupus*), a listed species. This determination is documented in the Biological Assessment (BA) of the Effects of the Craters of the Moon National Monument and Preserve Land Use Plan. The BA is available for review in the administrative record at the BLM Shoshone Field Office, Shoshone, Idaho. The USFWS concurrence letter is included in Appendix K of this document.

**COORDINATION WITH OTHER AGENCIES, ORGANIZATIONS, AND GROUPS**

The FLPMA, Title II, Section 202, provides guidance for coordinating planning efforts with Native American tribes, other federal departments, and agencies of the state and local governments. All tribal governments and local governments, and federal and state agencies with resource management responsibilities or interests in the planning area were informed of the planning effort and
encouraged to participate. Representatives from the U.S. Geologic Survey, USFWS, and the Idaho Department of Fish and Game served as consultants on the planning team. Throughout the planning process, tribal, federal, state and local agencies and other organizations were updated with newsletter mailings and briefings to keep them informed of the status of the planning effort.

Congressional officials were kept updated throughout the planning process at regularly scheduled quarterly meetings. The open houses of June 2002 and alternative workshops held in February 2003 were attended by local Congressional staffers.

BLM RESOURCE ADVISORY COUNCIL

The Idaho Upper Snake River District Resource Advisory Council (RAC) received regular updates on the planning process as the two agencies began working on a joint Management Plan. A subgroup of the RAC was authorized to follow Craters of the Moon issues and bring recommendations back to the full RAC. Members of the subgroup attended public meetings and also participated in meetings of the ID Team. A RAC member participated in the Choosing by Advantages process to recommend a preferred alternative for the Draft Plan/EIS. With the realigning of Idaho BLM Districts in October 2004, a new RAC was created for the Twin Falls District which has carried forward the Craters of the Moon subgroup. The Twin Falls RAC is now receiving briefings on the release of the Proposed Plan/FEIS. A letter of support from the Twin Falls RAC is included in Appendix K.

HISTORY OF PUBLIC INVOLVEMENT

Scoping is the early and open process for determining the scope of issues to be addressed during the planning process. The Notice of Intent (NOI) to jointly prepare a land use plan and the associated EIS for the Craters of the Moon National Monument was published in the Federal Register on April 24, 2002. The NOI initiated the public scoping process by inviting participation in identifying planning issues and developing planning criteria.

Information about the Monument planning process and opportunities for involvement were posted on websites for the National Park Service (www.nps.gov/crmo) and the Bureau of Land Management (www.id.blm.gov/planning/index.htm). Comments were accepted by mail and via e-mail submitted to the project Inbox: IDCraters_Plan@blm.gov.

Local and regional newspapers and radio stations throughout the planning area were used to disseminate information on the Management Plan process. Press releases, announcing scoping meetings and inviting the public to provide input, were prepared and distributed on April 24, 2002, to print and broadcast media.

The first of a series of three newsletters was developed to inform the public about the planning process and to solicit input. Approximately 1,500 copies of Newsletter No.1 were distributed in April 2002, with an insert identifying the schedule and locations for six public meetings in Idaho communities during the 60-day scoping period.

Open houses were held in June, 2002, at Arco, Carey, Shoshone, American Falls, Rupert, Fort Hall, Hailey, and Boise. More than 166 people attended the meetings. The following list shows the dates and the number of registered attendees at the open houses:

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arco</td>
<td>6/04/02</td>
<td>25</td>
</tr>
<tr>
<td>Carey</td>
<td>6/05/02</td>
<td>15</td>
</tr>
<tr>
<td>Shoshone</td>
<td>6/06/02</td>
<td>16</td>
</tr>
<tr>
<td>American Falls</td>
<td>6/11/02</td>
<td>18</td>
</tr>
<tr>
<td>Rupert</td>
<td>6/27/02</td>
<td>27</td>
</tr>
<tr>
<td>Fort Hall</td>
<td>6/13/02</td>
<td>31</td>
</tr>
<tr>
<td>Hailey</td>
<td>6/18/02</td>
<td>22</td>
</tr>
<tr>
<td>Boise</td>
<td>6/19/02</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>166</td>
</tr>
</tbody>
</table>

During the 60-day public scoping period, 169 letters were received with 536 comments. Letters were received from 29 states, with more than 40 percent
coming from Idaho. Of the 169 letters received, 148 came from individuals; 9 from federal, state, and local agencies; and 12 from interest groups. Comments were received from 26 different communities in Idaho, with the majority originating in Boise.

Issues identified through the scoping process were considered in the development and analysis of the planning alternatives. Comments were grouped into the following six categories:

- General (56 comments)
- Development (52 comments)
- Transportation and Access (139 comments)
- Visitor Use and Public Safety (77 comments)
- Authorized Uses (80 comments)
- Natural and Cultural Resources (132 comments)

Newsletter No. 2 was sent out in August 2002 to approximately 850 individuals and organizations on the mailing list. Copies were also made available at BLM and NPS offices and in gateway communities adjacent to the planning area. This newsletter summarized the comments received at the open houses and in writing throughout the scoping period. It also identified the next steps in the planning process.

Throughout the autumn of 2002, the planning team met and analyzed the comments received. The team developed four conceptual alternatives representing different management strategies that could be considered in planning the future of the Monument. These preliminary alternatives were explained in Newsletter No. 3, which was mailed out and made available in January 2003. A postage-paid card was included in the newsletter, with a request that comments be returned by March 14, 2003. The newsletter also gave the dates and locations of three public workshops to be held in February 2003 for people to come and work with the planning team to provide input and assistance on the conceptual alternatives. A total of 86 people attended the three workshops held in Arco, Carey, and Rupert, on February 8, 15 and 22.

More than 160 letters or comment cards were received. The planning team also received a response developed as a Wilderness Society Alert from more than 2,500 individuals. These comments were again compiled into categories and analyzed by the planning team. Team members used information in the comments as they finalized the four alternatives presented in the Draft Plan/EIS.

Public Comment on the Draft Plan/EIS

The Draft Plan/EIS was filed with the U.S. Environmental Protection Agency (EPA) in April 2004. The EPA announced the availability of the Draft Plan/EIS for public review and comment in the Federal Register on April 30, 2004 (Federal Register, Vol. 69, No. 84, Friday, April 30, pp. 23809-23811). This announcement began a 90-day comment period, which ended on July 29, 2004.

The Draft Plan/EIS was sent to agencies, organizations and people who had participated in the planning process and requested a copy. Copies of the Draft Plan/EIS were also available for review online at the website for the NPS (www.nps.gov/crmo) and the BLM (www.id.blm.gov/planning/index.htm). Copies of the Draft Plan/EIS were placed in the following Idaho libraries:

- American Falls
- Arco
- Burley
- Carey
- Hailey
- Idaho Falls
- Rupert
- Shoshone
- Twin Falls

Copies of the Draft Plan/EIS could also be requested in either a printed copy or on a compact disc (CD) by contacting the agencies through e-mail, phone, or fax.

Government agencies and the public were invited to submit comments by regular mail, through the
All meetings were open to the public and held in large, single rooms. NPS and BLM resource specialists were present to answer any questions that attendees had on the Draft Plan/EIS or to clarify issues on a particular resource. Poster-sized maps depicting the resources as they would be managed within the different alternatives were arranged around the room to illustrate the management options being considered. Hard copy comments were collected from participants during the public comment meetings, and additional comments on the Draft Plan/EIS were received via mail, fax, or e-mail.

During the 90-day comment period (from April 30 to July 29, 2004), 153 letters were received which contained 570 substantive comments. Substantive comments are those which challenge the accuracy of the analysis, dispute the accuracy of information presented, suggest different viable alternatives, or provide new information that makes a change in the proposal. In other words, they raise, debate, or question a point of fact or policy. Comments in favor or against the proposed action or alternatives or comments that only agree or disagree with policy, while valuable, are not considered substantive.

In addition, 975 form letters were received by e-mail, in response to three alerts, one from The Wilderness Society (611 total), one from Idaho Conservation League (354 total) and one from Western Watersheds (10 total).

Letters came from:

1. Twenty-five federal, state, city and county organizations

2. Twelve groups:
   - Gem State Grotto
   - Republicans for Environmental Protection
   - Power County Historical Society
   - Western Watersheds Project
   - Wilderness River Outfitters
   - Great Old Broads for Wilderness
   - Idaho Conservation League
   - The Wilderness Society
   - Idaho Wool Growers
   - Northern Rockies Chapter Sierra Club
   - Lava Lake Land and Livestock
   - Blue Ribbon Coalition

3. 116 individuals

Thirty late form letters were also received, plus one late letter from the National Trust for Historic Preservation.

All correspondence, including representative examples of each form letter and letters received late, were read in their entirety by all members of the ID Team. Both substantive comments and non-substantive comments were reviewed and noted by the ID Team and were considered in developing the Proposed Plan/FEIS. All correspondence is retained in the administrative record.

**COMMENT ANALYSIS**

This section presents a synopsis of the comments received on the Draft Plan/EIS. Comments in response to the Draft Plan/EIS were organized and summarized to allow decision-makers and agency specialists to understand the principal issues of concern. The purpose of this analysis

---

**Public Meetings, May 2004**

<table>
<thead>
<tr>
<th>Location - Date</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arco – 5/4/04</td>
<td>7</td>
</tr>
<tr>
<td>American Falls – 5/6/04</td>
<td>9</td>
</tr>
<tr>
<td>Rupert – 5/13/04</td>
<td>51</td>
</tr>
<tr>
<td>Carey – 5/18/04</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>75</td>
</tr>
</tbody>
</table>
was to objectively identify and display the nature and extent of the public input received on the Draft Plan/EIS. All comments were reviewed. Comments were categorized based on resource areas.

Substantive comments were identified for response, as required by NEPA (40 CFR 1503.4), the BLM NEPA Handbook (H-1790-1), and the NPS Director’s Order 12 guidance. Substantive comments are those which challenge the accuracy of the analysis, dispute the accuracy of information presented, suggest different viable alternatives, or provide new information that makes a change in the proposal. In other words, they raise, debate, or question a point of fact or policy.

As mentioned above, 570 substantive comments were received. Each substantive comment was entered into a database. Because of the large number of submittals (letters, e-mails, faxes, comment forms) received during the public comment period, NPS and BLM elected to extract and categorize comments and, as appropriate, group the same or similar comments for response. This approach enabled the agencies to more efficiently consider, individually and collectively, all comments received and to respond to those comments. Substantive comments received are presented in Appendix L, along with specific responses.

The following list highlights key aspects of the approach used for capturing, tracking, and responding to public comments on the Draft Plan/EIS:

- The ID Team read all comment documents and their attachments to identify and extract comments. After comment identification, individual substantive comments were grouped by categories and each was assigned to a specialist in the appropriate discipline to prepare a response. The ID Team reviewed each response to ensure technical and scientific accuracy, clarity, and consistency, and to ensure that the response fully answered the comment. The specialists referred to the original letters, as necessary, to better understand the context surrounding the comments.
- Frequently, more than one commenter submitted identical or similar substantive comments. In such cases, the comments were grouped and a single summary response was prepared for each group. Summarization of comments enabled the BLM and NPS to appropriately respond to the large number of comments received. To the extent practicable, substantive comments were grouped by topic.
- BLM and NPS made every effort to be fully responsive to every substantive comment on the Draft Plan/EIS. When the meaning of a comment was not clear, a reasonable attempt was made to interpret the comment and respond based on that interpretation. In such cases, a statement of the interpretation of the comment precedes the response.

**KEY TOPICS**

This section provides short summaries of questions raised by those commenting during the public comment period following release of the Draft Plan/EIS. It also provides agency responses to those questions. BLM and NPS identified the topics as “key” based on factors such as:

- The prevalence of a particular topic in the comments received on the DEIS.
- The extent to which a topic concerned fundamental aspects of the Preferred Alternative.
- The extent to which the agencies changed the Proposed Plan/EIS in response to the question.

**Topic: Cultural Resources**

Comments questioned the agencies’ plans to inventory only 10% of the Monument under Section 110 of NHPA, if roads are to be upgraded in some alternatives.

The plan proposes Section 110 inventory on 10% of the Monument (Draft Plan/EIS p. 186). Section 110 of the National Historic Preservation Act refers to non-project related inventory. Section 106 of the National Historic Preservation Act refers to project related inventory, and would always be completed.
Several comments questioned how the agencies would fulfill Cultural Resource commitments of Alternative D with such limited staff.

A discussion of staffing is outside the scope of the Draft Plan/EIS. The draft plan seeks to set the future management direction and goals for the Monument. Once this direction is in place, it will support future managers’ requests for additional funding and staff to accomplish these goals.

**Topic: Water Resources**

Comments stated concerns about grazing effects on water resources, such as playas.

BLM does not identify playas as riparian areas according to the riparian area definition in the Bureau of Land Management Technical References TR 1737-9 and 11. BLM presently has no data or standards to evaluate playas. Therefore, BLM will use their professional judgment to determine if the standards for rangeland health are being met or we are moving towards meeting them, so that the health of the playas will also be met. The plan does not directly alter grazing management, so the impacts of grazing on water quality are substantially the same for all alternatives.

Comments requested that the adopted plan include provisions to restore damaged playas.

Playas would be considered for restoration on a case-by-case basis. The Draft Plan/EIS (p. 29, Management Actions Common to All Alternatives: Livestock Grazing) states, “BLM may remove developments if they are no longer serving a useful purpose or resource objectives warrant their removal. Sites would be restored.” In addition, no additional playas would be modified or developed (Draft Plan/EIS p. 26, Management Actions Common to All Alternatives: Water Resources). Language regarding the restoration of playas has been added to the Proposed Plan/FEIS (See Chapter 2 of the Proposed Plan/FEIS, Management Actions Common to All Alternatives: Water Resources).

**Topic: Geological Resources**

Several comments voiced concerns over the fear of Monument degradation from use and maintenance of roads and from livestock trampling and associated transport of dust and weed seed, which can obscure surfaces of lava formations and alter surface lava features.

Dust can coat geologic formations until a precipitation event removes it. Dust can also infiltrate into cinders and be deposited in or fill cracks providing more growth medium for plants. In comparison to the aftermath of fire where huge volumes of dust/soil are liberated (eroded and re-deposited elsewhere), these impacts would fall within the range of normal variability and are, therefore, considered to have a negligible impact on geological processes and features. Short of keeping people out entirely, it is not possible to eliminate all anthropogenic-induced degradation.

**Topic: Soils**

Many comments expressed concern over the effects of disturbed soils transporting herbicide particles.

Impacts of the proposed alternatives on soil resources are analyzed in Draft Plan/EIS Ch. 4. Effects of herbicides being transported via soil particles would be analyzed in the Integrated Weed Management Plan and project-level vegetation treatment environmental assessments. The Proposed Plan expands the Pristine Zone (as compared to the Draft Alternative D), which will result in reduced access for recreation and livestock developments in certain areas containing sensitive vegetation.

Some comments indicated the assessment of soils is narrowly constrained, as it assesses no alternative that alters livestock soil disturbance.

The ID Team felt the level of detail and accuracy of impacts analysis, on the topic of soils, was adequate to make informed decisions at the RMP/GMP level of analysis. The plan does not directly alter grazing management, so the impacts of grazing on soils are substantially the same for all alternatives. Additional information found in the NRCS Soil Survey...
will be used for implementation and project-level planning.

Comments were concerned about adequate data to afford protection of soils and especially biological soils crusts.

More detailed data on soils found in the NRCS Soil Survey will be used for implementation level planning. Impacts to biological crusts have been analyzed in Chapter 4 and will be further analyzed in site-specific analyses.

**Topic: Vegetation**

A number of comments emphasized using native species in vegetation restoration and an assessment of the potential impact from future noxious weed infestation.

BLM and NPS are currently funded and have applied for additional funding to increase native seed specifically for plants found within the Monument. BLM is working with the USFS Rocky Mountain Research Station and private growers to collect and increase native plant seed to be used in large-scaled restoration and post-wildland fire rehabilitation projects; NPS is working with the NRCS to increase native plants specific to the Monument and Preserve. Every effort is being made to utilize the best available science and plant materials in restoration and rehabilitation projects.

In Management Common to All Alternatives, integrated Weed Management principles would be used to detect and eradicate all new infestations of noxious weeds, control existing infestations, and prevent the establishment and spread of weeds within and adjacent to the planning area.

Concerns were expressed over the limited data provided in the vegetation map and the lack of inventory performed.

The vegetation map included in the Draft Plan/EIS was produced from satellite imagery and is intended to give a general idea of vegetation distribution within the Monument. Refer to Draft Plan/EIS, p. 86, third paragraph in the right-hand column (Data from various vegetation studies…) for a discussion of the limitations of the vegetation map. Site-specific, project-level inventories and assessments of impacts to vegetation will be done as needed for individual projects conducted in the future.

Several comments indicated the acres of lands to be treated under all alternatives appear to be completely arbitrary, and could be changed under any alternative.

A vegetation inventory and assessment for Laidlaw Park, Little Park, and Paddelford Flat was performed by the BLM in cooperation with The Nature Conservancy in 2002/2003 (Jurs and Sands 2004). A map showing the general areas proposed for various levels of restoration treatment based on this assessment is included in the Proposed Plan. These are rounded estimates based on proposed restoration acreages in the Monument. Field condition assessment and vegetation inventories are included for other parts of the Monument.

Numerous comments voiced concern over the need to protect and restore sage-steppe habitats and the effects on grazing on these habitats.

All alternatives contain specific management guidance for wildlife protection, particularly sagebrush steppe obligates. Measures are in place to protect the sagebrush steppe in the Monument (Draft Plan/EIS pp. 25-26, Management Guidance Common to All Alternatives: Vegetation, Including Special Status Species, and Fire Management; and Wildlife, Including Special Status Species). In addition, all allotments must meet or be progressing towards meeting Idaho Standards and Guidelines, including Standard 4 (Native Plant Communities) and Standard 8 (Special Status Species) (Draft Plan/EIS p. 29, Management Guidance Common to All Alternatives: Livestock Grazing). All restoration methods, including passive methods, will be considered for future projects. If monitoring shows that grazing is impacting the restoration process, temporary removal of livestock is a legitimate response. See Draft Plan/EIS p. 25, Management Guidance Common to All Alternatives for
Vegetation, regarding protection and restoration of sagebrush steppe habitats.

Commenters were concerned that a Fire Management Plan should be part of the comprehensive planning process, which would identify a goal of restoration and maintenance of native vegetation on all lands altered by fire or other disturbance.

A Fire Management Plan (FMP) would be prepared as part of the implementation of the RMP/GMP (Draft Plan/EIS p. 12, Future Planning Needs, Fire Management Plan). Currently the Monument operates under two FMPs: the 2004 South Central Idaho FMP covers BLM-administered lands and the Preserve; and the 2000 NPS Wildland FMP covers the original Monument. The updated FMP would guide suppression efforts as well as pro-active fuels reduction and restoration treatments, and would detail goals and constraints in specific fire management areas based on resource objectives outlined in the RMP/GMP. In addition, post-fire rehabilitation on BLM-administered lands within the Monument is guided currently by the Shoshone and Burley Field Office Normal Fire Rehabilitation Plans (scheduled for decision Spring of 2005). In all cases, the use of native plants is emphasized and only native species would be used on projects in the Pristine Zone.

**Topic: Access and Transportation**

Several comments expressed concern that the document did not adequately address transportation planning issues.

See Chapter One, Future Planning Needs, Transportation Planning. In the Proposed Plan, we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on access and transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation-level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for travel and access within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan.

Several comments requested more discussion on impacts of road enhancements and building for delivery of administrative and fire services, and expressed concerns about the effects of roads, including fragmentation, access to sensitive areas, and weed dispersal.

The existing roads support a variety of administrative activities, such as weed control and fire fighting, and have since before the new Monument was designated. These administrative uses may increase for short periods of time, such as during restoration activity, but the long-term impacts of that administrative use are expected to increase only slightly.

The impact assessment is described separately and somewhat differently for different resources. For example, under Geologic Resources, it is recognized that road improvements could have potentially major long-term adverse impacts on resources such as caves due to increased numbers of visitors. However, in selecting the Proposed Plan, the agencies have taken into consideration the expected impacts on resources and the agencies’ future management capabilities to deal with such impacts. See Chapter One, Future Planning Needs, Transportation Planning.

Comments were received regarding increasing/decreasing the Passage Zone in the Monument.

In response to these comments, the agencies modified the areas contained in the Passage Zone in Alternative D as presented in the Proposed Plan. See Chapter 2, Alternative D Description and Map. In the Proposed Plan, the Passage Zone was reduced in response to public comment and agency review. Creating Passage Zone corridors does not mandate an increase in the number or current standard of roads. See Chapter 2, Description of Management Zones.
Several comments supported including the entire Arco-Minidoka Road as a “passage” route with improvements.

While not specifically proposing any improvement to the Arco-Minidoka Road, the agencies, in the Proposed Plan, allow for accommodating improvement to the section of the road within the Monument if, at a future time, the local authorities decide to improve the section of the Arco-Minidoka Road to the north of the Monument boundary.

Comments expressed concern over the spread of noxious weeds as a result of increased human activity in the Monument related to increased access.

The Draft Plan/EIS acknowledges that roads, vehicles, humans, and animals are known vectors to the spread of noxious weeds (Draft Plan/EIS p. 92 Ch. 3, Discussion on Noxious and Exotic Species). A full Integrated Weed Management Program addressed a broad range of prevention, education, and control activities to combat noxious weeds (Draft Plan/EIS p. 25, Management Guidelines Common to All Alternatives: Vegetation, Including Special Status Species, and Fire Management).

Several comments expressed concern over how the document defined roads, indicating that unauthorized or unplanned roads should not be considered “roads” and upgrading would result in increased impacts and OHV use.

See Draft Plan/EIS p. 112 Chapter 3, Land Use, Transportation/Travel and Access. In response to public comment concerning a lack of clarity in road definitions in the Draft Plan/EIS, road and trail definitions have been refined (See Proposed Plan/FEIS, Chapter 3, Land Use and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas.

Topic: Recreation
Comments requested a monitoring plan to ensure primitive camping and recreation does not damage Monument resources.

On pp. 12-13 of the Draft Plan/EIS, future planning needs are discussed. Many of the implementation plans described, such as the Wilderness/Wilderness Study Area Plan, the Cave Management Plan, and the Cultural Resources Management Plan, would provide for periodic monitoring and protection of resources from adverse impacts associated with primitive camping and recreation.

Topic: Special Designations/Management Zones
Many comments suggested designation of North Laidlaw Park as an Area of Critical Environmental Concern.

The comments did not provide any new information or studies updating the analysis of relevance and importance criteria that would result in a determination that ACEC status is warranted. Management direction to protect the high-quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See Draft Plan/EIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and p. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. The Preferred Alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49 of the DEIS) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.

Topic: Wilderness
Comments indicated the management plan for the Monument should identify a process by which WSAs not currently recommended for wilderness designation are reevaluated for their wilderness characteristics and suitability for wilderness designation.
The agencies previously inventoried lands within the current monument boundaries to determine areas with wilderness qualities. These inventories began in the 1960s and continued through the 1980s. These studies resulted in designation of the “43,243” acre Craters of the Moon Wilderness in 1970, and 469,009 acres of WSAs (of which 408,110 acres have been recommended to the U.S. Congress for designation). Existing law and agency policy require management of WSAs to protect the wilderness qualities until Congress determines whether or not to designate the lands as wilderness. The agencies do not believe the land use situation within or adjacent to the Monument warrants re-inventory of lands for wilderness suitability.

*Comments suggested the Wilderness Management actions should include removal of livestock projects that may be impairing wilderness values.*

Under the Proposed Plan/FEIS, managers would continue to have the authority to remove livestock or livestock facilities for resource benefit, if needed. Livestock projects within WSAs are managed according to BLM’s Interim Management Policies for Lands under Wilderness Review, Handbook H8550-1, to prevent impairment of wilderness values.

**Topic:** Grazing

*Comments indicated concern over the role of livestock grazing in loss of sagebrush steppe, and lack of analysis in the Draft Plan/EIS.*

Monument-wide management actions and cumulative impacts of livestock facilities on Monument resources were analyzed and characterized at an appropriate level of intensity for the Draft Plan/EIS (See Draft Plan/EIS Chapter 4, pp. 158-162). Specific, project-level analysis of cumulative impacts will be provided in individual range improvement project Environmental Assessments. Impacts of livestock facilities and developments on natural resources were specifically and cumulatively analyzed at the Monument level.

*Cornments requested terminating grazing from certain areas of the Monument and looking at temporary removal of livestock as a management tool to avoid negative impacts to the restoration process.*

If monitoring shows that grazing is impacting the restoration process, temporary removal of livestock is a legitimate response to correct the problem. According to policy requirements, restoration projects always include removal of livestock for a minimum of two growing seasons following treatment to allow for vegetation recovery and establishment of seeded species. Idaho Standards and Guidelines for Rangeland Health guide adjustments in livestock grazing regimes (numbers, seasons of use) in response to problems identified through evaluation and monitoring. The historical impacts of livestock grazing on the sagebrush steppe were discussed in the Draft Plan/EIS (p. 86, Affected Environment: Vegetation, including Special Status Species, and Fire Management).

**Topic:** Wildlife

*Several comments indicated concern that the Monument Management Plan failed to take the actions necessary to protect sagebrush and Sage-grouse ecosystems.*

The Proposed Plan does call for an increase in rehabilitation of areas to functional sagebrush systems as well as the protection of existing healthy and functional habitats. In response to this and similar comments, additional and updated protections for sage-grouse have been incorporated into the Proposed Plan. These can be found in the Wildlife section and Management Actions section of the Proposed Plan/FEIS.

**Topic:** Socioeconomics

*Comments requested further analysis regarding how the Proposed Plan will contribute to the health of local economies as well as positive and negative socioeconomic impacts.*

The NPS and BLM proactively involved local county and community officials in scoping of the
Draft Management Plan and development of the management alternatives analyzed. Through this process, several economic issues were identified and included in the alternatives. These include provisions for locating Monument facilities outside the Monument; opportunities for surrounding “gateway” communities to provide services and facilities to visitors; and opportunities for outfitter, guide operations and concession activities within the Monument, among others. A more thorough analysis of the potential economic and social impacts of the management alternatives has been included in the Proposed Plan/FEIS.

**Topic: General**

*Comments supported the City of Arco as the “Gateway to the Craters of Moon” city.*

The support of communities adjacent to the Craters of the Moon National Monument and Preserve is an important link for visitors to the area. We expect this relationship to become stronger. The agencies do not designate one particular community as the official “Gateway” to the Monument. Ideally, several communities strategically located near the Monument associate in a positive way with the Monument. The agencies intend to work closely with all communities surrounding the Monument.

**Responses to Comments**

As stated earlier, over 570 substantive comments were received during the 90-day public comment period. In order to reduce the cost and volume of this document, only Tribal, agency and other government letters have been reprinted in their entirety. All other substantive comments received have been summarized or have been synthesized into a representative comment capturing the main points of several similar comments. The administrative record contains all original letters received.

Public comments received have been documented, analyzed and considered in decision-making and incorporated into the Proposed Plan/FEIS as appropriate. Comments that presented new data or addressed the adequacy of the document, the alternatives or the analysis were responded to pursuant to NEPA regulations. Comments expressing personal opinion or that had no specific relevance to the adequacy or accuracy of the Draft Plan/EIS were considered in the decision-making process, but not responded to directly.

Consultation and agency letters on the Draft Plan/EIS are included in Appendix K. Appendix L contains substantive comments received and responses to those comments. A number of comments provided valuable suggestions on improving the Draft Plan/EIS. Some comments led to changes reflected in the Proposed Plan/FEIS. Other comments resulted in a response to explain BLM or NPS policy, to refer readers to information in the EIS, to answer technical questions, to further explain technical issues, or to provide clarification.

Appendices K and L, plus all other appendices referenced in this document, are printed after this chapter.

**LIST OF RECIPIENTS**

Shown below is a partial list of the many agencies, organizations, and individuals who expressed interest in the Plan during the planning process. Each of these groups or individuals was sent a copy of the Draft Plan/EIS, or notification of where documents could be viewed on a website.

**Native American Tribes**

- Shoshone-Bannock Tribes
- Shoshone-Paiute Tribes

**Government Agencies and Representatives**

- Environmental Protection Agency, Seattle, Washington
- U.S. Fish and Wildlife Service
- U.S. Geologic Survey
- USDA/APHIS Wildlife Services
- USDA/Forest Service – Sawtooth National Forest
- U.S. Senator Larry Craig
Chapter 5: CONSULTATION AND COORDINATION WITH OTHERS

Businesses, Organizations and Other Groups

In addition to the specific businesses, interest groups, and other organizations listed below, numerous individuals expressed an interest in the Plan and requested to be notified of the availability of the draft document.

- Audubon Society, Prairie Falcon Chapter
- Blue Ribbon Coalition
- Committee for Idaho's High Desert
- Craters of the Moon Natural History Association
- Flat Top Sheep Company
- Gem State Grotto
- Idaho Cattle Association
- Idaho Cave Survey Grotto
- Idaho Conservation League
- Idaho Environmental Council
- Idaho Native Plant Society, Loasa Chapter
- Idaho Outfitter and Guides Association
- Idaho Snowmobile Association
- Idaho State Historical Society
- Idaho Watershed Project (Western Watershed Project)
- Idaho Wool Growers
- IMBA (International Mountain Biking Association)
- Izaak Walton League
- Lava Lake Land and Livestock
- National Parks and Conservation Association
- National Wildlife Federation
- Sierra Club of Idaho
- Sun Valley-Ketchum Chamber of Commerce
- The Nature Conservancy
- The Wilderness Society of Idaho
- Twin Falls Chamber of Commerce
- Wilderness Watch
Distribution of the Proposed Plan/FEIS

Copies of the Proposed Plan will be sent to those people and organizations who have participated in the planning process and those who indicated interest in the Proposed Plan/FEIS. The mailing list is located in the administrative record of the Shoshone Field Office, BLM.
Appendices, Glossary, Abbreviations and Acronyms, Bibliography, List of Preparers, and Index
Previous page, clockwise, from top left
Lava arch
Big Craters view
Sprouts
APPENDIX A

PROCLAMATIONS AND ENABLING LEGISLATION

Proclamation 1694

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA
A PROCLAMATION

[No. 1694—May 2, 1924—43 Stat. 1947]

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

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

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

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

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

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

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

[SEAL]

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

By the President:
CHARLES E. HUGHES, Secretary of State.

CALVIN COOLIDGE
BY THE PRESIDENT OF THE UNITED STATES OF AMERICA
A PROCLAMATION

[No. 1843—July 23, 1928—45 Stat. 2959]

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

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

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

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

[SEAL]

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

CALVIN COOLIDGE.

By the President:
FRANK B. KELLOGG,
Secretary of State.
Proclamation 1916
BY THE PRESIDENT OF THE UNITED STATES OF AMERICA
A PROCLAMATION
[No. 1916—July 9, 1930—46 Stat. 3029]

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

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

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

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

BOISE MERIDIAN

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

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

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

[SEAL]

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

HERBERT HOOVER.

By the President:
HENRY L. STimson,
Secretary of State.
Proclamation 2499

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

[No. 2499—July 18, 1941—55 Stat. 1660]

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

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

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

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

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

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

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

FRANKLIN D. ROOSEVELT

By the President:
SUMNER WELLES,
Acting Secretary of State.
Proclamation 3506
Presidential Documents
From Federal Register of Nov. 22, 1962
Title 3—THE PRESIDENT
Proclamation 3506
ADDITION TO THE CRATERS OF THE MOON NATIONAL
MONUMENT, IDAHO

By the President of the United States of America
A Proclamation

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

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

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

BOISE MERIDIAN, IDAHO

T. 1 S., R. 24 E.
sec. 3, W-1/2
sec. 20, W-1/2 and W-1/2 E-1/2
sec. 29, NW-1/4 and W-1/2 NE-1/4
sec. 30, NE-1/4;
comprising 5,360 acres, more or less.

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

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

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

JOHN F. KENNEDY

By the President:
DEAN RUSK,
Secretary of State.
Omnibus Parks and Public Lands Management Act of 1996

Public Law 104-333
104th Congress

An Act

To provide for the administration of certain Presidio properties at minimal cost to the Federal taxpayer, and for other purposes.

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

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

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

(b) Administration and Acquisition.--Federal lands and interests therein deleted from the boundary of the national monument by this section shall be administered by the Secretary of the Interior through the Bureau of Land Management in accordance with the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.), and Federal lands and interests therein added to the national monument by this section shall be administered by the Secretary as part of the national monument, subject to the laws and regulations applicable thereto. The Secretary is authorized to acquire private lands and interests therein within the boundary of the national monument by donation, purchase with donated or appropriated funds, or exchange, and when acquired they shall be administered by the Secretary as part of the national monument, subject to the laws and regulations applicable thereto.
Proclamation 7373

Wednesday,
November 15, 2000

Part VII

The President

Proclamation 7373—Boundary Enlargement of the Craters of the Moon National Monument
Proclamation 7374—Vermilion Cliffs National Monument
Proclamation 7375—Veterans Day, 2000
Proclamation 7373 of November 9, 2000

Boundary Enlargement of the Craters of the Moon National Monument

By the President of the United States of America

A Proclamation

The Craters of the Moon National Monument was established on May 2, 1924 (Presidential Proclamation 1094), for the purpose of protecting the unusual landscape of the Craters of the Moon lava field. This “lunar” landscape was thought to resemble that of the Moon and was described in the Proclamation as “weird and scenic landscape peculiar to itself.” The unusual scientific value of the expanded monument is the great diversity of exquisitely preserved volcanic features within a relatively small area. The expanded monument includes almost all the features of basaltic volcanism, including the craters, cones, lava flows, caves, and fissures of the 65-mile-long Great Rift, a geological feature that is comparable to the great rift zones of Iceland and Hawaii. It comprises the most diverse and geologically recent part of the lava terrain that covers the southern Snake River Plain, a broad lava plain made up of immeasurable basaltic lava flows that erupted during the past 5 million years.

Since 1924, the monument has been expanded and boundary adjustments made through four presidential proclamations issued pursuant to the Antiquities Act (34 Stat. 225, 16 U.S.C. 431). Presidential Proclamation 1843 of July 23, 1926, expanded the monument to include certain springs for water supply and additional features of scientific interest. Presidential Proclamation 1916 of July 19, 1930, Presidential Proclamation 2489 of July 10, 1941, and Presidential Proclamation 3505 of November 19, 1962, made further adjustments to the boundaries. In 1996, a minor boundary adjustment was made by section 205 of the Omnibus Parks and Public Lands Management Act of 1996 (Public Law 104–333, 110 Stat. 4093, 4108).

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

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

CRATERS OF THE MOON NATIONAL MONUMENT AND PRESERVE
Proposed Management Plan and Final Environmental Impact Statement
during which the 60 lava flows and 25 cinder cones of this composite volcanic field were formed. Some of the lava flows traveled distances of as much as 43 miles from their vents, and some flows diverged around areas of higher ground and rejoined downstream to form isolated islands of older terrain surrounded by new lava. These areas are called "kipukas."

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

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

Section 2 of the Act of June 6, 1906 (34 Stat. 225, 16 U.S.C. 431), authorizes the President, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.

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

NOW, THEREFORE, I, William J. Clinton, President of the United States of America, by the authority vested in me by section 2 of the Act of June 6, 1906 (34 Stat. 225, 16 U.S.C. 431), do proclaim that there are hereby set apart and reserved as an addition to the Craters of the Moon National Monument, for the purpose of protecting the objects identified above, all lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the map entitled "Craters of the Moon National Monument Boundary Enlargement" attached to and forming a part of this proclamation. The Federal land and interests in lands reserved consist of approximately 661,207 acres, which is the smallest area compatible with the proper care and management of the objects to be protected.

All Federal lands and interests in lands within the boundaries of this monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale, or leasing or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating
to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument. For the purpose of protecting the objects identified above, the Secretary shall prohibit all motorized and mechanized vehicle use off road, except for emergency or authorized administrative purposes.

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

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

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

Wilderness Study Areas included in the monument will continue to be managed under section 906(c) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701-1782).

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

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

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

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

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

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

Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.
IN WITNESS WHEREOF, I have hereunto set my hand this ninth day of November, in the year of our Lord two thousand, and of the Independence of the United States of America the two hundred and twenty-fifth.

William Clinton

Appendices: APPENDIX A 343
To redesignate certain lands within the Craters of the Moon National Monument, and for other purposes. <<NOTE: Aug. 21, 2002 - [H.R. 601]>>

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

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

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

(b) Administration.--

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

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

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

(C) the laws generally applicable to units of the National Park System, including the Act entitled "An Act to establish a National Park Service, and for other purposes", approved August 25, 1916 (16 U.S.C. 1 et
(2) Hunting.--The Secretary of the Interior shall permit hunting on lands within the Craters of the Moon National Preserve in accordance with the applicable laws of the United States and the State of Idaho. The Secretary, in consultation with the State of Idaho, may designate zones where, and establish periods when, no hunting may be permitted for reasons of public safety, protection of the area’s resources, administration, or public use and enjoyment. Except in emergencies, any regulations prescribing such restrictions relating to hunting shall be put into effect only after consultation with the State of Idaho.

Approved August 21, 2002.

LEGISLATIVE HISTORY--H.R. 601:

------------------------------------------------------------------------

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

Vol. 147 (2001):
May 1, considered and passed House.

Aug. 1, considered and passed Senate.
Wilderness Designation
Public Law 91-504

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

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

* * * * * * *

DESIGNATION OF WILDERNESS AREAS WITHIN NATIONAL PARKS AND MONUMENTS

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

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

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

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

Approved October 23, 1970.
APPENDIX B

PLANNING CRITERIA AND INTERIM MANAGEMENT GUIDELINES

GENERAL PLANNING CRITERIA

“Planning area” or use of the “Monument” refers to the original NPS Monument, expanded Monument, and Preserve as a whole. The following General Planning Criteria will be considered in developing the Management Plan for the Craters of the Moon National Monument and Preserve:

<table>
<thead>
<tr>
<th>GENERAL PLANNING CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidential Proclamations 1694 and 7373</td>
</tr>
<tr>
<td>Compatibility of proposed uses with the purposes for which the Monument was established</td>
</tr>
<tr>
<td>Existing laws, regulations, and agency policies</td>
</tr>
<tr>
<td>Plans, programs, and policies of North American Indian tribes and other federal, state, and local governments</td>
</tr>
<tr>
<td>Public input</td>
</tr>
<tr>
<td>Quantity and quality of non-commodity resource values</td>
</tr>
<tr>
<td>Future needs and demands for existing or potential resource commodities and values</td>
</tr>
<tr>
<td>Past and present use of public and adjacent lands</td>
</tr>
<tr>
<td>Public benefits of providing goods and services relative to costs</td>
</tr>
<tr>
<td>Environmental impacts</td>
</tr>
<tr>
<td>Social and economic values</td>
</tr>
<tr>
<td>Public welfare and safety</td>
</tr>
<tr>
<td>Appropriate scientific findings</td>
</tr>
</tbody>
</table>

PROGRAM PLANNING CRITERIA

Section II of the National Parks Omnibus Management Act of 1998 (the Act) directs the NPS to inventory and monitor resources to establish baseline conditions and provide information on long-term trends in the condition of resources. The Act also provides a clear mandate to encourage scientific studies to benefit both park management and broader scientific understanding. The Act further directs that the information gained from resource inventories, monitoring, and research be disseminated to the public and utilized in management decisions.

In addition to the General Planning Criteria, the following program-specific criteria will apply to individual program decisions. Planning criteria are listed on the left; the laws, regulations, and policies that guide or mandate the criteria are referenced on the right.
### PROGRAM PLANNING CRITERIA

<table>
<thead>
<tr>
<th>Impairment</th>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law and NPS management policies require the analysis of potential effects to determine whether or not actions would impair Monument resources. Managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on resources and values. Although management discretion may allow certain impacts within NPS units, impairment of Monument resources and values is not permitted unless specifically authorized by federal law. A determination on impairment is made in the Environmental Consequences section for each impact topic.</td>
<td>NPS Organic Act, Proclamation 7373, NPS and BLM Management Policies</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Archaeological Resources</th>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laws and policies, including the National Historic Preservation Act, require that both agencies achieve the following desired conditions for archaeological resources within the Monument:</td>
<td>National Historic Preservation Act; Executive Order 11593; Archaeological and Historic Preservation Act; Archaeological Resources Protection Act; Federal Land Policy Management Act; the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation; Programmatic Memorandum of Agreement among the NPS, Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers (1995); BLM and NPS Management Policies; National Environmental Policy Act; NPS Organic Act</td>
<td></td>
</tr>
<tr>
<td>• Archaeological sites are identified and inventoried, and their significance is determined and documented.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sites are protected in an undisturbed condition unless it is determined through formal processes that disturbance or natural deterioration is unavoidable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Where disturbance or deterioration is unavoidable, sites are professionally documented and salvaged.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Historic Properties</th>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under the National Historic Preservation Act and other laws, historic properties within the Monument will be inventoried and evaluated under National Register criteria. The qualities that contribute to the eligibility for listing of properties on the Register will be protected in accordance with the Secretary of Interior’s Standards (unless it is determined through a formal process that disturbance or natural deterioration is unavoidable).</td>
<td>National Historic Preservation Act; Executive Order 11593; Archaeological and Historic Preservation Act; Federal Land Policy Management Act; the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation; Programmatic Memorandum of Agreement among the NPS, Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers (1995); BLM and NPS Management Policies; National Environmental Policy Act; NPS Organic Act</td>
<td></td>
</tr>
</tbody>
</table>
### Native American Trust Resources/Tribal Treaty Rights

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretarial Order 3175 requires that any anticipated impacts to Indian Trust Resources from a proposed project or action by Department of Interior agencies be explicitly addressed in environmental documents. The Federal Indian Trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights; and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.</td>
<td>Secretarial Order 3175; Department of Interior ECM 95-2, NPS and BLM Management Policies</td>
</tr>
</tbody>
</table>

### Ethnographic Resources

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certain contemporary American Indian and other communities are permitted by law, regulation, or policy to pursue customary religious, subsistence, and other cultural uses of resources with which they have traditionally associated. Both agencies plan and execute programs in ways that safeguard cultural and natural resources, while reflecting informed concern for the contemporary peoples and cultures traditionally associated with those resources. Ethnographic information will be collected through collaborative research that recognizes the sensitive nature of such information. Certain research data may be withheld from public disclosure to protect sensitive or confidential information about archaeological, historic, or other resources when doing so would be consistent with the Freedom of Information Act (FOIA). In many circumstances, this will allow the agencies to withhold information about ethnographic resources.</td>
<td>National Historic Preservation Act; Programmatic Memorandum of Agreement among the NPS, Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers (1995); Executive Order 11593; American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, Executive Order 13007 on American Indian Sacred Sites; Presidential Memorandum of April 29, 1994, on Government-to-Government Relations with Tribal Governments; BLM and NPS Management Policies; NPS Organic Act; National Register Bulletin 38</td>
</tr>
</tbody>
</table>

### Collections

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPS and BLM policies and other laws require that the qualities that contribute to the significance of collections be protected in accordance with established standards. All museum objects and manuscripts will be identified and inventoried with their significance determined and documented. Federal regulations (CFR Title 36, Section 2.5) prohibit collection of animal, plant, and mineral specimens on NPS lands without a permit. Specimen collection is limited to scientific or educational purposes, and all such specimens must be labeled as NPS property and recorded in the NPS museum catalog.</td>
<td>National Historic Preservation Act; American Indian Religious Freedom Act; Archaeological and Historic Preservation Act; Archaeological Resources Protection Act; Native American Graves Protection and Repatriation Act; NPS and BLM Management Policies; NPS Organic Act</td>
</tr>
</tbody>
</table>
### Air Quality

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under the federal Clean Air Act, the Craters of the Moon Wilderness is designated</td>
<td>Clean Air Act; BLM and NPS Management Policies; National Parks Omnibus Management Act of 1998;</td>
</tr>
<tr>
<td>a Prevention of Significant Deterioration (PSD) Class I area. The goal for Class I</td>
<td>NPS Organic Act</td>
</tr>
<tr>
<td>areas is to remedy existing visibility impairment and prevent future visibility</td>
<td></td>
</tr>
<tr>
<td>impairment. Only small increases from new sources of air pollutants above</td>
<td></td>
</tr>
<tr>
<td>established baseline levels of sulfur dioxide and particulate matter are</td>
<td></td>
</tr>
<tr>
<td>permitted. The non-wilderness lands within the Monument are classified as Class II</td>
<td></td>
</tr>
<tr>
<td>Class II allows larger but still moderate increases above baseline levels. All</td>
<td></td>
</tr>
<tr>
<td>lands within the planning unit will be managed in compliance with applicable local,</td>
<td></td>
</tr>
<tr>
<td>state, tribal, and federal air quality laws, regulations, standards and</td>
<td></td>
</tr>
<tr>
<td>implementation plans, including the Idaho DEQ regulations and the Montana/Idaho</td>
<td></td>
</tr>
<tr>
<td>Smoke Management Program. Current laws and policies require that air quality in</td>
<td></td>
</tr>
<tr>
<td>the Monument meets National Ambient Air Quality Standards (NAAQS) for specified</td>
<td></td>
</tr>
<tr>
<td>pollutants and that Monument activities do not contribute to the deterioration of</td>
<td></td>
</tr>
<tr>
<td>air quality.</td>
<td></td>
</tr>
</tbody>
</table>

### Water and Soil Resources

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 319 of the Clean Water Act obligates federal agencies to be consistent</td>
<td>Clean Water Act; Executive Order 11514; Executive Order 12088; Executive Order 11988</td>
</tr>
<tr>
<td>with state nonpoint source management program plans. Section 313 requires</td>
<td>(Floodplain Values); Executive Order 11990 (Wetland Values); Rivers and Harbors Act;</td>
</tr>
<tr>
<td>compliance with the state water quality standards. Both agencies will coordinate</td>
<td>BLM and NPS Management Policies; National Environmental Policy Act; National Parks</td>
</tr>
<tr>
<td>with the IDEQ regarding their total maximum daily load program and other relevant</td>
<td>Omnibus Management Act of 1998; NPS Organic Act</td>
</tr>
<tr>
<td>water quality programs. Water quality will be maintained or improved in</td>
<td></td>
</tr>
<tr>
<td>accordance with state and federal standards. Water resources within the</td>
<td></td>
</tr>
<tr>
<td>Monument are ephemeral and relatively rare, with the exception of the northernmost</td>
<td></td>
</tr>
<tr>
<td>end, which contains small spring-fed streams. The plan will describe the desired</td>
<td></td>
</tr>
<tr>
<td>future condition of those types of water sources that occur within the</td>
<td></td>
</tr>
<tr>
<td>Monument. The plan will also identify any Best Management Practices necessary,</td>
<td></td>
</tr>
<tr>
<td>or desirable, to protect watersheds or to maintain or enhance soil conditions in</td>
<td></td>
</tr>
<tr>
<td>order to maintain long-term productivity of soils.</td>
<td></td>
</tr>
</tbody>
</table>
### Vegetation

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetation will be managed to achieve desired plant communities or desired future condition. Ecological site potential will be considered, providing for biodiversity; protection and restoration of native species; and nonconsumption uses, including plant protection, visual quality, and watershed protection. The desired plant communities will provide both wildlife habitat and forage for livestock and native wildlife. Plant maintenance, watershed protection and stability, and wildlife habitat needs will be a primary goal. The plan will identify and describe desired plant communities and those actions necessary to achieve that desired future condition. Domestic livestock will use forage on BLM rangeland. The BLM will manage grazing according to Idaho’s Standards for Rangeland Health and ecological site potential. Prescribed fire and other treatment methods, consistent with approved fire management plans, will be considered as management tools to manipulate and restore native vegetation.</td>
<td>NPS and BLM Management Policies; Idaho Standards for Rangeland Health; National Parks Omnibus Management Act of 1998; NPS Organic Act</td>
</tr>
</tbody>
</table>

### Geologic Resources

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>The natural soil resources and geologic processes in the Monument should function in as natural condition as possible, except where special management considerations are allowable under policy. These areas of special management considerations will be determined through the management zoning decisions in the plan.</td>
<td>Monument’s enabling legislation; NPS and BLM Management Policies; National Parks Omnibus Management Act of 1998; NPS Organic Act; Proclamation 1694</td>
</tr>
</tbody>
</table>

### Caves and Paleontology

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant cave resources in the Monument will be identified and protected pursuant to 43 CFR, Part 37. Cultural sites within caves that meet the National Register criteria will be protected and nominated for inclusion on the register. Both agencies will coordinate with the Idaho State Historic Preservation Officer and Tribal State Historic Preservation Officers on issues dealing with historic or cultural resources. BLM will identify significant caves on federal lands and regulate, or restrict use of, significant caves under the Federal Cave Resources Protection Act of 1988. The policy of the NPS, pursuant to its Organic Act of 1916 (16 USC 1, et seq.) and Management Policies (Chapter 4:20, Dec. 1988), is that all caves are afforded protection and will be managed in compliance with approved resource management plans. Accordingly, all caves on NPS-administered lands are deemed to fall within the definition of &quot;significant cave.&quot; Paleontological resources will be considered and management recommendations will be developed, as appropriate.</td>
<td>Federal Caves Resources Protection Act of 1988; NPS Organic Act; NPS and BLM Management Policies; National Parks Omnibus Management Act of 1998; Proclamation 1694</td>
</tr>
</tbody>
</table>
### Special Designations: Wilderness, Areas of Critical Environmental Concern, Wild and Scenic Rivers

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximately 70 percent of the Monument is either in WSA status or designated Wilderness. Proclamation 7373 directs both agencies to manage WSAs under Section 603(c) of the Federal Land Policy and Management Act (FLPMA) of 1976 (43 USC 1701-1782).</td>
<td>Proclamation 7373; Federal Land Policy and Management Act (FLPMA) of 1976; BLM and NPS Management Policies; BLM “Interim Management Policy for Lands Under Wilderness Review”; Wilderness Act of 1964</td>
</tr>
</tbody>
</table>

Areas of Critical Environmental Concern (ACECs) are areas within the public lands where special management attention may be required to protect important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect human life and safety from natural hazards. The BLM is required to consider designating ACECs as part of the planning process. FLPMA provides for ACEC designation and establishes national policy for the protection of public land ACECs. Section 202(c)(3) of FLPMA requires the agency to give priority to the designation and protection of ACECs in the development and revision of land use plans. One ACEC is proposed in north Laidlaw Park for its undisturbed native plant communities. A planning decision will be made as to whether or not new ACEC designations are necessary or desirable.

Four Research Natural Areas (RNAs) have been designated within the Monument: Carey Kipuka, Sand Kipuka, Big Juniper Kipuka, and Brass Cap Kipuka. The Great Rift System Natural Landmark was designated by the Secretary of the Interior in 1968 for its geological significance and enlarged in 1980 in recognition of its biological significance. The Idaho Conservation Data Center has nominated two areas in the northern portion of the Monument, representing nationally significant vegetation communities, for National Natural Landmark status. There are no Wild and Scenic Rivers within the Monument.
### Species of Special Concern

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management actions authorized, funded, or implemented by BLM or NPS will be</td>
<td>Endangered Species Act; Executive Order 13112, Invasive Species; BLM and NPS Management</td>
</tr>
<tr>
<td>conducted in a manner that will not jeopardize the continued existence of federal</td>
<td>Policies; National Environmental Policy Act; Monument’s enabling legislation; National</td>
</tr>
<tr>
<td>ly listed, threatened, or endangered plant or animal species. The agencies will</td>
<td>Parks Omnibus Management Act of 1998; NPS Organic Act</td>
</tr>
<tr>
<td>consult with the U.S. Fish and Wildlife Service in preparing the plan. Management</td>
<td></td>
</tr>
<tr>
<td>actions should not result in the destruction or modification of habitat for state-,</td>
<td></td>
</tr>
<tr>
<td>BLM- and NPS-designated sensitive species. Species proposed, or candidates for,</td>
<td></td>
</tr>
<tr>
<td>federal listing will be given the same consideration as listed species. Planning</td>
<td></td>
</tr>
<tr>
<td>criteria will protect and maintain the intrinsic and recreational values associated</td>
<td></td>
</tr>
<tr>
<td>with native and appropriate non-native species; identify habitat needs in</td>
<td></td>
</tr>
<tr>
<td>consultation with the Idaho Department of Fish and Game; integrate Biological</td>
<td></td>
</tr>
<tr>
<td>Opinions, Conservation Agreements, and Strategy Plans; protect federally listed</td>
<td></td>
</tr>
<tr>
<td>threatened or endangered plant or animal species, including protection of critical</td>
<td></td>
</tr>
<tr>
<td>habitat; and protect BLM sensitive species. For example, for a sensitive species,</td>
<td></td>
</tr>
<tr>
<td>the following guidance would be considered: BLM 1640 Manual, 684 Manual on Special</td>
<td></td>
</tr>
<tr>
<td>Status, Idaho BLM Sensitive Species List, Idaho BLM Standards and Guidelines for</td>
<td></td>
</tr>
<tr>
<td>Rangeland Health, and 50 CFR Chapter IV (Fish and Wildlife Service Draft Policy for</td>
<td></td>
</tr>
</tbody>
</table>

### Fish and Wildlife

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are no fisheries within the Monument, although some vernal ponds support</td>
<td>NPS and BLM Management Policies; National Parks Omnibus Management Act of 1998; NPS Organic Act</td>
</tr>
<tr>
<td>fairy shrimp. Terrestrial wildlife species are a diverse and important part of the</td>
<td></td>
</tr>
<tr>
<td>ecosystem. The plan will acknowledge the Idaho Department of Fish and Game’s role</td>
<td></td>
</tr>
<tr>
<td>in managing fish and wildlife populations. The plan will closely coordinate goals</td>
<td></td>
</tr>
<tr>
<td>and objectives for wildlife management with those developed for vegetation</td>
<td></td>
</tr>
<tr>
<td>management, livestock management, fire management, wetlands, and recreation</td>
<td></td>
</tr>
<tr>
<td>(including guides and outfitters).</td>
<td></td>
</tr>
</tbody>
</table>

### Fire Management

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire management on the Monument will be in accordance with the BLM Upper Snake</td>
<td>BLM and NPS Management Policies; National Fire Plan; BLM/NPS Fire Management Plans; National</td>
</tr>
<tr>
<td>River District Fire, Fuels and Related Vegetation Management Direction Plan</td>
<td>Parks Omnibus Management Act of 1998</td>
</tr>
<tr>
<td>Amendment, the new Monument Management Plan, and the agencies’ Fire Management</td>
<td></td>
</tr>
<tr>
<td>Plans. The planning criteria will include enforcing standards for the public and</td>
<td></td>
</tr>
<tr>
<td>firefighters while protecting natural resources, historic properties, and private</td>
<td></td>
</tr>
<tr>
<td>property; implementing current and future fire management activity plans;</td>
<td></td>
</tr>
<tr>
<td>coordinating with other local cooperators in developing plans; and implementing the</td>
<td></td>
</tr>
</tbody>
</table>
### Viewscape/Night Sky Management

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large expanses of lands with little human intrusion and night skies where human caused light remains at minimum levels are considered important natural resources and have a high value because of their increasing rarity. The agencies will protect expansive, panoramic viewscapesthat provide unobstructed views for up to 100 miles as an integral resource within the Monument. They will also recognize the importance that a light/dark cycle plays in the natural environment as well as the value of the opportunity to view a night sky without the interference of artificial light sources. To prevent the loss of western landscape vistas and natural dark conditions, the agencies will seek the cooperation of visitors, neighbors, and local government agencies to prevent or minimize the intrusion of human intrusion on the ecosystems of the Monument.</td>
<td>Proclamation 7373; Proclamation 1694; NPS and BLM Management Policies; National Parks Omnibus Management Act of 1998; NPS Organic Act</td>
</tr>
</tbody>
</table>

### Natural Soundscape/Natural Quiet

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both BLM and NPS will preserve, to the greatest extent possible, the natural soundscapes of the Monument. The agencies will restore degraded soundscapes to the natural condition wherever possible, and will protect natural soundscapes from degradation due to noise (undesirable human-caused sound). Using appropriate management planning, managers will identify what levels of human-caused sound can be accepted. The frequencies, magnitudes, and durations of human-caused sound considered acceptable will vary throughout the Monument, being generally greater in developed areas and generally lesser in undeveloped areas. In and adjacent to the Monument, the agencies will monitor human activities that generate noise that adversely affects Monument soundscapes, including noise caused by mechanical or electronic devices. The agencies will take action to prevent, or minimize, all noise that, through frequency, magnitude or duration, adversely affects the natural soundscape or other Monument resources or values, or that exceeds levels that have been identified as being acceptable to or appropriate for visitor uses at the sites being monitored.</td>
<td>Proclamation 7373; Proclamation 1694; NPS Management Policies; National Parks Omnibus Management Act of 1998; NPS Organic Act</td>
</tr>
</tbody>
</table>
## Visitor Experience, Visual Resources, and Monument Use Requirements

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public lands will be managed to enhance appropriate recreation opportunities and visual resources. Either agency may identify special recreation management areas within a Development or Special Use Planning Zone as part of the planning process. Some areas may be subject to special measures to protect resources or reduce conflicts among uses. Recreation planning will follow the principles and guidance in NPS Management Policies (2000), the BLM National OHV Strategic Action Plan, and the draft National Mountain Bicycling Strategic Action Plan. According to BLM policy, all Wilderness Study Areas are designated as Visual Resources Management Class I. The plan will contain Visual Resource Management designations for the remainder of the Monument. All reasonable effort will be made to make NPS and BLM facilities, programs, and services accessible to and usable by all people, including those with disabilities. The NPS-administered portion of the Monument was a pilot site for the National Fee Demonstration Program. Entry fees will continue to be charged for entry into the north end of the Monument via the “Monument Loop Drive.” Under the 1978 National Parks and Recreation Act (PL 95-625), NPS is required to address the issue of carrying capacity in its general management plans. The concept of carrying capacity is intended to safeguard the quality of park resources and visitor experiences. Identifying desired resource conditions and visitor experience by zone is part of general management planning. At this level of decision-making, the desired resource conditions and experiences describe carrying capacity in qualitative terms. These qualitative terms are then translated into quantitative standards over time during implementation planning.</td>
<td>BLM OHV Strategic Action Plan; National Mountain Bicycling Strategic Action Plan (Draft); National Parks and Recreation Act of 1978; NPS Organic Act; Monument’s enabling legislation; BLM Manual Section 8400, Visual Resource Management; Americans with Disabilities Act; Architectural Barriers Act; Rehabilitation Act; 1998 Executive Summary to Congress, Recreational Fee Demonstration Program, Progress Report to Congress, Volume I – Overview and Summary (U.S. Department of the Interior, National Park Service, U.S. Fish and Wildlife Service, Bureau of Land Management; U.S. Department of Agriculture, Forest Service); NPS and BLM Management Policies; National Parks Omnibus Management Act of 1998</td>
</tr>
</tbody>
</table>

## Relations with Monument Neighbors and Other Agencies

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public participation in planning and decision-making will ensure that both agencies fully understand and consider the public’s interests in the Monument, which is part of their national heritage, cultural traditions, and community surroundings. The agencies will actively seek out, and consult with, existing and potential visitors, neighbors, people with traditional cultural ties to Monument lands, scientists and scholars, concessionaires, cooperating associations, gateway communities, other partners, and government agencies. The agencies will work cooperatively with others to improve the condition of the Monument, to enhance public service, and to integrate the Monument into sustainable ecological, cultural, and socioeconomic systems.</td>
<td>BLM and NPS Management Policies; National Environmental Policy Act</td>
</tr>
</tbody>
</table>
### Sustainable Design/Development

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability can be described as the result achieved by doing things in ways that do not compromise the environment or its capacity to provide for present and future generations. Sustainable practices minimize the short- and long-term environmental impacts of development and other activities through resource conservation, recycling, waste minimization, and the use of energy efficient and ecologically responsible materials and techniques. Facilities will be integrated into the Monument landscape and environs with sustainable designs and systems to minimize environmental impact. Development will not compete with, or dominate, Monument features, or interfere with natural processes, such as the seasonal migration of wildlife or hydrologic activity associated with wetlands.</td>
<td>BLM and NPS Management Policies</td>
</tr>
</tbody>
</table>

### Environmental Justice

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPS and BLM will incorporate environmental justice into the plan. Identifying and addressing any disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities will accomplish this.</td>
<td>Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”</td>
</tr>
</tbody>
</table>

### Socioeconomics

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both agencies understand the need to promote social and economic diversification and resiliency in southeastern Idaho and recognize the increasing demand for outdoor recreational opportunities and the dependency of local community economies on goods and services from public lands. Livestock production on public lands also makes a contribution to the health of local and rural economies. Population growth continues to increase and shift the demand on public lands for many uses including recreation opportunities. This demand and shift in the kinds and uses of public lands may contribute to changes in the economies of the counties and communities within the Monument area.</td>
<td>NPS and BLM Management Policies</td>
</tr>
</tbody>
</table>
### Land Protection/Land Tenure Adjustments

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclamation 7373 prohibits all forms of land disposal except exchanges that further the purposes of the Monument. The Proclamation also acknowledges that state or private lands may be acquired. Plans will be developed and periodically reviewed and updated, for the Monument containing lands that may be subject to acquisition. The plans will identify the alternative methods that will provide for the protection of resources, for visitor use, and for development; identify the minimum interests necessary for those purposes; and establish priorities for acquisition of land or interests in land.</td>
<td>NPS Management Policies; NPS Land Acquisition Policy Implementation Guideline (NPS-25); the Department of the Interior’s “Policy for the Federal Portion of the Land and Water Conservation Fund” (FR 47:19784); the NPS “Land Protection Plan Instructions” (FR 48:21121); the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 USC 4601 et seq.); Executive Order 12630, “Governmental Actions and Interference with Constitutionally Protected Property Rights”; Proclamation 7373, FLPLMA Sec. 205 and 206, 43 CFR 2100 and 2200 and FLTFA</td>
</tr>
</tbody>
</table>

### Rights-of-Way and Telecommunication Infrastructure

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLM-administered lands are generally available for transportation and utility rights-of-way (ROWs) subject to Monument compatibility determinations and NEPA evaluation, except where specifically prohibited by law or regulation or in areas specifically identified for avoidance and exclusion to protect significant resource values. Other types of ROW may be restricted. Major differences in ROW authority exist between BLM and NPS and the Plan will establish how potential conflicts might be resolved. Telecommunication structures are permitted in the Monument (outside of wilderness and wilderness study areas) to the extent that they do not jeopardize the Monument’s mission and resources.</td>
<td>16 USC 5; 16 USC 79; 23 USC 317; 36 CFR 14; BLM and NPS Management Policies; Director’s Order 53A, Wireless Telecommunications</td>
</tr>
</tbody>
</table>

### Minerals and Energy

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidential Proclamation 7373 withdrew lands within the Monument from location under the general mining laws, and the operation of the mineral and geothermal leasing laws, and from the mineral material disposal law, other than by exchange that furthers the protective purposes of the Monument.</td>
<td>Proclamation 7373</td>
</tr>
</tbody>
</table>

### Noxious Weed Control

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both agencies will work with state and county governments and Cooperative Weed Management Areas to monitor the location and spread of noxious weeds. The agencies will control the occurrence and spread of noxious weeds on public lands where economically feasible, and to the extent funds are available, to comply with Executive Order 11312. Noxious weed control is conducted in accordance with the integrated weed management guidelines and design features identified in current policies and programs.</td>
<td>Executive Order 11312, Invasive Species (February 1999); NPS Management Policies; the Northwest Area Noxious Weed Control Program EIS of 1985 and the USDI-BLM Final Environmental Impact Statement for Vegetation Treatment on BLM Lands in 13 Western States (May 1999); National Parks Omnibus Management Act of 1998</td>
</tr>
</tbody>
</table>
### Livestock Management

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclamation 7373 provides for continued livestock use on that portion of the Monument administered by the BLM under 43 CFR 4100, which addresses rangeland health and grazing administration. The Idaho State Director of the BLM, in consultation with the Resource Advisory Council, established under 43 CFR Part 1780, Subpart 1784, developed standards and guidelines to be applied to livestock use. On Monument lands administered by the BLM, livestock will be managed in accordance with Idaho’s Standards for Rangeland Health and Guidelines for Livestock Grazing Management in reference to ecological site potentials. Rangeland health assessments presented in the plan will guide issuance of grazing decisions in accordance with applicable BLM regulations and policy.</td>
<td>Proclamation 7373; Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management; Federal Land Policy Management Act; Public Range Improvement Act; BLM Planning Regulations</td>
</tr>
</tbody>
</table>

### Transportation

<table>
<thead>
<tr>
<th>Planning Criteria</th>
<th>Laws, Regulations, Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclamation 7373 specifically directs the agencies to prepare a transportation plan that addresses any actions, including road closures or travel restrictions, necessary to protect monument resources. Except for emergency or authorized administrative purposes, the Proclamation prohibits all motorized and mechanized vehicle use off road. In consultation with the respective county and transportation districts, the planning team will incorporate transportation planning in the Monument management plan by providing broad guidance on travel within the Monument. Any specific long-term road closures or travel restrictions will be carried out after completion of the management plan. The agencies will inform the public of travel opportunities and restrictions within the Monument by providing a Monument travel map, road signing as appropriate, and by other means. The BLM and NPS will follow existing agency policies in determining and describing road and trail definitions and standards. The planning team will develop the criteria for use in determining how roads and trails of different standards will fit into a comprehensive transportation system.</td>
<td>Proclamation 7373; Proclamation 1694; BLM and NPS Management Policies</td>
</tr>
<tr>
<td>Water Rights</td>
<td>Planning Criteria</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Proclamation 7373 does not reserve water as a matter of Federal law. Nothing in this reservation shall be construed as a relinquishment or reduction of any water use or rights reserved or appropriated by the United States on or before the date of this proclamation. The Secretary shall work with appropriate State authorities to ensure that water resources needed for monument purposes are available. The agencies will continue to participate in the Snake River Basin Adjudication (SRBA) pursuant to the McCarran Amendment (43 U.S.C. 666) and the Commencement Order for the SRBA (Case No. 39576, 5th District Court of Idaho), to secure historical priority to stock water under state and/or federal law.</td>
<td>Idaho Code 42-202; Fish &amp; Wildlife Coordination Act of March 10, 1934 (16 USC 661); Federal Land Management Policy Act (43 USC 666); 43 CFR 4120.3-9; Idaho Code 42-1503</td>
</tr>
<tr>
<td>Forestry</td>
<td>Planning Criteria</td>
</tr>
<tr>
<td>There are no commercial forest resources within the Monument.</td>
<td>N/A</td>
</tr>
<tr>
<td>Wild Horses and Burros</td>
<td>Planning Criteria</td>
</tr>
<tr>
<td>There are no wild horses or burros or herd management plans within or near the Monument.</td>
<td>N/A</td>
</tr>
</tbody>
</table>
This General Agreement (NPS) and Memorandum of Understanding (BLM), hereinafter called Agreement, is between two field units of two agencies within the Department of Interior. The National Park Service’s Craters of the Moon National Monument (NPS) and Bureau of Land Management’s Upper Snake River District (BLM) jointly manage the recently expanded Craters of the Moon National Monument.

I. Purpose:

Presidential Proclamation 7373 of November 9, 2000 - Boundary Enlargement of the Craters of the Moon National Monument (attached), gave the following direction to the National Park Service and Bureau of Land Management:

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

In addition, the Secretary of Interior instructed the Director, Bureau of Land Management and the Director, National Park Service, in a Memorandum dated November 24, 2000 to prepare a
shared resources agreement to, “... provide seamless service to the public and use their resources accordingly.” The Directors of the Bureau of Land Management and the National Park Service further refined these instructions in a Memorandum to the District Manager, BLM Upper Snake River District and the Park Superintendent, Craters of the Moon National Monument, dated February 15, 2001 stating in part, “The joint management of the Craters of the Moon National Monument represents a new chapter in a continuing partnership between BLM and NPS.”

The purpose of this Agreement is to implement the direction contained in the Proclamation by describing the cooperative working relationship between NPS and BLM. This Agreement is intended to form a framework for joint agency management of a single National Monument. Such interagency cooperation is in the interest of the American public. Both the NPS and BLM have unique abilities and strengths which can be jointly applied for efficient management of the Monument. While both agencies are part of the Department of Interior, cooperative management as described by this Agreement provides the agencies with a high visibility opportunity to demonstrate their capabilities in natural resource stewardship and management effectiveness.

II. Background:

Since the 1924 Presidential Proclamation that created the original National Monument, several expansion proposals, National Park designations, National Conservation Area designations, and other proposals have been made. The Monument has now been expanded through five separate Presidential Proclamations and one legislative initiative. Over the past few years, both BLM and NPS staff have developed a close working relationship, partially in response to these many initiatives for Monument expansion.

The BLM and NPS have formally cooperated for many years in managing the Great Rift - Craters of the Moon area. The agencies have signed several agreement instruments, including a Memorandum of Understanding (MU928095001) in 1999 that also included the U.S. Geological Survey.

At a January 2001 Workshop, staff and managers from both agencies wrote the following vision statement to help guide the development of this Agreement:

The NPS and BLM will cooperatively manage Craters of the Moon National Monument. Cooperative management means providing seamless public service and extensive public participation opportunities. Working together, both agencies will manage a wide variety of uses, promote education and enjoyment of the Monument’s significant natural resources, while retaining appropriate traditional human uses and practices associated with the land. Cooperative management will follow the Proclamations that created the Monument. Cooperative
management will recognize the diverse assemblage of geologic features, high desert plant and animal communities, and the rich traditions of human use and interaction within this uniquely Western landscape.

III. Authority:

The BLM is delegated authority of the Secretary of the Interior which is contained in the Federal Land Policy and Management Act of 1976 (FLPMA, 43 U.S.C. 1701 et seq., as amended). The NPS is delegated authority of the Secretary of the Interior which is contained in the National Park Service Organic Act (16 U.S.C. 1 g, as amended) and Presidential Proclamation 1694 which originally established the Monument as a unit of the National Park System.

President Clinton enlarged the Craters of the Moon National Monument, through Proclamation, by the authority vested in him by Section 2 of the Act of June 8, 1906 (Antiquities Act, 16 U.S.C. 431). Proclamation 7373 instructed both agencies to follow their respective legal authorities on the land each agency administers within the Monument, subject to the overriding purpose of protecting the scientific and historic objects described in the Proclamation.

IV. Commitments:

The NPS and BLM will:

* Support one another in activities within the Monument irrespective of the interior boundaries between the agency administered lands.

* Share the expertise each agency possesses to the maximum extent feasible.

* Acknowledge and incorporate the particular strengths and abilities of each agency.

* Strive to develop an integrated budget that outlines all the needs for the Monument.

* Promote the Monument as a model of effective interagency coordination and cooperation.

* Make decisions on discretionary uses and authorizations only after consultation with each other.

* Coordinate public information releases that pertain to matters involving both agencies in the management of the Monument.

* Provide a diversity of opportunities for high quality, safe, educational and enjoyable visitor
experiences.

* Insure full public understanding of agency actions and seamless service to the public in a way that is both clear and easily understandable.

* Actively seek the involvement of all stakeholders and a range of views on all Monument management issues, particularly during the planning process.

* Work in close cooperation with local governments including five Boards of County Commissioners, Sheriffs, search and rescue organizations, and community development associations.

* Complete a single, combined Resource Management Plan - General Management Plan - Environmental Impact Statement that meets both agency’s legal, regulatory, and policy requirements.

* Work in close cooperation with the Craters of the Moon Natural History Association to support interpretive and research programs at the Monument.

* Partner with the U. S. Geological Survey to foster the scientific understanding of the Monument which serves as a natural laboratory for the study and interpretation of the processes and products of basaltic volcanism and of volcanic rift zones.

Interim Management Guidelines are attached to this Agreement as an addendum. Both parties expect to develop several additional addendums following the execution of this instrument, including a Project Agreement/Preparation Plan to guide the Monument’s planning effort.

V. Duration and Limitations:

A. This Agreement becomes effective on the date of its signature by both parties.

B. The need for this Agreement is perpetual because a Presidential Proclamation ordered the preparation of an agreement. Both parties expect to propose modifications to the Agreement. Generally, either party will propose modifications in writing at least sixty days prior to the proposed date of the modification. Both parties will update and review the contents of this Agreement, including modifications and subservient instruments, at least annually.

C. Nothing in this Agreement may be construed to obligate the Department of the Interior or the United States to any current or future expenditures of resources in advance of the availability of appropriations from Congress.
D. Nothing in this Agreement will be construed as affecting the authorities of the participants or as binding beyond their respective authorities.

E. Specific work projects or activities that involve the transfer of funds, services, or property between the parties to this Agreement will require the execution of a separate Intra-Agency Agreement(s). Each subsequent agreement or arrangement involving the transfer of funds, services, or property must comply with all applicable statutes and regulations.

F. No member of, or delegate to Congress, or resident Commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise there from, but these provisions shall not be construed to extend to this Agreement if made with a corporation for its general benefits.

G. During the performance of this Agreement, the participants agree to abide by the terms of USDI-Civil Rights Assurance Certification, non-discrimination, and will not discriminate against any person because of race, color, religion, sex, or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, sexual orientation, national origin, disabilities, religion, age, or sex.

H. The existing MOU (MU928095001) with the U.S. Geological Survey remains in effect.

I. This Agreement is coordinated with other existing agreements related to fire and emergency services.

VI. Authorizing Signatures:

/s/ 9/06/01  /s/ 8/24/01
John Reynolds, date          Martha Hahn, date
Regional Director            State Director
Pacific West Region          Idaho
National Park Service         Bureau of Land Management
November 29, 2001

Memorandum

To: Acting Director, Bureau of Land Management
   Director, National Park Service

Through: State Director, Idaho, BLM
         Regional Director, Pacific West Region, NPS

From: District Manager, Upper Snake River District, BLM
      Park Superintendent, Craters of the Moon National Monument, NPS

Subject: Joint Agency Recommendations for Craters of the Moon National Monument

Attached is our proposed agreement for the sharing of resources and joint management of Craters of the Moon National Monument that you requested. The agreement has two components:

An umbrella General Agreement (NPS) and Memorandum of Understanding (BLM) which broadly frames the cooperative relationship between the National Park Service and Bureau of Land Management.

Interim Management Guidelines which are an Addendum to the Agreement. These Guidelines describe how the two agencies intend to manage the Monument during a three year planning process.

We are working on a Project Agreement (NPS) and Preparation Plan (BLM) to provide structure and focus for our interagency planning process. We anticipate submitting this product for your review by August 31. BLM will complete a metes and bounds description of the Monument this Fall and will publish the description as soon as possible.

We appreciate your interest in our unique interagency partnership.
ADDENDUM # 1

CRATERS OF THE MOON NATIONAL MONUMENT

INTERIM MANAGEMENT GUIDELINES

Introduction: Presidential Proclamation 7373 expanded Craters of the Moon National Monument and instructed the Bureau of Land Management and the National Park Service to prepare a joint management plan for the Monument. The agencies anticipate completing this plan by January 2004. In a Memorandum dated November 24, 2000 the Secretary of Interior instructed the Bureau of Land Management and the National Park Service to, “...issue interim management guidance for managing the Craters of the Moon National Monument”. Furthermore, in a Memorandum dated February 15, 2001 the Acting Directors of the National Park Service and Bureau of Land Management instructed the Park Superintendent, Craters of the Moon National Monument and District Manager, Upper Snake River District to, “...provide us with a proposal as to how the agencies can best coordinate management of the Monument”. Until the agencies complete the Monument Plan, these Interim Management Guidelines will provide direction specific to Craters of the Moon National Monument.

These Guidelines are an Addendum to the Agreement between the NPS and BLM for cooperative management of Craters of the Moon National Monument. These Guidelines constitute a more specific level of direction than the commitments outlined in the umbrella Agreement. For BLM, these Guidelines are tiered to the National Interim Management Policy for Newly Created National Monuments. NPS will follow the National Park Service Management Policies.

These Guidelines only apply to the expanded portion of the Monument created by Presidential Proclamation 7373. A 1992 General Management Plan is currently in place for lands administered by the NPS prior to Proclamation 7373.

General Guidelines: The overall theme of this interim management strategy is to maintain existing management policies, designations, and allocations except where changes are necessary to comply with the Proclamation and protect the objects of scientific and historic interest within the Monument.

Proclamation 7373 did not change much of the agencies’ regular and routine work within the Monument. Over the next three years, regular, on-going, base work will continue, albeit with a higher agency priority and a higher level of public interest.
However, all project level work within the expanded portion of the Monument, whether approved prior to the Proclamation or a new proposal, will be “screened” to insure no conflicts exist with the Proclamation. In most cases this will involve a quick, simple review and documentation in the appropriate project file. If conflicts or concerns with the project surface during the Proclamation screening, then the project should either undergo additional analysis using National Environmental Policy Act procedures, or be put on hold until completion of the Monument plan.

All BLM designations, restrictions, authorizations, and use limitations in effect on November 9, 2000, on lands now under NPS administration, remain in effect unless specifically addressed in the Proclamation, or in Park Service legal authorities. All NPS designations, restrictions, authorizations, and use limitations in effect on the portion of the Monument established prior to 2000 also remain in effect.

Both agencies expect to discover minor conflicts between NPS and BLM legal authorities, regulations, and policies during the interim management period. These conflicts should be interpreted based on the Monument Proclamation(s) and resolved to the benefit of the Monument’s resources at the lowest possible level within the agencies.

Public outreach and the involvement of local communities, users, and the Tribes are perhaps the most critical tasks facing the agencies. The agencies will communicate the contents of the Agreement and Interim Guidelines as widely as possible. It is important that staff from both agencies communicate the same message to the public.

Discussion of Specific Activities

Planning and NEPA: Both agencies have their own planning guidance. Development of the Craters of the Moon General Management Plan - Resource Management Plan - Environmental Impact Statement will require a unique mixing of both agencies procedures and guidance. A forthcoming Project Agreement (NPS) and Preparation Plan will outline the proposed Craters of the Moon planning process.

Evaluation of the five current BLM land use plans and NPS General Management Plan in effect at the Monument will be an interdisciplinary as well as interagency effort. The agencies view evaluation of these current plans as an excellent opportunity for staff from both agencies to become familiar with each other’s planning systems.

With limited exceptions, most “mid-level” planning for the expanded area will be placed on hold until completion of the Monument plan. BLM’s mid-level plans are generally referred to as Activity Plans. NPS mid-level plans are part of Implementation Planning. Individual project level planning and NEPA analysis will continue. Environmental Assessments are an important tool for involving the public in Monument management during this interim period.
**Budget and Staffing:** The agencies intend to function under a completely coordinated budget by Fiscal Year 2004. For Fiscal Year 2001, spending will be coordinated as closely as possible. Staff have already submitted Fiscal Year 2002 budget requests. Fiscal Year 2003 requests will provide the first opportunity for development of a consolidated budget.

The agencies will need to complete an Intra-Agency Agreement(s), Economy Act Determination(s), task orders, administrative and overhead fee waivers to share funding beginning in Fiscal Year 2002. The capability of the agencies to provide financial assistance to each other will be determined on a year-by-year, project-by-project basis, subject to the availability of funds. Intra-Agency Agreements also require a financial plan and reports documenting the completion of projects and funds expended.

The agencies will prepare an integrated Operations Plan for the Monument by Fiscal Year. The Operations Plan will facilitate interagency coordination at the project and specific task level. The Operations Plan will assign staff responsibility for specific work items, display the multi-fiscal year nature of some work, and provide documentation of accomplishments.

NPS line authority will continue through the Monument Superintendent. The BLM Interim Monument Manager will have authority as a point of contact, for day to day decisions, and to coordinate activities between the three affected BLM Field Office Managers in Shoshone, Burley, and Idaho Falls. Because the Monument includes three BLM Field Offices, authority for decisions that affect the entire Monument resides with the Upper Snake River District Manager.

The agencies will discuss opportunities to combine staff under the authority of a single line manager during the planning process. The agencies anticipate Monument plan decisions regarding facility and office locations. The staff and table of organization required to implement the Monument plan will likely differ from the staff and tables of organization in place during the interim planning period.

The agencies will encourage opportunities for details and informal cross assignments between staffs. Employees of both agencies will have access to training opportunities under the same terms as employees of the agency offering the training.

**Travel and Transportation System Management:** Within the expanded Monument, all of the existing transportation network is on BLM administered land. A few primitive routes (ways) are located within Wilderness Study Areas on NPS administered land. All existing roads and trails within the Monument that were open to vehicle travel prior to the Proclamation will remain open during the interim planning period. The agencies may close individual roads and trails to protect resources on a case by case basis. An example of such a closure would be roads within a fire rehabilitation project.
The Proclamation closed the Monument to cross-country travel by motorized or mechanical vehicles. Mechanical vehicles include mountain bikes. On-the-ground, this closure only affects land outside of Wilderness Study Areas because cross-country vehicle travel was already prohibited in Wilderness Study Areas. BLM administers most of the land affected by this Proclamation restriction. BLM will coordinate with livestock permittees, USDA Wildlife Services, Idaho Department of Fish of Game and others who may require authorizations for cross-country vehicle use. Due to the rugged, roadless nature of NPS administered lava flows, authorizations for cross-country vehicle travel are neither desired nor necessary.

BLM will continue to maintain, inventory, and coordinate with County Governments in managing the roads historically and regularly used by motorized and mechanical vehicles. Existing County Road rights-of-way are considered a Valid Existing Right and are not affected by the Proclamation.

The Proclamation mandated preparation of a transportation system plan. The agencies will include a transportation plan as an important component of the Monument plan.

Recreation: The Proclamation did not affect most recreation uses such as camping and hiking. Historically, the recent addition to the Monument received very small amounts of recreation use. BLM estimates from the Recreation Management Information System indicate less than 10,000 visits per year. The vast majority of this use was hunting for sage grouse and mule deer. BLM estimates that the NPS portion of the expanded Monument received less than 300 visits a year, most of which were hunters and hikers along the edge of lava flows.

The area has attracted increasing numbers of mountain bikers, hikers, cavers and other adventure oriented recreationists in recent years. The agencies anticipate additional increases in non-hunting recreation use. The agencies will improve the quantity and quality of visitor use measurements as well as the monitoring of biophysical and social impacts of recreation use.

The proclamation did not affect hunting on BLM administered portions of the Monument, other than the prohibition on cross-country vehicle use. Hunting or the use of firearms on the NPS administered portion of the Monument is prohibited.

Outfitter and Guide Operations: BLM and NPS will coordinate all outfitter and guide authorizations with the Idaho State Outfitter and Guide Licensing Board. The NPS will explore the possibility of signing onto the statewide agreement between all of the Federal land management agencies and the Board. Both agencies will work with the Board to develop additional, temporary guidelines for outfitter activities in the Monument during the interim planning period. The agencies anticipate that decisions in the Monument Plan will address outfitter activities and perhaps use allocation.
All existing outfitter activities within the Monument will be “screened” to insure compliance with the Proclamation. The agencies will perform a NEPA analysis of all proposed changes to existing Outfitter Plans of Operation. Any approved changes will be temporary authorizations pending completion of the Monument plan. Temporary authorizations will not grant an outfitter any preference in future authorizations or allocations which may be made in the Monument plan.

Both agencies believe that new outfitter services may be appropriate in the expanded portion of the Monument. Desired activities in portions of the Monument might include: guided hiking, geologic interpretation, jeep tours, backpacking, wildlife viewing, and mountain biking. Until the agencies complete the Monument plan, BLM will accept Special Recreation Permit Applications for outfitted services. BLM will prepare an environmental assessment for each application. The applicant must pursue the concurrent authorization process with the State Board. If the application is approved, the Special Recreation Permit will be issued for a term of one year. An acceptable annual performance evaluation will be required prior to renewal of the permit for another year. Annual authorizations will be required until completion of the Monument plan. These temporary authorizations will not grant an outfitter any preference in future authorizations or allocations which may be made in the Monument plan.

The agencies will work closely with all authorized hunting outfitters to insure they are aware of NPS restrictions regarding firearms and hunting on NPS administered portions of the Monument. The Proclamation did not change hunting and firearm use on BLM administered portions of the Monument.

Information, Education and Interpretation: NPS will have the lead in these program areas. All products and materials should include both agencies’ logos. All products will comply with the intent of BLM’s Interim Printing and Signing Guidelines for National Landscape Conservation System Units (IM-2001-083) and NPS Sign Standards (draft Director’s Order # 52 C). During the interim planning period, most products will be temporary. Both agencies will monitor public demand for different types of products and evaluate the effectiveness of the available temporary products. The first initial priority is to provide visitor safety information related to the expanded portion of the Monument. The second initial priority is to reach out to local communities, schools, and historic users of the Monument.

It is critical that visitors seeking a developed recreation setting and experience receive information directing them to existing NPS facilities. This theme will be emphasized in all information materials including web sites, informational signs, kiosks, responses to inquiries, press releases, and hard copy handouts and sale items.

Visitors intentionally seeking a remote, primitive, dispersed experience will be provided with information containing a strong “Leave-No-Trace” message. Information on current conditions, hazards, and recommended equipment for backcountry travel will also be provided.
Publication and distribution of maps, educational materials, interpretive brochures and guides, will normally involve the Craters of the Moon Natural History Association. The three BLM Field Offices and Interagency Visitor Center in Idaho Falls will explore opportunities for working with the Natural History Association.

Wilderness Study Areas: Approximately 90 percent of the land transferred from BLM to NPS by the Proclamation is in Wilderness Study Area status. In many areas, BLM administered land lies between the WSA boundary and the NPS administered lava flows within the WSA. The Proclamation instructed NPS to manage WSA’s according to Section 603 of FLPMA. NPS has national policy guidance for management of areas recommended suitable for wilderness designation. However, at Craters of the Moon, NPS will generally use BLM’s handbook, “Interim Management Policy and Guidelines for Lands Under Wilderness Review” (IMP, Handbook 8550-1). BLM’s IMP is directly tiered to Section 603 of FLPMA. This will also facilitate seamless service and avoid contrasts between the two agencies’ management of the same WSA within the same Monument.

Every effort will be made to coordinate WSA IMP work with ongoing transportation network inventory, visitor use measurement, and cadastral survey. For example, the transportation system inventory will involve looking for any new ways established in WSA’s since 1980 as well as documenting the condition of all existing ways.

The Proclamation had no effect on the existing, designated, NPS Craters of the Moon Wilderness.

Water Rights: The Proclamation does not reserve water as a matter of Federal law. However, the agencies will file for water rights under Idaho State Statute and within the procedures of the Snake River Basin General Water Adjudication. BLM has submitted several filings within the Monument, primarily for purposes of livestock and wildlife water.

Mineral Materials: The Proclamation prohibits casual rock collection on all land within the Monument. The agencies will provide information on BLM areas outside the Monument where casual collection of materials similar to those found in the Monument is appropriate and permitted.

No mining claims or mineral leases exist within the boundaries of the Monument. Existing authorizations for material sites within the Monument will continue during the interim planning period. Applications for new free use sites, community pits, common variety mineral material sales, or other discretionary mineral material disposals will not be accepted until completion of the Monument plan.

Lands and Realty: The Monument’s external boundary is over 260 miles long. Within the boundary are approximately 8,000 acres of State land and 7,000 acres of private land. The Monument does not contain any Recreation and Public Purpose Act leases; active land exchanges, land sales or other land disposal actions.
BLM will perform an inventory of all rights-of-way, easements, land use permits, and other authorizations in effect as of the date of the proclamation. The agencies will make determinations on Valid Existing Rights as part of the planning process. At this time, the agencies are not aware of any conflicts between existing lands and realty program actions and the Proclamation. Action on applications for new, discretionary land use authorizations will be guided by existing NPS and BLM policies until completion of the Monument plan.

The agencies will accept proposals for the acquisition of the private and state land within the Monument boundary during the interim planning period. The agencies will emphasize that all acquisition proposals, whether through easement, fee title, or exchange involve a willing seller who initiates the proposal. The agencies will identify acquisition priorities as part of the Monument plan.

BLM will prepare a written description of the Monument boundary and perform a meets and bounds survey of the external Monument boundary. Both agencies will approve the final boundary description. Minor boundary corrections based on the survey require the approval of both agencies. The agencies will consider maps showing the Monument boundary as preliminary and draft, until the description and survey are complete, approved, and filed with the Secretary of Interior.

In many places, the boundary between NPS and BLM administered land is extremely difficult to describe and locate. In most cases, distinguishing the boundary between BLM and NPS administered land, on the ground, is not a matter of concern to the agencies or the public. Surveying the boundary between the agencies is not a high priority. If a specific situation requires determination of the BLM - NPS boundary, then the boundary line will be described by the Universal Transverse Mercator coordinates which correspond to the edge line of the brown colored lava shown on USGS 7.5 minute series topographic maps.

**Government to Government Tribal Coordination:** Federal agencies are responsible for maintaining a formal government to government relationship with American Indian tribes. Federal agencies protect and maintain treaty rights on public land. Regarding cultural resources, this relationship focuses on identifying and protecting archaeological sites possessing traditional and religious values. BLM generally provides access for tribal members to gather traditional plant and animal resources from public lands, including National Monuments. Both agencies will facilitate access for tribal members to sacred sites. BLM and NPS will incorporate the concerns of the Shoshone-Bannock Tribes into the Monument plan through formal coordination. The agencies will also regularly coordinate with the Tribes and Tribal staff concerning management activities at the Monument.

**Coordination with State and Local Governments:** Most state and local government coordination will involve both agencies. Whenever possible, BLM and NPS will cooperatively conduct communication and coordination as the “Monument” rather than as an individual agency.
**Law Enforcement Coordination:** Law enforcement staff will work together in a cooperative and coordinated manner within the Monument. Both agencies intend to emphasize education over enforcement during the interim management period.

Coordination with County Sheriffs will be conducted jointly. County deputization of BLM or NPS law enforcement staff is entirely at the discretion of the individual County Sheriff. BLM will enter into separate agreements with each of the five County Sheriffs affected by the Monument. During the interim management period, these agreements will provide financial assistance to the County Sheriffs so that they can manage an expected increase in people accessing the Monument as well as search and rescue activities.

**Fire Management:** BLM has traditionally functioned as the lead agency for most fire management activities in the Monument area. The agencies have established a long standing cooperative relationship prior to the expansion Proclamation. Both agencies have also entered into a variety of agreements with nearby local fire departments and rural Fire Districts. The agencies intend to continue, if not improve, these existing partnerships.

The Monument contains a complete spectrum of fire management activities. Fire suppression ranges from highest priority immediate response aimed at protecting remnant stands of sagebrush to low level monitoring of lightening caused fires within the Craters of the Moon Wilderness. BLM has scheduled several fuel management projects and range restoration projects which are partially within the Monument. Existing vegetation studies related to fire effects and fire rehabilitation will continue.

During the interim planning period, adequate fire management guidance exists under the agencies’ existing plans and agreements. For example, existing fire management guidance requires a Resource Advisor for all wildfires within or near the Monument. Both agencies will continue to operate under existing fire management plans and Interagency Agreements which are reviewed and updated on an annual basis. The Monument plan will address fire management and the relationship between fire management and other resources.

**Weed and Grasshopper Control Programs:** The Proclamation will result in the agencies placing a higher priority on weed management over a large area. The focus on stopping the spread of new invaders will continue. The agencies will explore opportunities to increase cooperation and logistical coordination with local governments and weed control districts. The ongoing, nationally recognized, Raven’s Eye WSA leafy spurge program will continue on both agencies’ jurisdictions. Weeds are recognized to be an important element of transportation system management.

Historically, grasshoppers control activities have occurred within the Monument boundary where there is an agricultural interface. The agencies will work with USDA APHIS to address the additional constraints of Monument designation in the NEPA process for proposed grasshopper control activities.

**Appendices:** APPENDIX B
**USDA Wildlife Service’s Operations:** The Proclamation did not specifically address predator control. However, predator control activities are addressed in the Background Materials document, the Secretary’s Memorandum, the Director’s Memorandum, and BLM’s National Interim Management Policy for Newly Created National Monuments. For BLM administered land, predator control, including any necessary preemptive strategies, will continue to be governed under applicable laws. BLM will continue to coordinate with Wildlife Services as described in existing national MOU’s, BLM State policy, and Upper Snake River District annual meetings.

The NPS Superintendent has the authority to authorize predator control on NPS administered land for individual offending animals on a case-by-case basis.

**Livestock Grazing:** Both agencies will emphasize that the Proclamation affirms BLM’s continued management of livestock grazing consistent with existing policies. Both agencies recognize that livestock grazing is an important component of the landscape described in the Proclamation. BLM will continue to follow the same laws, regulations, and policies for administering grazing as it did prior to the Proclamation.

**Scientific Study:** All of the Proclamations associated with Craters of the Moon National Monument focus on the unique geologic resources of the Monument. The protection, study, and appreciation of the Monument’s unique geologic features are perhaps the over-riding purpose of the Monument. Both agencies acknowledge the challenge of scientific study in the Monument’s remote and often harsh environment. In addition, restrictions on surface disturbance and cross-country travel can constrain geologic research. Nonetheless, the agencies recognize the potential exists for significant scientific discoveries. In addition, basic research plays an important role in the identification, characterization and interpretation of the Monument’s resources.

The existing MOU between the agencies and the U.S. Geological Survey remains in effect. BLM and NPS will continue to encourage the U. S. Geological Survey to pursue ongoing research involving geologic mapping, geochemistry, geophysics, geomorphology, seismology, geomagnetism, geodesy, tectonics, earthquake hazards, volcanic hazards, and climate change.

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

The existing NPS unit has a long term air quality monitoring program in place. Both agencies intend to continue and expand climatic and air quality research and monitoring. The Idaho National Energy and Environmental Laboratory has cooperatively participated in these activities and is expected to be an important partner in the future.
The Monument contains several ongoing archeologic scientific studies. The agencies will continue established relationships with academic institutions for these challenge cost share research projects. Inventory, characterization, and protection of cultural resources is a high priority for both agencies. The potential for additional discoveries of significant cultural and paleontological resources is high. Investigations must conform with policy guidelines for surface disturbance within Wilderness Study Areas and minimize surface disturbance elsewhere.

The lava flows at Craters of the Moon create many unique opportunities for the study of isolated, relatively undisturbed native plant communities. The Proclamation describes kipukas as important comparative benchmarks relative to human altered plant communities in the Snake River Plain. The Monument has been the site of many vegetative studies and research projects. Several studies involving rare plants, natural fire, fire rehabilitation, and grazing are in progress. The agencies intend to continue ongoing studies without regard to the Proclamation’s transfer of administration of some study sites.

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

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

The agencies hope to sponsor and host a Science Symposium in Fiscal Year 2002 with the intent of cataloging existing scientific information and fostering future research within the Monument.

Recommended by:

/s/ 10/24/01
Jim May, date
District Manager
BLM
Upper Snake River District

/s/ 10/26/01
James A. Morris, date
Superintendent
NPS
Craters of the Moon National Monument

Appendices: APPENDIX B 375
EMS  
Instruction Memorandum No. ID-070-2002-001  
Expires: 9/30/03  

To: All Employees  

From: District Manager  

Subject: Interim Management Guidelines for Craters of the Moon National Monument  

**Program Area:** National Landscape Conservation System (NLCS). 

**Purpose:** This Instruction Memorandum transmits the attached Interim Management Guidelines for Craters of the Moon National Monument. The Guidelines provide a management strategy for the Monument while BLM and the National Park Service (NPS) cooperatively prepare a land use plan. 

**Policy/Action:** These Interim Guidelines are an Addendum to the Memorandum of Understanding (BLM-ID-MOU-399) between BLM and NPS for the Craters of the Moon National Monument. The Memorandum of Understanding was recently signed by the BLM Idaho State Director and NPS Pacific West Regional Director. The MOU broadly frames the cooperative relationship between the NPS and BLM. The Interim Management Guidelines describe how BLM and NPS will manage the National Monument during the land use planning process. The Guidelines apply to all BLM and NPS management actions and activities at the expanded National Monument. The NPS unit at Craters of the Moon National Monument will publish the Guidelines as part of the Compendium of Superintendents Orders. 

**Timeframe:** This IM is effective immediately.
Background: Presidential Proclamation 7373 of November 9, 2000 expanded Craters of the Moon National Monument and instructed BLM and NPS to prepare a joint management plan for the Monument. Subsequently, the Secretary of Interior instructed the agencies to issue interim management guidance for the expanded Monument. For BLM, NLCS national policy requires the development of unit specific interim management guidelines which are tiered to the National Interim Management Policy for Newly Created National Monuments.

Manual/Handbook Sections Affected: None.

Coordination: The following Offices have provided input to, and reviewed draft versions of the attached Interim Management Guidelines: BLM Shoshone Field Office, Upper Snake River District, Idaho State Office Resource Services and Support Services Divisions, Headquarters NLCS Office; NPS Craters of the Moon National Monument, Columbia Cascades Support Office and the Pacific West Regional Office.

Contact: If you have questions regarding this IM or the Interim Management Guidelines, please contact Rick VanderVoet, BLM Monument Manager, at 208-886-7288, or Jim Morris, NPS Superintendent, at 208-527-3257.

Signed by: Jim May
USRD, District Manager

Authenticated by: Sandy Hoffer
Secretary
EMS TRANSMISSION 10/11/01
Instruction Memorandum No. 2002-008
Expires: 09/30/2003

To: State Directors and Assistant Directors
From: Director
Subject: Interim Management Policy for Bureau of Land Management National Monuments and National Conservation Areas

Program Area: National Landscape Conservation System; National Monuments; National Conservation Areas

Purpose: This Instruction Memorandum issues interim management guidelines for newly designated BLM national monuments and national conservation areas and supercedes IM No. 2000-62. The guidelines in this policy are designed to provide direction to State Directors responsible for the proper care of new national conservation areas or national monuments, pending the completion of the required planning processes.

Policy/Action: See Attachment 1.

Time Frame: This guidance is in effect immediately.

Background: IM No. 2000-62, which provides interim management guidance for newly designated BLM national monuments expired on September 30, 2001. This Instruction Memorandum updates the guidance to include national conservation areas with input from the field.

Budget Impact: n/a

Manual/Handbook Sections Affected: n/a
Coordination: n/a

Contact: If you have any questions or concerns regarding this policy, you may contact Elaine Marquis-Brong, Director, National Landscape Conservation System, at (202) 208-3516.

Signed by: Nina Rose Hatfield
Authenticated by: Vincent C. Chapman Jr
Acting Director Policy & Records Group, WO-560

1 Attachment
   1 Interim Management Policy (4 pp)
Interim Management Policy
BLM National Monuments
BLM National Conservation Areas

Adhere to direction in the legislation or the President’s Proclamation

- Federal lands and interests in lands within the national conservation area or monument are withdrawn from all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws, including among others the mineral leasing and mining laws unless otherwise specified in legislation or the Proclamation.

- Valid existing rights will be recognized.

- The States responsibilities and authorities regarding wildlife management, including fishing and hunting, within the national conservation area or the monument are unaffected by legislation or the Proclamation.

- Grazing activities shall continue to be governed by applicable laws and regulations other than specified in legislation or the Proclamation.

- Existing withdrawals, reservations, or appropriations are not revoked, but the national conservation area or monument is the dominant reservation.

Maintain existing management policies, designations, and allocations except where changes are necessary to comply with the legislation or Proclamation and protect the objects of scientific and historic interest within the national conservation area or monument.

Provide the public with prompt and accessible information on questions regarding the use of federal lands within the national conservation area or monument.

Coordinate with the local, State, Tribal, and other governmental entities (under existing agreements and any new arrangements deemed necessary) to disseminate and exchange information and cooperate in management actions, consistent with applicable legal authorities and other directives.

Assure the applications, proposals, and future use requests pending when the legislation or Proclamation was issued are subject to the terms of the legislation or Proclamation, including its recognition of valid existing rights, and other management directives and decisions relate to the national conservation area or monument.

Consider land or easement acquisitions and land exchanges that will enhance the values of the national conservation area or monument.

All existing planning documents related to the monument lands should be reviewed for consistency with the legislation or Proclamation. Consistent with NEPA and FLPMA, the plans should be modified or a
new plan created for the monument that addresses all resource issues in the legislation or Proclamation. A separate planning document for the national conservation area or monument is recommended, as opposed to combining the national conservation area or monument with an adjacent administrative resource area.

**Discussion of Specific Activities**

In general, actions that are not precluded by the Proclamation or legislation and which do not conflict with the established purposes of the monument or national conservation area may continue. Allowed activities can be restricted only where (1) the BLM, through processes required by existing law, identifies places where such uses ought to be restricted or prohibited as necessary to protect the federal lands and resources, including the objects protected by the monument or national conservation designation; or (2) where the BLM finds a clear threat from such a use to the federal lands and resources, including the objects protected by the national conservation area or monument designation and the circumstances call for swift protective action.

**Livestock Grazing:** Where applicable and consistent with the designation, livestock grazing within the national conservation area or monument is permitted, pursuant to the terms of permits and leases. Appropriate grazing management practices (as in all properly managed grazing pastures) should be followed to protect rangeland resources. Implementation of Standards and Guidelines for Rangeland Improvement should continue. Actions should be taken to assist permits in assuring compliance with existing requirements. Enforcement actions against trespassers or other violators continue to be authorized under policy.

**Animal Damage Control:** Coordinate closely with State Game and Fish Department and Animal and Plant Health Inspection Service (APHIS) on animal damage control issues.

**Camping:** Dispersed recreational camping may continue consistent with current policies and practices and the Proclamation. Developed BLM camping facilities should be maintained and rehabilitated as appropriate, consistent with monument purposes.

**Facilities:** Maintenance of existing facilities should be permitted, subject to compliance with current policies and practices, provided monument resources are protected. Applications for new facilities may be considered, if they will protect or enhance monument resources.

**Hunting and Fishing:** Coordinate with the State to ensure public safety, specifically if there are areas of increased visitor use.

**Mineral Activities (including Hard rock, Oil, Gas, and Coal):** Unless otherwise specified in legislation or proclamation all valid existing rights will be recognized in accordance with policy.

**Noxious Weeds/Exotic Species:** Existing noxious weed control activities should continue. Exotic species should not be introduced, unless doing so is essential to control noxious weeds or other undesirable species.
Off-Road Vehicles: No areas in the national conservation area or monument should be authorized for cross-country, off-road vehicular use, except for authorized administrative and emergency purposes. For routes, including washes, where motorized and mechanical vehicular use has been authorized by past planning decisions, management discretion should be exercised where necessary, through emergency closures or other actions, to protect the national conservation area or monument resources. Wheeled game carriers are exempt.

Paleontological Resources and Rock Collection: The collection of any objects, including vegetation, paleontological resources, or rock specimens, should not be permitted, except where intended for legitimate scientific uses for which documentation is provided to the satisfaction of the responsible management official. Where limited wood gathering for uses including firewood and fence maintenance occurred prior to designation, this activity could be permitted. In such cases the manager must assure that national conservation area or monument resources are not affected.

Rights-of-Way: No new rights-of-way or ancillary public facilities should be processed, except for rights-of-way pursuant to existing policies and practices and necessary for access and/or maintenance needs to private or state in holdings, public facilities or administrative sites. In addition, rights-of-way may be permitted within the boundary of existing rights-of-way or designated rights-of-way corridors established by previous land use planning, and where site specific NEPA analysis determines that impact to the objects or values for which the national conservation area or monument was designated would be negligible.

Roads: Road improvements should be minimal and designed solely to correct those conditions that are unsafe or hazardous. Activities that maintain, as opposed to enhance, existing roads may be permissible.

Scientific, Archeological, and Historical Investigations: Scientific, archeological, and historical investigations that increase our understanding of the national conservation area’s or monument’s resources are important and scientific use for surveys and reconnaissance may be allowed but surface disturbance should be avoided.

Signs and Interpretation: Appropriate signs at the national conservation areas or monuments boundaries should be provided. Other relevant information should be posted as needed. Actions should be initiated to interpret the resources and values and provide environmental education to visitors on important topics (i.e., visitor safety and resource protection).

Surface Disturbance and Reclamation Activities under Current Permits: Surface disturbance and reclamation activities under current permits should proceed consistent with those permits. Permit extensions will be considered subject to consistency with applicable policies, laws and proclamation.

Vegetation Manipulation: Vegetation manipulation should proceed only when consistent with conservation and protection of the national conservation area or monument’s resources. Chaining and other vegetation manipulation methods that cause substantial surface disturbance shall not be permitted.
Wilderness Study Areas: Where applicable, maintain the non-impairment standard for wilderness study areas, per FLPMA, to prevent undue and unnecessary degradation of resources.
The boundary of a national monument may be modified only as authorized by law. This appendix describes four minor proposed changes to the external boundary of the Monument and three proposed changes to the boundary between NPS and BLM within the Monument. The agencies are recommending these boundary modifications for the reasons described below. Congress would have to pass legislation authorizing a modification and the President would need to sign that legislation for the modification to be authorized by law.

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

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

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

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

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

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

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

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

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

The following is a list of recommended boundary modifications including legal description, approximate acreage, and a brief summary of the justification for each proposed change. See Figure C-1 (A through E) for specific locations.
1) Township 2 North, Range 24 East, Section 24 – Approximately 90 acres

   a. Recommended transfer of management from NPS to BLM to provide for the continuation of historic grazing. With the expansion of the Monument, the NPS has assumed management of all lava covered lands within the Monument (indicated by the dark brown coloring on 7.5 minute USGS color maps). The NPS management boundary would be moved eastward from the lava edge illustrated on the USGS 7.5 minute map to the first road. This adjustment would be bounded at the southern end by the Craters of the Moon Wilderness area. A closer evaluation of this particular site revealed relatively low evidence of lava and/or unique features. As such, this land can be more closely identified with most other BLM managed portions of the Monument and should be managed accordingly.

2) T2N, R24E, Sec11 – Approximately 120 acres

   a. Recommended transfer of management from NPS to BLM to provide for the continuation of historic grazing. With the expansion of the Monument, the NPS has assumed management of all lava covered lands within the Monument (indicated by the dark brown coloring on 7.5 minute USGS color maps). The NPS management boundary would be moved eastward from the lava edge illustrated on the USGS 7.5 minute map to the first road. A closer evaluation of this particular site revealed relatively low evidence of lava and/or unique features. As such, this land can be more closely identified with most other BLM managed portions of the Monument and should be managed accordingly.

3) T2N, R25E, Sec5 – Approximately 1 acre

   a. Recommended inclusion of land in the Monument from the BLM to expand the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This would provide for a more consistent and manageable boundary.

4) T2N, R25E, Sec5 – Approximately 60 acres

   a. Recommended deletion of land from the Monument to adjust the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This would provide for a more consistent and manageable boundary. This land does not provide exceptional opportunities for public enjoyment, nor does it contain features for which the Monument was established to protect.

   b. It would also eliminate a mineral material site from the Monument.

5) T3N, R25E, Sec27 – Approximately 2 acres

   a. Recommended deletion of land from the Monument to adjust the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This
would provide for a more consistent and manageable boundary.

6) T3N, R25E, Sec27 – Approximately 3 acres
   
a. Recommended deletion of land from the Monument to adjust the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This would provide for a more consistent and manageable boundary.

7) T5S, R28E, Sec36 – Approximately 230 acres
   
a. Recommended transfer of management from NPS to BLM to provide for the continuation of historic grazing. With the expansion of the Monument, the NPS has assumed management of all lava covered lands within the Monument (indicated by the dark brown coloring on 7.5 minute USGS color maps). A closer evaluation of this particular site revealed relatively low evidence of lava and/or unique features. As such, this land can be more closely identified with most other BLM managed portions of the Monument and should be managed accordingly.

8) T1S, R22E, Sec 5 – Approximately 2 acres
   
a. Recommended adjustment of the Monument boundary from a legal subdivision to meet the southern edge of the highway right of way. This would provide for a more consistent and manageable boundary.

The agencies have consulted with the relative interests to arrive at these proposals which are consistent with enabling Legislation, the Proclamations, and current management guidelines. The agencies received no other proposals for boundary modifications during the scoping for the Draft Plan/DEIS.
Carey
Proposed boundary modifications have been oversized for graphic presentation and are not to scale. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

FIGURE C1-A
PROPOSED BOUNDARY MODIFICATIONS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

Map Scale = 1:500,000

Proposed boundary modifications have been oversized for graphic presentation and are not to scale. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
FIGURE C1-B

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

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
FIGURE C1-C
PROPOSED BOUNDARY MODIFICATIONS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
FIGURE C1-D
PROPOSED BOUNDARY MODIFICATIONS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
## Appendix D

### Common and Scientific Names of Species Occurring at Craters of the Moon National Monument and Preserve

#### Amphibians

<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western toad</td>
<td><em>Bufo boreas</em></td>
</tr>
<tr>
<td>Boreal chorus frog</td>
<td><em>Pseudacris maculate</em></td>
</tr>
<tr>
<td>Pacific tree frog</td>
<td><em>Pseudacris regilla</em></td>
</tr>
<tr>
<td>Great Basin spadefoot</td>
<td><em>Spea intermontana</em></td>
</tr>
</tbody>
</table>

#### Birds

<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper’s hawk</td>
<td><em>Accipiter cooperii</em></td>
</tr>
<tr>
<td>Northern goshawk</td>
<td><em>Accipiter gentilit</em></td>
</tr>
<tr>
<td>Sharp-shinned hawk</td>
<td><em>Accipiter striatus</em></td>
</tr>
<tr>
<td>Spotted sandpiper</td>
<td><em>Acitis macularia</em></td>
</tr>
<tr>
<td>Western grebe</td>
<td><em>Aechmophorus occidentalis</em></td>
</tr>
<tr>
<td>Northern saw-whet owl</td>
<td><em>Aegolius acadicus</em></td>
</tr>
<tr>
<td>White-throated swift</td>
<td><em>Aeronautes saxatalis</em></td>
</tr>
<tr>
<td>Red-winged blackbird</td>
<td><em>Agelaius phoeniceus</em></td>
</tr>
<tr>
<td>Chukar</td>
<td><em>Alectoris chukar</em></td>
</tr>
<tr>
<td>Grasshopper sparrow</td>
<td><em>Ammodrmus savannarum</em></td>
</tr>
<tr>
<td>Sage sparrow</td>
<td><em>Amphispiza belli</em></td>
</tr>
<tr>
<td>Black-throated sparrow</td>
<td><em>Amphispiza bilineata</em></td>
</tr>
<tr>
<td>Northern pintail</td>
<td><em>Anas acuta</em></td>
</tr>
<tr>
<td>American wigeon</td>
<td><em>Anas americana</em></td>
</tr>
<tr>
<td>Northern shoveler</td>
<td><em>Anas clypeata</em></td>
</tr>
<tr>
<td>Green-winged teal</td>
<td><em>Anas crecca</em></td>
</tr>
<tr>
<td>Cinnamon teal</td>
<td><em>Anas cyanoptera</em></td>
</tr>
<tr>
<td>Blue-winged teal</td>
<td><em>Anas discors</em></td>
</tr>
<tr>
<td>Mallard</td>
<td><em>Anas platyrhynchos</em></td>
</tr>
<tr>
<td>Gadwall</td>
<td><em>Anas strepera</em></td>
</tr>
<tr>
<td>American pipit</td>
<td><em>Anthus rubescens</em></td>
</tr>
<tr>
<td>Golden eagle</td>
<td><em>Aquila chrysaetos</em></td>
</tr>
<tr>
<td>Black-chinned hummingbird</td>
<td><em>Archilochus alexandri</em></td>
</tr>
<tr>
<td>Great blue heron</td>
<td><em>Ardea herodias</em></td>
</tr>
<tr>
<td>Short-eared owl</td>
<td><em>Asio flammeus</em></td>
</tr>
<tr>
<td>Long-eared owl</td>
<td><em>Asio otus</em></td>
</tr>
<tr>
<td>Western burrowing owl</td>
<td><em>Athene cunicularia</em></td>
</tr>
<tr>
<td>Lesser scaup</td>
<td><em>Aythya affinis</em></td>
</tr>
<tr>
<td><strong>Birds</strong></td>
<td>Species</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Redhead</td>
<td>Aythya americana</td>
</tr>
<tr>
<td>Ring-necked duck</td>
<td>Aythya collaris</td>
</tr>
<tr>
<td>Canvasback</td>
<td>Aythya valisineria</td>
</tr>
<tr>
<td>Cedar waxwing</td>
<td>Bombycilla cedrorum</td>
</tr>
<tr>
<td>Bohemian waxwing</td>
<td>Bombycilla garrulus</td>
</tr>
<tr>
<td>Ruffed grouse</td>
<td>Bonasa umbellus</td>
</tr>
<tr>
<td>Canada goose</td>
<td>Branta canadensis</td>
</tr>
<tr>
<td>Great horned owl</td>
<td>Bubo virginianus</td>
</tr>
<tr>
<td>Bufflehead</td>
<td>Bucephala albeola</td>
</tr>
<tr>
<td>Common goldeneye</td>
<td>Bucephala clangula</td>
</tr>
<tr>
<td>Red-tailed hawk</td>
<td>Buteo jamaicensis</td>
</tr>
<tr>
<td>Rough-legged hawk</td>
<td>Buteo lagopus</td>
</tr>
<tr>
<td>Ferruginous hawk</td>
<td>Buteo regalis</td>
</tr>
<tr>
<td>Swainson's hawk</td>
<td>Buteo swainsonii</td>
</tr>
<tr>
<td>Lark bunting</td>
<td>Calamospiza melanocorys</td>
</tr>
<tr>
<td>Common redpoll</td>
<td>Carduelis flammea</td>
</tr>
<tr>
<td>Hoary redpoll</td>
<td>Carduelis hornemanni</td>
</tr>
<tr>
<td>Pine siskin</td>
<td>Carduelis pinus</td>
</tr>
<tr>
<td>American goldfinch</td>
<td>Carduelis tristis</td>
</tr>
<tr>
<td>Cassin’s finch</td>
<td>Carpodacus cassinii</td>
</tr>
<tr>
<td>House finch</td>
<td>Carpodacus mexicanus</td>
</tr>
<tr>
<td>Turkey vulture</td>
<td>Cathartes aura</td>
</tr>
<tr>
<td>Hermit thrush</td>
<td>Catharus guttus</td>
</tr>
<tr>
<td>Swainson’s thrush</td>
<td>Catharus ustulatus</td>
</tr>
<tr>
<td>Greater sage grouse</td>
<td>Centrocercus urophasianus</td>
</tr>
<tr>
<td>Brown creeper</td>
<td>Certhia americana</td>
</tr>
<tr>
<td>Belted kingfisher</td>
<td>Ceryle alcyon</td>
</tr>
<tr>
<td>Killdeer</td>
<td>Charadrius vociferus</td>
</tr>
<tr>
<td>Snow goose</td>
<td>Chen caerulescens</td>
</tr>
<tr>
<td>Black tern</td>
<td>Chlidonias niger</td>
</tr>
<tr>
<td>Lark sparrow</td>
<td>Chondestes grammacus</td>
</tr>
<tr>
<td>Common nighthawk</td>
<td>Chordeiles minor</td>
</tr>
<tr>
<td>American dipper</td>
<td>Cinclus mexicanus</td>
</tr>
<tr>
<td>Northern harrier</td>
<td>Circus cyaneus</td>
</tr>
<tr>
<td>Marsh wren</td>
<td>Cistothorus palustris</td>
</tr>
<tr>
<td>Evening grosbeak</td>
<td>Coccothraustes vespertinus</td>
</tr>
<tr>
<td>Northern flicker</td>
<td>Coloptes auratus</td>
</tr>
<tr>
<td>Band-tailed pigeon</td>
<td>Columba fasciata</td>
</tr>
<tr>
<td>Rock pigeon</td>
<td>Columba livia</td>
</tr>
<tr>
<td>Olive-sided flycatcher</td>
<td>Contopus cooperi</td>
</tr>
<tr>
<td>Western wood-pewee</td>
<td>Contopus sordidulus</td>
</tr>
<tr>
<td>Birds</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>American crow</td>
<td><em>Corvus brachyrhynchos</em></td>
</tr>
<tr>
<td>Common raven</td>
<td><em>Corvus corax</em></td>
</tr>
<tr>
<td>Steller’s jay</td>
<td><em>Cyanocitta stelleri</em></td>
</tr>
<tr>
<td>Tundra swan</td>
<td><em>Cygnus columbianus</em></td>
</tr>
<tr>
<td>Blue grouse</td>
<td><em>Dendragapus obscurus</em></td>
</tr>
<tr>
<td>Yellow-rumped warbler</td>
<td><em>Dendroica coronata</em></td>
</tr>
<tr>
<td>Yellow warbler</td>
<td><em>Dendroica petechia</em></td>
</tr>
<tr>
<td>Townsend’s warbler</td>
<td><em>Dendroica townsendii</em></td>
</tr>
<tr>
<td>Bobolink</td>
<td><em>Dolichonyx oryzivorus</em></td>
</tr>
<tr>
<td>Gray catbird</td>
<td><em>Dumetella carolinensis</em></td>
</tr>
<tr>
<td>Hammond’s flycatcher</td>
<td><em>Empidonax hammondii</em></td>
</tr>
<tr>
<td>Dusky flycatcher</td>
<td><em>Empidonax oberholseri</em></td>
</tr>
<tr>
<td>Cordilleran flycatcher</td>
<td><em>Empidonax occidentalis</em></td>
</tr>
<tr>
<td>Willow flycatcher</td>
<td><em>Empidonax traillii</em></td>
</tr>
<tr>
<td>Gray flycatcher</td>
<td><em>Empidonax wrighti</em></td>
</tr>
<tr>
<td>Horned lark</td>
<td><em>Eremophila alpestris</em></td>
</tr>
<tr>
<td>Brewer’s blackbird</td>
<td><em>Euphagus cyanocephalus</em></td>
</tr>
<tr>
<td>Merlin</td>
<td><em>Falco columbarius</em></td>
</tr>
<tr>
<td>Prairie falcon</td>
<td><em>Falco mexicanus</em></td>
</tr>
<tr>
<td>Peregrine falcon</td>
<td><em>Falco pergrinus</em></td>
</tr>
<tr>
<td>Gyr falcon</td>
<td><em>Falco rusticolus</em></td>
</tr>
<tr>
<td>American kestrel</td>
<td><em>Falco sparverius</em></td>
</tr>
<tr>
<td>American coot</td>
<td><em>Falco sparverius</em></td>
</tr>
<tr>
<td>Wilson’s snipe</td>
<td><em>Gallinago gallinago</em></td>
</tr>
<tr>
<td>Sandhill crane</td>
<td><em>Grus canadensis</em></td>
</tr>
<tr>
<td>Pinyon jay</td>
<td><em>Gymnorhinus cyanocephalus</em></td>
</tr>
<tr>
<td>Bald eagle</td>
<td><em>Halaeetus leucocephalus</em></td>
</tr>
<tr>
<td>Barn swallow</td>
<td><em>Hirunda rustica</em></td>
</tr>
<tr>
<td>Yellow-breasted chat</td>
<td><em>Icteria virens</em></td>
</tr>
<tr>
<td>Bullock’s oriole</td>
<td><em>Icterus bullockii</em></td>
</tr>
<tr>
<td>Varied thrush</td>
<td><em>Ixoreus naevius</em></td>
</tr>
<tr>
<td>Dark-eyed junco</td>
<td><em>Junco hyemalis</em></td>
</tr>
<tr>
<td>Northern shrike</td>
<td><em>Lanius excubitot</em></td>
</tr>
<tr>
<td>Loggerhead shrike</td>
<td><em>Lanius ludovicianus</em></td>
</tr>
<tr>
<td>Herring gull</td>
<td><em>Larus argentatus</em></td>
</tr>
<tr>
<td>California gull</td>
<td><em>Larus californicus</em></td>
</tr>
<tr>
<td>Ring-billed gull</td>
<td><em>Larus delawarensis</em></td>
</tr>
<tr>
<td>Franklin’s gull</td>
<td><em>Larus pipixan</em></td>
</tr>
<tr>
<td>Black rosy-finch</td>
<td><em>Leucosticte atrata</em></td>
</tr>
<tr>
<td>Gray-crowned rosy-finch</td>
<td><em>Leucosticte tephrocotis</em></td>
</tr>
<tr>
<td>Long-billed dowitcher</td>
<td><em>Limnodromus scolopaceus</em></td>
</tr>
<tr>
<td>Birds</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Red crossbill</td>
<td>Loxia curvirostra</td>
</tr>
<tr>
<td>Western screech owl</td>
<td>Megascops kenicottii</td>
</tr>
<tr>
<td>Red-headed woodpecker</td>
<td>Melanerpes erythrocephalus</td>
</tr>
<tr>
<td>Lewis’ woodpecker</td>
<td>Melanerpes lewis</td>
</tr>
<tr>
<td>Lincoln’s sparrow</td>
<td>Melospiza lincolnii</td>
</tr>
<tr>
<td>Song sparrow</td>
<td>Melospiza melodia</td>
</tr>
<tr>
<td>Brown-headed cowbird</td>
<td>Molothrus ater</td>
</tr>
<tr>
<td>Townsend’s solitaire</td>
<td>Myadestes townsendi</td>
</tr>
<tr>
<td>Ash-throated flycatcher</td>
<td>Myiarchus cinerascens</td>
</tr>
<tr>
<td>Clark’s nutcracker</td>
<td>Nucifraga columbiana</td>
</tr>
<tr>
<td>Long-billed curlew</td>
<td>Numenius americanus</td>
</tr>
<tr>
<td>Whimbrel</td>
<td>Numenius phaeopus</td>
</tr>
<tr>
<td>Snowy owl</td>
<td>Nyctea scandiaca</td>
</tr>
<tr>
<td>MacGillivray’s warbler</td>
<td>Oporornis tolmiei</td>
</tr>
<tr>
<td>Sage thrasher</td>
<td>Orreoscopetes montanus</td>
</tr>
<tr>
<td>Ruddy duck</td>
<td>Oxyura jamaicensis</td>
</tr>
<tr>
<td>Osprey</td>
<td>Pandion haliaetus</td>
</tr>
<tr>
<td>House sparrow</td>
<td>Passer domesticus</td>
</tr>
<tr>
<td>Savannah sparrow</td>
<td>Passerculus sandwichensis</td>
</tr>
<tr>
<td>Lazuli bunting</td>
<td>Passerina amoena</td>
</tr>
<tr>
<td>Fox sparrow</td>
<td>Passerlla iliaca</td>
</tr>
<tr>
<td>American white pelican</td>
<td>Pelecanus erythrorhynchos</td>
</tr>
<tr>
<td>Gray partridge</td>
<td>Perdix perdix</td>
</tr>
<tr>
<td>Cliff swallow</td>
<td>Petrochelidon pyrrhonota</td>
</tr>
<tr>
<td>Common poorwill</td>
<td>Phalaenoptilus</td>
</tr>
<tr>
<td>Wilson’s phalarope</td>
<td>Phalaropus tricolor</td>
</tr>
<tr>
<td>Ring-necked pheasant</td>
<td>Phasianus colchicus</td>
</tr>
<tr>
<td>Black-headed grosbeak</td>
<td>Pheucticus melanocephalus</td>
</tr>
<tr>
<td>Black-billed magpie</td>
<td>Pica hudsonia</td>
</tr>
<tr>
<td>Downy woodpecker</td>
<td>Picoides pubescens</td>
</tr>
<tr>
<td>Hairy woodpecker</td>
<td>Picoides villosus</td>
</tr>
<tr>
<td>Pine grosbeak</td>
<td>Pinicola enucleator</td>
</tr>
<tr>
<td>Green-tailed towhee</td>
<td>Pipilo chlorurus</td>
</tr>
<tr>
<td>Spotted towhee</td>
<td>Pipilo maculatus</td>
</tr>
<tr>
<td>Western tanager</td>
<td>Piranga ludoviciana</td>
</tr>
<tr>
<td>Snow bunting</td>
<td>Plectrophenax nivalis</td>
</tr>
<tr>
<td>White-faced ibis</td>
<td>Plegadis chihi</td>
</tr>
<tr>
<td>Eared grebe</td>
<td>Podiceps nigricollis</td>
</tr>
<tr>
<td>Pied-billed grebe</td>
<td>Podilymbus podiceps</td>
</tr>
<tr>
<td>Black-capped chickadee</td>
<td>Poecile atricapilla</td>
</tr>
<tr>
<td>Mountain chickadee</td>
<td>Poecile gambeli</td>
</tr>
<tr>
<td>Birds</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Blue-gray gnatcatcher</td>
<td>Polioptila caerulea</td>
</tr>
<tr>
<td>Vesper sparrow</td>
<td>Poecetes gramineus</td>
</tr>
<tr>
<td>Sora</td>
<td>Porzana carolina</td>
</tr>
<tr>
<td>Common grackle</td>
<td>Quiscalus quiscula</td>
</tr>
<tr>
<td>Virginia rail</td>
<td>Rallus limicola</td>
</tr>
<tr>
<td>American avocet</td>
<td>Recurvirostra americana</td>
</tr>
<tr>
<td>Ruby-crowned kinglet</td>
<td>Regulus calendula</td>
</tr>
<tr>
<td>Golden-crowned kinglet</td>
<td>Regulus satrapa</td>
</tr>
<tr>
<td>Rock wren</td>
<td>Salpinctes obsoletus</td>
</tr>
<tr>
<td>Say’s phoebe</td>
<td>Sayornis saya</td>
</tr>
<tr>
<td>Northern waterthrush</td>
<td>Seiurus noveboracensis</td>
</tr>
<tr>
<td>Broad-tailed hummingbird</td>
<td>Selasphorus platycercus</td>
</tr>
<tr>
<td>Rufous hummingbird</td>
<td>Selasphorus rufus</td>
</tr>
<tr>
<td>American redstart</td>
<td>Setophaga ruticilla</td>
</tr>
<tr>
<td>Mountain bluebird</td>
<td>Sialia currucoides</td>
</tr>
<tr>
<td>Western bluebird</td>
<td>Sialia mexicana</td>
</tr>
<tr>
<td>Red-breasted nuthatch</td>
<td>Sitta canadensis</td>
</tr>
<tr>
<td>White-breasted nuthatch</td>
<td>Sitta carolinensis</td>
</tr>
<tr>
<td>Red-naped sapsucker</td>
<td>Sphyrapicus nuchalis</td>
</tr>
<tr>
<td>Williamson’s sapsucker</td>
<td>Sphyrapicus thyroideus</td>
</tr>
<tr>
<td>Brewer’s sparrow</td>
<td>Spizella breweri</td>
</tr>
<tr>
<td>Chipping sparrow</td>
<td>Spizella passerina</td>
</tr>
<tr>
<td>Northern rough-winged swallow</td>
<td>Stelgidopteryx serripennis</td>
</tr>
<tr>
<td>Calliope hummingbird</td>
<td>Stellula calliope</td>
</tr>
<tr>
<td>Forster’s tern</td>
<td>Sterna forsteri</td>
</tr>
<tr>
<td>Western meadowlark</td>
<td>Sturnella neglecta</td>
</tr>
<tr>
<td>European starling</td>
<td>Sturnus vulgaris</td>
</tr>
<tr>
<td>Tree swallow</td>
<td>Tachycineta bicolor</td>
</tr>
<tr>
<td>Violet-green swallow</td>
<td>Tachycineta thalassina</td>
</tr>
<tr>
<td>Brown thrasher</td>
<td>Toxostoma rufum</td>
</tr>
<tr>
<td>House wren</td>
<td>Troglodytes aedon</td>
</tr>
<tr>
<td>Winter wren</td>
<td>Troglodytes troglodytes</td>
</tr>
<tr>
<td>American robin</td>
<td>Turdus migratorius</td>
</tr>
<tr>
<td>Eastern kingbird</td>
<td>Tyrannus tyrannus</td>
</tr>
<tr>
<td>Western kingbird</td>
<td>Tyrannus verticalis</td>
</tr>
<tr>
<td>Orange-crowned warbler</td>
<td>Vermivora celata</td>
</tr>
<tr>
<td>Tennessee warbler</td>
<td>Vermivora pergrina</td>
</tr>
<tr>
<td>Nashville warbler</td>
<td>Vermivora ruficapilla</td>
</tr>
<tr>
<td>Cassin’s vireo</td>
<td>Vireo cassini</td>
</tr>
<tr>
<td>Warbling vireo</td>
<td>Vireo gilvus</td>
</tr>
<tr>
<td>Plumbeous vireo</td>
<td>Vireo plumbeus</td>
</tr>
</tbody>
</table>
### Birds

<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilson’s warbler</td>
<td>Wilsonia pusilla</td>
</tr>
<tr>
<td>Yellow-headed blackbird</td>
<td>Xanthocephalus xanthocephalus</td>
</tr>
<tr>
<td>Mourning dove</td>
<td>Zenaida macroura</td>
</tr>
<tr>
<td>White-throated sparrow</td>
<td>Zonotrichia albicollis</td>
</tr>
<tr>
<td>Golden-crowned sparrow</td>
<td>Zonotrichia atricapilla</td>
</tr>
<tr>
<td>White-crowned sparrow</td>
<td>Zonotrichia leucophrys</td>
</tr>
</tbody>
</table>

### Mammals

<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moose</td>
<td>Alces alces</td>
</tr>
<tr>
<td>Pronghorn</td>
<td>Antilocapra americana</td>
</tr>
<tr>
<td>Pallid bat</td>
<td>Antrozous pallidus</td>
</tr>
<tr>
<td>Pygmy rabbit</td>
<td>Brachylagus idahoensis</td>
</tr>
<tr>
<td>Coyote</td>
<td>Canis latrans</td>
</tr>
<tr>
<td>Gray wolf</td>
<td>Canis lupus</td>
</tr>
<tr>
<td>Beaver</td>
<td>Castor canadensis</td>
</tr>
<tr>
<td>Elk</td>
<td>Cervus elephas</td>
</tr>
<tr>
<td>Townsend's big-eared bat</td>
<td>Corynorhinus townsendii</td>
</tr>
<tr>
<td>Ord’s kangaroo rat</td>
<td>Dipodomys ordii</td>
</tr>
<tr>
<td>Big brown bat</td>
<td>Eptesicus fuscus</td>
</tr>
<tr>
<td>Porcupine</td>
<td>Erethizon dorsatum</td>
</tr>
<tr>
<td>Mountain lion</td>
<td>Felis concolor</td>
</tr>
<tr>
<td>Sagebrush vole</td>
<td>Lagurus curtatus</td>
</tr>
<tr>
<td>Snowshoe hare</td>
<td>Lepus americanus</td>
</tr>
<tr>
<td>White-tailed jackrabbit</td>
<td>Lepus californicus</td>
</tr>
<tr>
<td>Black-tailed jackrabbit</td>
<td>Lepus townsendii</td>
</tr>
<tr>
<td>Bobcat</td>
<td>Lynx rufus</td>
</tr>
<tr>
<td>Yellow-bellied marmot</td>
<td>Marmota flaviventris</td>
</tr>
<tr>
<td>Striped skunk</td>
<td>Mephitis mephitis</td>
</tr>
<tr>
<td>Long-tailed vole</td>
<td>Microtus longicaudis</td>
</tr>
<tr>
<td>Montane vole</td>
<td>Microtus montanus</td>
</tr>
<tr>
<td>Short-tailed weasel</td>
<td>Mustela ermina</td>
</tr>
<tr>
<td>Long-tailed weasel</td>
<td>Mustela frenata</td>
</tr>
<tr>
<td>California myotis</td>
<td>Myotis californicus</td>
</tr>
<tr>
<td>Long-eared myotis</td>
<td>Myotis evotis</td>
</tr>
<tr>
<td>Small-footed myotis</td>
<td>Myotis leibii</td>
</tr>
<tr>
<td>Little brown myotis</td>
<td>Myotis lucifugus</td>
</tr>
<tr>
<td>Fringed myotis</td>
<td>Myotis thysanodes</td>
</tr>
<tr>
<td>Long-legged myotis</td>
<td>Myotis volans</td>
</tr>
<tr>
<td>Bushy-tailed woodrat</td>
<td>Neotoma cinerea</td>
</tr>
<tr>
<td>Pika</td>
<td>Ochotona princeps</td>
</tr>
</tbody>
</table>
## Mammals

<table>
<thead>
<tr>
<th>Animal</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mule deer</td>
<td><em>Odocoileus hemionus</em></td>
</tr>
<tr>
<td>Muskrat</td>
<td><em>Ondatra zibethicus</em></td>
</tr>
<tr>
<td>Great Basin pocket mouse</td>
<td><em>Perognathus parvus</em></td>
</tr>
<tr>
<td>Deer mouse</td>
<td><em>Peromyscus maniculatus</em></td>
</tr>
<tr>
<td>Heather vole</td>
<td><em>Phenacomys intermedius</em></td>
</tr>
<tr>
<td>Raccoon</td>
<td><em>Procyon lotor</em></td>
</tr>
<tr>
<td>Western harvest mouse</td>
<td><em>Reithrodontomys megalotis</em></td>
</tr>
<tr>
<td>Merriam’s shrew</td>
<td><em>Sorex merriami</em></td>
</tr>
<tr>
<td>Dusky shrew</td>
<td><em>Sorex monticolus</em></td>
</tr>
<tr>
<td>Vagrant shrew</td>
<td><em>Sorex vagrans</em></td>
</tr>
<tr>
<td>Columbian ground squirrel</td>
<td><em>Spermophilus columbianus</em></td>
</tr>
<tr>
<td>Golden-mantled ground squirrel</td>
<td><em>Spermophilus lateralis</em></td>
</tr>
<tr>
<td>Piute ground squirrel</td>
<td><em>Spermophilus mollis</em></td>
</tr>
<tr>
<td>Western spotted skunk</td>
<td><em>Spilogale gracilis</em></td>
</tr>
<tr>
<td>Mountain cottontail</td>
<td><em>Sylvilagus nuttallii</em></td>
</tr>
<tr>
<td>Yellow-pine chipmunk</td>
<td><em>Tamias amoenus</em></td>
</tr>
<tr>
<td>Least chipmunk</td>
<td><em>Tamias minimus</em></td>
</tr>
<tr>
<td>Red squirrel</td>
<td><em>Tamiasciurus hudsonicus</em></td>
</tr>
<tr>
<td>Badger</td>
<td><em>Taxidea taxus</em></td>
</tr>
<tr>
<td>Northern pocket gopher</td>
<td><em>Thomomys talpoides</em></td>
</tr>
<tr>
<td>Black bear</td>
<td><em>Ursus americanus</em></td>
</tr>
<tr>
<td>Kit fox</td>
<td><em>Vulpes macrotis</em></td>
</tr>
<tr>
<td>Red fox</td>
<td><em>Vulpes vulpes</em></td>
</tr>
<tr>
<td>Western jumping mouse</td>
<td><em>Zapus princeps</em></td>
</tr>
</tbody>
</table>

## Reptiles

<table>
<thead>
<tr>
<th>Animal</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber boa</td>
<td><em>Charina bottae</em></td>
</tr>
<tr>
<td>Western yellow-bellied racer</td>
<td><em>Coluber constrictor</em></td>
</tr>
<tr>
<td>Western rattlesnake</td>
<td><em>Crotalus viridis</em></td>
</tr>
<tr>
<td>Western skink</td>
<td><em>Eumeces skiltonianus</em></td>
</tr>
<tr>
<td>Longnose leopard lizard</td>
<td><em>Gambelia wislizenii</em></td>
</tr>
<tr>
<td>Short-horned lizard</td>
<td><em>Phrynosoma douglasi</em></td>
</tr>
<tr>
<td>Desert horned lizard</td>
<td><em>Phrynosoma platyrhinos</em></td>
</tr>
<tr>
<td>Gopher snake</td>
<td><em>Pituophis catenifer</em></td>
</tr>
<tr>
<td>Sagebrush lizard</td>
<td><em>Sceloporus graciosus</em></td>
</tr>
<tr>
<td>Western terrestrial garter snake</td>
<td><em>Thamnophis elegans</em></td>
</tr>
</tbody>
</table>
### Common and Scientific Names of Plant Species Referenced in this Document

#### Trees

<table>
<thead>
<tr>
<th>Tree</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utah juniper</td>
<td>Juniperus osteosperma</td>
</tr>
<tr>
<td>Rocky Mountain juniper</td>
<td>Juniperus scopulorum</td>
</tr>
<tr>
<td>Limber pine</td>
<td>Pinus flexilis</td>
</tr>
<tr>
<td>Quaking aspen</td>
<td>Populus tremuloides</td>
</tr>
<tr>
<td>Black cottonwood</td>
<td>Populus trichocarpa</td>
</tr>
<tr>
<td>Douglas fir</td>
<td>Pseudotsuga menziesii</td>
</tr>
</tbody>
</table>

#### Shrubs

<table>
<thead>
<tr>
<th>Shrubs</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alder</td>
<td>Alnus incana</td>
</tr>
<tr>
<td>Serviceberry</td>
<td>Amelanchier alnifolia</td>
</tr>
<tr>
<td>Low sagebrush</td>
<td>Artemisia arbuscula</td>
</tr>
<tr>
<td>Early low (alkali) sagebrush</td>
<td>Artemisia longiloba</td>
</tr>
<tr>
<td>Basin big sagebrush</td>
<td>Artemisia tridentata ssp. tridentata</td>
</tr>
<tr>
<td>Mountain big sagebrush</td>
<td>Artemisia tridentata ssp. vaseyana</td>
</tr>
<tr>
<td>Wyoming big sagebrush</td>
<td>Artemisia tridentata ssp. wyomingensis</td>
</tr>
<tr>
<td>Threetip sagebrush</td>
<td>Artemisia tripartita</td>
</tr>
<tr>
<td>Fern-bush (tansy bush)</td>
<td>Chamaebatiaria millefolium</td>
</tr>
<tr>
<td>Green rabbitbrush</td>
<td>Chrysothamnus viscidiflorus</td>
</tr>
<tr>
<td>Rubber rabbitbrush</td>
<td>Chrysothamnus nauseosus</td>
</tr>
<tr>
<td>Rock spirea</td>
<td>Holodiscus dumosus</td>
</tr>
<tr>
<td>Syringa</td>
<td>Philadelphus lewisii</td>
</tr>
<tr>
<td>Chokecherry</td>
<td>Prunus virginiana</td>
</tr>
<tr>
<td>Antelope bitterbrush</td>
<td>Purshia tridentata</td>
</tr>
<tr>
<td>Golden current</td>
<td>Ribes aureum</td>
</tr>
<tr>
<td>Wax current</td>
<td>Ribes cereum</td>
</tr>
<tr>
<td>Willow</td>
<td>Salix spp.</td>
</tr>
<tr>
<td>Mountain snowberry</td>
<td>Symphoricarpus oreophilus</td>
</tr>
<tr>
<td>Gray horsebrush</td>
<td>Tetradyinia canescens</td>
</tr>
</tbody>
</table>
### Grasses and Grasslike Plants

<table>
<thead>
<tr>
<th>Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crested wheatgrass</td>
<td>Agropyron cristatum</td>
</tr>
<tr>
<td>Tall wheatgrass</td>
<td>Agropyron elongata</td>
</tr>
<tr>
<td>Siberian wheatgrass</td>
<td>Agropyron fragile</td>
</tr>
<tr>
<td>Cheatgrass</td>
<td>Bromus tectorum</td>
</tr>
<tr>
<td>Great Basin wildrye</td>
<td>Elymus cinereus</td>
</tr>
<tr>
<td>Snake River wheatgrass</td>
<td>Elymus wawaensis</td>
</tr>
<tr>
<td>Idaho fescue</td>
<td>Festuca idahoensis</td>
</tr>
<tr>
<td>Prairie junegrass</td>
<td>Koeleria cristata</td>
</tr>
<tr>
<td>Onion grass</td>
<td>Melica bulbosa</td>
</tr>
<tr>
<td>Indian ricegrass</td>
<td>Oryzopsis hymenoides</td>
</tr>
<tr>
<td>Big bluegrass</td>
<td>Poa ampla</td>
</tr>
<tr>
<td>Sandberg bluegrass</td>
<td>Poa secunda</td>
</tr>
<tr>
<td>Bluebunch wheatgrass</td>
<td>Pseudoroegneria spicata</td>
</tr>
<tr>
<td>Threesquare bulrush</td>
<td>Scirpus americanus</td>
</tr>
<tr>
<td>Needle-and-thread grass</td>
<td>Stipa comata</td>
</tr>
<tr>
<td>Western needlegrass</td>
<td>Stipa occidentalis</td>
</tr>
<tr>
<td>Thurber needlegrass</td>
<td>Stipa thurberiana</td>
</tr>
</tbody>
</table>

### Forbs

<table>
<thead>
<tr>
<th>Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwarf mistletoe</td>
<td>Arceuthobium campylopodum</td>
</tr>
<tr>
<td>Picabo milkvetch</td>
<td>Astragalus oniciformis</td>
</tr>
<tr>
<td>Milkvetch</td>
<td>Astragalus spp.</td>
</tr>
<tr>
<td>Arrowleaf balsamroot</td>
<td>Balsamorhiza sagittata</td>
</tr>
<tr>
<td>Douglas chaenactis</td>
<td>Chaenactis douglasii</td>
</tr>
<tr>
<td>Oval-leaved buckwheat</td>
<td>Eriogonum ovalifolium</td>
</tr>
<tr>
<td>Dwarf buckwheat</td>
<td>Eriogonum ovalifolium var. depressum</td>
</tr>
<tr>
<td>Buckwheat</td>
<td>Eriogonum spp.</td>
</tr>
<tr>
<td>Bitterroot</td>
<td>Lewisia rediviva</td>
</tr>
<tr>
<td>Blue flax</td>
<td>Linum perenne</td>
</tr>
<tr>
<td>Lupine</td>
<td>Lupinus spp.</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>Medicago sativa</td>
</tr>
<tr>
<td>Dwarf monkeyflower</td>
<td>Mimulus nanus</td>
</tr>
<tr>
<td>Sainfoin</td>
<td>Onobrychis viciaefolia</td>
</tr>
<tr>
<td>Penstemon</td>
<td>Penstemon spp.</td>
</tr>
<tr>
<td>Scorpion weed</td>
<td>Phacelia hastata</td>
</tr>
<tr>
<td>Obscure phacelia</td>
<td>Phacelia inconspicua</td>
</tr>
<tr>
<td>Phlox</td>
<td>Phlox spp.</td>
</tr>
<tr>
<td>Gland cinquefoil</td>
<td>Potentilla glandulosa</td>
</tr>
<tr>
<td><strong>Noxious Weeds</strong></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>Russian knapweed</td>
<td><em>Acroptilon repens</em></td>
</tr>
<tr>
<td>Musk thistle</td>
<td><em>Carduus nutans</em></td>
</tr>
<tr>
<td>Diffuse knapweed</td>
<td><em>Centaurea diffusa</em></td>
</tr>
<tr>
<td>Spotted knapweed</td>
<td><em>Centaurea maculosa</em></td>
</tr>
<tr>
<td>Rush skeletonweed</td>
<td><em>Chondrilla juncea</em></td>
</tr>
<tr>
<td>Canada thistle</td>
<td><em>Cirsium arvense</em></td>
</tr>
<tr>
<td>Field bindweed</td>
<td><em>Convolvulus arvensis</em></td>
</tr>
<tr>
<td>Leafy spurge</td>
<td><em>Euphorbia esula</em></td>
</tr>
<tr>
<td>Dalmation toadflax</td>
<td><em>Linaria genistifolia ssp. dalmatica</em></td>
</tr>
<tr>
<td>Scotch thistle</td>
<td><em>Onopordum acanthium</em></td>
</tr>
<tr>
<td>Species</td>
<td>Species</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Pied-billed grebe</td>
<td>Copper’s hawk</td>
</tr>
<tr>
<td>Eared grebe</td>
<td>Northern goshawk</td>
</tr>
<tr>
<td>Western grebe</td>
<td>Swainson’s hawk</td>
</tr>
<tr>
<td>American white pelican</td>
<td>Red-tailed hawk</td>
</tr>
<tr>
<td>Great blue heron</td>
<td>Rough-legged hawk</td>
</tr>
<tr>
<td>White-faced ibis</td>
<td>Ferruginous hawk</td>
</tr>
<tr>
<td>Turkey vulture</td>
<td>Golden eagle</td>
</tr>
<tr>
<td>Snow goose</td>
<td>American kestrel</td>
</tr>
<tr>
<td>Canada goose</td>
<td>Merlin</td>
</tr>
<tr>
<td>Tundra swan</td>
<td>Gyr falcon</td>
</tr>
<tr>
<td>Gadwall</td>
<td>Peregrine falcon</td>
</tr>
<tr>
<td>American wigeon</td>
<td>Prairie falcon</td>
</tr>
<tr>
<td>Mallard</td>
<td>American coot</td>
</tr>
<tr>
<td>Northern shoveler</td>
<td>Virginia rail</td>
</tr>
<tr>
<td>Cinnamon teal</td>
<td>Sora</td>
</tr>
<tr>
<td>Northern pintail</td>
<td>Sandhill crane</td>
</tr>
<tr>
<td>Blue-winged teal</td>
<td>Killdeer</td>
</tr>
<tr>
<td>Green-winged teal</td>
<td>American avocet</td>
</tr>
<tr>
<td>Ruddy duck</td>
<td>Spotted sandpiper</td>
</tr>
<tr>
<td>Canvasback</td>
<td>Whimbrel</td>
</tr>
<tr>
<td>Redhead</td>
<td>Long-billed curlew</td>
</tr>
<tr>
<td>Ring-necked duck</td>
<td>Wilson’s snipe</td>
</tr>
<tr>
<td>Lesser scaup</td>
<td>Wilson’s phalarope</td>
</tr>
<tr>
<td>Common goldeneye</td>
<td>Long-billed dowitcher</td>
</tr>
<tr>
<td>Bufflehead</td>
<td>Ring-billed gull</td>
</tr>
<tr>
<td>Osprey</td>
<td>Herring gull</td>
</tr>
<tr>
<td>Bald eagle</td>
<td>California gull</td>
</tr>
<tr>
<td>Northern harrier</td>
<td>Franklin’s gull</td>
</tr>
<tr>
<td>Sharp-shinned hawk</td>
<td>Forster’s tern</td>
</tr>
</tbody>
</table>
Black tern
Band-tailed pigeon
Mourning dove
Great horned owl
Snowy owl
Western burrowing owl
Long-eared owl
Short-eared owl
Western screech owl
Northern saw-whet owl
Common nighthawk
Common poorwill
White-throated swift
Black-chinned hummingbird
Calliope hummingbird
Broad-tailed hummingbird
Rufous hummingbird
Belted kingfisher
Lewis’ woodpecker
Red-headed woodpecker
Red-naped sapsucker
Williamson’s sapsucker
Downy woodpecker
Hairy woodpecker
Northern flicker
Olive-sided flycatcher
Western wood-pewee
Willow flycatcher
Hammond’s flycatcher
Gray flycatcher
Dusky flycatcher
Cordilleran flycatcher
Say’s phoebe

Ash-throated flycatcher
Western kingbird
Eastern kingbird
Loggerhead shrike
Northern shrike
Plumbeous vireo
Cassin’s vireo
Warbling vireo
Steller’s jay
Pinyon jay
Clark’s nutcracker
Black-billed magpie
American crow
Common raven
Horned lark
Tree swallow
Violet-green swallow
Cliff swallow
Northern rough-winged swallow
Barn swallow
Black-capped chickadee
Mountain chickadee
Red-breasted nuthatch
White-breasted nuthatch
Brown creeper
Rock wren
Winter wren
Marsh wren
American dipper
Golden-crowned kinglet
Ruby-crowned kinglet
Blue-gray gnatcatcher
Western bluebird
Mountain bluebird
Townsend’s solitaire
Swainson’s thrush
Hermit thrush
American robin
Varied thrush
Gray catbird
Sage thrasher
Brown thrasher
American pipit
Bohemian waxwing
Cedar waxwing
Tennessee warbler
Orange-crowned warbler
Nashville warbler
Yellow warbler
Yellow-rumped warbler
Townsend’s warbler
American redstart
Northern waterthrush
MacGillivray’s warbler
Wilson’s warbler
Yellow-breasted chat
Western tanager
Green-tailed towhee
Spotted towhee
Chipping sparrow
Brewer’s sparrow
Vesper sparrow
Lark sparrow
Black-throated sparrow
Sage sparrow
Lark bunting

Savannah sparrow
Grasshopper sparrow
Fox sparrow
Song sparrow
Lincoln’s sparrow
White-throated sparrow
White-crowned sparrow
Golden-crowned sparrow
Dark-eyed junco
Snow bunting
Black-headed grosbeak
Lazuli bunting
Bobolink
Red-winged blackbird
Western meadowlark
Yellow-headed blackbird
Brewer’s blackbird
Common grackle
Brown-headed cowbird
Bullock’s oriole
Baltimore oriole
Gray-crowned rosy-finch
Black rosy-finch
Pine grosbeak
Cassin’s finch
House finch
Red crossbill
Hoary redpoll
Common redpoll
Pine siskin
American goldfinch
Evening grosbeak
Weaver finches
I. STANDARDS AND GUIDELINES

Idaho Standards for Rangeland Health &
Guidelines for Livestock Grazing Management

Standards for Rangeland Health

The Standards for Rangeland Health, as applied in the State of Idaho, are to be used as the Bureau of Land Management’s management goals for the betterment of the environment, protection of cultural resources, and sustained productivity of the range. They are developed with the specific intent of providing for the multiple uses of the public lands. Application of the standards should involve collaboration between the authorized officer, interested publics, and resource users.

Rangelands should be meeting the Standards for Rangeland Health or making significant progress toward meeting the standards. Meeting the standards provides for proper nutrient cycling, hydrologic cycling, and energy flow.

Monitoring of all uses is necessary to determine if the standards are being met. It is the primary tool for determining rangeland health, condition, and trend. It will be performed on representative sites.

Appropriate to soil type, climate, and landform, indicators are a list of typical physical and biological factors and processes that can be measured and/or observed (e.g., photographic monitoring). They are used in combination to provide information necessary to determine the health and condition of the rangelands. Usually, no single indicator provides sufficient information to determine rangeland health. Only those indicators appropriate to a particular site are to be used. The indicators listed below each standard are not intended to be all inclusive.

The issue of scale must be kept in mind in evaluating the indicators listed after each standard. It is recognized that individual isolated sites within a landscape may not be meeting the standards; however, broader areas must be in proper functioning condition. Furthermore, fragmentation of habitat that reduces the effective size of large areas must also be evaluated for its consequences.

**Standard 1 (Watersheds)**

Watersheds provide for the proper infiltration, retention, and release of water appropriate to soil type, vegetation, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.
Indicators may include, but are not limited to, the following:

1. The amount and distribution of ground cover, including litter, for identified ecological site(s) or soil-plant associations are appropriate for site stability.

2. Evidence of accelerated erosion in the form of rills and/or gullies, erosional pedestals, flow patterns, physical soil crusts/surface sealing, and compaction layers below the soil surface is minimal for soil type and landform.

**Standard 2 (Riparian Areas and Wetlands)**

Riparian-wetland areas are in properly functioning condition appropriate to soil type, climate, geology, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Indicators may include, but are not limited to, the following:

1. The riparian/wetland vegetation is controlling erosion, stabilizing stream banks, shading water areas to reduce water temperature, stabilizing shorelines, filtering sediment, aiding in floodplain development, dissipating energy, delaying flood water, and increasing recharge of groundwater appropriate to site potential.

2. Riparian/wetland vegetation with deep strong binding roots is sufficient to stabilize stream banks and shorelines. Invader and shallow rooted species are a minor component of the floodplain.

3. Age class and structural diversity of riparian/wetland vegetation is appropriate for the site.

4. Noxious weeds are not increasing.

**Standard 3 (Stream Channel/Floodplain)**

Stream channels and floodplains are properly functioning relative to the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity) and climate to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Indicators may include, but are not limited to, the following:

1. Stream channels and floodplains dissipate energy of high water flows and transport sediment. Soils support appropriate riparian-wetland species, allowing water movement, sediment filtration, and water storage. Stream channels are not entrenching.

2. Stream width/depth ratio, gradient, sinuosity, and pool, riffle and run frequency are appropriate for the valley bottom type, geology, hydrology, and soils.
3. Streams have access to their floodplains and sediment deposition is evident.

4. There is little evidence of excessive soil compaction on the floodplain due to human activities.

5. Stream banks are within an appropriate range of stability according to site potential.

6. Noxious weeds are not increasing.

**Standard 4 (Native Plant Communities)**

Healthy, productive, and diverse native animal habitat and populations of native plants are maintained or promoted as appropriate to soil type, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow. Indicators may include, but are not limited to, the following:

1. Native plant communities (flora and microbiotic crusts) are maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species.

2. The diversity of native species is maintained.

3. Plant vigor (total plant production, seed and seedstalk production, cover, etc.) is adequate to enable reproduction and recruitment of plants when favorable climatic events occur.

4. Noxious weeds are not increasing.

5. Adequate litter and standing dead plant material are present for site protection and for decomposition to replenish soil nutrients relative to site potential.

**Standard 5 (Seedings)**

Rangelands seeded with mixtures, including predominately non-native plants, are functioning to maintain life form diversity, production, native animal habitat, nutrient cycling, energy flow, and the hydrologic cycle.

Indicators may include, but are not limited to, the following:

1. In established seedings, the diversity of perennial species is not diminishing over time.

2. Plant production, seed production, and cover are adequate to enable recruitment when favorable climatic events occur.

3. Noxious weeds are not increasing.

4. Adequate litter and standing dead plant material are present for site protection and for decomposition
to replenish soil nutrients relative to site potential.

**Standard 6 (Exotic Plant Communities, Other Than Seedings)**

Exotic plant communities, other than seedings, will meet minimum requirements of soil stability and maintenance of existing native and seeded plants. These communities will be rehabilitated to perennial communities when feasible cost effective methods are developed.

Indicators may include, but are not limited to, the following:

1. Noxious weeds are not increasing.
2. The number of perennial species is not diminishing over time.
3. Plant vigor (production, seed and seedstalk production, cover, etc.) of remnant native or seeded (introduced) plants is maintained to enable reproduction and recruitment when favorable climatic or other environmental events occur.
4. Adequate litter and standing dead plant material is present for site protection and for decomposition to replenish soil nutrients relative to site potential.

**Standard 7 (Water Quality)**

Surface and ground water on public lands comply with the Idaho Water Quality Standards.

Indicators may include, but are not limited to, the following:

1. Physical, chemical, and biologic parameters described in the Idaho Water Quality Standards.

**Standard 8 (Threatened and Endangered Plants and Animals)**

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Indicators may include, but are not limited to, the following:

1. Parameters described in the Idaho Water Quality Standards.
2. Riparian/wetland vegetation with deep, strong, binding roots is sufficient to stabilize stream banks and shorelines. Invader and shallow rooted species are a minor component of the floodplain.
3. Age class and structural diversity of riparian/wetland vegetation are appropriate for the site.
4. Native plant communities (flora and microbiotic crusts) are maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species.

5. The diversity of native species is maintained.

6. The amount and distribution of ground cover, including litter, for identified ecological site(s) or soil-plant associations are appropriate for site stability.

7. Noxious weeds are not increasing.

Guidelines for Livestock Grazing Management

Guidelines direct the selection of grazing management practices, and where appropriate, livestock management facilities to promote significant progress toward, or the attainment and maintenance of, the standards. Grazing management practices are livestock management techniques. They include the manipulation of season, duration (time), and intensity of use, as well as numbers, distribution, and kind of livestock. Livestock management facilities are structures such as fences, corrals, and water developments (ponds, springs, pipelines, troughs, etc.) used to facilitate the application of grazing management practices. Livestock grazing management practices and guidelines will be consistent with the Idaho Agricultural Pollution Abatement Plan.

Grazing management practices and facilities are implemented locally, usually on an allotment or watershed basis. Grazing management programs are based on a combination of appropriate grazing management practices and facilities developed through consultation, coordination, and cooperation with the Bureau of Land Management, permittees, other agencies, Native American tribes, and interested publics. These guidelines were prepared under the assumption that regulations and policies regarding grazing on the public lands will be implemented and will be adhered to by the grazing permittees and agency personnel. Anything not covered in these guidelines will be addressed by existing laws, regulations, Indian treaties, and policies.

The BLM will identify and document within the local watershed all impacts that affect the ability to meet the standards. If a standard is not being met due to livestock grazing, then allotment management will be adjusted unless it can be demonstrated that significant progress toward the standard is being achieved. This applies to all subsequent guidelines.

Guidelines

1. Use grazing management practices and/or facilities to maintain or promote significant progress
toward adequate amounts of ground cover (determined on an ecological site basis) to support infiltration, maintain soil moisture storage, and stabilize soils.

2. Locate livestock management facilities away from riparian areas wherever they conflict with achieving or maintaining riparian-wetland functions.

3. Use grazing management practices and/or facilities to maintain or promote soil conditions that support water infiltration, plant vigor, and permeability rates and minimize soil compaction appropriate to site potential.

4. Implement grazing management practices that provide periodic rest or deferment during critical growth stages to allow sufficient regrowth to achieve and maintain healthy, properly functioning conditions, including good plant vigor and adequate vegetative cover appropriate to site potential.

5. Maintain or promote grazing management practices that provide sufficient residual vegetation to improve, restore, or maintain healthy riparian-wetland functions and structure for energy dissipation, sediment capture, ground water recharge, stream bank stability, and wildlife habitat appropriate to site potential.

6. The development of springs, seeps, or other projects affecting water and associated resources shall be designed to protect the ecological functions, wildlife habitat, and significant cultural and historical/archaeological/paleontological values associated with the water source.

7. Apply grazing management practices to maintain, promote, or progress toward appropriate stream channel and stream bank morphology and functions. Adverse impacts due to livestock grazing will be addressed.

8. Apply grazing management practices that maintain or promote the interaction of the hydrologic cycle, nutrient cycle, and energy flow that will support the appropriate types and amounts of soil organisms, plants, and animals appropriate to soil type, climate, and landform.

9. Apply grazing management practices to maintain adequate plant vigor for seed production, seed dispersal, and seedling survival of desired species relative to soil type, climate, and landform.

10. Implement grazing management practices and/or facilities that provide for complying with the Idaho Water Quality Standards.

11. Use grazing management practices developed in recovery plans, conservation agreements, and Endangered Species Act, Section 7 consultations to maintain or improve habitat for federally listed threatened, endangered, and sensitive plants and animals.
12. Apply grazing management practices and/or facilities that maintain or promote the physical and biological conditions necessary to sustain native plant populations and wildlife habitats in native plant communities.

13. On areas seeded predominantly with non-native plants, use grazing management practices to maintain or promote the physical and biological conditions to achieve healthy rangelands.

14. Where native communities exist, the conversion to exotic communities after disturbance will be minimized. Native species are emphasized for rehabilitating disturbed rangelands. Evaluate whether native plants are adapted, available, and able to compete with weeds or seeded exotics.

15. Use non-native plant species for rehabilitation only in those situations where:
   a. native species are not readily available in sufficient quantities;
   
   b. native plant species cannot maintain or achieve the standards; or
   
   c. non-native plant species provide for management and protection of native rangelands.
   
   d. include a diversity of appropriate grasses, forbs, and shrubs in rehabilitation efforts.

16. On burned areas, allow natural regeneration when it is determined that populations of native perennial shrubs, grasses, and forbs are sufficient to revegetate the site. Rest burned or rehabilitated areas to allow recovery or establishment of perennial plant species.

17. Carefully consider the effects of new management facilities (e.g., water developments, fences) on healthy and properly functioning rangelands prior to implementation.

18. Use grazing management practices, where feasible, for wildfire control and to reduce the spread of targeted undesirable plants (e.g., cheatgrass, medusa head, wild rye, and noxious weeds) while enhancing vigor and abundance of desirable native or seeded species.

19. Employ grazing management practices that promote natural forest regeneration and protect reforestation projects until the Idaho Forest Practices Act requirements for timber stand replacement are met.

20. Design management fences to minimize adverse impacts, such as habitat fragmentation, to maintain habitat integrity and connectivity for native plants and animals.
II. ALLOTMENT BOUNDARY ADJUSTMENTS

When the Monument was expanded in 2000, some portions of new lava included in allotment boundaries were transferred to the NPS. Since federal regulations do not authorize livestock grazing on NPS lands, the affected allotment boundaries would be revised to exclude these portions of lava. These areas consist primarily of exposed lava flows, which are mostly devoid of available forage and/or are inaccessible to livestock; therefore, prohibiting grazing in these areas would have little to no impact on the livestock industry. There would be no change in forage allocation or reduction in these affected allotments, and no boundary fences or border would be built.

Table F-1 and Figure F-1 (A through G) show the revised allotment acres and boundaries. The map legends show affected allotments, which are the allotments within the Monument that are impacted with the adjustments from BLM- to NPS-administered land. Affected area represents the area of land that was previously BLM and is now administered by NPS.

<table>
<thead>
<tr>
<th>Allotment</th>
<th>Total Acres</th>
<th>NPS Acres Removed from Allotment</th>
<th>Adjusted Allotment Total Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craters</td>
<td>10,800</td>
<td>8,600</td>
<td>2,200</td>
</tr>
<tr>
<td>Blizzard Mountain</td>
<td>4,900</td>
<td>1,400</td>
<td>3,500</td>
</tr>
<tr>
<td>Big Desert</td>
<td>236,200</td>
<td>200</td>
<td>236,000</td>
</tr>
<tr>
<td>Rudeen</td>
<td>15,600</td>
<td>600</td>
<td>15,000</td>
</tr>
<tr>
<td>Minidoka</td>
<td>100,800</td>
<td>1,000</td>
<td>99,800</td>
</tr>
<tr>
<td>Schodde</td>
<td>22,000</td>
<td>900</td>
<td>21,100</td>
</tr>
<tr>
<td>Crater</td>
<td>4,200</td>
<td>1,700</td>
<td>2,500</td>
</tr>
<tr>
<td>Lava Lake</td>
<td>15,500</td>
<td>1,000</td>
<td>14,500</td>
</tr>
<tr>
<td>Timber Butte</td>
<td>8,700</td>
<td>800</td>
<td>7,900</td>
</tr>
</tbody>
</table>
FIGURE F1-A
ADJUSTED ALLOTMENTS

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

Affected Areas
Monument Boundary
Allotment Boundary
Historic Livestock Trails
Unallotted
Lava
A Road
B Road
C Road
D Road
Class I Trail
Town

Map Scale = 1:500,000

Only those allotments which are either inside or immediately adjacent to the Monument have been labeled here. No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
FIGURE F1-B
ADJUSTED ALLOTMENTS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
FIGURE F1-C
ADJUSTED ALLOTMENTS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.

FIGURE F1-D
ADJUSTED ALLOTMENTS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management
FIGURE F1-E
ADJUSTED ALLOTMENTS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

APPENDICES: APPENDIX F 419
FIGURE F1-G
ADJUSTED ALLOTMENTS
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
III. LIVESTOCK ADMINISTRATION
ADJUSTMENTS

In this plan, there is no change in AUM preference. Adjustments to stocking rates, if needed, would
be addressed during the standards and guidelines process, or similar NEPA-compliant decisions.
The standards and guidelines process would be used to accurately address the specific needs of each
allotment.

Any changes in livestock management and AUM allocations (a grazing increase or decrease) would
conform to the grazing regulations (43 CFR 4130) and this land use plan. Monitoring, field observations,
ecological site inventories, or other BLM acceptable data must support management changes.

If grazing preference is reduced through relinquishment, which could occur when a permittee voluntarily
gives up all or part of their preference, or through cancellation, then that preference may be used to
provide management flexibility to conduct vegetation treatments, rehabilitation or other natural resource
management actions. The preference may also be allocated to a different permittee in that Allotment.
In addition, the pasture or allotment that held the reduced grazing preference may be combined with an
existing allotment/pasture to allow additional management flexibility. BLM may reduce grazing use if
that would facilitate progress toward meeting land use plan objectives.

Proposals to reduce or increase grazing use will be analyzed and documented in a NEPA compliant
grazing decision. Completely removing grazing from an area identified in this plan as “available for
livestock grazing” requires NEPA analysis as well as a Land Use Plan Amendment.

The trailing of livestock from one allotment to another is a common practice in the livestock industry.
Historic trail routes are still used today in many areas of the Monument. The majority of this trailing
occurs along existing roads. There are two historic livestock trails in the Monument that do not follow
designated roads and cross lava flows now administered by the NPS. Federal regulations and NPS
policy strictly limit authorized livestock use on National Park System lands. If livestock permittees
should request trailing of livestock across NPS-administered lands on either of these two trails, the NPS
would consider granting a special use permit after first determining whether legal authority exists and
completing an environmental analysis to assure no unacceptable impacts to the Monument’s resources,
values, or purposes occur. Figure F-1 shows the location of the two existing trails.

IV. ISSUING LIVESTOCK GRAZING
PERMIT AND LEASE SUMMARY

The procedures for issuing livestock grazing permits and leases usually follow a logical progression.
Certain steps are followed in order to issue livestock grazing permits and leases. In some instances, steps
are conducted concurrently. Below is a progression of these steps:
Step 1 — Notify the permittees that their allotment(s) are being assessed and evaluated in preparation for renewing their livestock grazing permit(s)/lease(s). Appropriate state agencies, tribes, and interested publics are also notified. Provide an opportunity for all of these entities to submit data and information they feel are important to consider in the Rangeland Health Assessment and Evaluation (RHAЕ).

Step 2 — Field managers (FMs) assemble an interdisciplinary (ID) team to complete the Initial Allotment and Permit/Lease Review and RHAЕ. The ID team recommends to the field manager allotments that need additional field data. The RHAЕ is completed when no additional data is needed.

Step 3 — Provide opportunities for the permittees, appropriate state agencies, tribes, and interested publics to participate in the training for field data collection, analysis, and evaluation and the actual collection of field data and information.

Step 4 — When necessary, collect field data and information needed to make a determination of whether the allotment is meeting or making progress toward meeting the Idaho Standard for Rangeland Health (ISRH).

Step 5 — Complete the Rangeland Health Assessment (RHAЕ). When Endangered Species Act (ESA) proposed and/or listed species or designated critical habitat is an issue in the allotment, the ESA Level 1 Team may be involved. FMs may elect to provide the permittees, state agencies, and interested publics an opportunity to review and provide comment on a draft RHAЕ.

Step 6 — FM completes and signs the Evaluation and Determination at least 30 days prior to completing the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) and issuing the proposed decision.

Step 7 — Send the Determination to permittees, state agencies, tribes, and interested publics.

Step 8 — Send the permittee(s) an application to renew a livestock grazing permit. Field staff works with the permittee(s) during field data gathering and the RHAЕ to develop management proposals, and to add known issues. The permittee should be instructed to describe the grazing management they propose in order to address the issues described in the determination. BLM will offer to assist the permittee in completing the application.

Step 9 — BLM develops alternatives to be considered in the EA. The management proposed in the application for livestock grazing will be the proposed action. When the applicant’s proposed management is not likely to begin making progress toward meeting the ISRH, BLM will develop
an alternative that would likely begin to make progress. The “no livestock grazing” alternative generally will not be included in the EA. Other grazing management proposals may be analyzed in detail, or they may be considered without being analyzed in detail.

Step 10 — When ESA Section 7 consultation or conferencing is required, the Level 1 team should be brought into the process when developing the alternatives, including working with the applicant. This will help ensure timely consultation.

Step 11 — Carefully prepare the Purpose and Need statement for the EA.

Step 12 — Prepare the EA.

Step 13 — When ESA Section 7 consultation or conferencing is required, prepare the Biological Assessment (BA). The preferred alternative in the EA is the proposed action in the BA. The permittee must be consulted regarding the proposed action in the BA. Therefore the analysis in the EA will provide much of the analysis in the BA. At the conclusion of the consultation, a concurrence letter or biological opinion must be incorporated into the EA.

Step 14 — A copy of the EA may be sent to the public for review and comment. The review period is generally 30 days.

Step 15 — Complete the FONSI.

Step 16 — Prepare the proposed decision with appropriate protest periods.

Step 17 — Respond to protests and prepare the final decision with the appropriate appeal procedures.
The purpose of an Area of Critical Environmental Concern (ACEC) designation is to focus management attention on special resources located in the area. The potential ACEC designation was brought to the attention of the Bureau of Land Management (BLM), which then used a screening process – the ACEC Criteria Review Checklist – as an initial evaluation to determine if the nominated area met basic relevance and importance criteria for designation. The BLM considered the appropriate amount of land needed to protect the resource values reflected in the nomination. The designation of this ACEC in Laidlaw Park is proposed in Alternative C of this document (See Chapter 2, Alternative C).

The ACEC evaluation was based on guidance provided by 43 CFR 1610.7-2 and BLM Manual Section 1613, which state that potential ACECs must meet specified criteria for relevance and importance. Relevance is based on the presence of a significant

- Historic, cultural, or scenic value;
- Fish or wildlife resource or other natural system or process; or
- Natural hazard.

Upon meeting the relevance criteria, a nominated site must then have substantial significance and values that meet one or more of the “importance” criteria:

- Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.
- Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
- Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of Federal Land and Policy Management Act (FLPMA).
- Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare.
- Poses a significant threat to human life and safety or to property.

North Laidlaw Park met the relevance criteria for scenic values, wildlife resources, and natural process or system and importance criteria for scenic values and wildlife resources. The Laidlaw Park ACEC (10,500 acres of public land) is proposed in Alternative C. However, it is uncertain that ACEC designation is needed to provide special management for the identified resources or values, because current management, regulation, and law provide sufficient protection for the values identified; therefore, ACEC designation may not be necessary. The ACEC criteria review checklist follows:
<table>
<thead>
<tr>
<th>Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Historic:</strong> There are no recorded historical resources that contribute to the ACEC.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Cultural:</strong> There are no recorded cultural resources that contribute to the ACEC.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Scenic:</strong> Laidlaw Park is the world’s largest kipuka and contains unobstructed views of the volcanic landscapes for which the Monument was established, as well as the Pioneer Mountains to the north. Because of the isolated nature of the area it provides excellent night-sky viewing. Air quality monitoring from the nearby NPS Monument headquarters indicates that the airshed is among the cleanest in the nation.</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Fish or Wildlife Resource:</strong> There are no fish resources in the area. North Laidlaw Park contains one of the last remaining large contiguous blocks of low elevation sagebrush habitat found in the central Snake River Plain. The area provides critical breeding, brood rearing, and winter habitat for sage grouse and other sagebrush dependent wildlife. In addition, the area provides important seasonal habitat for pronghorn and elk and important transition range for migrating mule deer. North Laidlaw Park contains 7 active and historical leks.</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Natural Process or System:</strong> The natural system in Laidlaw Park is classified as cool shrub, with communities dominated by basin big sagebrush, Wyoming big sagebrush, mountain big sagebrush, and threetip sagebrush in association with bluebunch wheatgrass, Thurber’s needlegrass, and Idaho fescue. Communities within the park are in a variety of seral stages, ranging from early seral grassland post-fire to early- and late-seral shrub-dominated stands. There is currently little known about the ecology of threetip sagebrush communities, which are common throughout the area. In particular, it is unknown if these communities are a long-term seral stage of a big sagebrush association, or climax communities unto themselves. Laidlaw Park has only been grazed for approximately 70 years, as compared to surrounding areas that have been grazed for over 100 years. Recent livestock use in North Laidlaw has been light due to lack of water. This area is in good to excellent ecological condition without large areas dominated by exotic species and with considerable forb diversity. Therefore the area serves as a reference site for ecologically comparable, more heavily grazed sites. North Laidlaw also contains an aspen grove at Snowdrift Crater, a plant community that is rare in this desert environment. Habitat is present for the BLM Sensitive species, Picabo milkvetch (<em>Astragalus oniciformis</em>), which is endemic to this area of the central Snake River Plain.</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Natural Hazard:</strong> There are no known natural hazards within the area.</td>
<td>No</td>
</tr>
</tbody>
</table>
**Importance:** Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA’s mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?

| Historic: | N/A |
| Cultural: | N/A |
| Scenic: | Yes |

The scenic qualities found within the area are unique on a national level. Bordered on the north side by the National Park Service’s first federally designated Wilderness area, North Laidlaw Park offers the viewer a striking visual progression. Looking north across the vast sagebrush steppe landscape, the view from North Laidlaw Park climbs abruptly into the black austerity of the Craters of the Moon lava fields, then high into the Pioneer Mountains. To the south lies Laidlaw Butte, representing one of the most outstanding examples of a low shield volcano in the world outside of Hawaii. The shallow-angled slopes of Laidlaw Butte typify the unique volcanic character of the Snake River Plain. Snowdrift Crater is the summit caldera of another discrete shield volcano. Over one mile long and nearly a half-mile across, Snowdrift Crater is geologically comparable to Kilauea Caldera in Hawaii Volcanoes National Park, offering views into the giant cinder cones and fresh multi-colored lavas of the Craters of the Moon Wilderness. In the southern part of the Crater, a rare stand of aspen offers shade to both visitors and a large herd of migrating elk. The spectacular seasonal color changes combined with the unique variety of disparate ecosystems and landforms earned published photographs in both Sunset Magazine and Sierra Club Calendars.

**Fish or Wildlife Resource:** There are no fish resources within the area. The area contains key habitat for sage grouse and other sagebrush steppe obligates (Terrestrial Family 11 as defined by ICBEMP). This habitat, particularly big sagebrush vegetation types, has declined substantially from historical to current on a regional level. ICBEMP identified areas such as this as being significant regionally due to this decline. The Proclamation for the expansion of the Monument highlighted the importance of the area as habitat for sagebrush steppe obligates and its protection.

**Natural Process or System:** North Laidlaw Park is not vulnerable to adverse change under existing management. Current fire management direction is for full fire suppression, especially for the protection of sage grouse “strongholds,” which includes the entire park. Current post-fire rehabilitation policy directs the use of native species where it is appropriate.

**Natural Hazard:**

---

**Appendices:** APPENDIX G 427
Alternative A (No Action Alternative)

The nominated Laidlaw Park ACEC would not be designated. Existing management for the area would continue to be implemented (see the appropriate resource sections in this chapter for management direction).

Alternative B

The nominated Laidlaw Park ACEC would not be designated.

Alternative C

In this alternative, 10,517 acres of public land encompassing North Laidlaw Park, north of the Turnbull Fence, would be designated as an ACEC (see Figure G-1). The following actions would be implemented to protect the high quality native vegetation, wildlife habitat, and scenic values of the area:

a) Develop standards and indicators for vegetation health that allow for natural disturbance and processes while ensuring that degradation due to invasion of invasive or noxious weeds does not occur.

b) Develop a low-use transportation network with no new routes, trails, or signs.

c) No new development of permanent livestock watering facilities to ensure that the existing, light use of the area continues. The two existing watering facilities will be maintained, but not expanded. Water hauling to temporary sites will remain at the current level.

d) Use off-site interpretive resources (e.g., brochures and displays in the Visitor Center) to highlight grazing management, native vegetation, and scenic qualities of the area.

Alternative D

The nominated Laidlaw Park ACEC would not be designated.
FIGURE G1
PROPOSED LAIDLAW PARK ACEC
Craters of the Moon National Monument & Preserve
U.S. Department of the Interior * National Park Service * Bureau of Land Management

No warranty is made by the Bureau of Land Management or National Park Service for use of the data for purposes not intended by these agencies.
APPENDIX

H

RECREATION STATISTICS — CRATERS OF THE MOON
NATIONAL MONUMENT, 1999-2002
Month

Year

January
1999
February
1999
March
1999
April
1999
May
1999
June
1999
July
1999
August
1999
September
1999
October
1999
November
1999
December
1999
January
2000
February
2000
March
2000
April
2000
May
2000
June
2000
July
2000
August
2000
September
2000
October
2000
November
2000
December
2000
January
2001
February
2001
March
2001
April
2001
May
2001
June
2001
July
2001
August
2001
September
2001
October
2001
November
2001
December
2001
January
2002
February
2002
March
2002
April
2002
May
2002
June
2002
July
2002
August
2002
September
2002
October
2002
November
2002
December
2002
TOTALS

Recreation
Visits

2,691
2,040
6,495
6,900
21,926
35,507
46,843
42,100
29,442
13,848
5,860
1,915
1,431
1,719
5,065
9,131
20,574
59,573
39,358
29,013
26,271
14,262
3,475
1,770
2,368
1,290
5,726
7,660
21,338
30,394
40,769
33,133
24,808
13,161
4,991
161
1,897
1,141
4,495
6,181
20,968
30,346
37,447
36,173
25,833
13,103
3,565
2,424
796,581

Total
Visits

2,691
2,040
6,495
6,900
21,926
35,507
46,843
42,100
29,442
13,848
5,860
1,915
1,431
1,719
5,065
9,131
20,574
59,573
39,358
29,013
26,271
14,262
3,475
1,770
2,368
1,290
5,726
7,660
21,338
30,394
40,769
33,133
24,808
13,161
4,991
161
1,897
1,141
4,495
6,181
20,968
30,346
37,447
36,173
25,833
13,103
3,565
2,424
796,581

Tent
Campers

RV
Campers

0
0
0
0
558
1,206
1,590
1,482
905
254
47
0
0
0
0
152
555
1,234
1,435
1,104
608
254
19
3
0
0
0
121
490
1,110
992
1,215
840
177
71
3
0
0
0
90
496
1,073
1,308
1,538
756
220
6
0
21,912

0
0
0
19
896
2,003
1,779
1,724
1,643
391
62
0
0
0
0
198
952
1,547
1,339
1,020
862
322
31
6
0
0
0
81
725
1,451
1,026
1,141
1,150
239
28
0
0
0
0
62
741
1,547
1,265
1,460
1,237
279
0
0
27,226

Total
RV/Tent
Campers

0
0
0
19
1,454
3,209
3,369
3,206
2,548
645
109
0
0
0
0
350
1,507
2,781
2,774
2,124
1,470
576
50
9
0
0
0
202
1,215
2,561
2,018
2,356
1,990
416
99
3
0
0
0
152
1,237
2,620
2,573
2,998
1,993
499
6
0
49,138

Backcountry
Campers

Misc.
Campers

Total
Overnight
Stays

0
0
0
0
25
41
19
15
20
1
0
0
0
4
6
36
32
18
8
12
8
19
0
0
0
0
1
8
38
37
12
10
11
16
12
0
0
0
0
2
20
24
8
16
9
13
0
2
503

0
0
0
0
20
270
180
219
0
0
0
0
0
0
0
0
60
270
120
120
0
0
0
0
0
0
0
0
270
240
180
0
0
0
0
0
0
0
0
0
0
90
210
90
90
0
0
0
2,429

0
0
0
19
1,499
3,520
3,568
3,440
2,568
646
109
0
0
4
6
386
1,599
3,069
2,902
2,256
1,478
595
50
9
0
0
1
210
1,523
2,838
2,210
2,366
2,001
432
111
3
0
0
0
154
1,257
2,734
2,791
3,104
2,092
512
6
2
52,070

Appendices: APPENDIX H

431


APPENDIX I

CONSULTATION LETTERS RECEIVED PRIOR TO THE DRAFT PLAN/EIS

Craters of the Moon National Monument Planning Team
Bureau of Land Management
Shoshone Field Office
PO BOX 2-B
400 West F Street
Shoshone, ID 83352-1522

Jim Morris, Superintendent
Craters of the Moon National Monument
PO BOX 29
Arco, ID 83213

RE: SHOSHONE-BANNOCK TRIBES COMMENTS TO THE CRATERS OF THE
MOON NATIONAL MONUMENT & PRESERVE – RESOURCE MANAGEMENT
PLAN

The Shoshone-Bannock Tribes would like to thank the National Park Service and the Bureau of
Land Management for seeking Tribal participation in the development of this Management Plan.
The Shoshone-Bannock Tribes (Tribes) technical staff has reviewed the available information and
submits the following comments.

The BLM and NPS staff came to Fort Hall to meet on August 27, 2003 with the Fort Hall
Business Council, and that may be considered as a part of the consultation process, as an
information meeting. Prior to that, the BLM and NPS staff coordinated with the Tribal resource
staff, and the Tribes urge the agencies to continue to coordinate with the staff, throughout the
planning process.

The Craters of the Moon area is of particular importance to the Tribes, as it has important
historical usage and continues to retain cultural values, as legends and other Tribal histories have
included the Craters area. Any potentially adverse impacts that this management plan would
have upon those traditional values needs to be prevented.

Out of the four alternatives presented, the technical staff supports the DRAFT Alternative C,
which emphasizes retention and enhancement of the Monuments primitive character with
minimal visitor facilities or services and less management action to influence resource conditions,
with minor changes. These suggestions are to ensure adequate roads, (two tracks) to allow Tribal member access for exercise of treaty rights.

The Tribes request to be actively involved and participate in the development of the implementation plan for individual projects that will result from this management plan.

General Comments: The Shoshone-Bannock Tribes are not members of the general public; the Tribes are a sovereign nation, with its own governing system and cannot be equated with local state, municipalities or county governments. The 1868 Fort Bridger Treaty reserves the right to continue traditional activities on all unoccupied federal lands.

Understanding that the BLM is under a Multi-use Mandate, the Tribes remind and emphasize that the BLM first has a federal trust responsibility to the Tribes to manage lands under their jurisdiction in a manner to preserve and protect those trust resources, on behalf of the Tribes.

Please include in your list of required laws and statutes the federal agencies must follow, the 1868 Fort Bridger Treaty, as well as the official government-to-government consultation requirements to the Shoshone-Bannock Tribes. Also include in the document, a statement stating the federal agencies federal trust responsibility to the Tribes to manage and protect Indian Trust Assets/Treaty Resources, and that these federal agencies will work to ensure all proposed projects will be developed and analyzed with this responsibility paramount.

Specific Comments: Please analyze the impacts that this proposed management plan would have upon the Tribes reserved treaty rights. Please review and revise this NEPA document to address the concerns raised in these comments. Again, the Tribes need to be involved to review and ensure that the EIS adequately addresses the Tribal comments.

Specific treaty resources include the following resources, cultural resources, wildlife, plants and vegetation, water resources and the traditional cultural activities.

The Tribal staff agrees with the overall recommendation and goal to retain the character and preserve the unique qualities of this area, but another goal/objective would be to ensure that Tribal interests and rights are protected, enhanced and managed to the benefit of the Tribes.

Tribal hunting and gathering rights needs to be addressed to ensure access for Tribal members on public lands. To exercise treaty rights reserved by the 1868 Treaty, no state regulations or permits are necessary by Tribal members. The Tribes Fish & Game Department regulate and enforce the 1975 Tribal Fish & Game Code, for all off reservation hunting and fishing activities. Please expressly state that the federal agencies recognize that the Tribes regulate their own Tribal members for hunting, and do not require Tribal members to secure state hunting permits to hunting within the National Preserve lands or within the jurisdiction of the BLM.

Big game wildlife that is important for Tribal hunting include elk, deer, antelope and an occasional moose. Small game includes the sharp tailed grouse, sage hens, rabbits, rockchucks, squirrels, partridges, and other associated small game. Access to hunting areas also vital to the Tribal members to allow them exercise their treaty rights, but also without opening up additional roads to tourists.

Due to the additional concerns to protect the delicate and fragile environment, it is the recommendation of the Tribal staff to discourage the development of new roads.
The federal agencies are requesting specific site information to help identify constraints in specific locations of resources important to the Tribes, etc., however, it is the Tribes position that the entire area contains cultural significance to the Tribes. Site-specific recommendations are difficult to make without extensive visits to these areas by our Tribal members and Tribal resource staff. If the BLM can offer financial assistance, via Assistance Agreements, to provide the funding to the Tribes, then more detailed participation can be possible from the Tribes side. The Tribes expect the agencies to manage to protect, and when possible enhance all of these resources.

Additional information and educational signs and displays to educate the public about the historical use of this area by the Tribes are necessary. Please develop these informational displays in conjunction with the Tribes. The documented archeological sites are very important to the Tribes, with expectation that they will be respected, preserved, protected from excessive public recreational use.

Additionally, as a part of the management plan, please encourage Tribal member permanent and temporary employment, such as for fire management activities, seasonal employment and summer youth employment.

The Tribes look forward to continuing to work with your staff to develop these Management Plans for the Craters of the Moon National Monument and Preserve. If you have any further technical questions, please call Yvette Tuell at 208-238-3290 or email her at ytuell@shoshonebannocktribes.com.

Sincerely,

Fred Auck, Chairman
Fort Hall Business Council
Shoshone-Bannock Tribes

CC: Chad Colter, Shoshone-Bannock Tribes
    Louise Dixey, Shoshone-Bannock Tribes
    Yvette Tuell, Shoshone-Bannock Tribes
    Lora Buckskin, Shoshone-Bannock Tribes
    Land Use Policy Commission (3)
    File
May 24, 2002

James A. Morris  
Superintendent,  
Craters of the Moon National Monument  
National Park Service  
P.O. Box 29  
Arco, Idaho 83213

Rick Vander Voet  
Monument Manager,  
Craters of the Moon National Monument  
Bureau Of Land Management  
P.O. Box 2-B  
Shoshone, Idaho 83352

Subject: Craters of the Moon National Monument Land Use Management Plan and Environmental Impact Statement Scoping Document  
File # 1035.0150  
FWS # I-4-02-SP-0126

Dear Mr. Morris and Mr. Vander Voet:

The U.S. Fish and Wildlife Service (Service) is providing you with a list of endangered, threatened, proposed, and/or candidate species which may be present in the area of Craters of the Moon National Monument (Monument) located in Blaine, Butte, Lincoln, Minidoka, and Power Counties, Idaho. The list fulfills requirements for a Species List under Section 7(c) of the Endangered Species Act of 1973 (Act), as amended. If the project decision is not made within 180 days of this letter, regulations require that you request an updated list. Please refer to the FWS number above in all correspondence and reports.

Section 7 of the Act requires Federal agencies to assure that their actions are not likely to jeopardize the continued existence of endangered or threatened species. Federal funding, permitting, or land use management decisions are considered to be Federal actions subject to Section 7. If the proposed action may affect a listed species, consultation with the Service is required. Formal consultation must be initiated for any project that is likely to adversely affect a threatened or endangered species. If a project involves a major construction activity and may affect listed species, Federal agencies are required to prepare a Biological Assessment (BA). If a proposed species is likely to be jeopardized by a Federal action, regulations require a conference between the Federal agency and the Service.
The Service understands that the National Park Service and Bureau of Land Management has proposed to develop a Management Plan for the Monument. This plan is intended to (1) provide general direction and basic management philosophy; (2) identify resource, management, and visitor use strategies and actions; (3) identify Monument infrastructure requirements, functions, and locations; (4) satisfy statutory and policy requirements; and (5) identify funding and staffing requirements.

Threatened and Endangered Species

Threatened and endangered species that may occur in the proposed project area (enclosure) include: Canada lynx (Lynx canadensis), gray wolf (Canis lupus), bald eagle (Haliaeetus leucocephalus), Ute ladies’- tresses (Spiranthes diluvialis), bull trout (Salvelinus confluentus), Bliss Rapids snail (Taylorconcha serpenticola), Utah valvata snail (Valvata utahensis), and Snake River physa snail (Physa natricina). However, for your information, we also have provided you with a list of Species of Special Concern and ask that you consider them, and their habitats, during project planning and review; although they do not have legal status under the Act.

Based on our knowledge of the Monument area, sufficient habitat for Canada lynx or bull trout is not available. The proposed project area does not occur in lynx habitat (i.e., not in a Lynx Analysis Unit) and there are no linkage areas in the project area. Furthermore, there is not adequate surface water present in the Monument area for bull trout survival. However, any available information documenting Canada lynx or bull trout presence in the project area should be noted in the project BA.

The gray wolf is listed as nonessential experimental within the central Idaho area. However, if gray wolf denning sites or rendezvous areas are found near or within the project area, the Service asks that project activities be planned to minimize disturbance to wolf activities.

A bald eagle breeding territory is located approximately 15 air miles east of Monument at Carey Lake. The project BA should document the most recent bald eagle survey information regarding the above breeding territory and address effects of proposed project activities on these and any newly established breeding territories that may occur in the project area. The Guidelines for Management of Breeding Areas (Bald Eagle Management Plan for Greater Yellowstone, 1996 Final Draft) should guide the timing of any project activities with regard to potential disturbance of Nest Site Management Zones (NSMZX) from human activity, and to bald eagle foraging habitat outside NSMZs. It also should be noted that transient, wintering bald eagles may occur anywhere throughout Blaine, Butte, Minidoka, and Power counties, including the project area.

Ute ladies’-tresses have the potential to occur in wetland and riparian areas including springs, wet meadows, and river meanders. The plant is known to occur at sites ranging from 1,500 to 7,000 feet in elevation. This species generally flowers from mid-July through September, and can be identified definitively only at that time. The orchid can remain dormant for several years; therefore, we suggest surveys for the orchid be scheduled for sequential years. The species may
be adversely affected by modification of riparian and wetland habitats associated with livestock grazing, vegetation removal, excavation, construction for residential or commercial purposes, stream channelization, hydroelectric development and operation, and actions that alter hydrology.

The Bliss Rapids snail, Utah valvata snail, and Snake River physa snail are part of the native mollusc fauna of the middle Snake River which characteristically require cold, fastwater or lotic habitats. The Bliss Rapids snail occurs on stable, cobble-boulder substratum only in flowing waters in unimpounded stream reaches. This species does not burrow in sediments and normally avoids surfaces with attached plants. Populations (or colonies) of the Bliss Rapids snail occur in areas associated with spring influences or rapids edge environments and tend to flank shorelines. They are found at varying depths if dissolved oxygen and temperature requirements persist. The Utah valvata snail lives in deep pools adjacent to rapids or in perennial flowing waters associated with large spring complexes. This species avoids areas with heavy currents or rapids, and prefers well-oxygenated areas of non-reducing calcareous mud or mud-sand substrate among beds of submergent aquatic vegetation. The Snake River physa snail occurs on the undersides of gravel to boulder substratum in swift current. Living specimens have been found on boulders in the deepest accessible part of Snake River at the margins of rapids. Currently, the occurrence of snails at the Monument is unknown; therefore the project BA should document any available survey information addressing the presence or absence of snails or snail habitat in or near the project area. If survey information is not available, we recommend surveys be conducted prior to submission of the BA.

Our office would welcome the opportunity to assist in developing a consultation agreement and to work as part of your planning team. If you need any further information, please contact Sandi Arena of this office at (208) 237-6975 x 34. Thank you for your continued interest in endangered species conservation.

Sincerely,

[Signature]

Deb Mignogno
Supervisor, Eastern Idaho Sub-Office

Enclosure
United States Department of the Interior
FISH AND WILDLIFE SERVICE
Southeast Idaho Refuge Complex
4425 Burley Drive, Suite A
Chubbuck, Idaho 83202
Telephone: 208/237-6615 Fax: 208/237-8213

12 March 2003

Craters of the Moon National Monument Planning Team
Bureau Of Land Management
PO BOX 2-B
400 West F Street
Shoshone, ID 83352-1522

Dear Planning Team,

We appreciate the opportunity to comment on the National Monument alternatives. We do not wish to endorse any particular alternative, but would like to voice a couple of concerns.

If you are considering land trades to even up boundaries or to take care of inholdings The U. S. Fish and Wildlife Service would be interested in partnering in those transactions. There are three parcels of State lands on the north shore of Lake Walcott that Minidoka National Wildlife Refuge would like to acquire to give the refuge control of the entire north shore. This would allow better wildlife management and opportunities to improve recreational access in the Gifford Springs Area. Since we do not have excess lands to trade we will require the assistance of other Federal agencies. The Department of Lands has expressed interest in disposing of these three tracts to consolidate their holding elsewhere.

Secondly, if the decision is made to add a visitor center at the south end of the National Monument, the U. S. Fish and Wildlife Service would like to investigate the possibility of joint location for visitor and education facilities as well as an office complex in the vicinity of Lake Walcott State Park. The Idaho Department of Parks and Recreation would also likely be interested in collocation.

Our final concern is with weed invasion. Since weed control is a major effort at Minidoka NWR we are sensitive to the potential problems that may occur on the National Monument. We suggest that potential for weed introductions be considered before opening access routes, either by foot or by vehicle into new areas, particularly in Kipukas with pristine natural vegetation.

Sincerely,

Richard Munoz, Project Leader
Southeast Idaho National Wildlife Refuge Complex

Appendices: APPENDIX I 439
Reply To: ECO-088  JUL 19 2002  02-030-NPS

Rick VanderVoet, Monument Manager
Bureau of Land Management (BLM)
Shoshone Field Office
PO Box 2-B
Shoshone, ID 83352

James Morris, CRMO Superintendent
National Park Service (NPS)
PO Box 29
Arco, ID 83213

Dear Mr. VanderVoet and Mr. Morris:

The U.S. Environmental Protection Agency (EPA) has reviewed the Federal Register Notice of Intent (NOI) to prepare an environmental impact statement (EIS) for the proposed Craters of the Moon National Monument (CRMO), Land Use Plan. Our review of the NOI was conducted in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

Section 309 specifically directs EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Although our Section 309 and NEPA reviews are independent, we conduct both at the same time. Our review considers not only the impact to the environment, but also the adequacy of the document to meet the requirements of NEPA. To avoid major revisions after the draft EIS is issued, we offer these comments early in the NEPA process to help improve the proposed project and ensure that a good NEPA document is developed. A good EIS should adequately address purpose and need for the proposed activity, set forth the environmental impacts of the proposed project and all its alternatives, and discuss significant issues. Please refer to the attached information, EPA’s Section 309 Review: The Clean Air Act and NEPA, for further explanation on our EIS review responsibility.

Through the Presidential Proclamation 7373, the CRMO was greatly expanded “to assure protection of the entire Great Rift volcanic zone and associated lava features.” The CRMO’s basaltic volcanism features are nationally significant. In addition, the CRMO contains undisturbed sage-brush steppe communities within isolated vegetation islands surrounded by lava. These relic vegetation stands, called kipukas, form essential habitat for sensitive species that is often found lacking within the surrounding Snake River Plain.

Bureau of Land Management and the National Park Service are in a unique situation, as co-managers, to manage and protect this national treasure. Our major concerns related to the proposed CRMO, Land Use Plan are:

Printed on Recycled Paper
• The direct, indirect, and cumulative impacts to streams and riparian areas – For example, the proposed project has the potential to alter stream discharge, and degrade riparian areas and water quality.
• Impacts to soil quality – The proposed project has the potential to impact long-term soil productivity (soil quality) through disturbances and changes in organic matter levels.
• Threatened or endangered species – The proposed project may impact federally listed or candidate species and including their habitats.
• Wildlife habitat and habitat connectivity – The proposed project should disclose if or how wildlife habitat or migration corridors might be impacted.
• Recreation and accessibility – The DEIS should disclose management of recreational and accessibility opportunities in the project area.
• Prescribed wildfires – The proposed management plan should disclose potential impacts from prescribed fires in the project area.
• Air Quality – The DEIS should disclose the elements of a smoke management plan for the project area.
• Livestock grazing – Since grazing will continue within the CRM0, the DEIS should elements of sustainable rangeland management and disclose impacts associated with existing and proposed livestock grazing activities within project areas.
• Invasive and noxious weeds – Proposed project should disclose efforts towards restoration of native habitat disrupted by the colonization and establishment of noxious weeds within project area.
• Hunting activities – Since hunting privileges will continue in the Monument, the DEIS should disclose long-term management of target species and their habitat.
• Historic resources, treaty rights, and privileges – Proposed project development may affect historical or traditional cultural places of importance to the area’s tribal community.
• Effective public participation – The DEIS should disclose what efforts were initiated to ensure effective public participation.

We appreciate the opportunity to participate early in the scoping process. We are available to discuss issues or answer questions that arise while you develop the draft EIS. Should you have any questions regarding our comments, please contact me at (206) 553-4423 or at connor.tom@epa.gov.

Sincerely,

Tom Connor, Environmental Specialist

Enclosures
Purpose and Need

We suggest writing a short, yet direct, Purpose and Need statement that clearly states what the driving factor is for the project. The Council on Environmental Quality (CEQ), through its regulation (§ 1502.13), provides assistance in proposing that the Purpose and Need statement should disclose the underlying purpose of this management plan (MP). Make it about one to two sentences long. Then follow it with more in-depth discussion. Avoid putting in the Purpose and Need Statement other objectives you want to accomplish. Instead, discuss these other objectives later in the Purpose and Need section. For example, the Purpose and Need for this cooperative project between BLM and NPS may be to manage and restore public lands within the Craters of the Moon National Monument (CRMO). If both federal project leads intend to also improve livestock forage and habitat, improve recreational opportunities, and preserve relic sage-brush steppe habitat in the CRMO, then it would be more accurate to characterize these as other proposed activities and not include them in the Purpose and Need statement.

Description of Impacts

We strongly encourage that the Draft Environmental Impact Statement (DEIS) quantify values where possible when predicting impacts to the environment and discuss the significance of those values in terms of how the environment will be affected. Describing impacts as low, medium, or high, for example, is not very meaningful. Ideally, impacts should be quantified and compared against a standard or threshold. For example, water quality of an affected stream could be compared to the water quality standards.

Water Quality

303(d) Listed Waters

One of EPA's primary concerns is to prevent the degradation of water quality. Section 303(d) of the Clean Water Act (CWA) requires the state of Idaho to identify those waterbodies which are not meeting or not likely to meet State water quality standards. The EIS must disclose which waterbodies may be impacted by the project, the nature of the potential impacts, and the specific pollutants likely to impact those waters. It should also report those water bodies potentially affected by the project that are listed on the State’s current 303(d) list and whether Idaho Department of Environmental Quality (DEQ) has developed a TMDL for the waterbodies and the pollutants of concern. If a water restoration plan (Total Maximum Daily Load) has not been established which applies to a stream on the 303(d) list, then in the interim until one is established, it must be demonstrated that there will be
no net degradation of water quality. This should be demonstrated by doing a watershed analysis. Also, the DEIS must identify other waterbodies [not just those that are listed under Section 303(d)] likely to be impacted by the project, the nature of the potential impacts, and the specific pollutants likely to impact those waters.

Best Management Practices (BMPs)

Predicting water quality impacts from nonpoint source activities and the efficacy of BMPs in preventing those impacts is an imprecise science. Challenges include predicting water quality degradation from a proposed activity, designing appropriate BMPs, and making the BMPs work in the field. Therefore, the effectiveness of the BMP should be verified. One way is to use monitoring information on BMPs employed elsewhere under similar circumstances. Finally, water quality should be monitored to determine the adequacy of BMPs and for future remediation work if BMPs are found later to be inadequate.

Source Water Assessment and Protection (SWAP)

Public drinking water supplies and/or their source areas are often found on lands under federal management. Activities such as timber harvesting, road building, weed/insect control, grazing, and recreation may impact the water quality of waters that serve as the sources of drinking water for downstream communities. The SWAP provisions of the 1996 amendments to the Safe Drinking Water Act (SDWA) impose certain obligations on federal land management agencies. Under the SWAP requirements, federal land management agencies that manage land that serves as source water areas will need to participate with the states and local communities in the delineation of the source water area, the inventory of all potential sources of contamination, and in the protection of these source water areas.

If you should discover that there are public drinking water supplies in the project area, then you should disclose this information and how you intend to protect those source waters under each alternative. In any case, you should discuss the SWAP provisions of the SDWA as outlined above, what you are doing to meet your obligations under SWAP, and whether there are any issues with SWAP from this project.

Vegetation Management

Unfortunately, noxious weeds have established themselves nationally across thousands of acres of BLM land. Currently, BLM is participating with state and local governments in establishing Cooperative Weed Management Areas. These Areas will utilize local, state and federal resources to inventory and treat weed infestations on public and private lands. While the briefing package for the proposed project does mention mechanical and chemical methods towards weed management, EPA strongly encourages that the DEIS incorporates proven strategies of an integrated weed management program.
EPA endorses the concept of an integrated weed management program for several reasons. Important among these reasons are:

1) Uncertainties. Despite the substantial amount of scientific information that EPA reviews prior to registering a pesticide, it is virtually impossible to identify all conceivable risks and to address all the uncertainties of pesticide use. Therefore, pesticide use should be approached cautiously.

2) Overuse of pesticide can cause problems. Aside from the potential for toxic effects to people, overuse of pesticides may cause problems such as: a) lethal effects to beneficial organisms; b) resurgence of pest populations, and c) contamination of the environment.

3) Economics. An integrated weed management program can result in lower costs than conventional pest management. Some of these poorly accounted for costs are: potential long term health effects, effects of pesticides on non-target animals and plants, and the health effects to someone who may be particularly sensitive to a pesticide or pesticides, and any other effects that are not now understood, but will be uncovered over time. Even though these costs are not traditionally considered in economics, they are costs, and should not be ignored.

We recommend that the DEIS disclose if BLM is pursuing management strategies beyond chemical and mechanical; and if they are, then what these strategies might be. We also recommend that the approach of an integrated weed management program be adaptive. This means that as new information becomes available, it can be incorporated into corrective decisions to revise vegetation management plans.

**Herbicides**

Herbicide use affects ecosystem processes and, specifically, biological processes. Unintended environmental impacts do occur. The EIS should address the sublethal effects of herbicides, surfactant and emulsifiers on ESA listed species. The EIS should explore the impacts from non-specific or broad-based herbicides that kill many species of plants and can devastate ecological chains, adversely affecting both terrestrial and aquatic species directly (plant) and indirectly (animal). While the focus is generally on water pathways and drift during chemical application, wind erosion of soils can transport herbicides offsite and have unintended effects, especially on dry, highly erosive BLM lands in the West. In Idaho, a recent application of the herbicide OUST® on BLM lands was unintentionally carried via windblown sediment to nearby agricultural lands, and ended up damaging literally tens of millions of dollars worth of crops. Similarly, the EIS should consider that dust can also be deposited in streams, lakes, and wetlands.
Livestock Management

The EIS should evaluate and disclose historic rangeland conditions on a broad, landscape scale and identify avenues to incorporate flexibility in grazing plans and allotments that permit both BLM managers and public-lands ranchers to account for special circumstances such as drought and reduce grazing use when necessary.

43 CFR 4110.3-3, "When the authorized officer determines that the soil, vegetation, or other resources on the public lands require immediate protection because of conditions such as drought, fire, flood, insect infestation, or when continued grazing use poses an imminent likelihood of significant resource damage, after consultation with, or a reasonable attempt to consult with, affected permittees or lessees, the interested public, and the State having lands or responsible for managing resources within the area, the authorized officer shall close allotments or portions of allotments to grazing by any kind of livestock or modify authorized grazing use.”

The EIS should evaluate whether riparian protection, habitat conservation for ESA-listed species and habitat management plans for sensitive species are being implemented as committed to in the MP and other planning and/or decision documents. More specifically, the EIS should evaluate ecological restoration needs and develop strategies to achieve restoration goals. It should also consider including roadless and wilderness designations as part of the overall restoration strategy.

The DEIS should examine the tradeoffs associated with various management options for livestock grazing regarding wildlife habitat. This information should be considered when developing the MP or other NEPA decisions. It should include information and guidance which informs BLM managers and other stakeholders about the effects of livestock forage removal and competition with native wildlife. The DEIS should evaluate the extent and risks associated with continued grazing on listed, threatened, endangered or sensitive species and on rare and sensitive species and ecosystems found on BLM lands.

The DEIS should consider an appropriate range of alternatives to achieve multiple-use goals for lands that are desired for other economic and human uses. For example, the EIS should consider a No Grazing Alternative on allotments to evaluate the social, economic, and environmental impacts that may occur if grazing ceases on a given allotment or other land holdings that are desirable for other uses or that are seriously degraded.

The DEIS should consider all impacts in the decision criteria, including land health, riparian protection, wildlife habitat and recreation, with equal consideration to grazing. The decision criteria should be based on sound science and economics rather than solely on sustaining a single-use objective.
Noxious weeds

The short and long-term impact of noxious weeds on public lands is affecting both the quality of native habitat and the breadth of management activities. Due to the growth of noxious weeds' impacts, the DEIS needs to disclose if and how the Integrated Vegetation Management program will control and manage noxious weed infestations due to a variety of vectors (i.e., livestock grazing, off-road vehicle activities, and road construction and maintenance) within the Planning Area. For example, studies have shown that livestock contribute to noxious weed invasion (Belsky et al., 1999; and Belsky and Gelgard, 2000) by a variety of avenues.

Accessibility and Recreation

Roads

Roads are the major source of sediment to streams and interrupt the subsurface flow of water, particularly where roads cut into steep slopes. In addition, roads and their use contribute to other environmental problems such as habitat fragmentation, wildlife disturbance, the introduction or exacerbation of noxious weeds, and increased fire danger from recreational activities. Please describe the road and culvert situation in the project area in terms of impacts on resources.

Off Road Vehicles (ORV)

Unauthorized ORV use is becoming a concern to many BLM areas since unregulated and unsanctioned ORV disturbance is inconsistent with two Executive Orders (11644 and 11989). Even the CEQ has written a report (1979) stating the environmental damage that ORV's have caused on stream reaches across numerous ecosystems throughout the United States. In general, unregulated and unsanctioned motorized vehicle use on public lands is incompatible with soil and aquatic resource management. Therefore within the Planning Area, how will the BLM prevent both short and long-term access of unauthorized motorized traffic, especially by 4-wheel drive vehicles (or ATVs), prevent unrestrained access across fragile rangelands and other sensitive areas, and effectively enforce access to restricted areas?

Biodiversity

A significant issue in the Pacific Northwest is decreasing biodiversity. To preserve native faunal numbers and abundance, and in recognition of the importance of viable habitat, the Affected Environment section of the DEIS should rate the current quality and potential capacity of habitat, its use by wildlife on and near the project area, and identify known wildlife corridors, migration routes, and areas of seasonal wildlife congregation. The Environmental Consequences sections should evaluate effects on wildlife from habitat removal and alteration; habitat fragmentation caused by roads, land use, and management activities; and increased human access. As a proactive
management plan, maintenance of biodiversity can minimize the need for listing species as threatened or endangered under the Endangered Species Act.

Furthermore, the importance of maintaining project area’s biodiversity extends equally to native plant species. Therefore, efforts of disclosure within the DEIS should proceed at the same level of detail as for wildlife habitat. Preservation of floral biodiversity includes active and long-term preservation of the native genetic stock throughout the project area. Preservation of the number and abundance of the indigenous floristic community should extend from the herbaceous layer and shrub species to the tree species.

Prescribed Wildfires and Regional Haze Regulations

Pursuant to the Clean Air Act for the protection of public health and welfare and to preserve, protect, and enhance air quality, we recommend that the DEIS describe the Interim Air Quality Policy on Wildland and Prescribed Fires in relation to the alternatives. The DEIS needs to disclose the smoke management program to be used for this propose project with pertinent discussion on visibility and haze management. In addition, we recommend that the project leaders work closely with the Western Regional Air Partnership.

The State of Idaho has a smoke management plan (or program) (SMP) that is applicable in Idaho. Federal agencies are required to abide by applicable State rules and as such this project should likewise comply with the provisions of the Idaho SMP. In addition, the State is developing a SIP revision addressing the requirements of the Regional Haze Rule (64 FR 35714, July 1, 1999) in a cooperative effort with the WRAP of which the National Park Service (DOI) and Department of Agriculture are members. We recommend that impacts from any prescribed fire be considered in light of potential provisions of an Enhanced Smoke Management Plan as developed by the WRAP.

Having two federal agencies (the Bureau of Land Management and the National Park Service) acting as co-managers, Craters of the Moon National Monument (CRMO) is in an unusual position nationally for both cooperating agencies to manage and preserve public resources. While the BLM will be implementing livestock grazing within the monument, the NPS will be working to preserve the nationally significant basaltic volcanism features and native vegetation communities located within the monument’s unique kipuka habitats. To help preserve CRMO’s significant basaltic volcanism features, the NPS created a portion of the CRMO as the Craters of the Moon Wilderness Area, designating it as a mandatory federal Class I Area according to the Clean Air Act.

Furthermore, as stated within the NOI, fire and fuel management will continue within CRMO. Thus site management will be an active concern. Even when following a designed smoke management program (SMP), there is the potential for unwanted air quality impacts and these should be described. SMPs rely on the vagaries of the weather. Smoke generated from human activities, like prescribed fires, may not disperse as intended resulting in adverse impacts to nearby designated airsheds or communities. Contingencies for these situations should be considered, including a short-term air quality action level. Nonexceedance of the 24-hour particulate matter
(PM) under national air quality standards does not preclude the need to plan ahead given the potential adverse health impacts to individuals exposed to PM at high concentrations for shorter time periods.

**Direct, Indirect, and Cumulative Effects**

Please include the indirect and cumulative effects of the project in your analysis. We are as concerned with cumulative effects as we are with direct impacts posed by the individual project. To examine the impact of this project in isolation from other past, present, and reasonably foreseeable future projects in the vicinity would be to ignore what is really happening to the environment in the project area. Resources that could be examined for cumulative effects with this project are water quality, air quality (see previous discussion on Prescribed Fires), mines, old unmaintained or abandoned roads, noxious weeds, biodiversity, and visual (aesthetics) resources.

Agency guidance and information is now available. The handbook, *Considering Cumulative Effects under the National Environmental Policy Act*, issued by the Council on Environmental Quality in January 1997. In summary, the guidance states that in order to address cumulative effects, the EIS should:

- Identify resources that are being cumulatively impacted. If there are none then you need to state this.
- Determine the appropriate geographic (natural ecological boundaries) area and the time period over which the effects will occur.
- Look at all past, present, and reasonably foreseeable future actions that contribute to cumulative effects on the resource of concern.
- Describe a benchmark or baseline.
- Include scientifically defensible threshold levels.

**Related Regional Planning Actions**

We recommend that the DEIS disclose and coordinate with other agency planning efforts that are proposing federal actions within the project area of the recently expanded CRMO. For example, the Natural Resources Conservation Service is currently proposing a project in Blaine County through the issuance of a Notice of Intent for the Little Wood River Irrigation District, Gravity Pressurized Irrigation Delivery System. Of interest, the Irrigation District is proposing returning water to the Little Wood River which could alter seasonal flows within the system. Then at a larger scale, BLM has issued an intent to prepare a Fire, Fuels, and Vegetation Management Plan within the Upper Snake River District of Idaho that includes the lands comprising CRMO.
Monitoring

RECEIVED

The DEIS should establish environmental monitoring protocols that are appropriate and essential, and these same protocols should actively incorporate adaptive management principles. For example, the DEIS should identify additional mechanisms to enforce performance standards based on monitoring data when adverse impacts to rangelands from overstocking results in poor forage quality and ecological damage to fish and wildlife habitat, riparian areas, and fragile upland soils.

Regarding Tribal Consultation and Coordination

The DEIS should include ethnographic research and discuss any inter-governmental coordination on proposed activities within and adjacent to the proposed project area related to rights or historical utilization by the affected Tribe. The project co-leaders should work with the Tribe in a government-to-government relationship whereby the Tribe can work with BLM/NPS as co-managers of the natural resources. Below, we highlight specific concerns.

1) The DEIS should disclose how the lead federal agencies consulted and coordinated with the Tribe in development of the EIS as required by the Executive Order 13175.

Paraphrasing EPA Region 10’s Tribal Consultation Process, “Consultation” means the process of seeking, discussing, and considering the views of federally recognized tribal governments at the earliest time in the decision-making process. Consultation generally means more than simply providing information about what the agency is planning to do and allowing comment. Rather, consultation means two-way communication that works toward a consensus reflecting the concerns of the affected federally recognized tribe(s).

2) The DEIS should disclose whether the Tribe considers lands within the project area to be “sacred sites” and provide a prescriptive accommodation plan to resolve concerns, yet not publically disclose actual site locations.

According to Executive Order 13007, federal land managers are to “accommodate access to and ceremonial use of Indian sacred sites.” The SDEIS has not disclosed if the MNF has consulted with the Burns Paiute Tribe on this issue.
June 14, 2002

Mr. John Apel  
Craters of the Moon National Monument  
P.O. Box 29  
Arco, Idaho 83213

RE: Craters of the Moon National Monument Management Plan

Dear Mr. Apel:

Thank you for notifying us of the National Park Service’s proposed development of a comprehensive management plan for Craters of the Moon National Monument. We look forward to working with you through this process.

We are pleased to see that one of the desire future conditions is to educate the public about the Monument’s diverse history and prehistory and its important cultural resources. This will be a good opportunity to expand on the Monument’s existing and excellent interpretation about human adaptation over time to Craters’ unique landscape. To meet this goal, we encourage NPS to step up efforts to complete a record search of known historic properties within the Monument and to conduct reconnaissance surveys to identify historic properties not yet recorded. This information will also be necessary to determine what protection should be offered for cultural resource sites.

We appreciate your stewardship of our State’s important historic places. If you have any questions, please feel free to contact me at 208-334-3847.

Sincerely,

Susan Pengilly Netzel  
Deputy SHPO and Compliance Coordinator

cc: Lisa Cresswell, BLM
Craters of the Moon National Monument
Planning Team
Bureau of Land Management
P.O. Box 2-B
400 West F Street
Shoshone, Idaho 83352-1522

Re: Draft Goals and Issues for Management Planning – Craters of the Moon National Monument

Rick Vander Voet and Jim Morris,

We have reviewed the information provided at the June 6, 2002 public information meeting and presented in your scoping document (Spring/Summer newsletter) for the Management Plan being developed for the Craters of the Moon National Monument. In general, we concur with your broad statements presented in the “Purpose and Significance,” “Goals,” and “Issues and Concerns” sections. To assist you in further defining issues relevant to fish and wildlife management and recreational use of the area, please consider the following comments:

- The Idaho Department of Fish and Game has management authority over fish and wildlife within the Monument boundary. Although specific information on wildlife populations within the Monument is limited, we do have broad management plans for the game management units encompassing the Craters of the Moon. We request consideration be given to our species management plans and goals for the management units found within the Monument boundaries. These include hunt units 49, 50, 52A, and 68. Species management plans covering this area are available for Mule Deer, Elk, Pronghorn, and Sage Grouse. They can be found on the Idaho Department of Fish and Game website or can be provided by the Magic Valley Regional Office in Jerome.

- Given the lack of site specific wildlife information and its importance in management planning and decision making, we recommend the plan identify wildlife information and monitoring needs within the Monument. We readily offer our expertise and assistance in identifying data gaps and monitoring needed to assess wildlife species abundance, distributions, and trends; particularly in relation to Monument management goals.

- Hunting and trapping and sportsmen access should be considered in management planning as a traditional use of the land. As you are aware, federal legislation is currently being proposed to restore these traditional uses, which were excluded under the Presidential Proclamation expanding the Monument. We fully expect these traditional
activities will again be allowed and request management direction allow for this recreational use of the land.

- The land included in the Monument expansion is currently a mix of native shrub-steppe habitats and areas altered by post fire rehabilitation efforts. We would like to see a goal included in your management plan that addresses future vegetation management in the Monument. Specifically, we would like to see a commitment by BLM and the National Parks Service to utilize only native plant materials in treatment activities. Additionally, we request management consideration and priority be given to the restoration of areas currently dominated by exotic plants. Fire response priorities should also be designated for the Monument with native shrub communities given the highest level of protection.

- Past grasshopper and cricket infestations have resulted in the use of pesticides on federally owned land within the area covered by the expanded Monument. We recommend management guidelines for insect control are included in your planning document. Specifically, we recommend pesticide use guidelines consider the impact on sagebrush obligate wildlife, such as sage grouse, and the importance of insects in chick and migratory songbird survival.

Thank you for this opportunity to participate in planning for future management at the Craters of the Moon National Monument. We will contact you after the scoping meetings have concluded to discuss information the Department can contribute to the management planning process. Please contact Mike McDonald, Environmental Staff Biologist, in this office if you have any questions or need additional information.

Sincerely,

David Parrish
Magic Valley Regional Supervisor

Cc: IDFG-NRBP
IDFG-D. Pitman
IDFG-B. Saban
Craters of the Moon National Monument
Planning Team
Bureau of Land Management
P.O. Box 2-B
400 West F Street
Shoshone, Idaho 83352-1522

Re: Draft Goals and Issues for Management Planning – Craters of the Moon National Monument

Rick Vander Voet and Jim Morris,

We have reviewed the information provided at the June 6, 2002 public information meeting and presented in your scoping document (Spring/Summer newsletter) for the Management Plan being developed for the Craters of the Moon National Monument. In general, we concur with your broad statements presented in the “Purpose and Significance,” “Goals,” and “Issues and Concerns” sections. To assist you in further defining issues relevant to fish and wildlife management and recreational use of the area, please consider the following comments:

- The Idaho Department of Fish and Game has management authority over fish and wildlife within the Monument boundary. Although specific information on wildlife populations within the Monument is limited, we do have broad management plans for the game management units encompassing the Craters of the Moon. We request consideration be given to our species management plans and goals for the management units found within the Monument boundaries. These include hunt units 49, 50, 52A, and 68. Species management plans covering this area are available for Mule Deer, Elk, Pronghorn, and Sage Grouse. They can be found on the Idaho Department of Fish and Game website or can be provided by the Magic Valley Regional Office in Jerome.

- Given the lack of site specific wildlife information and its importance in management planning and decision making, we recommend the plan identify wildlife information and monitoring needs within the Monument. We readily offer our expertise and assistance in identifying data gaps and monitoring needed to assess wildlife species abundance, distributions, and trends, particularly in relation to Monument management goals.

- Hunting and trapping and sportsmen access should be considered in management planning as a traditional use of the land. As you are aware, federal legislation is currently being proposed to restore these traditional uses, which were excluded under the Presidential Proclamation expanding the Monument. We fully expect these traditional

Keeping Idaho’s Wildlife Heritage

Appendices: APPENDIX I
activities will again be allowed and request management direction allow for this recreational use of the land.

- The land included in the Monument expansion is currently a mix of native shrub-steppe habitats and areas altered by post fire rehabilitation efforts. We would like to see a goal included in your management plan that addresses future vegetation management in the Monument. Specifically, we would like to see a commitment by BLM and the National Parks Service to utilize only native plant materials in treatment activities. Additionally, we request management consideration and priority be given to the restoration of areas currently dominated by exotic plants. Fire response priorities should also be designated for the Monument with native shrub communities given the highest level of protection.

- Past grasshopper and cricket infestations have resulted in the use of pesticides on federally owned land within the area covered by the expanded Monument. We recommend management guidelines for insect control are included in your planning document. Specifically, we recommend pesticide use guidelines consider the impact on sagebrush obligate wildlife, such as sage grouse, and the importance of insects in chick and migratory songbird survival.

Thank you for this opportunity to participate in planning for future management at the Craters of the Moon National Monument. We will contact you after the scoping meetings have concluded to discuss information the Department can contribute to the management planning process. Please contact Mike McDonald, Environmental Staff Biologist, in this office if you have any questions or need additional information.

Sincerely,

[Signature]

David Parrish
Magic Valley Regional Supervisor

Cc: IDFG-NRBP
    IDFG-D. Pitman
    IDFG-B. Saban
June 17, 2002

Craters of the Moon Planning Team
Bureau of Land Management
P.O. Box 2-B
400 West F Street
Shoshone, ID 83352-1522

Re: State of Idaho Endowment lands within the Boundary of the Expanded Craters of the Moon National Monument

Planning Team:

Please add the Idaho Department of Lands, P.O. Box 149, Gooding, Idaho 83330 to your mailing list. We did not receive any notice of your current planning activity so we must not be on your list at this time.

You should note that there are seventeen (17) parcels of Idaho Endowment land within the expanded boundary. There is no mention of these lands in Newsletter 1. There are an additional five (5) parcels that border on the boundary of the monument.

Most of the Endowment lands are currently leased for grazing and we encourage the continuance of grazing on these lands. Grazing leases provide income and impact vegetation to reduce wildfire severity and control of weeds.

Existing roads to Endowment lands need to remain open so that the State and its lessees, or successors in interest can access these lands for administration. Additionally, endowment lands are open to the public for hunting. Existing roads will provide the public access to our lands for hunting.

Since management of the Monument likely will not meet the objectives of this department to maximize revenue from Endowment lands, these Endowment lands should be acquired by the federal government through land exchange. There is no mention in your newsletter that you will work towards acquiring all non-federal lands within the monument boundary.

If land exchange cannot be completed then we would seek improved access to Endowment lands so that we might lease them to Outfitters and Guides for use such as a base camp, or similar use, in order to generate additional income for our beneficiaries.

It is important that the federal government work diligently to acquire the Endowment lands within the Monument boundary to avoid conflicts with the Department of Lands Mission and the Monuments need to manage for public purposes. Department staff are willing to meet with your planning team to develop a land exchange proposal.

Sincerely,

Bryce Taylor
Area Supervisor

Appendices: APPENDIX I 455
September 23, 2002

Rick Vander Voet, Monument Manager
Shoshone Field Office, BLM
P.O. Box 2-B
Shoshone, ID 83352

RE: Craters of the Moon National Monument Management Plan

Dear Rick:

The Idaho Department of Parks and Recreation obtained a copy of the Craters of the Moon National Monument Management Plan Preliminary Planning Criteria. We obtained this copy by checking your website and fortunately checked it before the comment deadline closed. We would like to receive all planning documents by mail or e-mail well before the comment period closes.

National Monument designation creates more restrictive planning criteria than a normal resource management plan. The enabling proclamation in itself, presents constraints on plan development.

What surprised us the most about the preliminary planning criteria was the lack of BLM information to guide recreation planning. We believe the monument plan should incorporate the principles and guidance laid out by the BLM's National OHV Strategic Action Plan and the draft National Mountain Bicycling Strategic Action Plan.

A key component of this plan will be the development of a transportation management component. Monument designation and an increasing local population will likely increase visitation to the area. A transportation management component should minimize visitor ecological impacts and still provide for adequate visitor access (motorized and non-motorized).

The travel analysis in the plan needs to distinguish between different forms of off-highway vehicle (OHV) recreation. Off-highway motorcycles, ATV’s, and passenger four-wheel drives have different impacts to the environment. The most obvious difference is the trail that they can travel on. An off-highway motorcycle can travel on a trail with a tread width as narrow as 12 inches with no adverse effects to the trail tread, while an ATV requires at least a 48 inch tread width to avoid adverse impacts to the trail tread.

The plan will also have to provide adequate access for both motorized and non-motorized recreation. Travel planning can be a difficult issue. The broad variety of recreation uses competing for the same amount of ground can lead to conflict. The monument should also try to create more non-motorized opportunities without closing current motorized opportunities.
Preliminary Planning Criteria
September 23, 2002
Page 2

This can be as simple as creating different zones for travel. The lava flows limit mechanized travel. They provide for wilderness or a wilderness like experience. Other areas, such as Little Park are more open and prone to route proliferation. The key to reducing route proliferation is properly identifying and signing routes combined with visitor education and enforcement. Another key is to provide adequate recreation access.

The Idaho Department of Parks and Recreation appreciates the opportunity to comment on the planning criteria. We look forward to working with the BLM and the NPS in the planning process. If you have any questions about our comments, contact Jeff Cook, Trails Program Coordinator at (208) 334-4180 ext. 230.

Sincerely,

Rick Collignon, Director
Idaho Parks and Recreation

/\g lucr\nplanners.doc
March 7, 2003

Craters of the Moon National Monument Planning Team
Shoshone Field Office, BLM
P.O. Box 2-B
Shoshone, ID 83352-1522

RE: Monument Plan Preliminary Alternatives

Dear Rick and Jim:

The Idaho Department of Parks and Recreation attended the Craters Monument Plan workshop on February 22, 2003 in Rupert. The Craters of the Moon National Monument is an unknown treasure to many Idahoans, and potential visitors. In the future, as the population grows, the monument will likely become better known. The management plan should focus on managing visitor opportunities and traditional ranching opportunities as well as protecting physical resources.

The preliminary alternatives cover a wide range of activities and actions. Much of the public sentiment has been to manage the area as it is currently being managed. We believe that all alternatives should give monument managers enough flexibility to manage the monument resources and opportunities effectively.

One component of Alternative B would resource inventory and monitor target areas most vulnerable to vandalism, theft, or indirect impact from increased levels of recreation use. National Monument designation requires the NPS and BLM to protect areas from vandalism, theft, or indirect recreation use impacts. We encourage the planners to incorporate this component into the entire range of action alternatives.

Draft alternative C increases the amount and extent of biological weed treatments and reduces chemical treatments compared to the existing situation. Generally, biological treatments are most successful in controlling the spread of noxious weeds while chemical treatments are more successful in eliminating noxious weeds. The EIS should examine the effectiveness of biological versus chemical treatments across the range of alternatives.

Draft alternative C also increases the amount of land located in the pristine zone over the other alternatives. While attending the meeting, we learned that some areas proposed for the pristine zone, might not be suitable to being listed as pristine. These areas have numerous range improvements, power line corridor and roads. Draft alternative C might need to have some of the pristine zone unit boundaries relocated.
A key component of draft alternative D is to promote partnerships at existing facilities such as Idaho visitor centers, state parks and Chamber of Commerce visitor centers. Partnerships will be key to the implementation of any selected alternative. We encourage the planning staff to put this component in the entire range of selected alternatives.

Section 202 (f) and Section 309 (e) of the Federal Lands Policy Management Act (FLPMA) provides that federal, state, and local governments and the public be given adequate public notice and opportunity to comment on the formulation of standards and criteria for, and to participate in, the preparation and execution of plans and programs for the management of public lands. Both your agencies have done a good job of providing the public an opportunity to comment on the formulation of this management plan. The Lower Snake River District implemented an intergovernmental coordinating group for the development of the Bruneau and Snake River Birds Of Prey Resource Management Plans. The planning staff should consider the formulation of a similar group to insure consistency of this plan with other state and local plans. If such a group is formed, the Idaho Department of Parks and Recreation would like to participate.

We recently completed the 2002 State Comprehensive Outdoor Recreation and Tourism Plan (SCORTP). We encourage you to review it in your planning process. As a component of the SCORTP plan, the Idaho Outdoor Recreation Demand Assessment provides good information on Idahoans’ ranking of important outdoor recreation issues and participation in outdoor recreation activities. The 2002 SCORTP can be downloaded online at http://www.idahoparks.org/SCORTP/.

We appreciate the opportunity to attend the draft alternative meeting, and provide comment on these draft alternatives. We look forward to working with the BLM and NPS on the development, and possibly implementation of this plan. Please let us know if we can help in any way. If you have any questions about our comments, contact Jeff Cook, Outdoor Recreation Analyst at (208) 334-4180 ext. 230.

Sincerely,

Rick Collignon, Director
Idaho Department of Parks and Recreation

Appendices: APPENDIX I 459
March 13, 2003

Craters of the Moon National Monument
Planning Team
BLM, Shoshone Field Office
P.O. Box 2-B
Shoshone, ID 83352

RE: County Government Comment on Alternative Concepts

Our first comments refer to your Purpose statements, which were well crafted, and we hope are utilized as standards to decide where you go from this point forward. In our view, it is very important to not forget to ‘maintain the wilderness character of the Craters, protect the kipukas, and continue the historic and traditional human relationships that have existed for generations!’ We believe the traditional relationships like hunting and grazing can be accommodated within managed parameters. Most probably the biggest threat to kipukas would come from vehicles and grazing, both of which could be mitigated by management constraints. By definition, any historical and traditional connection to a proposed use ought to be measured by a time factor. Certainly a use established two or three years ago wouldn’t fit these standards.

Secondly, the Draft Goals, if utilized by the team in balancing your efforts, should always focus on the compatibility of competing uses. It isn’t sensible to build conflict into the plan at any stage. In addition, team members hopefully will not lose sight of the second goal, which mentions the ‘remarkable opportunities for solitude’. If certain noisy uses are allowed, they should be in segregated areas so as not to violate this goal.

While all of the alternatives pose their unique problems, our Board would at this time, support the approximate ideas represented by A and C. We have no problems with accessing the King’s Bowl area on the south but would prefer to have it an in-and-out experience, as opposed to the circular pattern in Draft D and we definitely oppose the improved road connection from Arco to Minidoka that is proposed through Blaine County by alternative B. We realize there is pressure from the two
counties to our south to enhance their economies through major travel from Arco to Rupert. However, we think this idea is misguided and wouldn’t amount to near the economic benefit that the proponents do. Arco especially, has experience from visitors going through their town and hasn’t realized measurable improvements to their area from the approximately 195,000 annual visitors to the present visitor center. Without a doubt, an improved road would bring more traffic, demand more maintenance dollars, and put many more people at peril who may choose to leave the road and not understand the harsh environment they are dealing with. Blaine County does not care to accept any more maintenance responsibilities in that area and may consider abandoning the 4 miles we presently maintain on the Arco-Minidoka road. Road issues on the Carey-Kamama Rd. will have to be addressed also from a maintenance viewpoint. Once again, increased traffic will necessitate increased grading and dust control. These increases to our marginal costs will have to be borne by someone other than Blaine County.

The increased passage zone north of Highway 93 near the visitor’s center in Alternative A in an improvement we could support. It would tend to keep visitors near the best road and out of trouble in other areas.

Overall, we urge the planning team to not forget the real purpose behind every Monument creation. That is to protect the area’s natural features and vitality from degradation and to preserve it as a legacy to pass on to future generations. Certainly you want to encourage visitors and enjoyment from the general public while at the same time, minimizing the effect of that visitation on the fragile features of the area. Recreational pursuits by certain types of ORV’s do not, in our opinion, fit the purpose statements outlined earlier. It should be recognized that there are thousands of acres of BLM lands contiguous to the monument boundaries that are already accessible to these uses. The monument itself should not necessarily accommodate the exact same uses as other desert lands under BLM jurisdiction. Otherwise one needs to ask the question: Why was it set apart as a monument in the first place? Please don’t forget, this doesn’t prevent people from visiting; it only limits the mode of transportation.

This Board looks forward to more input as your team continues to refine the management plan. We also recognize the enormity of your task and wish you much success as you strive to reach your ultimate objective. Thank you for the opportunity to respond at this time.

Sincerely,

[Signatures]

Dennis Wright
Chairman

Sarah Michael
Vice-Chair

Mary Ann Mix
Commissioner
March 24, 2003

Mr. Jim Morris, Superintendent
Craters of the Moon National Monument

Mr. Rick Vander Voet
Bureau of Land Management

Dear Jim and Rick,

I want to first let you know how much I appreciate the role that both of you have related to planning for the future of the Craters of the Moon National Monument. The right people at the right time certainly comes to mind. Thank you again for taking the time to give the presentation to the City Council.

In the last regular City Council meeting, the presentation was briefly discussed again. The Council unanimously feels that now is the appropriate time for individual comment and that it would not be appropriate for them to try and develop a City opinion without a significant public process. They therefore instructed me to thank both of you for the presentation and let you know that we want to be a full partner completely through this process and that a more appropriate time will present itself for City comment in the future.

Thank you again and if you have questions, please contact me at 208-788-9003.

Richard Baird, Mayor
June 25, 2002

Craters of the Moon National Monument Planning Team
Bureau of Land Management – Shoshone Field Office
P.O. Box 2B
Shoshone, ID 83352

To Whom It May Concern:

On behalf of the Carey City Council, I have been authorized to provide the following comments.

The residents of the City of Carey were not part of the decision making process to expand the Monument. It was a decision that was made primarily at the national level. The Monument will certainly impact the Carey Valley sometime in the future. The extent of impact cannot be determined or even forecasted because appropriate plans and studies related to the monument have not been completed. The City Council, therefore, will insist that local residents not shoulder impact to this community or to the Carey Valley alone. Federal funds should be made available on a timely basis to mitigate impacts that are a direct or indirect result of the new Monument Management Plan. In fact, mitigation measures should be a part of the plan itself.

Carey Valley residents are concerned that the future will bring access restrictions. The area should remain accessible to as many people, by as many different methods as possible. The plan should recognize statistics relating to the baby boomer generation and ensure that our most vulnerable and experienced can enjoy the monument as they could before the expansion.

The area should remain multi-use. Grazing, hunting, four wheeling and as many other activities as possible, should be addressed and made a part of the plan. The BLM was able to manage the area for years and ensure that it essentially remained unchanged. The BLM was continuously under pressure from many permitees to grant more grazing rights, but their management was working. It can remain multi-use and remain unchanged.

The community believes that development inside the Monument is not appropriate. Facilities like campgrounds and other services should be provided outside of the Monument and should not be allowed to change what the expansion designation sought to protect. Roads should be maintained, not improved.

In this era of electronic marvels, the form letter comment sheet or idea has been perfected. Please ensure that appropriate weight is placed on particular comments. Organized groups have the ability to overwhelm the comment process with comments that mean nothing more than the push of a button.

Appendices: APPENDIX I 463
The City of Carey desires to work with the BLM and National Park Service to ensure that the Plan not only protects, but also provides as much opportunity to as many as possible. We are also proud to be considered the western gate/entry to the Monument.

Please place the City of Carey on the mailing list. We would like ten hard copies of the Draft Management Plan/Environmental Impact Statement.

Thank you for the opportunity to comment and to participate in the process.

Sincerely,

[Signature]

Richard R. Baird
Mayor, City of Carey
Wildland fire suppression and vegetation treatment protocols would be implemented under all alternatives. These protocols would be applied to fire suppression and vegetation treatment activities with the intent of protecting sensitive resources. However, wildland fire suppression is generally an emergency activity and the Monument Manager or Park Superintendent could choose to override the protocols to protect life, property, or valuable resources. Suppression protocols would be further defined within the Monument FMP. Treatment protocols would be addressed in project-specific NEPA documents. All protocols are intended to prevent significant impacts to natural and human resources.

**Wildland Fire Suppression Protocols Common to All Alternatives**

- Dozer blading should not occur within 300 feet of playas or dry lakebeds to protect cultural resources. Buffer zones greater than 300 feet from playas and dry lakebeds are preferable.
- Dozer blading should not occur within 300 feet of known historic trails and cultural sites.
- Dozer blading should not occur within 300 feet of perennial streams unless approved by the authorized officer. Buffer zones greater than 300 feet from riparian areas are preferable. Exceptions would be made to protect lives and property when safety is an immediate concern, or under the direction of a Resource Advisor when an escape would cause more long-term damage to resources.
- Within the NPS Monument and Preserve, dozers shall not be used for line construction or driven off-road across NPS lands unless a fire poses an immediate threat to life or property and with the approval of the NPS Monument Superintendent.
- Within Wilderness Study Areas (WSAs) and the Pristine Zone, wildland fire management activities should follow BLM Manual H-8550-1, Interim Policy for Lands Under Wilderness Review. The use of earth-moving equipment within these areas requires approval of the authorized officer.
- Within the Craters of the Moon Wilderness, motorized equipment or mechanized transportation shall not be used unless emergency conditions threaten life or property.
- Fire camps and staging areas shall be placed outside of the Pristine Zone.
- Use of natural firebreaks and existing roads and trails to contain a wildland fire will be encouraged.
- Establishment of control lines, base camps, and support facilities should be avoided in known habitat for special status species unless life and property are threatened.
- When a wildland fire escapes initial attack, BLM and/or NPS Resource Advisors will be assigned to ensure that resource management concerns are adequately addressed and that necessary mitigation occurs.
- The Resource Advisor(s) will ensure emergency consultation is initiated with the USFWS whenever suppression activities impact listed species habitat.
• Application of retardant or foam will be avoided within 300 feet of waterways. Exceptions would be made to protect lives and property when safety is an immediate imperative, or under the direction of a Resource Advisor when an escape would cause more long-term damage to aquatic resources.

• To minimize spread of noxious and invasive plant species, equipment used for extended attack or Type I or II incidents should be cleaned before arriving on site and prior to leaving the incident. Staging areas and fire camps should avoid sites with noxious weed infestations.

• Developed recreation sites and structures on public lands will be protected.

• Minimum Impact Suppression Tactics (MIST) guidelines will be followed where appropriate.

• Prior to fire season, potential areas of conflict between archaeological resources and fire suppression activities should be identified.

• An archaeologist will be notified of any cultural resources encountered during suppression activities. Where feasible, line construction will be preceded by assessment by an archaeologist.

### Restoration Treatment Protocols Common to All Alternatives

- Noxious/invasive species inventory, and pre- and post-burn treatments will be utilized to reduce the overall threat of noxious and invasive species establishment and spread.

- All herbicides will be applied by certified applicators following label directions.

- Prescribed fire treatments and wildland fire for resource use will follow pre-approved fire management plans or project-specific burn plans that restrict when, where, and the conditions under which fire can be used.

- Plant materials used in vegetation treatments would be predominately native. However, non-native species may be used in vegetation treatments in the BLM portion of the Monument on harsh or degraded sites where they are needed to structurally mimic the natural plant community and prevent soil loss and invasion by exotic annual grasses and noxious weeds. The species used would be those that have the highest probability of establishment on these sites without invading surrounding areas. These “placeholders” would maintain the area for future native restoration. Native seed would be used more frequently and at larger scales as species adapted to the local area become available.

- All prescribed fire treatment areas would be rested from livestock grazing for a minimum of two growing seasons or until vegetation establishment and resource objectives are achieved, including soil stability and desired vegetation cover, or as defined in site-specific plans.

- Cultural resource inventories/surveys will be completed prior to implementing site-specific restoration projects.

- Dozer blading should not occur within 300 feet of known historic trails and cultural sites.

- No dozer blading should occur within 300 feet of perennial streams. Buffer zones greater than 300 feet are preferable.

- Within WSAs and the Pristine Zone, vegetation treatment activities should follow BLM Manual H-8550-1, Interim Policy for Lands Under Wilderness Review.

- All restoration treatments in areas supporting threatened and endangered species would be
conducted in consultation with the USFWS.

- From February 1 through August 15, restrictions may be imposed on restoration treatments in areas supporting nesting raptors. Treatment proposals would be coordinated with IDFG.
- Restoration treatments proposed in areas supporting sage-grouse would be coordinated with IDFG.
- Restoration treatments in areas supporting sage-grouse breeding habitat would be limited from March 1 through April 30, and grouse nesting habitat April 30 through June 15.
- Restoration treatments in areas supporting sage-grouse wintering habitats would be limited from December 1 through March 1.
- Sage-grouse Key and Source habitats would be maintained and enhanced when possible within Low- and Mid-Elevation Shrub types. Restoration treatments would generally be limited in habitats supporting live sagebrush communities. Treatments to enhance and restore habitat would be focused in areas where the sagebrush component is lost or dead and the understory degraded.
- Seasonal guidelines may be applied if needed to mitigate the impacts to big game species from planned restoration treatments (Table J-1).

<table>
<thead>
<tr>
<th>Table J-1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seasonal Big Game Guidelines for Restoration Treatments.</strong></td>
</tr>
<tr>
<td>Habitat</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>Crucial big game winter range</td>
</tr>
<tr>
<td>Elk calving area</td>
</tr>
<tr>
<td>Pronghorn and mule deer fawning ground</td>
</tr>
</tbody>
</table>

- Treatments would consider visual qualities to preserve the landscape character. Wherever possible, landscape modifications would replicate a natural line, form, color and texture found in the surrounding area. Treatments that result in long-term disruption of natural visual qualities (e.g., drill seeding that establishes vegetation rows) should be avoided or hidden by design.
- Treatments in developed or high-use recreation areas would be designed to minimize impacts to the recreational resource or users.
- All prescribed fire would be done in coordination with the Montana/Idaho Airshed Group Smoke Management Program.
- The economic effects of alternative fuels management practices should be considered. Local involvement and economic benefits from restoration projects will be promoted.

**Emergency Stabilization and Rehabilitation Protocols Common to All Alternatives**

- When conducting ESR actions on BLM lands, standard operating procedures outlined in the Normal Year Fire Rehabilitation Plan for the Shoshone and Burley Field offices (USDI BLM 2005) will be followed.
CONSULTATION AND AGENCY LETTERS RECEIVED ON THE DRAFT PLAN/EIS

This appendix includes copies of letters received as a result of government-to-government consultation with Tribes, consultation with the State Historic Preservation Officer, the U.S. Fish and Wildlife Service, and the Resource Advisory Council, as well as other letters received from state and local governments.

February 28, 2005

Craters of the Moon National Monument Planning Team
Bureau of Land Management
Shoshone Field Office
PO BOX 2-B
400 West F Street
Shoshone, ID 83352-1522

Jim Morris, Superintendent
Craters of the Moon National Monument
PO BOX 29
Arco, ID 83213

RE: CRATERS OF THE MOON RMP

The Shoshone-Bannock Tribes (Tribes) would like to thank the National Park Service (NPS) and the Bureau of Land Management (BLM) for continuing Tribal participation in the development of this Management Plan. The Shoshone-Bannock Tribes staff has met with Planning staff from both the BLM and the NPS, and submits the following comments.

After consideration of the four alternatives, the Alternative C is most protective is the environment, which is the preferred alternative by the Tribes. It may be more restrictive to all including Tribal members, but it does the most to protect the integrity of the ecosystem.

As a part of the ongoing consultation process, the BLM and NPS staff recently came to Fort Hall to review and discuss the DRAFT Management Plan/Environmental Impact Statement for the Craters of the Moon National Monument and Preserve.

Previously, the Tribal staff requested a written response to previous comments submitted; we have received that, and based from that letter and review of the DRAFT EIS, these additional comments are being submitted.
The Shoshone-Bannock Tribes have both reserved treaty rights to hunting, fishing and gathering off-reservation, and have the tribal traditional values and perspectives to protect, which includes NPS and BLM resources. As clearly stated in the November 15, 2000 Presidential Proclamation 7373, Boundary Enlargement of the Craters of the Moon National Monument, "nothing in this proclamation shall be deemed to enlarge or diminish the rights of any Indian tribe." Please clarify this in the section discussing the reserved rights of the Tribes.

General Comments:
Again, the Tribes request to include in your list of required laws and statutes that the federal agencies must follow, the consultation requirements for government to government consultation between the Tribes and BLM/NPS.

Please conduct a global check for correct spelling for the Shoshone-Bannock Tribes.

Additional signs or interpretative features needs to be developed to inform the public about resource protection.

Specific Comments:

What is the BLM and NPS definition of short and long term?

No mention of Tribal Scoping was made in the section discuss Scoping.

In the listing of Issues and concerns identified, even though the Tribes focused explicitly on the Tribes reserved Treaty rights, no mention was made of this in the Issues and Concerns.

Page 111, Chapter 3, American Indian Rights and Interests. As stated in the November 15, 1999 Presidential Proclamation 7373, Boundary Enlargement of the Craters of the Moon National Monument, Therefore include the this in the list of Planning Criteria.

Page 17, Environmental Justice. Please include the following statement: This area is important to the Shoshone-Bannock Tribes, whose members retain and exercise the right to hunt, fish and gather for subsistence purposes, in accordance with the Fort Bridger Treaty of 1868. Geographically, the physical boundary of the Fort Hall Reservation is not immediately adjacent to Craters of the Moon, but Tribal members do travel to public lands, including Craters and other BLM lands to exercise their rights off reservation. Environmental Justice is not determined by geographical distance; Shoshone-Bannock Tribes reserved rights are applicable to all unoccupied lands of the US.

Page 17, Carrying Capacity. The Tribes support the limited development of the Craters of the Moon area, emphasizing managing to achieve the desired resource conditions, rather than based on resource users.
Page 24, Management Guidance Common to all Alternatives. Include a statement of the Tribes Treaty rights and traditional cultural rights the Tribes retain, and that none of these alternatives will diminish these rights. We would like to have the agencies protect, restore and enhance, when necessary, throughout the alternatives for this plan. It will not be acceptable to have diminishment of any rights the Tribes retain, as a part of any Alternative.

Page 25, Vegetation. Regarding Fire, in all alternatives, the Tribes would like to see BLM/NPS management work to restore the natural fire regime. All of the Alternatives discuss full fire suppression outside of the pristine zone, which is where the majority of impacts will occur. Full fire suppression would allow for long term benefits to ethnographic resources, but can only see short term benefits for traditional use areas and the exercise of treaty rights because habitat would be allowed to reach a late seral stage and plants communities that are early seral stage would be lost; fire is important to the ecosystem.

Page 27, Cultural Resources, Archaeological and Historical Resources. We don’t want to limit the meetings with the Shoshone-Bannock Tribal staff and official Tribal government consultation to only those projects that may have an adverse impact. Add in the Management Actions, the following statement: Regular and periodic meetings will take place with the Shoshone-Bannock Tribes to discuss any impacts, both beneficial and adverse, to traditional cultural resources, including archeological resources.

Page 28, American Indian Rights and Interests (Resources, Resource and public land values, Treaty rights). Change this topic heading to read “American Indian Rights and Interests.” Delete resources, resource and public land values.

Page 28, American Indian Rights and Interests. Include in the Desired Future Conditions the desire to protect and enhance reserved rights under the 1868 Ft. Bridger Treaty between the Shoshone-Bannock Tribes and the US Government, for specific off reservation rights.

Page 28, American Indian Rights and Interests. Under the 3rd bullet, add the following clause to this sentence, “…..regarding their treatment, or as per official Shoshone-Bannock Tribes request.”

Page 28, Land Use and Transportation, Access and Travel. Please include the following statement. The agencies will work cooperatively with Tribal governments to ensure appropriate access to the Monument within the Monument.

Page 29, Lands and Realty. Provide a statement that any proposed Enhancement/Expansion of boundaries will not affect any rights reserved to the Shoshone-Bannock Tribes, nor result in diminishment of rights.
Page 29, Land and Realty. Provide in the Management Actions a statement to ensure Shoshone-Bannock Tribes official government consultation will occur for any land exchange, land disposal and land acquisitions.

Page 31, Visitor Experience, Interpretation/Visitor Understanding. In the Desired Future Conditions, insert a DFC for providing a greater understanding of Tribal perspectives of this area, and the importance Tribal members have had and continue to have for this unique area. Provide in the Management Actions, a bullet to ensure regular communication and cooperation with the Tribes for developing these interpretations.

Page 31, Recreation. Include in the DFCs the desire to provide improved ecosystem management to ensure recreationists are not compromising the natural and cultural resources. Also, the management plans, current and future plans, needs to have appropriate law enforcement by federal agencies.

Page 32, Social and economic conditions. Current and past land uses have impacted traditional and cultural values important to the Shoshone-Bannock Tribes. Traditions and ceremonies have been impacted from non-Indian activities. Tribal economics are impacted as the use of natural resources are important to provide subsistence uses for Tribal members. Shoshone-Bannock Tribes demographics must be included, including the unemployment rate (especially seasonal) to demonstrate the importance of subsistence hunting/fishing/gathering. This also includes the number of tribal members enrolled.

Page 33, Alternative A. Include a statement regarding the Tribes Treaty rights and cultural resources that have not been previously acknowledged as a part of any of the previous plans listed. The No Action Alternative provides little to no management actions for Treaty rights or cultural resources.

Provide equal consideration and evaluation of Tribal concerns for all the Alternatives, as required for all resources.

Page 52, No Hunting within the Monument. Please state the rights the Tribes retain under the Ft. Bridger Treaty for hunting, in this section.

Page 57, Cultural Resources. The Tribes needs to be included with cultural resource management activities, including land-modifying activity, inventories, surveys and any other activities, to ensure the highest standards of protectiveness for the resources.

Page 110, Archaeological and Historical Resources, 2nd paragraph. Revise the following sentence from, “Today it is known that Native Americans used this area much more than was originally believed,” to read as follows... “Today it is known that Native Americans used this area much more than was originally believed by archaeologists.”
Page 111, American Indian Rights and Interests, Ethnographic Resources. Replace the 2nd sentence with the following paragraph. “Based on Shoshone-Bannock Tribal ethnographic legends and information, Indians have traveled throughout the Salmon River Basin and the Snake River Basin, following subsistence resources based on the seasons. Some bands traveled to the Camas Prairie area to gather plants, others traveled to buffalo country, and other went to the Salmon and Snake rivers for fish. The different bands of Shoshone and Bannock all have their place names for specific areas and locations within this region, which includes the Craters area. Indians have always used the unique features of the Craters area for various uses, and continue to hold this area sacred and important.”

Page 111, American Indian Rights and Interests. 2nd paragraph, 3rd sentence. Revise the sentence to read as follows: “Article 4 of the Fort Bridger Treaty reserves the right to continue to hunt, fish, and gather traditional resources off reservation, on unoccupied lands of the United States. It also provides associative rights necessary to effectuate those rights on unoccupied lands. Unclaimed lands have been determined by case law to include Forest Service and BLM-administered lands. Please move this paragraph to the Treaty Rights section.”

Page 111, 3rd paragraph. Move this paragraph to the Treaty Rights section.

Page 112, Native American Traditional Use and Treaty Rights. Remove the first sentence. In the next sentence, delete the word “public;” use the word "unoccupied.”

Page 112, N/Am Traditional Use and Treaty Rights. 2nd paragraph. Do not include the discussion on IDFG when discussing Treaty rights. Include the following paragraph: The Shoshone-Bannock Tribes Fish & Game Department provides enforcement for Tribal members, under the 1975 Fish and Game Code, which set regulations for Tribal members to hunt and fish on and off reservation.

The whole discussion on hunting, paragraphs 3 and 4 should be deleted or moved to a different section dealing with non-Tribal members hunting. It is not applicable to this section.

Page 116, Livestock Grazing. Ensure that any grazing activities do not adversely impact Traditional native plants important to the Tribes. Regular meetings with the Tribes are necessary to ensure appropriate management is conducted for grazing purposes.

Page 133, Hunting. Do not attempt to quantify the hunting by Tribal members; delete the clause “very small amount of.”

Page 139, Social and Economic Conditions, Overview. Demographic information from the Tribes needs to be included in this section.
Page 147, Analysis Assumptions and Guidelines. What assumptions or guidelines were used to address Tribal Treaty rights and consultation obligations?

Page 195, Alternative A- “For the most part, Tribal treaty rights excised on adjacent federal lands outside the Monument would be consistent with those exercised in the expanded Monument and Preserve.” Strike out “For the most part.”

Page 197, Alternative B- “Tribal treaty rights exercised on adjacent federal lands outside the Monument would be mostly consistent with those exercised in the expanded Monument and Preserve.” Strike out “mostly”.

Page 198, Alternative C- Change the sentence as per previous comment.

Page 199, Alternative D- First sentence, “...resources from Alternative C...”; should be Alternative D.

Page 249, Consultation with Native American Tribes. Formal government to government consultation has been initiated with the Tribes, and will be completed between the appropriate Tribal decision-makers when the Plan is Final.

The Tribes look forward to continuing to work with your staff to develop these Management Plans for the Craters of the Moon National Monument and Preserve. If you have any further technical questions, please call Claudio Broncho at 238-239-4563 or email him at cbroncho@shoshonebannocktribes.com or Yvette Tuell at 208-239-4552 or email her at ytuell@shoshonebannocktribes.com.

Sincerely,

Nancy Eschini Murillo, Chairwoman
Fort Hall Business Council
Shoshone-Bannock Tribes

CC: Chad Colter, Shoshone-Bannock Tribes
Claudeo Broncho, Shoshone-Bannock Tribes
Yvette Tuell, Shoshone-Bannock Tribes
Carolyn Smith, Shoshone-Bannock Tribes
Land Use Policy Commission (3)
File
January 20, 2005

Rick Vandervoot, Monument Manager, (BLM)
James A. Morris, Superintendent CMO, (NPS)

Dear Rick and Jim,

Re-Twin Falls District BLM-RAC comments on Craters of the Moon National Monument.

We’re a new RAC; however, some of our members have transferred from the USRD RAC and have followed and participated in the planning process from the beginning. Our new members offer a fresh perspective, thus we offer some observations.

We believe the Management Plan represents a reasonable compromise. We are pleased the process that produced the plan encouraged public involvement, and preferences expressed by the public were not ignored. We recall that many Idahoans reacted negatively to the Presidential Proclamation of November 2000. Providing citizens with the opportunity to shape “The Monument” has begun to restore the public’s trust. An unexpected bonus is co-management by NPS and BLM. For two agencies with different goals and direction to come together and jointly plan and combine their respective expertise is remarkable and commendable.

A member of our sub-group participated in the “Choosing by Advantage” process in selecting the Preferred Alternative. While we recognize no alternative will please everyone and perhaps no one is pleased with every aspect of any plan, we believe the plan is responsive to the Proclamation and to the needs of those citizens most likely to suffer economic hardship due to new rules.

As we studied the Draft Management Plan/EIS, some RAC members noted how complex and sometimes overlapping existing environmental regulations have become. For example, the information submitted by the U.S. Environmental Protection Agency was detailed and specific. It was observed by some RAC members that current land use law allows federal land use managers little latitude in decision making.

In reviewing comments from the public, we noted respondents proximity to the area seemed to influence their response; with those living closer desiring more flexibility and those living farther away more concerned with preservation. We hope the plan and its implementation can accomplish the best of both.

In summary, we believe the plan was developed using sound methodology and procedure. It reflects citizen input within the spirit of the Proclamation. Continued citizen involvement is desirable and necessary over the life of the plan.

Sincerely,

Kelly Adams, Chairman
Twin Falls District BLM-RAC
Memorandum

To: Craters of the Moon National Monument Manager, Bureau of Land Management, Shoshone Field Office, Shoshone, Idaho

From: Supervisor, Fish and Wildlife Service, Eastern Idaho Field Office, Chubbuck, Idaho

Subject: Endangered Species Act Section 7 Consultation for the Craters of the Moon Land Use Plan – Concurrency File # 1035.0150 OALS # 1-05-1-0088

This letter transmits the Fish and Wildlife Service’s (Service) concurrence on determinations for listed species as documented in the Biological Assessment of the Effects of the Craters of the Moon National Monument and Preserve Land Use Plan (Assessment). In a letter dated December 17, 2004, and received by the Service on December 29, 2004, the Bureau of Land Management (Bureau) requested concurrence with effects determinations under section 7 of the Endangered Species Act (Act) of 1973, as amended, that the proposed Craters of the Moon National Monument (Craters Monument) Land Use Plan (LUP) may affect, but is not likely to adversely affect gray wolves (Canis lupus).

In 1994 the Service published a Notice of Availability in the Federal Register concerning the reintroduction of gray wolves into Idaho, Montana, and Wyoming. In 1995 and 1996 wolves designated as nonessential experimental populations were reintroduced into central Idaho and the Greater Yellowstone Area. Within the central Idaho area, the nonessential experimental population areas are those portions of Idaho south of Interstate Highway 90 and west of Interstate Highway 15. The portion of the gray wolf Yellowstone Management Area in Idaho (that portion in Idaho east of Interstate Highway 15) also is designated as a nonessential experimental population area. However, Section 10j of the Act requires that any nonessential experimental population located within a National Park System or National Wildlife Refuge System unit is treated as a threatened species (whereby standard consultations are conducted). Because portions of the Craters Monument are managed by the National Park Service (NPS), standard consultation procedures for the Craters Monument LUP are being conducted for gray wolves.
The proposed action is to implement a LUP (combined Bureau Resource Management Plan and NPS General Management Plan). The LUP would include: 1) rehabilitation of up to 80,000 acres of degraded sagebrush-steppe habitat; 2) identification of use intensity areas or management zones to guide long-term management goals; 3) the designation of roads; 4) the utilization of rangeland health standards and guidelines to achieve a healthy range ecosystem; and 5) the general protection of resource qualities for which the Monument was designated.

Based on the information provided in the Assessment, the Craters LUP meeting I attended on September 23, 2004, and several conversations I had with Paul McIain of your office, we concur that the proposed Craters Monument LUP may affect, but is not likely to adversely affect gray wolves.

This concludes informal consultation on the Craters Monument LUP under section 7 of the Act. If the proposal addressed in this letter is modified, environmental conditions change, or additional information becomes available regarding potential effects to listed species, you should verify that your conclusions are still valid.

Thank you for your continued interest in the conservation of threatened and endangered species. If you have any questions regarding the above Service comments, please contact Sandi Arena of this office at 208-237-6975 x 34.

ce: NPS, Arco (Morris)
Mr. Rick Vander Voet  
Bureau of Land Management  
Shoshone Field Office  
400 West F Street  
Shoshone, Idaho 83352

RE: Craters of the Moon National Monument and Preserve (Monument) Draft Environmental Impact Statement (EIS) and Management Plan (Plan) for Craters

Thank you for requesting our views on the Draft EIS and Management Plan for Craters of the Moon National Monument. Our comments on the document are provided below:

1. Page 110, Prehistoric and Historic Sites: The first sentence in this section states that there are 346 known, recorded cultural resources in the Monument. According to our records, 1149 archaeological sites have been recorded within the Monument.

2. pp. 193-194: While we are not opposed to Alternative #4, we question the statement at the bottom of p. 193 and top of p. 194 that begins with: “Because there would be no major adverse impacts on a resource or value whose conservation is...” We wonder how the NPS and BLM can make this statement when so little is known about the number and nature of sites within the monument (only 5% of the Monument has been surveyed), and the effects of increased visitor use. This, coupled with insufficient professional staff to monitor effects and identify historic properties, leaves much to be learned about the fate of Monument’s cultural resources.

3. Outfitters and guides should receive some training in cultural resource laws and ethics.

The Idaho State Historical Society is an Equal Opportunity Employer.
Comments from the Idaho SHPO
May 17, 2004
page 2

4. Finally, we are pleased to learn that, under Alternative 4, the National Park Service (NPS) and Bureau of Land Management (BLM) plan to support a Section 110 program at the Monument that will include on-going Section 110 survey, public education, interpretation, monitoring, and the preparation of a Cultural Resource Management Plan. As you know, however, the BLM has two archaeologists for the entire Shoshone, Idaho Falls, and Pocatello districts; the National Park Service has no archaeologists in southern Idaho. With such limited staff and so many acres, we question how your agencies can fulfill the cultural resource commitments of Alternative 4 without additional professional staff. We urge you to include as part of this GMP and EIS a parallel commitment to hire the professional staff needed to implement this program and fulfill the obligations outlined in this document.

We appreciate your cooperation. If you have any questions, please feel free to contact me at 208-334-3847.

Sincerely,

[Signature]

Susan Pengilly Neitzel
Deputy SHPO and
Compliance Coordinator

cc: Lisa Cresswell, BLM
    John Apel, NPS
    Stephanie Toothman, NPS
    Stan McDonald, BLM
    Dick Hill, BLM
Memorandum

To: Craters of the Moon National Monument Planning Team (Attn: Barbara Bassler), Shoshone Field Office, Bureau of Land Management, 400 West F Street, Shoshone, Idaho 83352

From: Supervisor, Eastern Idaho Field Office, Fish and Wildlife Service, Chubbuck, Idaho


File #1035.0150 FWS #1-4-04-0183

The U.S. Fish and Wildlife Service (Service) has reviewed the Bureau of Land Management (BLM) and National Park Service’s (NPS) Craters of the Moon National Monument and Preserve (Monument) Draft Management Plan and Environmental Impact Statement (DEIS). The following comments are offered for your use and consideration:

General Comments

With regard to the alternatives presently under consideration in the DEIS, the Service supports selection of Alternative C as the preferred alternative. The Service believes that Alternative C, as it reads presently, meets the goals of the Monument more closely than does the stated preferred alternative, Alternative D.

Restoration of native plant communities, protection of soils, and protection and restoration of sage grouse habitat have all been identified as objectives in this DEIS. Even though livestock grazing and its associated activities (road development, introduction of invasive species, plantings of non-native forage, habitat fragmentation due to fencing) have been consistently identified as impacts in the DEIS, no alternative provides BLM the tools to reduce the numbers and/or change the timing and movement of livestock within the Monument in order to meet the goals presented in this document. On page 52, the DEIS states that elimination of livestock was
not considered in any of the alternatives because a "no grazing" alternative would not be consistent with the language in Proclamation 7373 (Federal Register, v.65 pp 69221). Nonetheless, the proclamation states that livestock grazing will continue to be managed in a way that is consistent with BLM regulations and policy. BLM policy and regulations certainly allow for removal and/or reduction of livestock to meet management objectives.

The Service is specifically identifying grazing as a concern because a number of allotments within the Monument are not meeting standards at this time. The Service is not necessarily endorsing an alternative that proposes the elimination of livestock grazing, we are merely stating that as a document of disclosure and public review, the range of alternatives should include possible modifications to a land use (grazing) that can have profound impacts on the very resources the BLM and NPS have identified as priorities. We strongly recommend that an alternative be developed and considered that would provide the BLM with the tool of modifying livestock numbers and distribution, as necessary, to meet management objectives.

We believe that implementation of Alternative C will result in more acreage of restored sagebrush steppe community than is reported, and perhaps as much as Alternative D. The removal of trails and roads, and other limitations on disturbance in the pristine areas should result in passive restoration of those areas. The Service recommends that the final document estimate the number of acres that will be improved in all alternatives due to natural recovery.

Alternative D’s proposed maintenance and reclassification of roads, and the planting of non-native forage could retard recovery of native plant communities needed by sage grouse and other sage-obligate species. The DEIS has identified improved roads and the establishment and spread of non-native plant species as impacts to the system and yet has chosen an alternative that facilitates those actions more than other alternative(s). The maintenance of roads for the purposes of administrative and fire suppression will only facilitate the use of these roads by the public. This is a reoccurring process throughout the west that has shown to expedite the spread of noxious weeds and increase the frequency of man-made fires.

The Service recommends that pygmy rabbit populations and their potential habitat within the Monument be identified and each alternative be assessed for its potential impact on pygmy rabbit populations. This sagebrush obligate species is identified by the BLM as a sensitive species and by the Idaho Fish and Game as a game species of special concern. Many public lands activities could have negative impacts on pygmy rabbits and their habitat, including off highway travel, hunting, fire (both prescribed and wildfire), livestock grazing, and pesticide use. In particular, we suggest that proposed fire projects be scrutinized carefully with regard to the potential for impacts to this species. Pygmy rabbits are reluctant dispersers and do not do well over large
fragmented habitats. The timing, shape, size and juxtaposition of a fire footprint on the landscape are important considerations when managing for pygmy rabbits.

The Service recommends that the final document identify where the areas to be restored are located in relation to areas of sage grouse habitat, cattle allotments that are or are not meeting standards, healthy seed source areas for sagebrush and associated native vegetation, pygmy rabbit habitat, and habitat for neo-tropical migrant birds that are obligate to certain stand densities (often different from sage grouse needs) such as sage sparrow, Brewer's sparrow, and sage thrasher. This is necessary information to disclose in order for the public and interested agencies to assess the impacts the different alternatives may have on “public trust” resources.

It is unclear why some of the goals identified under Alternative D are not common to all alternatives. These include control of public access to caves and other geological features that are experiencing recreation-related damage, promotion of off-site partnerships for Monument education and interpretation, encouraging commercial outfitters/guides to offer varying experiences, emphasizing safety and protection at access points, and expanding education at off-site locations. We see no reason why these should not be goals common to all alternatives.

The Service recommends that the preferred alternative include the designation of Laidlaw Park as an Area of Critical Environmental Concern (ACEC). ACECs include public lands where special management attention and direction is needed to protect and prevent irreversible damage to important historic, cultural, and scenic values, fish, or wildlife resources or other natural systems or processes; or to protect human life and safety from natural hazards. ACEC designation indicates that the management agency recognizes the significant values of the area and intends to implement management to protect and enhance the resource values. We understand that all ACEC’s are considered land use authorization avoidance areas as they are known to contain resource values that will pose special constraints for and possibly denial of applications for land uses that can not be designed to be compatible with the management objectives and prescriptions for the ACEC.

If the preferred alternative does include designation of Laidlaw Park as an ACEC, then the Service recommends the final document include management objectives and prescriptions to implement a resource management regime for Laidlaw Park’s unique vegetative features.

**Specific Comments**

Page 45 - Alternative C; Access and Travel; Management Actions: It would be useful if the document identifies the roads that would be converted for this and the other alternatives. This is important for assessing road impacts to sensitive species such as pygmy rabbits and sage grouse, as well as other species of interest.

Page 46 - Alternative C; We suggest that “no new livestock developments in the proposed Laidlaw Park ACEC” may be too restrictive. If this alternative were chosen and the BLM subsequently finds that moving livestock facilities to a new location within the proposed ACEC
would be beneficial to wildlife and native plant communities, they would be unable proceed because of this restriction. If the absolute number of developments in the proposed ACEC is the issue, we recommend that the statement read “no net increase of livestock developments or the acreage they impact and no new developments unless it results in a net benefit to those resources identified as needing improvement or protection.” This would allow moving fence and water developments to new locations if it resulted in a net gain in overall plant community health in Laidlaw Park.

Page 49 - Alternative D; Vegetation; Management Actions, 2nd bullet: It is unclear how active restoration/rehabilitation of 80,000 acres of annual grassland and low elevation sagebrush steppe will impact use of livestock allotments in those areas being treated. Livestock allotted to areas being treated by fire and other mechanisms (mechanical, chemical) will need to go elsewhere in many cases. The Service recommends that the final document disclose the destination of displaced livestock, what success criteria will need to be met before they can be placed back on the treated allotment, whether or not other BLM allotments will be used to support the displaced livestock, or what contingency plans will be in place if the treated areas do not meet success criteria within the predicted time frame. These nuances are very important when assessing the utility of an action or an alternative that calls for a particular prescription.

Page 49 - Alternative D, Vegetation; Management Actions, 6th bullet: The statement suggests that there are objectives that would conflict with wildland fire other than life and property protection and that these objectives are known and prioritized. We recommend these be identified and their priority justified in the final document. The reader cannot judge the applicability or utility of a management action without this knowledge.

Page 50 - Alternative D; Access and Travel; Management Actions: bullets 1, 3, and 5: These actions will facilitate habitat degradation, fire frequency, noxious weed infestation, vandalism and theft of cultural and geological resources by allowing better and more frequent motorized access to these areas. Proclamation 7373 specifically sets aside these lands “for the purpose of protecting the objects identified above (lava flows, kipukas, natural landscapes).” The Service believes that access should not take precedence over the integrity and health of lands identified in the proclamation. We suggest that Class C and D roads and temporary roads could accommodate the management activities proposed in all alternatives.

Page 55 - Environmentally Preferred Alternative: The Service has concerns with the statement that Alternative D best meets the definition of the Environmentally Preferred Alternative. The proposed reclassification and maintenance of roads conflicts with Section 101 of the National Environmental Policy Act (NEPA) which burdens the federal government to “Preserve important
historical, cultural and natural aspects of our natural heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice."

Several allotments, including the proposed ACEC in Laidlaw Park, are not meeting rangeland health standards. All of the alternatives, including Alternative D, do not provide the tool of reducing or eliminating livestock grazing, whether temporary or permanent, in areas not attaining standards.

The document states (on Page 55, first column, second paragraph) that Alternative D does not expand or upgrade routes within the Monument. This conflicts with statements made on pages 43, 49, 50, 61, 68, 69, and 70. Overall number of roads and miles of roads do not change markedly between Alternative C and D, but the classifications of the zones within which these roads are located change dramatically between these two alternatives. Alternative D appears to have a lower number of road-miles in Primitive Zones, but that is because the size of these zones is reduced in this alternative. The Pristine Zone of Alternative D has 100,000 fewer acres than that of Alternative C and the Passage Zone in Alternative D is 3 times the size of the Passage Zone in Alternative C.

It is our opinion that the alternative identified to best meet national environmental goals would be the one that maintains and protects the integrity of the largest section of landscape. As currently written, Alternative C provides this best. However, we see the opportunity to modify either Alternative C or D to incorporate the best actions under both alternatives.

Page 59 - Natural Resources; Alternative B, C, and D: The rationale for different target acreages between alternatives is unclear. In addition, it is unclear what the differences are between Alternative C and D in the last row of the table.

Page 67 - Table 8; Summary of Impacts; Geological Resources: The Service believes that the maintenance and improvement of roads, along with the reduction of acres in the Pristine Zone, would result in an increase of damage from visitors and would compromise restoration efforts, contrary to the statement made herein.

Page 68 - Table 8; Summary of Impacts; Vegetation and Fire Management: Although less active restoration (in acres) would be realized in Alternative C, more passive restoration would be realized by the reduction of access and motorized activities. The rate of restoration may be slower in some areas but higher in others because of the lack of disturbances such as mechanized activities, planting of non-native forage species, and reduced probability of human-induced fire. This would result in a larger area of restored ecosystem, even if it takes a longer period of time. There would be less opportunity for noxious weed management in Alternative C, but there should be less need for it as well. Many of the restoration activities outlined in Alternative D will need to be applied repeatedly because of ongoing activities that facilitate weed introduction
and spread, poor soil conditions, unnatural plant community composition, and continued degradation of resources by continued and/or increased public access to sensitive areas.

Page 70 - Land Use and Transportation; Travel And Access: Alternative C identifies “minor adverse impacts on travel from visitors using lower standard roads.” Alternative D carries this same potential yet it is not identified there.

Page 70 - Land Use and Transportation; Livestock Grazing: It states that Alternative D would involve the largest acreage identified for restoration. This may not be true if the acreage passively restored by Pristine Zone designation is considered in Alternative C.

Page 71 - Special Designation Areas: Under Alternatives C and D, it is stated that livestock impacts “could be moderate in some local areas where livestock concentrate”. This statement is inaccurate. The DEIS identifies Laidlaw Park as being an area where grazing standards are not being met (DEIS Page 120). This conveys more than a “moderate impact” and if monitoring is being done correctly, the failure to meet standards is indicative of the whole allotment and not just “where livestock concentrate”.

Page 73 - Visitor Experience; Recreation and Public Safety; All Alternatives: It is unclear how ongoing livestock operations can result in “long-term negligible to minor beneficial effects”. The document does not describe how livestock grazing can be beneficial to recreation and public safety, it merely states it. We recommend the final document provide the information to support this statement.

Page 120 - Affected environment; Livestock Grazing: It is stated that grazing preference is not expected to change because most allotments are attaining or making progress toward uniform achievement. Table 16 indicates otherwise. Standards and guidelines have been applied to 14 of the 23 allotments. Table 16 indicates that standards were not met for 5 out of 13 allotments or, one out of three allotments is not meeting standards. In addition, the allotments that are not meeting standards (376,000 acres) contain 40,000 more acres than those meeting standards (336,000 acres). The Service recommends that the final document address whether the allotments not meeting standards were in areas important for sage grouse, pygmy rabbits, and neo-tropical migrants. We also recommend that, if grazing preference is not expected to change, the rationale for this decision be described.

Page 167 - Affected Environment; Impacts from Alternative C: It is stated that a decrease in access would occur under this alternative. We do not believe that this is entirely accurate. There would be a decrease in motorized access, but access from foot or pack animal would remain the same. Legal access to a given area is not being altered, only the means by which an area can be accessed.
Page 249 – Consultation with the U.S. Fish and Wildlife Service. We recommend that the last sentence of the paragraph be changed to read: “Informal consultation with USFWS...” Informal consultation is an optional process that includes all discussions, etc., between the agencies to assist the Federal action agency in determining whether formal consultation is required.

Page 337 - Appendix G Proposed Laidlaw Park ACEC: The document states that ACEC designation may not be necessary because “current management, regulation, and law provide sufficient protection for the values identified.” Given that Laidlaw Park is unique and valuable because of its plant community, the Service recommends it be provided the protection given by ACEC designation and the prioritization of resource conservation it affords.

Summary

In summary, the Service believes that Alternative C meets the goals of the Monument more than the Preferred Alternative (D). This may be due, in part, to the abstract nature in which the restoration and road management goals for Alternative C and D were presented. Clarification of where, how, and to what extent restoration will be conducted, which roads are to be reclassified, how access would be controlled on roads intended only for administrative use, how restoration activities will be mitigated in terms of vegetative disturbance, road maintenance, invasive weed management, and displaced livestock distribution, may lead us to re-evaluate the utility of Alternative D as the Preferred Alternative.

The Service recommends that Laidlaw Park be designated as an ACEC. We also recommend that the preferred alternative provide BLM the tools that would allow for a change in livestock management, if necessary, to retain the qualities of Laidlaw Park that make it worthy of protection.

Finally, we recommend that a more thorough analysis of the impacts to sage grouse and pygmy rabbits be conducted in order to more accurately reflect potential impacts to these species.

Thank you for the opportunity to provide comments on this DEIS. If we can be of further assistance or if you have any questions, please feel free to contact Debbie Mignogna of the Service’s Eastern Idaho Field Office, 4425 Burley Drive, Suite A, Chubbuck, Idaho 83202 (208 237-6975x31).

cc: Craters of the Moon NP (Attn: J. Apel)
FWS, Boise, ID (Attn: M. Robertson)
IDFG, Jerome, ID
EPA, Boise
Reply To
Attn Or: ECO-088

Rick VanderVoet, Monument Manager
Craters of the Moon National Monument Planning Team
BLM Shoshone Field Office
400 West F Street
Shoshone, ID 83352

James Morris, CRMOS Superintendent
National Park Service
PO Box 29
Arco, ID 83213

Dear Mr. VanderVoet and Mr. Morris:

The U.S. Environmental Protection Agency (EPA) has completed its review of the draft Environmental Impact Statement (DEIS) for the Craters of the Moon National Monument and Preserve Draft Management Plan (CEQ No. 040188) in accordance with our authorities and responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

The DEIS evaluates four (4) alternatives regarding the co-management of the national monument for the next 15 to 20 years by both the Bureau of Land Management (BLM) and the National Park Service (NPS). The monument includes areas for recreational opportunities, visitor information, natural and cultural resources, and grazing. The alternatives evaluated are Alternative A is the no action alternative; Alternative B emphasizes on a broad array of visitor experiences; Alternative C emphasizes the monument’s primitive character, and Alternative D emphasizes protection and restoration of physical and biological resources and processes. The DEIS identifies Alternative D as the agencies' Preferred Alternative.

EPA supports the revision of current management to encourage desired conditions in the monument and better collaboration among agencies and partnerships outside the monument in order to facilitate education for visitors. Consequently, EPA has rated the Preferred Alternative LO – Lack of Objections. This rating and a summary of our comments will be published in the Federal Register. A summary of the rating system we used in our evaluation of the draft EIS is enclosed.
The document provides sufficient information regarding issues of concern brought up during scoping and clear figures related to each alternative. However, EPA recommends including additional information in the EIS regarding cultural resources and water resources impacts.

The EIS discusses cultural resources and the consultation that occurred and that long term cultural resource impacts would not occur. EPA recommends further discussing specific issues that were identified by tribes in the consultation process and how any issues would be addressed. This will assist the public in understanding how the consultation process affects management decisions for not only Section 106 of the National Historic Preservation Act identified resources, but also tribal resources related to traditional sites, sacred sites, travel routes, and traditional hunting.

The monument area is inherently dry and the limited supply of water and water quality are a critical element for sustainability of wildlife and other natural resources, which is a component of the carrying capacity (a character used by the NPS for ensuring no excessive damage to the environment) of the area as discussed in the EIS. The EIS discusses that Alternative D “could accommodate more livestock water developments” and that if these are developed than water quality in playas could be impacted. EPA supports long term water quality and protection of playas and all other water resources in the area. EPA recommends further discussing what measures will be taken to ensure that grazing will not adversely impact water resources, how this will be monitored, and how management direction will be adapted.

If you would like to discuss these issues, please contact me at (206) 553-6911 or Lynne McWhorter of my staff at (206) 553-0205. Thank you for the opportunity to provide comments.

Sincerely,

[Signature]

Judith Lecrone, Lee Manager
Geographic Implementation Unit

Enclosure
Appendices: APPENDIX K 489
MEMORANDUM

To: Craters of the Moon National Monument Planning Team
   Bureau of Land Management
   Shoshone, Idaho

From: James F. Devine
      Senior Advisor for Science Applications

Subject: Review of Draft Management Plan Environmental Impact Statement for
         the Craters of the Moon National Monument and Preserve

As requested by your correspondence of May 11, 2004, the U.S. Geological Survey
(USGS) has reviewed the subject Draft Environmental Impact Statement (DEIS) and
offers the following comments.

SPECIFIC COMMENTS:

Page 172, Chapter 4 Environmental Consequences, Section Water Resources, Section
Impacts from Alternative A, Section Analysis, second column, second full paragraph,
second sentence:

This document states that because of the short seasonal periods during which standing
water is present in playas, the impacts of livestock use -- contamination with fecal
coliform and nutrients from manure deposits -- are negated by the eventual disappearance
of surface water. Disappearance of water does not negate the problem, because although
the water may not be present year-round, nutrient sources (deposited feces) could remain
until the following wet season allows them to remobilize. The USGS recommends the
statement be modified to remove the word "negated."

Thank you for the opportunity to review and comment on this DEIS.
May 21, 2004

Craters of the Moon Planning Team  
Shoshone BLM Field Office  
400 West "F" St.  
Shoshone, Idaho 83352

Gentlemen:

When Secretary of the Interior Babbitt held hearings in Rupert he assured us that the Arco-Minizdoka route would be a component of the Monument/Preserve.

After reviewing your draft plan, it would appear to be important that the Alternative (D) should include parts of options in Alternative (B).

The entire Arco-Minizdoka road as a "passage" route and Carey-Kimama as a "passage" route are important to the people wanting to go through the Monument/Preserve and to have that as an alternative to reaching the National Park Service Visitor Center.

I farm next to the Carey-Kimama road, and I am amazed at the number of vehicles using the road for recreation, hunting and maintaining grazing allotments. It is not unusual to help people retrieve their vehicles from this road.

The public policy has been made that this would be a Monument/Preserve to be used by the public. In order for this to be accomplished, it is imperative that people have adequately maintained roads. People’s expectations are that they can use this public land and that requires maintained roads.

I appreciate your consideration of these important issues as you continue to develop the Management Plan.

Thank You.

Sincerely,

JULY 26, 2004

Craters of the Moon National Monument Planning Team
Shoshone Field Office, BLM
400 West F Street
Shoshone, ID 83352-1522

RE: Craters Draft Management Plan/EIS

Dear Mr. Morris and Mr. Vander Voet:

We reviewed the Craters of the Moon National Monument and Preserve Draft Management Plan and Environmental Impact Statement. The Idaho Department of Parks and Recreation has participated throughout the planning process and we look forward to working with both agencies on implementation of applicable portions of the plan.

The draft plan identifies Alternative D as the preferred alternative. This alternative would emphasize aggressive restoration of the sagebrush steppe community, including noxious weed control and fire management. It also emphasizes commercial service and off-site visitor opportunities.

The Monument is a relatively unknown place for many Idaho citizens and visitors. With Idaho's rapidly growing population and growing participation rates in outdoor recreation, it will only be a matter of time before the Monument becomes more well known. Any action alternative needs to be responsive to visitor's needs and demands. We believe that Alternative D can be responsive to those needs and demands.

We had the opportunity to review the internal draft this past winter. We greatly appreciate the opportunity and would like to say that the planning team did an excellent job of addressing our concerns and comments.

We offer the following comments to improve the final management plan and environmental impact statement.

In the Introduction on Page 3, the plan states that Craters of the Moon National Monument was the first national park site in Idaho. According to BLM Land Status records approximately 37,130 acres of Yellowstone National Park is in Idaho. We recommend that the sentence be rewritten to "Craters of the Moon National Monument, the first national monument in Idaho, was established on May 2, 1924."

We were pleased to see in Chapter 2, Page 31; one of the Management Actions utilizes the Idaho State Comprehensive Outdoor Recreation and Tourism Plan and the Idaho Outdoor Recreation Demand Assessment. We are in the process of updating the plan and expect to have a final copy available by December 2005.

In Chapter 2, Page 32, another Management Action states that an intergovernmental coordinating group would be considered to ensure consistency
Craters Draft Management Plan/EIS Comment
July 28, 2004
Page 2

of this plan with other state and local plans. Section 202 (f) and Section 309 (e) of
the Federal Lands Policy Management Act (FLPMA) provides that Federal, State,
and local governments and the public be given adequate public notice and
opportunity to comment on the formulation of standards and criteria for, and to
participate in, the preparation and execution of plans and programs for the
management of public lands. The establishment of such a group would help with
this requirement.

In Alternative E, in Chapter 2, Page 30, one of the management actions states,
"Selected Class D roads in the Primitive and Pristine zones could be converted to
trails or closed for resource protection." Table 5 identifies that 167 miles of these
roads are within primitive and pristine zones. The pristine zone concept is
inconsistent with roads in these areas, so 9 miles of roads within the pristine zone
can be either closed or converted to non-motorized trails.

The public should clearly understand the inconsistency between pristine areas and
roads in the final plan. If a primitive road in primitive area needs to remain on the
system because of management access or public access, then the area surrounding
the road should be reclassified to primitive status to resolve the inconsistency.

In Chapter 4, Page 151 the draft covers the Lost River Off-Highway Vehicle
Management Demonstration Project. The draft states "IDPR is seeking
exemptions from licensing and insurance requirements for off-highway vehicle
(OHV) travel on county roads and for crossing US 93." We are not seeking an
exemption from insurance requirements under this proposal. Idaho Code 49-426
allows counties and highway district to exempt certain roads from the license
plate requirements. It does not allow those counties to exempt roads from
insurance requirements. The sentence needs to be reworded to read "IDPR is
seeking an exemption from licensing requirements for off-highway (OHV) travel
on county roads and for crossing US 93."

In conclusion, we believe that the planning team addressed our concerns with the
previous internal draft. The team has done a great job in providing a reading draft
document. We look forward to working with the BLM and NPS on
implementation of this plan in the future. If you have any questions about our
comments, contact Jeff Cook, Outdoor Recreation Analyst at (208) 334-4180 ext.
230.

Sincerely,

Rick Just, Coordinator
Outdoor Recreation Data Center

Appendices: APPENDIX K 493
Craters of the Moon National Monument Planning Team
Rick Vanderdoet
BLM Shoshone Field Office
400 West F Street
Shoshone, Idaho 83352-1522

Dear Mr. Vanderdoet:

The Idaho Department of Agriculture (ISDA) appreciates the opportunity to review and comment on the Craters of the Moon National Monument and Preserve, Draft Management Plan/Environmental Impact Statement (Draft EIS/plan). The planning team (the team) has obviously put much time and effort into developing a plan that will comply with the intent of the Presidential Proclamation to preserve the wonders of the monument area, while providing for continued use and enjoyment of the resources. The majority of the comments provided on the Draft EIS are directed at the preferred alternative (Alternative D). While this alternative is a compromise between the recreation and the preservation emphasis alternatives, we would like to point out a few items that may strengthen the overall content of the plan.

First, ISDA would like to commend the planning team on the efforts made to continue resource protection, while providing for continued livestock use throughout the majority of the area. As stated in the proclamation, “The establishment of this monument is subject to valid existing rights” and that, “Laws, regulations, and policies set by the Bureau of Land Management in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the monument administered by the Bureau of Land Management.” The number of grazing permits and active AUMs has remained intact in the area managed by the Bureau of Land Management (BLM). While this is critical to the continued viability of the livestock operations that depend on these areas for a portion of the yearlong forage requirements, it is just as critical that the permitees be able to access these areas for administrative purposes. Areas key to the success of rangeland grazing operations include water sources, salt and mineral distribution sites, and other facilities used throughout the grazing season. Access to these areas must be included as an administrative term of the grazing permit.

ISDA appreciates the planning team's recognition of the importance of noxious weed management. Noxious weeds are one of the most devastating forces occurring on our rangelands today. The aggressive stance the team is taking on noxious weed control will pay dividends well into the future. Invasive annual plants are also a very destructive force found in this area. The planning team has also done a good job at recognizing the need to focus efforts to control the spread of these species throughout the monument. We encourage the team and subsequent managers to maintain a full spectrum of treatment options including prescribed grazing as a part of the ongoing fight against these invaders.

Constant monitoring is key to determining the success of any of our efforts. When planning monitoring activities, managers need to ensure that goals and objectives are clearly defined. The team needs to look at those desired future conditions identified throughout the Draft EIS and establish specific conditions that are required to assess the “vital signs” of ecosystem health (pg 24). The team must ensure the most appropriate scientifically sound methods are designated for use in the Monument.

“Serving consumers and agriculture by safeguarding the public, plants, animals and the environment through education and regulation”
The Draft EIS emphasizes the need to maintain soil protection to prevent "accelerated and unnatural erosion". While native species are important for a number of ecological reasons, including soil protection, many non-native perennial species are just as effective and much easier to establish in the face of annual grass competition in xeric soils types. ISDA strongly suggests that the team place a heavier emphasis on utilizing those plants that will afford the most soil stability and place less emphasis on whether the plants are native or non-native.

The aggressive restoration goals identified in the vegetation portion of Alternative D (pg 49) are very good goals, but these restoration activities should be closely coordinated with the affected permittees. One of the most environmentally sensitive methods of vegetation manipulation is the use of closely controlled prescriptive grazing. ISDA strongly suggests the team reword restrictive language in the document and maintain prescriptive grazing as a tool to achieve desired future conditions.

While livestock may impact resources, the impacts portrayed in the "Unavoidable Adverse Impacts" section (pg239) unnecessarily concentrate those associated with livestock. The "damage, theft, vandalism, foot-traffic, and other caused disturbances" associated with geologic resources also impact many other facets of the monument that are currently only attributed to livestock. Cultural resources are a prime example of finite resources damaged more extensively by direct human activity (theft or vandalism) than by livestock. ISDA strongly suggests that the team make a complete assessment of current and potential impacts to these resources by direct human activity in addition to those caused by livestock.

While it is true that removal of exposed lava flows will not appreciably reduce the available forage base for grazing permits, care should be taken to ensure that only those lands of truly exposed lava are removed from the grazing permits. ISDA supports the recommended adjustments to the boundary and jurisdictional changes proposed within Appendix C.

The nominated Laity Park ACEC, as shown in Appendix G, is not appropriate. The BLM has Standards for Rangeland Health and Guidelines for Livestock Management that provide for the attainment of rangeland health while still providing for utilization to benefit the operations of local ranchers. The designation of this area calls for additional protection that is not necessary and would limit the availability of many management tools currently used by resource managers and users.

ISDA thanks you for the opportunity to comment on this important draft environmental impact statement. By working together we can make this a better plan for the direction of our natural resources and the administration of the National Monument.

Sincerely,

[Signature]

John Chattle
Deputy Administrator
Division of Animal Industries
ISDA
Craters of the Moon National Monument
Planning Team
Bureau of Land Management
P.O. Box 2-B
400 West F Street
Shoshone, Idaho 83352-1522

Dear Planning Team,

The Idaho Department of Fish and Game (IDFG) has reviewed the Draft Management Plan/Environmental Impact Statement (DEIS) for the Craters of the Moon National Monument and Preserve (Monument). The Monument encompasses 739,682 acres of public land located on the Snake River Plain of southern Idaho. We offer the following comments for your consideration.

In general, the IDFG supports the management direction outlined in the DEIS. The preferred alternative calls for aggressive restoration efforts on degraded sagebrush-steppe communities. As the document correctly states, there has been substantial loss and degradation of these communities throughout southern Idaho and we believe the restoration efforts promulgated under the preferred alternative will significantly improve the condition of the targeted areas. In addition, the restoration efforts will provide for large-scale testing of restoration methods, which will allow evaluation of the most effective methods/techniques to use under a variety of circumstances. This in turn will improve the efficacy of future restoration efforts on degraded sage-steppe habitats throughout southern Idaho.

We are however, concerned regarding the status of livestock grazing management within the Monument and the lack of analysis in the DEIS. The Laidlaw Park portion of the Monument maintains one of the last remaining large, contiguous blocks of low elevation sagebrush habitat in the area administered by the BLM’s Shoshone Field Office. This area provides critical breeding, brood rearing, and winter habitat for sage-grouse and other sagebrush dependent wildlife. In addition, the allotment provides important seasonal habitat for pronghorn and elk and important transition range for migrating mule deer. Improper grazing management can constitute a significant impact to vegetation resources and subsequent wildlife habitat. Alteration of plant community structure, species diversity, and plant abundance can impact the availability of food and cover resources for wildlife. In addition, grazing livestock and associated operations can displace wildlife from seasonally important habitats including breeding and nesting habitat and winter range. We recognize grazing has historically occurred within the Monument expansion since post settlement by pioneers. Further, we acknowledge the administrative rationale to address grazing management on the Monument through the BLM’s
Standards and Guidelines process. However, analysis relative to impacts of livestock grazing on wildlife resources and other features common to a visitor’s expectation should be reviewed in this EIS. In technical correspondence to BLM regarding the standards and guidelines assessment of the Laidlaw Park Allotment, we identified several wildlife related issues and provided management recommendations to address the needs of wildlife in the allotment (see attached). The assessment noted a general lack of species and structural diversity (forbs and large, perennial bunchgrasses) throughout the Laidlaw Park Allotment coupled with a widespread distribution and abundance of cheatgrass. To our knowledge, only one management guideline identified by the IDFG was incorporated in the final decision – prohibiting sheep bedding on active sage-grouse leks during the breeding season. As demonstrated in the assessment, livestock grazing has had a significant impact on vegetation resources within the Monument – suggesting a thorough analysis of impacts is warranted in the EIS. The new designation as a Monument provides an opportunity to examine past grazing practices and evaluate new alternative grazing management strategies that address the needs of important wildlife resources and better fit the Monument designation.

Thank you for the opportunity to provide comment. If you have any questions please contact Mike McDonald, Environmental Staff Biologist, at this office.

Sincerely,

[Signature]

David Parrish
Magic Valley Regional Supervisor

Cc: IDFG (NRPB)
ECc: IDFG (R4 staff)
September 16, 2002

Mr. Bill Baker  
Bureau of Land Management  
Shoshone Resource Area Office  
P.O. Box 2-B  
Shoshone, ID 83352-1522

RE: Laidlaw Park Allotment Assessment

Dear Bill:

The Idaho Department of Fish and Game (Department) has reviewed the Laidlaw Park Allotment assessment of rangeland health standards and offer the following comments for your consideration.

The Laidlaw Park Allotment maintains one of the last remaining large, contiguous blocks of low elevation sagebrush habitat found within the area administered by the Shoshone Field Office. This area provides critical breeding, brood-rearing, and winter habitat for sage grouse and other sagebrush dependent wildlife. In addition, the allotment provides important seasonal habitat for pronghorn and elk and important transition range for migrating mule deer.

In April 2002 the Department conducted aerial sage grouse lek surveys in an area encompassing the Laidlaw Park Allotment. In addition to documenting new lek locations, all historic leks were visited. The density of active and historic leks in the Laidlaw Park Allotment emphasize the importance of this area as sage grouse habitat (Table 1).

Data provided in the assessment suggests current grazing management practices in the Laidlaw Park Allotment are having deleterious impacts on vegetation resources and subsequent wildlife habitat. The general lack of species and structural diversity (forbs and large, perennial bunchgrasses) throughout the allotment coupled with the widespread distribution and abundance of cheatgrass warrants a thorough analysis of livestock grazing management practices. The Department recommends the BLM’s analysis consider the following issues and grazing management strategies:

1. Despite the lack of specific monitoring data, it appears utilization levels in native habitats are too high to facilitate improvement of rangeland vegetation and subsequent wildlife habitat. The assessment acknowledged a general lack of forb and perennial bunchgrass diversity, abundance, and cover throughout the allotment. Literature suggests livestock utilization should not exceed 30-35% for improvement of rangeland vegetation.
Decreased utilization levels will ensure adequate residual cover for nesting sage grouse (7 in. of cover at nest initiation as per Sage Grouse Management Guidelines) and other ground nesting birds, plant diversity necessary for suitable sage grouse brood-rearing habitat, and forage for pronghorn, elk, and mule deer.

2. The season of use (April 16 to June 15 and 23) is contributing to the lack of native forb and large, perennial bunchgrass diversity, abundance, and cover throughout the allotment. Research indicates bunchgrasses are extremely sensitive to utilization during the active growing season (most sensitive prior to the boot stage through flowering). Bunchgrass survival and production can be significantly reduced for several seasons following defoliation during the active growing season. Also, spring domestic sheep grazing negatively impacts native forb abundance. Long-term monitoring of spring and fall sheep grazing at the Sheep Experiment Station near Dubois indicates heavy spring grazing negatively impacts native plant abundance. Specifically, forb and bunchgrass abundance in spring grazed pastures was considerably lower (5% and 16% respectively) than fall grazed pastures (29% and 24% respectively). Given the importance of native forbs and bunchgrasses to breeding and brood-rearing sage grouse and other sagebrush dependent wildlife, we strongly recommend the season of use in this allotment be modified to eliminate negative impacts associated with spring grazing.

3. The Laidlaw Park Allotment has received heavy spring sheep use over the last 22 years. In the study noted above, the cessation of spring sheep grazing did not promote long-term forb recovery. We recommend the BLM implement strategies to reestablish native forbs.

4. Research has shown browse species can constitute a significant portion of domestic livestock diets, particularly in the late fall. The palatability of shrub species found in this allotment for sheep and cattle range from moderate for Wyoming big sagebrush to poor for other species sagebrush. Research in northern and central Utah recommends no livestock utilization of shrubs should occur in the summer and fall on mule deer winter range. The Laidlaw Park Allotment is important seasonal habitat for pronghorn, elk, and mule deer. Livestock utilization of shrubs should not exceed 10% of current year’s growth to ensure ample browse for big game in this allotment.

5. The assessment noted ephemeral playa lakes are not protected from livestock and receive heavy grazing pressure. The ephemeral lakes and associated vegetation can provide important brood-rearing and summer use areas for sage grouse, especially in low precipitation zones and/or during periods of drought. We recommend the BLM incorporate specific management guidelines to protect these areas, including long-term rest for areas in poor condition.

A disturbing trend noted in the assessment was the lack of biotic crust throughout the allotment. Biotic crusts serve several important ecological functions in healthy desert plant communities. Unfortunately, biotic crusts are extremely vulnerable to disturbance by livestock and humans. When the integrity of the crust is destroyed, soils become susceptible to wind and water erosion, lowering soil fertility and subsequent plant productivity. In addition, sites where biotic crusts have been damaged or destroyed create opportunities for exotic plants like cheatgrass to become
established. The assessment noted more "at-risk" sites in the lower elevations of the allotment. Coincidentally, these are the sites (below 12 inches annual precipitation) where biotic crusts were historically most prominent. It is unlikely biotic crusts will recover from persistent spring and fall livestock grazing. The loss of plant diversity, disruption of the nutrient cycle, and spread of exotic annual grasses in large portions of this allotment can, in part, be attributed to historic livestock grazing management and the loss of biotic crusts.

We question the conclusions regarding sage grouse habitat as it applies to Standard 8. Specifically, resting 25% of the allotment on an annual basis has little bearing on the availability of suitable nesting habitat for sage grouse in the Laidlaw Park Allotment. First, rested pastures that received 50% utilization the previous growing season likely do not meet the residual cover requirements (7 inches) for nesting sage grouse. Second, rested pastures are frequently the first pastures utilized the following year—negating any potential benefits derived from rest. And finally, the statement fails to recognize that sage grouse hens in the other 75% of the allotment will nest in close proximity (generally within 2 miles) to the lek where breeding occurs. To maximize the potential benefits of rest for nesting sage grouse we recommend pastures slated for rest receive no more than 30% utilization of current years vegetation growth the preceding year. This level of utilization will ensure adequate residual cover for nesting. In addition, grazing should not resume on rested pastures until after the early brood-rearing period (June 15).

Sheepherder camping and sheep bedding on active sage grouse leks is still an issue in the Laidlaw Park Allotment. Annual camping and bedding on leks disrupts sage grouse breeding efforts. Given the current status of sage grouse, we strongly recommend the BLM implement restrictions on sheepherder camping and sheep bedding to eliminate disturbance during this critical period. We offer our assistance in developing maps to help permittees and herders avoid active sage grouse leks.

We concur with assessment recommendations to inventory, enhance, and protect sage grouse habitat in the Laidlaw Park Allotment. However, we question whether development of a six-pasture rotation grazing system will be sufficient to reverse the observed negative trends. As previously noted, grazing systems that fail to address utilization levels and season of use will be unable to facilitate improvement of native vegetation resources.

Thank you for the opportunity to provide comment on this important natural resource issue. If you have further questions please contact Mike McDonald, Environmental Staff Biologist, at this office.

Sincerely,

/sig

David Parrish
Magic Valley Regional Supervisor

Cc: IDFG (NRPB)
Ecc: IDFG (Region 4 Staff)
May 25, 2004

Craters of the Moon Planning Team
Shoshone BLM Field Office
400 West F Street
Shoshone, Idaho 83352

Dear Members of the Planning Group:

The Board of Commissioners for Cassia County, having been generally advised in the matter, submit this letter in support of an adequate and appropriate road system providing access to the Craters of the Moon Monument and Preserve.

We understand that the designation of the Monument/Preserve has, and will continue to, create demand for public access. We believe it is the obligation of responsive government and the clarion call of orderly planning to provide for the essential needs of the public. We see the need for adequate, appropriate and safe access to such significant places of public interest and history, which the Monument/Preserve constitutes, as the type of need deserving the utmost attention.

We have also been advised by the Mini-Cassia Transportation Committee in this matter. We heartily agree with the Committee’s recommendations that Alternative (D) is the preferred option, and should include limited options in Alternative (B), to-wit: 1) including the entire Arco-Minidoka Road as a “passage” route; and 2) including the entire Carey-Kamima Road as a “passage” route. By adopting this Alternative, with designated options, we are confident that you would be serving the best interests of all citizens, especially those seeking access to view our interesting and historic landscape.

We appreciate your consideration of our reasons and recommendations, which we urge you to adopt in the final plan. Thank you.

THE BOARD OF COUNTY COMMISSIONERS
FOR CASSIA COUNTY, IDAHO

Dennis D. Crane, Chairman
Paul Christensen, Commissioner
Clay Handy, Commissioner
July 13, 2004

To Whom It May Concern:

I am writing this letter in support of Butte County and the City of Arco becoming the Gateway for the Crater's of the Moon National Monument. My reasons are that the City of Arco has two major state highways joining together so that many tourists use to go to the Crater's of the Moon. The majority of the boundaries for the Crater's of the Moon are within the Butte County lines. Because of the farming industry slowly failing Butte County and the City of Arco are relying more and more on the tourist industry. We are only 18 miles from the entrance to the Crater's and so many people choose to stay here in motels, RV parks and they eat at our restaurants and buy fuel from local business. The employees of the Crater's live in Arco and Butte County and their children are a big part of Butte County School system. They are active in local activities, clubs and work with local officials. So I would like have my support show in favor of this great idea.

Sincerely,

Lori Beck
Butte County Treasurer
July 13, 2004

Craters of the Moon Planning Team
Shoshone BLM Field Office
400 F Street
Shoshone, Idaho

Dear Sir,

I am writing in support of the improvement of the Minidoka-Arco Road. The Mini-Cassia Search and Rescue is a joint Search and Rescue for both Minidoka and Cassia Counties. I feel it is important to have a good road, so searches can be conducted. I also feel the road needs to be in good order for not only S&R, but law enforcement, fire, and EMS.

For the general public I also believe that there should be access to existing roads and trails.

Thank you for your support.

Sincerely,

Sheriff Jim Higens
Cassia County Sheriff’s Office
Burley, Idaho

RECEIVED
JUL 20 2004
SHOSHONE F.O.
July 13, 2004

Craters of the Moon Planning Team
Shoshone BLM Field Office
400 West F Street
Shoshone, Idaho 83352

Dear Craters of the Moon Planning Team,

I am writing to express my support for the concept of an upgraded and realigned road connecting the Idaho cities of Minidoka and Arco.

I see this as an important step which would benefit the communities of Arco, Mackay, Minidoka, Rupert, Heyburn, Burley in the Cassia, Minidoka and Butte counties. The benefit would come in several ways. An adequate road upgrade and realignment would provide for recreation, tourism, farm to market, desert access and viewing, INEEL access, fire suppression, hunting, search and rescue access and a very beneficial north-south route.

This office would be supportive of any federal government funding assistance efforts.

Sincerely,

[Signature]
Paul E. Fries Sr.
Sheriff, Minidoka County

PEF/kr

RECEIVED
JUL 20 2004
SHOSHONE F.O.
July 9, 2004

Craters Of The Moon Planning Committee
Shoshone BLM Field Office
400 West F Street
Shoshone, ID 83352

Minidoka County strongly supports the building of an improved road, from the city of Minidoka, to Arco. When you adopt the final plan, for administration of the Craters of The Moon National Monument and Preserve, which ever plan is adopted, we urge you to include plans for inclusion of the road.

This road would provide much better access for essential services such as:

1. Fire suppression, in and around the preserve
2. Much improved access for visitors
3. Better access to the Lost River Valley, from Minidoka County
4. Safety and rescue procedures
5. It would be less likely that people would get out there and get stranded, if they have a good road, instead of trying to find their way on unmarked dirt trails.

We also support other access roads, in various places, so that the preserve is easily available to the public, and access roads to the areas that have cattle grazing, and hunting.

Thank you for your consideration on this matter. We expect you to follow our recommendations, as there is broad support from most of the cities and counties involved.

Minidoka County Commissioners:

RECEIVED
JUL 20 2004

ATTEST: SHOSHONE F.O.

Dave Teeter, Chairman
Dan Stapelman
Marvin Bingham

Duane Smith, Clerk of the Board
THE BOARD OF BLAINE COUNTY COMMISSIONERS
206 FIRST AVENUE SOUTH, Ste 300
HAILEY, IDAHO 83333
PHONE: (208) 788-5500 * FAX: (208) 788-5576

Dennis Wright, Chairman * Sarah Michael, Vice Chair * Mary Ann Mix, Commissioner

RECEIVED
JUL 30 2004
SHOSHONE F.O.

July 21, 2004

Craters of the Moon National Monument Planning Team
BLM Shoshone Field Office
P.O. BOX 2-B
400 West F Street
Shoshone, ID 83352

Subject: Recommend Alternative C

Blaine County has been on the record in previous comments as desiring as little development in the Craters of the Moon National Monument. We are writing to reinforce that position by requesting that you adopt Alternative C. We believe that this alternative ensures the strongest conservation protections for the monument and is particularly proactive in restoring primitive and pristine areas.

While the National Park/BLM preferred alternative, Alternative D, supports aggressive weed control, fire management, and restoration, this proposal would further develop roads. Roads, as you know, will actually increase the threat of noxious weeds and fire risk and will accelerate damage to wilderness values and geologic features. We believe that preservation of natural and cultural resources must take precedence over development for visitor use and recreation.

Management zoning (i.e. level of development) should first maximize the amount of pristine, and then maintain primitive zones, with a minimum of passage and use. Management goals should include road closure and rehabilitation. We believe that the general public should be directed to the already developed portion of the monument. For those people seeking solitude and a primitive wilderness experience, the more remote areas and lands recently added to the Monument should be designated for this purpose.

1
Most of the Craters of the Moon National Monument is located within Blaine County. It will be local law enforcement paid by Blaine County taxpayers who will be responsible for problems resulting from the increase use of the Monument. More visitors, and more problems will arise from Alternative D than our preferred Alternative C. This is another reason that we urge you to make Alternative C your preferred management option.

Thank you for consideration on our comments.

Sincerely,

Dennis Wright
Chairman

Sarah Michael
Vice Chairman

Mary Ann Mix
Commissioner
The Board of Blaine County Commissioners
206 First Avenue South, Suite 300
Hailey, Idaho 83333
Phone: (208) 788-5500 Fax: (208) 788-5576
www.co.blaine.id.us

Dennis Wright, Chairman * Sarah Michael, Vice Chair * Mary Ann Mix, Commissioner

July 30, 2004

Craters of the Moon National Monument Planning Team
BLM Shoshone Field Office
400 West F Street
Shoshone, ID 83352-1522

Gentlemen:

Please consider the following comments in addition to the previous letter you have received from our Board.

After reviewing the maps on p. 34, 39, 44, & 48, it becomes quickly apparent that none of the alternatives are as good as we know is possible. All have glaring weaknesses and I’d bet that very few people would desire all that is encompassed within the various alternatives. I’ll try and comment on each:

Alternative A should be the beginning point for any of the alternatives. It has reasonable access for all needs but could be built upon. Improved access to Kings Bowl from the east, as depicted on Alternative D, is a perfect example I support. A couple tourist access/view points that allowed people to gaze across the vast expanse of the Wapi Lava field could be developed and would enhance that southern experience. The yellow depicted passage roads in the Laidlaw Park portion have always sufficed and should be the limit of improvement. Some c and d roads should be considered for closure, depending on their real need. A shortcut isn’t a real need. On the front country portion, some modest improvement in view sights and turnoffs could be accommodated without any detriment to the resource.

Alternative B surely isn’t considered a serious alternative by you people who wrote this draft document. If your goal is to completely trample the resource, go for it. However, the whole reason for getting the status that was obtained was for protecting, not creating a playground for thousands of tourists who would eventually, love the place to death. The fragility of the country should have been an acknowledged starting point for any planning effort and seems to have been forgotten on the creation of Alt. B and to some extent, Alternative D. In short, B should be trashed.

Alternative C road concept in Laidlaw Park works for me. The additional improvement in the northern part, as depicted in A works for me also. Obviously, the access to Wapi Lava Field in the south should be included, as stated above.

Alternative D has far too many improved roads in Laidlaw Park from Blaine County’s perspective. The really bad part is the suggested road connection from Laidlaw Park, south and east around the boundary of the Monument. This will obviously entice tourist traffic to travel from the Interstate to Highway 20/26. Let’s not forget how unfriendly this country can become to the uninitiated. I can see the need, eventually, of stationing law enforcement/rescue people along that stretch on a permanent basis. That will be very costly and Blaine County doesn’t intend on footing the bill.

Secondly, Blaine County is not interested in accepting responsibility for any more road maintenance in that region. To put it bluntly, the road issue is terribly overdone in Alternative D. Apparently much thought has been given to the idea that fire vehicles have to crisscross the area and we need pathways for them to speedily get to their destinations. The whole concept seems shortsighted to me. It should also be stated that the Arco/Meridian road that is primarily in Blaine County, is not something we want to see improved. I realize that some commercial interests in the Mini/Cassia area feel differently, but they would in my opinion be better off trying to better their bottom lines with the purchase of lottery tickets than instilling their financial hopes on another desert road going nowhere.
Finally, I desire to see the pristine/primitive percentages of Alternative C maintained. Obviously my suggested access and road additions mentioned above would impact that percentage, but hopefully, only in minimal way.

Thank you for accepting some further comment from Blaine County. We appreciate all that both agencies have done to date in creating the draft document and wish you nothing but excessive wisdom as you strive to create the management plan that will protect the majority of the resource while at the same time allowing individuals to experience the beautifully remote and harsh landscape that is The Craters of The Moon.

Sincerely,

FOR THE BOARD

Dennis Wright
Chairman
July 29, 2004

Craters of the Moon National Monument Planning Team
BLM Shoshone Field Office
400 West F Street
Shoshone, Idaho 83352-1522

Re: Draft Management Plan

Before offering comment on the Craters ongoing management, Butte County would like to recognize the long standing relationship with the Craters of the Moon and we celebrate the Craters success.

As to the continued management of the Craters, Butte County first priority is expecting the multiple use policy will be followed which allows for continued grazing and hunting on the parts of the monument as was promised at the time the Craters was expanded.

Our seconded priority is in regard to maintaining and improving the facilities on the monument. We believe it is important with limited budgets to concentrate on those improvements to the facilities at the existing entrance west of Arco. Arco has been and should continue to be the gateway to the Craters and the improvements should be directed towards the headquarters.

We also recognize access to the monument is an issue with the development of the Arco-Minidoka road but with limited budgets, this would be our third priority.

[Signature]
Seth E. Beal
Chairman
Butte County Board of Commissioners

Cc: file
To Whom It May Concern:

This letter is written on behalf of the Board of Trustees of the Butte County Joint School District # 111 in support of Arco as the “Gateway To The Craters Of The Moon National Monument.” We are proud to have this wonderful park located in our county. This monument and the staff who works there are an important part of our community heritage. We have enjoyed a close association for many years.

Our students spend a great deal of time on field trips at the monument and we have various pictures in our buildings of the monument. We have been honored to host many tourists and travelers who come through our town to visit Craters. We have always been proud of this National Park and the many wonderful and unique things it offers.

We believe that the City of Arco is truly “The Gateway” to this national treasure. We pledge to do all we can to represent and preserve this relationship and designation. We would like to add our energies to any programs designed to highlight or increase awareness and visits to Craters.

Please consider our district as a ready and willing to do whatever it takes to continue our support of this honored designation. If you have any further questions or require additional information, please do not hesitate to contact me. Thank you.

Sincerely,

Scott A. Rogers
Superintendent of Schools
The Power County Historical Society met on the 23rd of June. We discussed your management plans. We are in favor of Alternative D, which is your preferred. We wish to express our interest in being a gateway facility at our new museum.

Sincerely,

Max Newlin
President

His Soc Craters plan D preferred 7-11-04
Mini-Cassia Transportation Committee
Mini-Cassia Transportation Committee

May 12, 2004

Craters of the Moon Planning Team
Shoshone BLM Field Office
400 West F Street
Shoshone, Idaho 83352

The Mini-Cassia Transportation Committee (MCTC), representing Minidoka and Cassia County’s local cities, highway districts, legislators and others, voted unanimously today to strongly support an adequate road system for access to the Craters Monument and Preserve. We propose that the preferred Alternative (D) should include limited options in Alternative B.

It is proposed that the following items from Alternative B be included in Alternative D:

1. Include the entire Arco-Minidoka Road as a “passage” route.
2. Include the entire Carey-Kimama Road as a “passage” route.

We are adamant in our support for the Arco-Minidoka route. The Monument/Preserve designation has created a demand by the public for access. The road from Minidoka will become an attractive alternative to those wanting to go through the Monument/Preserve and to have that as an alternative to reaching the National Park Service Visitor Center. People will attempt to use the existing road with potential catastrophic results so it must be adequate.

This route would facilitate safety, fire suppression, access, and other legitimate concerns. When Secretary of the Interior Babbitt held hearings in Rupert he assured us that the Arco-Minidoka route would be an integral part of the Monument/Preserve. The designation created the demand for access and it should be addressed accordingly.

We would expect our recommendations and concerns be adopted in the final plan.

Thank you,

Milo Ross, Chairman
Mini-Cassia Transportation committee
2979 East 1010 South
Hazelton, Idaho 83335
June 29, 2004

Craters of the Moon National Monument Planning Team
Bureau of Land Management-Shoshone Field Office
P.O. Box 2B
Shoshone, ID 83352

To Whom It May Concern:

On behalf of the Carey City Council, I have been authorized to offer the following comments:

First, the City of Carey would like to thank the Bureau of Land Management (BLM) and the National Park Service (NPS), specifically Rick VanderVoet and Jim Morris, for their selfless dedication to the Craters of the Moon National Monument and the public process associated with the Draft Management Plan/Environmental Impact Statement, which sets forth the future direction for the use and management of the Monument. They both have traveled the extra mile to ensure that this community has had the opportunity to understand the plan and have the opportunity to give informed comment.

After reviewing the Draft Management Plan and attending an open house, the Carey City Council unanimously authorized support for Alternative D (Preferred Alternative), for obvious reasons. The Council felt that this alternative would provide the best possibility of ensuring protection of the Monument and its associated features. Alternative D emphasizes off-site commercial services and visitor opportunities, which should do volumes to ensure that the interior of the Monument remains pristine and unchanged. Alternative D also seems to ensure that the Monument remains multi-use with a wide range of possibilities available for many.

The community has shared their concern with regard to local impact several times in the past and that concern is more ominous than ever before. The impact related to the enlargement of the Monument will most certainly be shouldered by this area in the near future and, for that matter, may already be present but unrecognized. It has been and continues to be our position that this valley should not shoulder the impact alone.

The City Council also recognizes the obvious. The City of Carey and the Carey Valley are the West Gate of the Monument. We are not sure exactly what effects that will have on the area, but we look forward to the possibilities and would like to work hand in hand with the BLM and NPS to ensure that the Monument and the Carey Valley are enjoyed by many for years to come.

Thank you for the opportunity to comment and for the exemplary leadership displayed by the NPS and BLM Managers.

Very truly yours,

Richard R. Baird, Mayor
City of Carey
July 2, 2004

Craters of the Moon Planning Team
Shoshone BLM Field Office
400 West F Street
Shoshone, Idaho 83352

It is our understanding that you are seeking federal funding for the purpose of improving and maintaining an adequate road system for access to the Craters Monument and Preserve. We propose that the preferred Alternative (D) should include limited options in Alternative B.

It is proposed that the following items from Alternative B be included in Alternative D:

1. Include the entire Arco-Minidoka Road as a “passage” route.
2. Include the entire Carey-Kimama Road as a “passage” route.

We are adamant in our support for the Arco-Minidoka route. The Monument/Preserve designation has created a demand by the public for access. The road from Minidoka will become an attractive alternative to those wanting to go through the Monument/Preserve. It is important that the road be adequate as people will attempt to use the existing road with potential catastrophic results.

The City of Paul feels it would be beneficial to our community to have a well maintained access road to the Craters Monument and Preserve.

Sincerely,

Randy E. Jones
Mayor
City of Paul

Cc: Milo Ross
July 9, 2004

Crater of the Moon Planning Team
Shoshone BLM Field Office
400 West F Street
Shoshone, ID 83352

RE: Arco-Minidadoka Road

To Whom It May Concern:

The City of Heyburn supports the Arco-Minidadoka Road improvements. We believe this road will offer many economic opportunities for the area. These include strengthening the draw for tourism. As this area continues to develop, the Arco-Minidadoka Road will provide a strong base for this future development.

Sincerely,

Scott Spevak
City Superintendent
June 13, 2004

Craters of the Moon Planning Team  
Shoshone BLM Field Office  
400 West F Street  
Shoshone, Idaho 83352

As a participant in the Mini-Cassia Transportation Committee the City of Burley is happy to have the opportunity to urge you to strongly support an adequate road system for access to the Craters of the Moon Monument and Preserve.

We would urge that you include the entire Arco-Minidoka Road as a “passage” route and that you include the entire Carey-Kimama Road as a “passage” route.

Our local citizens would love to have access to the Craters of The Moon Preserve without having to go through Blackfoot and Idaho Falls. The recent change to the area makes it a much more desirable destination as a National Park Service Visitor Center. We often hear of people that drive the present route and have trouble because they do not realize how poor the route is.

We also have been made aware that the better route would facilitate safety and fire suppression and that is a major reason for the improvement. I was at the meeting when Interior Secretary Babbitt assured the local community that access to the Monument/Preserve would be an integral factor considered when the facility became reality. We would appreciate your consideration of the needs of our area.

Yours truly,

Jon R. Anderson  
Mayor
July 13, 2004

Craters of the Moon
National Monument Planning Team
BLM Shoshone Field Office
400 W. F Street
Shoshone, ID 83352-1522

To Whom It May Concern;

The City of Minidoka would like to express our support and desire to have the road from Minidoka to Arco improved. We would very much like to see the road suitable for all vehicles, as we have numerous tourists stopping for directions to Arco and we have to turn them around and discourage desert travel.

We as a City, see the possibility of Minidoka also growing to provide services for travelers through our town.

We truly feel this road would benefit not only travelers, but destinations on both ends.

We appreciate your consideration of this matter.

Sincerely,

Maxine Homer
Mayor

c: Dwinelle Allred

RECEIVED
JUL 15 2004
SHOSHONE F.O.
City of Arco
P.O. Box 196
Arco, ID 83213
Phone (208) 527-8294
Fax (208) 527-8951
Gateway to the Craters of the Moon National Monument

RECEIVED
JUL 16 2004
SHOSHONE F.O.

July 13, 2004

Planning Team
Craters of the Moon National Monument
BLM Shoshone Field Office
400 West F Street
Shoshone, Id. 83352-1522

Dear Sir:

On behalf of the Arco City Council and the residents of Arco, I am writing to you concerning the Visitor Centers and the Gateway to the Craters of the Moon. We would encourage you to retain this honor in Butte County.

We would like you to know that the businesses, residents and local officials do now and always have supported the Craters of the Moon to the fullest.

We would appreciate your consideration in leaving the entry to the Craters as it is presently in Butte County.

Sincerely,

Carol Jardine, Mayor
City of Arco

Appendices: APPENDIX K 519
Craters of the Moon Planning Team  
Shoshone BLM Field Office  
400 West F Street  
Shoshone, Idaho 83352

To Whom It May Concern,

The Mini-Cassia Transportation Committee (MCTC), representing Minidoka and Cassia County’s local cities, highway districts, legislators and others, voted unanimously today to strongly support an adequate road system for access to the Craters Monument and Preserve. We propose that the preferred Alternative (D) should include limited options in Alternative B.

It is proposed that the following items from Alternative B be included in Alternative D:

1. Include the entire Arco-Minidoka Road as a “passage” route.
2. Include the entire Carey-Kimama Road as a “passage” route.

We are adamant in our support for the Arco-Minidoka route. The Monument/Preserve designation has created a demand by the public for access. The road from Minidoka will become an attractive alternative to those wanting to go through the Monument/Preserve and to have that as an alternative to reaching the National Park Service Visitor Center. People will attempt to use the existing road with potential catastrophic results so it must be adequate.

This route would facilitate safety, fire suppression, access, and other legitimate concerns. When Secretary of the Interior Babbitt held hearings in Rupert he assured us that the Arco-Minidoka route would be an integral part of the Monument/Preserve. The designation created the demand for access and it should be addressed accordingly.

We would expect our recommendations and concerns be adopted in the final plan.

Thank you,

Audrey R. Neiwerth, Mayor
This appendix contains all 570 substantive comments received on the Draft Management Plan/EIS during the 90-day comment period (April 30 to July 29, 2004). Specific responses to those comments, prepared by the NPS and BLM, are also shown. If the text of the Draft Plan/EIS was changed in response to a comment, this is also noted.

The reader is also referred to Chapter 5 of this document, where the public involvement and comment analysis process is described in greater detail. Additionally, comments and responses (individually listed in this appendix) are summarized in Chapter 5 by resource topic, providing a more concise analysis of the public input received on the Draft Plan/EIS. Information in that chapter also describes consultation with Native American Tribes and coordination with other government agencies.

During the comment period, the BLM and NPS received 153 individual letters and 975 form letters commenting on the Draft Plan/EIS. The 570 substantive comments from those letters were identified, as required by NEPA (40 CFR 1503.4), the BLM NEPA Handbook (H-1790-1), and the NPS Director’s Order 12 Handbook. Substantive comments are those which challenge the accuracy of the analysis, dispute the accuracy of information, suggest different viable alternatives, or provide new information that makes a change in the proposal. In other words, they raise, debate, or question a point of fact or policy. Comments in favor of or against one or more alternatives or comments that only agree or disagree with policy are not considered substantive, although they often provide important and valuable information or opinion.

This appendix lists each individual substantive comment received along with the specific response to that comment and references to any text changes made as a result. In the column to the left of the comment and response is a reference to the number of the comment letter and the corresponding comment in that letter. Comments and responses are grouped by resource topic, as analyzed in the EIS. Unless otherwise noted, page numbers cited in the comments and responses refer to the Draft Plan/EIS, not the Proposed Plan/FEIS.
<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 / 001</td>
<td>On page 110, Prehistoric and Historic Sites: The first sentence in this section states that there are 346 known, recorded cultural resources in the Monument. According to our records, 1149 archaeological sites have been recorded within the Monument.</td>
<td>The agencies conferred with the State Historic Preservation Office and agency GIS specialists to calculate the number of recorded sites within the Monument given the most current information available. The text on page 110 has been edited as a result. It now reads, “Over 500 known, recorded cultural resources...”</td>
</tr>
<tr>
<td>28 / 001</td>
<td>The Power County Historical Society met on the 23rd of June. We discussed your management plans. We are in favor of Alternative D, which is your preferred. We wish to express our interest in being a gateway facility at our new museum.</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>4 / 002</td>
<td>Pp. 193-194: While we are not opposed to Alternative #4, we question the statement at the bottom of p. 193 that begins with: “Because there would be no major adverse impacts on a resource or value whose conservation is...” We wonder how the NPS and BLM can make this statement when so little is known about the number and nature of sites within the Monument (only 5% of the Monument has been surveyed), and the effects of increased visitor use. This, coupled with insufficient professional staff to monitor effects and identify historic properties, leaves much to be learned about the fate of Monument's cultural resources.</td>
<td>The section on Pages 193-194 refers to “impairment” of Monument cultural resources. From the information we presently have, we can extrapolate that the vast majority of cultural resources within the Monument lie within the least accessible areas of the Monument and are naturally protected to some extent by their remoteness. It is understood that Section 106 review would be required for all implementation actions pursuant to this DEIS and major adverse effects would be avoided where at all possible.</td>
</tr>
<tr>
<td>126 / 002</td>
<td>The document provides sufficient information regarding issues of concern brought up during scoping and clear figures related to each alternative. However, EPA recommends including additional information in the EIS regarding cultural resources and water resources impacts. The EIS discusses cultural resources and the consultation that occurred and that long term cultural resource impacts would not occur. EPA recommends further discussing specific issues that were identified by tribes in the consultation process and how any issues would be addressed. This will assist the public in understanding how the consultation process affects management decisions for not only Section 106 of the National Historic Preservation Act identified resources, but also tribal resources related to traditional sites, sacred sites, travel routes, and traditional hunting.</td>
<td>Issues of tribal concern are addressed in the Native American Treaty Rights, Trust Resources and Ethnographic Resources sections of the document p. 111-112 and 194-200. In addition, the government to government relationship with Tribes is expressed in letters from the Shoshone-Bannock Tribes, printed in Appendix K.</td>
</tr>
<tr>
<td>Topic</td>
<td>Cultural Resources</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Letter No./ Comment No.</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td></td>
<td>107 / 003</td>
<td>All historic signs identifying historic locations should be erected in order to identify those points as established from prior use. For instance, Little Blowout is now identified as Big Blowout, this is incorrect. All those places should be identified as historic. For instance, some playas are identified by names of BLM personnel, this is not historic.</td>
</tr>
<tr>
<td></td>
<td>4 / 003</td>
<td>Outfitters and guides should receive some training in cultural resource laws and ethics.</td>
</tr>
<tr>
<td></td>
<td>4 / 004</td>
<td>Finally, we are pleased to learn that, under Alternative 4, the National Park Service (NPS) and Bureau of Land Management (BLM) plan to support a Section 110 program at the Monument that will include on-going Section 110 survey, public education, interpretation, monitoring, and the preparation of a Cultural Resource Management Plan. As you know, however, the BLM has two archaeologists for the entire Shoshone, Idaho Falls, and Pocatello districts; the National Park Service has no archaeologists is southern Idaho. With such limited staff and so many acres, we question how your agencies can fulfill the cultural resource commitments of Alternative 4 without additional professional staff. We urge you to include as part of this GMP and EIS a parallel commitment to hire the professional staff needed to implement this program and fulfill the obligations outlined in this document.</td>
</tr>
<tr>
<td></td>
<td>123 / 034</td>
<td>The DEIS discussion of ongoing activities fails to mention the array of livestock impacts to cultural sites that must be addressed – trampling, disturbing site stratigraphy, breaking artifacts, causing soil erosion exposing artifacts to surface looting, introducing weeds and altering fire cycles so archaeological sites are damaged by intense fires.</td>
</tr>
<tr>
<td></td>
<td>123 / 065</td>
<td>Why are you proposing to inventory only 10% of the Monument for cultural resources? How can you decide which roads to not upgrade if you have not conducted these inventories?</td>
</tr>
</tbody>
</table>
### Water Resources

<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 / 001</td>
<td>This document states that because of the short seasonal periods during which standing water is present in playas, the impacts of livestock use—contamination with fecal coliform and nutrients from manure deposits—are negated by the eventual disappearance of surface water. Disappearance of water does not negate the problem, because although the water may not be present year-round, nutrient sources (deposited feces) could remain until the following wet season allows them to remobilize. The USGS recommends the statement be modified to remove the word “negated.”</td>
<td>We agree. The word negated has been deleted from this section.</td>
</tr>
<tr>
<td>2 / 002</td>
<td>On page 242, you mention that “intense recreational use of ice cave pools could create moderate changes in nutrient concentrations and bacteria levels.” Could you expand what you mean by ‘ice cave pools?’ The draft refers to the same text for each alternative. Are there known ice cave pools and what gives the impression that they will be visited recreationally?</td>
<td>Ice cave pools are pools of water melted from ice deposits on the floor of caves. The ice deposits prevent the melted water from draining away through the fractured basalt. There are dozens of known ice caves with pools of water during the warm seasons of the year. Several of these caves are on developed trails and are visited recreationally by many people each year. Other ice caves are more remote but increased recreational use could lead to increases in nutrient and bacteria concentrations.</td>
</tr>
<tr>
<td>126 / 003</td>
<td>The Monument area is inherently dry and the limited supply of water and water quality are critical elements for sustainability of wildlife and other natural resources, which is a component of the carrying capacity (a character used by the NPS for ensuring no excessive damage to the environment) of the area as discussed in the EIS. The EIS discusses how Alternative D “could accommodate more livestock water developments,” and that if these are developed than water quality in playas could be impacted. EPA supports long term water quality and protection of playas and all other water resources in the area. EPA recommends further discussing what measures will be taken to ensure that grazing will not adversely impact water resources, how this will be monitored, and how management direction will be adapted.</td>
<td>BLM does not identify playas as riparian areas according to the riparian area definition in the BLM Technical Reference TR 1737-9 and 11. TLM presently has no data or standards to evaluate playas. Therefore, BLM will use the professional judgment to determine if the standards for rangeland health are being met or we are moving towards meeting them, that the health of the playas will also be met. The Draft EIS does not alter grazing management so the impacts of grazing on water quality are substantially the same for all alternatives. The Draft EIS page 172 concludes that livestock grazing is expected to be long term with intensity ranging from negligible to potentially major in local sites depending upon the concentration and duration of livestock use.</td>
</tr>
<tr>
<td>123 / 132</td>
<td>BLM’s proposed grazing regulation changes would hand over much of the control of public lands to permittees. Under these changes, permittees would be granted partial ownership of water projects. The DEIS must analyze these foreseeable impacts.</td>
<td>The new regulations are not in effect at this time. It is policy that all BLM EIS follow the Code of Federal Regulations. The proposed grazing regulations do not change BLM’s authority to manage public lands.</td>
</tr>
<tr>
<td>123 / 176</td>
<td>DEIS at 282. Have water rights filings been made on all waters within the Monument? If not, when will this occur, and why has it not been done? Please provide a list of all water rights filings, with geographic locators. How will the waters of the Monument be protected from aqifer depletion?</td>
<td>A summary of the status of water rights within the Monument may be found on page 99 of the Draft EIS.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>104 / 003</td>
<td>… It is difficult to comprehend why the impacts associated with this alternative are noted as ranging from “negligible to potentially major” when this is the same designation ascribed to Alternative D, even though it offers no road closures and increases the Passage Zone. Either the impacts associated with Alternative C should be downgraded, or the impacts associated with Alternative D should be upgraded to highlight the significant differences between these alternatives.</td>
<td>As noted on page 157 in the geology section of Chapter 4, “Alternative C would cause the fewest impacts on geologic resources of all the alternatives.” In any of the alternatives, however, individual features could have impacts ranging from negligible to major. In the Proposed Plan/FEIS we have adopted an expanded Pristine Zone similar to Alternative C, which will afford the most passive protection through limited access.</td>
</tr>
<tr>
<td>165 / 018</td>
<td>Page 67 -Table 8; Summary of Impacts; Geological Resources: The Service believes that the maintenance and improvement of roads, along with the reduction of acres in the Pristine Zone, would result in an increase of damage from visitors and would compromise restoration efforts, contrary to the statement made herein.</td>
<td>Road improvements have never been mandated by falling within a particular zone description; any improvements will be driven by management, restoration, and resource protection needs. Further, in the Proposed Plan/FEIS the amount of Passage Zone has been decreased over what was in the original Alternative D and the Pristine Zone has been expanded to be closer to Alternative C. Off-site interpretation will still be emphasized in the Proposed Plan/FEIS for all areas other than the developed portion of the Monument.</td>
</tr>
<tr>
<td>123 / 068</td>
<td>This is deeply flawed, especially the analysis of Alt. D. Livestock trampling displaces and alters surface lava features, causes windblown weeds to obscure surfaces of lava formations, increases dust coating on lava surfaces. There is no basis for Alt. D to be claimed “beneficial” to geological resources because of its “aggressive” restoration – while livestock disturbance continues to be maximized. Plus, Alt. D does not emphasize off-site recreation experience as it leaves almost all roads open, thus encouraging motorized use through nearly all sagebrush habitats.</td>
<td>As noted on page 157 in the geology section of Chapter #4: “Grazing and associated trailing would result in the same negligible to minor adverse impacts described for other alternatives, since grazing would not be managed any differently under this alternative.” Thus, grazing cannot be characterized as maximized under Alternative D and causing more damage to geologic features. Contrary to your statement, Alternative D does emphasize off-site interpretation, thus not attracting people into the expanded Monument. In the Proposed Plan Alternative D incorporates a Pristine Zone similar to Alternative C and there will be some miles of road closure because of the zone description. Dust can coat geologic formations until a precipitation event removes it. Dust can also infiltrate into cinders and be deposited in or fill cracks providing more growth medium for plants. No data is available as to rates of deposition in the Monument. In comparison to the aftermath of fire where huge volumes of dust/soil are liberated (eroded and re-deposited elsewhere), these impacts would fall within the range of normal variability and are, therefore, considered to have a negligible impact on geologic processes and features.</td>
</tr>
<tr>
<td>123 / 139</td>
<td>How does wind-blown livestock water in dust affect geologic surfaces? How does being covered by windblown livestock-caused weds affect geologic surfaces, lichen covering, weathering, etc.? How do windblown herbicides (including transported on soils) affect lichens, and appearance of geologic surfaces? The analysis of grazing effects and road effects on geologic resources ids greatly under-estimated in the analysis.</td>
<td></td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Topic</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>123 / 143</td>
<td>Geological Resources</td>
<td>The DEIS admits that “an individual geologic feature could suffer a major impact,” yet claims that the impacts would be localized. This is essentially saying it is ok to irreparably harm an area, as the impacts are “localized” to the particular feature or area that is ruined. This is not management that is compatible with the Monument Proclamation. As the DEIS finds that Alternative C would provide the MOST protection to geologic features, it is impossible to understand why you would not choose the protections of this Alternative as your course of action, given the prominence of geologic features in Monument designation. Plus, please provide a detailed rationale for claiming that Alt. C would only have “slightly” fewer adverse impacts. We believe you have exhibited bias throughout the analysis of Alt. C in underestimating any beneficial impacts related to it.</td>
</tr>
<tr>
<td>123 / 177</td>
<td>Soils</td>
<td>DEIS at 285 claims that geologic features may perhaps be the over-riding purpose of the Monument, yet in the DEIS analysis of environmental effects, it allows for degradation of geological resources as part of its Preferred Alternative, and all Alternatives assessed.</td>
</tr>
<tr>
<td>123 / 030</td>
<td>Soils</td>
<td>The DEIS claims that soils would be protected from accelerated or unnatural erosion – yet no data on soil erosion hazard, current soil conditions, zones of active erosion, etc. has been presented. No data has been collected and presented on livestock impacts causing soil compaction, loss of microbiotic crusts, or accelerated and unnatural erosion.</td>
</tr>
<tr>
<td>123 / 069</td>
<td>Soils</td>
<td>The assessment of soils is narrowly constrained, as it assesses no alternative that alters livestock soil disturbance. Likewise, Alt. D on soils is deeply flawed, and it fails to recognize the degree of disturbance associated with grazing and even more livestock developments that would be permitted in many of the sagebrush areas.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>123 / 071</td>
<td>The mix of status quo grazing and extensive treatment disturbance plus use of herbicides or fire on unknown acreages will harm air quality. For example, in the Idaho Falls BLM Big Desert Fuelbreaks project currently underway along the Arco-Minidoka road, BLM is using a long-term persistent herbicide to kill big sagebrush. This is not “short term”. There are no efforts to address the destruction of microbiotic crusts, which help protect the soil form both wind and water-caused erosion. Plus, as the “restoration” alt. proposes shifting livestock use to other portions of grazed lands while its “treatments” are carried out, the impacts on nearby lands could be significant, and lead to further de-stabilization of soils and dust pollution.</td>
<td>Impacts to soils and biological crusts have been analyzed in DEIS Ch. 4. Impacts of projects on soils and biological crusts will be analyzed in site-specific environmental analyses. See also the discussion regarding the occurrence (or lack of) biological crusts in the Monument in DEIS Ch. 3.</td>
</tr>
<tr>
<td>123 / 076</td>
<td>The DEIS fails to adequately characterize the Affected Environment. For example, the DEIS discussion of Soils fails to assess the impacts of livestock disturbance on soils – including estimates of soil erosion with or without livestock grazing, health or condition of microbiotic crusts; impacts of livestock trampling on playa soils, etc. It fails to assess impacts of livestock projects on soils.</td>
<td>The ID Team felt that the level of detail regarding soils data was adequate to make informed decisions at the RMP/GMP level of analysis. General impacts of livestock on soils are analyzed in DEIS Ch. 4. Additional information found in the NRCS Soil Surveys will be used for implementation- and project-level planning.</td>
</tr>
<tr>
<td>123 / 098</td>
<td>The Laidlaw Determination found that Standard 4 (Native Plant Communities) and 8 (T&amp;E Species) were not met. EA at 6 described areas of severe wind erosion potential, and severe water erosion potential. Yet, the DEIS ignores erosion assessment, and development of goals, objectives and management actions to protect soils.</td>
<td>See DEIS Ch. 4 for analysis of impacts to soils. Management goals and actions are defined in DEIS p. 25, Management Actions Common to All Alternatives: Soils.</td>
</tr>
<tr>
<td>123 / 146</td>
<td>DEIS flaws related to soils correspond to those of the road analysis. Plus, the displacement of soils above the no action Alt. A would be increased dramatically by more improved roads and bladed rights-of-way, more livestock projects in “passage” areas, and much more “restoration” disturbance. Effects of disturbed soils transporting herbicide particles must also be assessed. This could significantly harm adjacent sagebrush-steppe vegetation, kill scenic lichens on lava, etc.</td>
<td>Thank you for your comments. Impacts of the proposed alternatives on soil resources were analyzed in DEIS Ch. 4. Effects of herbicides being transported via soil particles would be analyzed in the Integrated Weed Management Plan and project-level vegetation treatment environmental assessments. The Proposed Plan/FEIS expands the Pristine Zone (as compared to the draft Alternative D) to include almost all of the WSA. These areas would be closed to motorized vehicle use.</td>
</tr>
<tr>
<td>123 / 190</td>
<td>Biological crusts must be maintained as a partial shield preventing establishment or spread of invasive exotic species; implement a plan to restore damaged biological crusts; prohibit livestock grazing for at least five years following a fire in areas capable of maintaining biological crusts. Delay return of livestock past five years if significant recovery of the biological crust or native vegetation components has not occurred. More natural fire</td>
<td>Thank you for your comment. We will consider these points in the appropriate implementation- and project-level plans.</td>
</tr>
</tbody>
</table>

Response:

- Impacts to soils and biological crusts have been analyzed in DEIS Ch. 4. Impacts of projects on soils and biological crusts will be analyzed in site-specific environmental analyses. See also the discussion regarding the occurrence (or lack of) biological crusts in the Monument in DEIS Ch. 3.
- The ID Team felt that the level of detail regarding soils data was adequate to make informed decisions at the RMP/GMP level of analysis. General impacts of livestock on soils are analyzed in DEIS Ch. 4. Additional information found in the NRCS Soil Surveys will be used for implementation- and project-level planning.
- See DEIS Ch. 4 for analysis of impacts to soils. Management goals and actions are defined in DEIS p. 25, Management Actions Common to All Alternatives: Soils.
- Thank you for your comments. Impacts of the proposed alternatives on soil resources were analyzed in DEIS Ch. 4. Effects of herbicides being transported via soil particles would be analyzed in the Integrated Weed Management Plan and project-level vegetation treatment environmental assessments. The Proposed Plan/FEIS expands the Pristine Zone (as compared to the draft Alternative D) to include almost all of the WSA. These areas would be closed to motorized vehicle use.
- Thank you for your comment. We will consider these points in the appropriate implementation- and project-level plans.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comment</strong></td>
<td>conditions must be promoted: reduce or eliminate livestock grazing where historical understory necessary to carry cooler fires has been or could be diminished by grazing; or where historical grass and forb competition to tree and shrub seedling density has been or can be diminished by grazing.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic</th>
<th>Vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comment</strong></td>
<td>We feel that the emphasis of Alternative D, protection and restoration, is appropriate for the Monument. However, we would like to see a more &quot;light-handed&quot; approach, as mentioned in Alternative C, in regards to restoration.</td>
</tr>
<tr>
<td><strong>Response</strong></td>
<td>All restoration methodologies, including “light-handed” and passive restoration, will be considered for future projects. Environmental Assessments for specific restoration projects will analyze methods relative to zoning within the Monument, as well as existing vegetation condition and desired future conditions (see DEIS, Management Guidelines Common To All Alternatives: Management Actions under Vegetation, Including Special Status Species, and Fire Management).</td>
</tr>
</tbody>
</table>

| **Comment** | While I support aggressive weed control, fire management, and restoration, the proposal to further develop roads will actually increase the threat of noxious weeds and fire risk, as well as accelerate damage to wilderness values and geologic features. |
| **Response** | Analysis in the DEIS (Ch. 4) acknowledges the risk of increased road improvement relative to weed infestation, fire risk, wilderness values and geologic features. In response to comments such as this the ID team reduced the amount of Passage Zone in the Proposed Plan/FEIS, particularly in Laidlaw Park. The implementation plan for transportation will address road maintenance and improvement within specific areas and zones of the Monument, with consideration to these and other issues. |

| **Comment** | The EIS offers little or nothing in the way of an action plan that would conserve and/or improve sagebrush habitat and the species dependant upon it in Craters. The preferred alternative would actually lead to further degradation of this important ecosystem because it continues destructive grazing practices and allows existing, roads and trails to remain open. |
| **Response** | The preferred alternative was designed specifically to focus on the restoration and protection of sagebrush steppe habitats within the Monument, and to balance public access and other resource uses with this goal. Management actions included in the alternative, including proactive restoration of approximately 80,000 acres of degraded rangeland, are listed on p. 49 of the DEIS. Additional management direction common to all alternatives for vegetation, wildlife, access and travel, and livestock grazing can be found on pp. 25-29 of the DEIS. |

<p>| <strong>Comment</strong> | I would strongly urge that there be a supplemental EIS to re-examine reduction in livestock grazing and closure of current unnecessary roads to naturally prevent the spread of weed infestations, plus the use of reseeding with ONLY native plants where any restoration is carried out. |
| <strong>Response</strong> | The DEIS acknowledges that roads, vehicles, humans, and animals are known vectors to the spread of noxious weeds (DEIS Ch. 3, Discussion on Noxious and Exotic Species, p. 92). A full Integrated Weed Management Program addresses a broad range of prevention, education, and control activities to combat noxious weeds (see DEIS p. 25 under Management Guidelines Common to All Alternatives: Vegetation, Including Special Status Species, and Fire Management). The use of native plants is emphasized in all restoration projects, |</p>
<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Topic</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>162 / 001</td>
<td>Vegetation</td>
<td>In general, the IDFG supports the management direction outlined in the DEIS. The preferred alternative calls for aggressive restoration efforts on degraded sagebrush, steppe communities. As the document correctly states, there has been substantial loss and degradation of these communities throughout southern Idaho and we believe the restoration efforts promulgated under the preferred alternative will significantly improve the condition of the targeted areas. In addition, the restoration efforts will provide for large-scale testing of restoration methods, which will allow evaluation of the most effective methods/techniques to use under a variety of circumstances. This, in turn, will improve the efficacy of future restoration efforts on degraded sage-steppe habitats throughout southern Idaho.</td>
</tr>
<tr>
<td>37 / 001</td>
<td>Vegetation</td>
<td>Plus, after reading the DEIS, it now appears that IF BLM's Big Desert Fuelbreaks Project is really implementing part of Alt. B -before the EIS project is anywhere near completion. See, for example, DEIS at 41” proactive fuels mgmt. activities would be undertaken to offset potential effects of increased public use…”</td>
</tr>
<tr>
<td>100 / 002</td>
<td>Vegetation</td>
<td>There should not be any crested wheat grass planted anywhere, especially here. Only native herbage should be replanted. Laidlaw Park should be completely restored with native grasses.</td>
</tr>
<tr>
<td>89 / 002</td>
<td>Vegetation</td>
<td>The Preferred Alternative promotes aggressive herbicide, mechanical and fire treatments and seedings without any requirement to address the root causes of ecosystem problems -grazing and roads. Conduct real restoration, relying on passive restoration techniques wherever possible (limit livestock grazing, close roads, remove livestock facilities that are causing weed spread).</td>
</tr>
</tbody>
</table>

**Response**

pursuant to BLM policy and Executive Order 13112, Invasive Species, February 3, 1999, and only native species would be used on projects in the Pristine Zone.

Thank you for your comment.

The Big Desert Fuelbreaks Project is outside of the boundaries of Craters of the Moon National Monument and Preserve and therefore is not implementing any aspect of the Draft EIS. Future fuels management projects within the Monument boundary will be analyzed through project-level environmental assessments and will be available for public review.

See DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. Restoration treatments are not necessarily active and can include passive methods, such as temporary rest from livestock grazing, depending on the current condition of the vegetation and desired future conditions. The use of native plants is emphasized in all restoration projects and only native species would be used on projects in the Pristine Zone.

Same response as previous comment.
<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>102 / 002</td>
<td>The Preferred Alternative is misleadingly dubbed a &quot;restoration&quot; alternative by the agencies. It promotes aggressive herbicide, mechanical and fire treatments and seedings without any requirement to address the root causes of ecosystem problems -grazing and roads. There is not even a requirement to seed native plant species following a treatment! Conduct real restoration, relying on passive restoration techniques wherever possible (limit livestock grazing, close roads, remove livestock facilities that are causing weed spread). *** Use only native plants in all seedlings.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>88 / 002</td>
<td>The Preferred Alternative is misleadingly dubbed a &quot;restoration&quot; alternative by the agencies. It promotes aggressive herbicide, mechanical and fire treatments and seedings without any requirement to address the root causes of ecosystem problems -grazing and roads. There is not even a requirement to seed native plant species following a treatment. Conduct real restoration, relying on passive restoration techniques wherever possible use only native plants in all seedlings.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>129 / 002</td>
<td>ISDA appreciates the planning teams recognition of the importance of noxious weed management. Noxious weeds are one of the most devastating forces occurring on our rangelands today. The aggressive stance the team is taking on noxious weed control will pay dividends well into the future. Invasive annual plants are also a very destructive force found in this area. The planning team has also done a good job at recognizing the need to focus efforts to control the spread of these species throughout the Monument. We encourage the team and subsequent managers to maintain a full spectrum of treatment options including prescriptive grazing as a part of the ongoing fight against these invaders.</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>113 / 002</td>
<td>The preferred alternative calls for aggressive noxious weed control and fire management. The plan should recognize grazing as a management tool in obtaining these objectives. Research has been completed that show sheep as an excellent tool for noxious weed control and reducing the fuel load wildfires depend on.</td>
<td>The targeted use of livestock as a cultural or biological tool for noxious weed control is recognized under the Proposed Plan as a viable option within a fully implemented Integrated Weed Management Program. See DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management.</td>
</tr>
<tr>
<td>Topic</td>
<td>Vegetation</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>123 / 002</td>
<td>The West’s sagebrush wild lands have long been viewed as a throwaway landscape, and managed for commodity production. Sagebrush species and subspecies of the genus Artemisia are often complexly interspersed across the landscape, varying with elevation, soils and other factors. Anti-sagebrush myth-based management has been pervasive (Welch and Criddle 2003). Virtually all sagebrush wild lands are grazed (Knick 2003), with resultant alteration of species composition and structure, and disruption of ecosystem functioning (Fleischner 1994). There is now widespread recognition of the spiraling loss, fragmentation and endangerment of sagebrush habitats (Ricketts et al. 1999, Knick et al. 2003). A conservation assessment of North American ecoregions found the Snake/Columbia Shrub Steppe bioregionally Outstanding and Endangered, “requiring protection of remaining habitat and extensive restoration.” Livestock degradation is setting the stage for irreversible changes, which may have already occurred in the Monument in areas of cheatgrass-infested lands.</td>
<td>The decline of the sagebrush steppe in the western United States is acknowledged in the DEIS (pp. 86-98, Affected Environment, Vegetation, Including Special Status Species, and Fire Management).</td>
</tr>
<tr>
<td>37 / 002</td>
<td>However, it is admittedly hard to understand how the Big Desert project could really do anything other than increase fire danger by killing sagebrush and ultimately leading to increases in cheatgrass under the dead shrubs.</td>
<td>The Big Desert Fuelbreaks Project is outside of the boundaries of Craters of the Moon National Monument and Preserve and therefore is not implementing any aspect of the Draft EIS. Future fuels management projects within the Monument boundary will be analyzed through project-level environmental assessments and will be available for public review.</td>
</tr>
<tr>
<td>165 / 003</td>
<td>We believe that implementation of Alternative C will result in more acreage of restored sagebrush steppe community than is reported, and perhaps as much as Alternative D. The removal of trails and roads, and other limitations on disturbance in the pristine areas should result in passive restoration of those areas. The Service recommends that the final document estimate the number of acres that will be improved in all alternatives.</td>
<td>Potential restoration acreage in Alternative C was estimated to be less than D due to reduction of acres that would receive a full range of restoration treatments under the increased Pristine Zone acreage. Additional passive restoration through future changes in grazing regimes, or road and trail removal, is possible under any of the alternatives; however, is not guaranteed and therefore was not analyzed. Removal of livestock grazing, roads, trails, etc., do not guarantee restoration by passive means if the area is dominated by cheatgrass and/or noxious weeds, and does not have an adequate on-site seed source for passive revegetation.</td>
</tr>
<tr>
<td>37 / 003</td>
<td>I ask that Monument planners find out just what exactly is going on, if any Tebuthiuron has yet been placed, and if so where. As you know, Tebuthiuron persists in soils for long periods of time, as it kills shrubs over a period of 10 years or more. Any chemical-sensitive visitors to the eastern side of Craters may be exposed to chemical-containing dust from this project over the next decade.</td>
<td>The Big Desert Fuelbreaks Project is outside of the boundaries of Craters of the Moon National Monument and Preserve and therefore is not implementing any aspect of the Draft EIS. Future fuels management projects within the Monument boundary will be analyzed through project-level environmental assessments and will be available for public review.</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>82 / 004</td>
<td>The Preferred Alternative, so-called, a &quot;restoration&quot; alternative, would promote aggressive herbicide, mechanical and fire treatments and plant seedings with no requirement to address the root causes of ecosystem problems -livestock grazing and roads. There is not even a requirement to seed native plant species following a treatment! Conduct real restoration, relying on passive restoration techniques wherever possible (limit livestock grazing, close roads, remove livestock facilities that are causing weed spread). Use only native plants in all seedings.</td>
<td>See DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. Restoration treatments are not necessarily active and can include passive methods, such as temporary rest from livestock grazing, depending on the current condition of the vegetation and desired future conditions. The use of native plants is emphasized in all restoration projects and only native species would be used on projects in the Pristine Zone.</td>
</tr>
<tr>
<td>82 / 004</td>
<td>There is not even a requirement to seed native plant species following a treatment! Conduct real restoration, relying on passive restoration techniques wherever possible (limit livestock grazing, close roads, remove livestock facilities that are causing weed spread). Use only native plants in all seedings.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>107 / 004</td>
<td>More forbes should be planted in burned areas rather than excessive non-palatable crested wheat grasses and intermediate wheat grasses. This would be more beneficial to sage grouse and domestic sheep grazing.</td>
<td>See DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management.</td>
</tr>
<tr>
<td>129 / 004</td>
<td>The Draft EIS emphasizes the need to maintain soil protection to prevent &quot;accelerated and unnatural erosion.&quot; While native species are important for a number of ecological reasons, including soil protection, many non-native perennial species are just as effective and much easier to establish in the face of annual grass competition in xeric soil types. ISDA strongly suggests that the team place a heavier emphasis on utilizing those plants that will afford the most soil stability and place less emphasis on whether the plants are native or non-native.</td>
<td>The use of native plants is emphasized in all rehabilitation and restoration projects, as required by BLM policy and Executive Order 13112, Invasive Species, February 3, 1999. However, the ID Team maintained language in the document that would allow use of non-native species if they are the best plant materials available for specific site conditions.</td>
</tr>
<tr>
<td>129 / 005</td>
<td>The aggressive restoration goals identified in the vegetation portion of Alternative D (pg 49) are very good goals, but these restoration activities should be closely coordinated with the affected permitees. One of the most environmentally sensitive methods of vegetation manipulation is the use of closely controlled prescriptive grazing. ISDA strongly suggests the team reword restrictive language in the document and maintain prescriptive grazing as a tool to achieve desired future conditions.</td>
<td>Restoration activities will be addressed under project-level environmental assessments, which are available for public review. These activities are closely coordinated with all affected publics, including the permitees. There is no language in the DEIS or Proposed Plan/FEIS prohibiting the use of prescriptive grazing to achieve resource management goals.</td>
</tr>
</tbody>
</table>
Based on data in the Draft EIS and vegetation assessments conducted by Jurs and Sands (2004) on the vegetation of northern portions of the Monument, it is apparent that between 30-40% of the vegetation in the surveyed areas is in poor condition and will require either active restoration measures or a multi-decades long recovery period (Anderson and Inouye, 2001). Lava Lake believes that it is imperative to conduct active restoration of areas in poor condition, especially those areas that have high levels of cheatgrass and are adjacent to areas in good ecological condition. Because a catastrophic fire could originate in these cheatgrass-infested areas and damage adjacent good condition plant communities, NPS/BLM should, as they have proposed, conduct an active restoration program in Laidlaw Park, in particular.

Ecological change in sagebrush communities happens rapidly. Once thresholds are crossed, recovery does not occur, and restoration is extraordinarily difficult, if possible at all. The demise of sagebrush-steppe vegetation in special management areas where agencies fail to take strong action to stop disturbance is vividly apparent in the Snake River Birds of Prey National Conservation Area (SRBOPA). Yesterday’s bright hopes for the SRBOPA, now face the cold reality of ever-expanding monocultures of cheatgrass, with some areas burning every 3-5 years. Here the synergistic and cumulative impacts of disturbance - livestock grazing, fire and military training - have wreaked havoc. This has drastic effects on the ground squirrel and jackrabbit prey of raptor populations, sagebrush-obligate songbirds and other native biota (BLM/IDARNG 1996). The BOP demonstrates the fate of the sagebrush lands of the Monument if BLM fails to act in the EIS to control and change livestock grazing practices, decrease effects of roading, emphasize passive restoration and act to protect remaining native vegetation communities.

The EIS should provide a map of the proposed restoration acreage. This information is crucial to understanding the scope of the problem, the need for new road construction, and how restoration efforts will affect the surrounding area. All alternatives should require the use of native plant species or describe the preferences if sufficient seeds of non-native species are not available.

Areas targeted for restoration within the Monument have an advantage over areas in the Snake River Birds of Prey National Conservation Area (SRBOPA) in that they receive greater precipitation and have soils with greater potential for vegetation production compared to many areas in the SRBOPA. Therefore data pertaining to vegetation treatments in that area are not entirely applicable to the Monument. However, we will consider all available current science when planning treatments.

A restoration map (Figure 15) is included in the Proposed Plan/FEIS. Areas targeted for proactive vegetation treatments were identified in the 2004 vegetation inventory (Jurs and Sands 2004) as being in a highly degraded condition. Other areas, identified as fair condition would be considered for more passive means of restoration, including temporary removal of livestock or removal of livestock facilities. BLM believes that not attempting restoration on cheatgrass-dominated ranges will only increase the risk of catastrophic wildland fire and potential loss of intact sagebrush communities adjacent to degraded areas. More information regarding
### Vegetation

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>104 / 007</td>
<td>What models and methodology suggest restoration within ten years is reasonable, considering that Jay Anderson concluded that it took nearly fifty years of data to begin to see trends in the sage-steppe at INEEL? P. 170: Restoration methodology is briefly outlined as using &quot;all available methods&quot; but there is nothing that demonstrates landscape scale success anywhere in the west. An honest discussion would need to recognize that only partial restoration is possible and the long term analysis would call for weed control. &quot;All available methods&quot; is a wide open opportunity to use the quick and dirtiest method. We need to emphasize native plants in the restoration. &quot;All available methods&quot; needs to include removal of grazing, which is acknowledged as a primary contributor to weeds, soil disturbance, fire potential and loss of diversity.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>restoration methods will be included in EAs for individual restoration projects.</td>
</tr>
</tbody>
</table>

See also DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. The use of native plants is emphasized in all restoration projects and only native species would be used on projects in the Pristine Zone.

The alternatives describe the acreage that would be treated within the life of the plan with the goal of moving the treated areas towards a more functional community (Fire Condition Classes 2 and 1). BLM is aware that full restoration is complicated – methodologies and materials available for restoration are in an evolving state and will be for at least the term of this plan, and likely longer. However, we will use the best tools and science available over this period to treat dysfunctional, cheatgrass-dominated communities and move them toward sagebrush-steppe. Restoration goals always include short- and long-term control of noxious weeds.

Shoshone BLM has been a proactive leader in sagebrush steppe restoration in the western US and has several projects showing success in the early stages. BLM believes that not attempting restoration on cheatgrass-dominated ranges will only increase the risk of catastrophic wildland fire and potential loss of intact sagebrush communities. It is our intent to treat those areas identified in the 2004 vegetation inventory and assessment conducted by the BLM and The Nature Conservancy (see Jurs and Sands 2004) as being in a highly degraded condition to reduce this risk and to protect good condition areas, as well as those that can be improved by less invasive means, including temporary removal of livestock. More information regarding restoration methods will be included in environmental assessments for individual restoration projects.

The alternatives describe the acreage that would be treated within the life of the plan with the goal of moving the treated areas towards a more functional community (Fire Condition Classes 2 and 1). BLM is aware that full restoration is complicated – methodologies and materials available for restoration are in an evolving state and will be for at least the term of this plan, and likely longer. However, we will use the best tools and science available over this period to treat dysfunctional, cheatgrass-dominated communities and move them toward sagebrush-steppe. Restoration goals always include short- and long-term control of noxious weeds. Shoshone BLM has been a proactive leader in sagebrush steppe restoration in the western US and
<table>
<thead>
<tr>
<th>Topic</th>
<th>Vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter No. / Comment No.</td>
<td>Comment</td>
</tr>
<tr>
<td>123 / 007</td>
<td>There is a great urgency to take strong and decisive steps to limit livestock disturbance of soils and vegetation, and try to slow the spread of exotic species. We have just reviewed a Shoshone BLM EA that describes trying to rehab an OHV hill-claim area in the Sand Butte WSA. This EA states “rush skeletonweed is common in the general area” – which is just upwind of Laidlaw Park! The livestock-disturbed lands of the Monument are at great risk of rapid spread of this highly invasive exotic whose small seeds are transported on wind.</td>
</tr>
<tr>
<td>111 / 008</td>
<td>Where restoration work involves seedings, only native plants should be used.</td>
</tr>
<tr>
<td>104 / 008</td>
<td>The plan should contain an assessment of the potential impact from future noxious weed infestation resulting from a significant expansion of Passage Zone. The plan seems to ignore the strong correlation between roads/vehicular traffic and noxious weed infestations. According to the numerous sources and studies, roads and trails, and their accompanying motorized users are the primary conduits for noxious weed species transport and establishment. In addition, recent studies show that improved roads accelerate noxious weed expansion significantly more than primitive ones while unroaded areas act as strongholds for native species against invasions. The DEIS fails to analyze how each level of road improvement will expose an increasing area of native vegetation to invasion by exotic weeds. The study found</td>
</tr>
<tr>
<td>Response</td>
<td>has several projects showing success in the early stages. BLM believes that not attempting restoration on cheatgrass-dominated ranges will only increase the risk of catastrophic wildland fire and potential loss of intact sagebrush communities. It is our intent to treat those areas identified in the 2004 vegetation inventory and assessment conducted by the BLM and The Nature Conservancy (see Jurs and Sands 2004) as being in a highly degraded condition to reduce this risk and to protect good condition areas, as well as those that can be improved by less invasive means, including temporary removal of livestock. More information regarding restoration methods will be included in environmental assessments for individual restoration projects.</td>
</tr>
<tr>
<td></td>
<td>The DEIS acknowledges that livestock are known vectors to the spread of noxious weeds (Ch. 3, Discussion on Noxious and Exotic Species, p. 92). A full Integrated Weed Management Program addresses a broad range of prevention, education, and control activities to combat noxious weeds (see DEIS p. 25, Management Guidelines Common To All Alternatives: Vegetation, Including Special Status Species and Fire Management.</td>
</tr>
<tr>
<td></td>
<td>See DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. Restoration treatments are not necessarily active and can include passive methods, such as temporary rest from livestock grazing, depending on the current condition of the vegetation and desired future conditions. The use of native plants is emphasized in all restoration projects and only native species would be used on projects in the Pristine Zone.</td>
</tr>
<tr>
<td></td>
<td>Analysis in the DEIS (Ch. 4) acknowledges the risk of increased road development relative to weed infestation. In response to comments such as this the ID team reduced the amount of Passage Zone in the Proposed Plan/FEIS, particularly in Laidlaw Park. The implementation plan for transportation will address road development within specific areas and zones of the Monument, with consideration to these and other issues.</td>
</tr>
<tr>
<td></td>
<td>The DEIS acknowledges that roads, vehicles, humans, and animals are known vectors to the spread of noxious weeds (Ch. 3, Discussion on Noxious and Exotic Species, p. 92). A full Integrated Weed Management Program addresses a broad range of prevention, education, and control activities to combat noxious weeds (see DEIS</td>
</tr>
<tr>
<td>Topic</td>
<td>Vegetation</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
</tr>
<tr>
<td></td>
<td>significantly greater numbers of non-native weeds adjacent to paved roads than four wheel drive…</td>
</tr>
<tr>
<td>70 / 009</td>
<td>No restoration should proceed without a long term monitoring and response protocol mandated and funded as a part of the initial restoration. We need a map showing restoration acreage.</td>
</tr>
<tr>
<td>123 / 010</td>
<td>There are no provisions to restore damaged playas. For example, all playas should be assessed for potential for restoration, and those with potential should have stock ponds removed.</td>
</tr>
<tr>
<td>105 / 011</td>
<td>Development of a fire plan for the Monument lands must be part of the comprehensive planning process. Protection of existing native habitat, especially sagebrush, should be identified as a top priority in fire situations. Whether a wild fire or a prescribed burn, all areas should be reseeded with native plants and adequately rested from livestock grazing and recreation use to allow native plant establishment and lessen the spread of weeds. No new crested wheat grass seedlings or other exotic species should be used to restore native habitat. The BLM and NPS should work to establish their own, local seed sources from within the Monument. Areas should be identified (possibly Laidlaw Park) where select removal of a desired species seed will not impact the current location, but will provide native seed to another location if none is available from the usual DOI sources. The Monument plan should identify as one of its primary goals, restoration and maintenance of native vegetation on all lands altered by fire or other disturbance. Restoration should be conducted using only native species. Specific timelines for restoration, revegetation and rest should be included in the management plan. The management plan should also include a timeline for revegetation and/or restoration to natural conditions of all “user-created” motorized routes in the Monument.</td>
</tr>
<tr>
<td>Response</td>
<td>p. 25, Management Actions Common to All Alternatives: Vegetation, Including Special Status Species, and Fire Management).</td>
</tr>
<tr>
<td></td>
<td>A map of proposed restoration acreages has been added to the Proposed Plan/FEIS. Monitoring protocols for all restoration projects will be addressed in project-level environmental assessments.</td>
</tr>
<tr>
<td></td>
<td>Playas would be considered for restoration on a case-by-case basis. The DEIS (p. 29, Management Actions Common to All: Livestock Grazing) states “BLM may remove developments if they are no longer serving a useful purpose or resource objectives warrant their removal. Sites would be restored.” In addition, no additional playas would be modified or developed (DEIS p. 26, Management Actions Common to All: Water Resources). Language regarding the restoration of playas has been added to the Proposed Plan/FEIS.</td>
</tr>
<tr>
<td></td>
<td>A Fire Management Plan would be prepared as part of the implementation of the Proposed Plan (DEIS p. 12, Future Planning Needs, Fire Management Plan). Currently the Monument operates under two Fire Management Plans: the 2004 South Central Idaho FMP covers BLM-administered lands and the Preserve; the 2000 NPS Wildland FMP covers the original Monument. The updated FMP would guide suppression efforts as well as pro-active fuels reduction and restoration treatments, and would detail goals and constraints in specific fire management areas based on resource objectives outlined in the RMP/GMP. In addition, post-fire rehabilitation on BLM-administered lands within the Monument is guided currently by the Shoshone and Burley Field Office Normal Fire Rehabilitation Plans. In all cases, the use of native plants is emphasized and only native species would be used on projects in the Pristine Zone. BLM and NPS are currently funded and have applied for additional funding for native seed increase projects specifically for plants found within the Monument. BLM is working with the USFS Rocky Mountain Research Station and private growers to collect and increase plants to be used in large-scale restoration and post-wildland fire rehabilitation projects; NPS is working with NRCS the Natural Resources Conservation Service to increase plants specific to the Monument and Preserve. Every effort is being made to utilize the best available science and plant materials in restoration and rehabilitation projects.</td>
</tr>
<tr>
<td></td>
<td>Restoration of user-created or closed routes would be addressed after completion of the Transportation Plan.</td>
</tr>
<tr>
<td>Topic</td>
<td>Vegetation</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td><strong>Letter No./ Comment No.</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>165 / 011</td>
<td>Page 49 - Alternative D, Vegetation; Management Actions, 6th bullet: The statement suggests that there are objectives that would conflict with wildland fire other than life and property protection and that these objectives are known and prioritized. We recommend these be identified and their priority justified in the final document. The reader cannot judge the applicability or utility of a management action without this knowledge.</td>
</tr>
<tr>
<td>165 / 017</td>
<td>Page 59 - Natural Resources; Alternative B, C, and D: The rationale for different target acreages between alternatives is unclear. In addition, it is unclear what the differences are between Alternative C and D in the last row of the table.</td>
</tr>
<tr>
<td>165 / 019</td>
<td>Page 68 - Table 8; Summary of Impacts; Vegetation and Fire Management: Although less active restoration (in acres) would be realized in Alternative C, more passive restoration would be realized by the reduction of access and motorized activities. The rate of restoration may be slower in some areas but higher in others because of the lack of disturbances such as mechanized activities, planting of non-native forage species, and reduced probability of human-induced fire. This would result in a larger area of restored ecosystem, even if it takes a longer period of time. There would be less opportunity for noxious weed management in Alternative C, but there should be less need for it as well. Many of the restoration activities outlined in Alternative D will need to be applied repeatedly because of ongoing activities that facilitate weed introduction.</td>
</tr>
<tr>
<td>123 / 019</td>
<td>Restoration (DEIS at 8, 17). The DEIS provides a flawed, unscientific and commodity-use biased definition of “restoration”. See DEIS at 387: “Actions that proactively treat degraded vegetation with the intent of meeting resource management objectives. Restoration treatments can include prescribed fire, herbicide use to control weeds, and seeding with desirable vegetation”. This is not restoration. “Resource management objectives” may be providing cattle food. This has nothing to do with ensuring ecological integrity. The DEIS actions are better described as “treatment”. Why don’t you just call it treatment,</td>
</tr>
</tbody>
</table>

**Response**

Wildland Fire Use for Resource Benefit is a site-specific action, requiring a project-specific burn plan for implementation. Resource management objectives which are broadly outlined in the DEIS and Proposed Plan/FEIS guide implementation- and project-level planning. More site-specific objectives can be dynamic and are therefore updated periodically in the Fire Management Plans, and are addressed specifically in burn plans. Current resource considerations for the Craters of the Moon Wilderness can be found in the NPS Fire Management Plan (2000). Resource considerations for the Preserve (Craters Fire Management Unit) can be found in the 2004 BLM South Central Idaho Fire Management Plan.

Table 7 is a summary of the proposed alternatives. The full description of each alternative is found in DEIS Ch. 2.

Thank you for your comment. We will consider these points in the appropriate implementation- and project-level plans.

The DEIS explicitly states (DEIS p. 25, Management Actions Common to All Alternatives: Vegetation, Including Special Status Species, and Fire Management, and p. 49, Management Actions under Alternative D for Vegetation) that the goal of restoration treatments is to restore sagebrush steppe and wildlife habitat. Additional information regarding restoration treatment methods and protocols is included in the Proposed Plan/FEIS.
<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>165 / 021</td>
<td>Instead of contriving a non-ecologically based, circular definition. A restoration action that is “desired” is something that the agency (with bias towards continued commodity production) describes.</td>
<td>Many of the impacts mentioned will be addressed later in implementation-level plans including Transportation, Fire, and Wilderness Management Plans. Each of these plans, as well NEPA documents for individual projects, will address pygmy rabbits as well as other sensitive or rare species. Specific project planning will also address the needs of these species. Inventory work for rabbits will continue and the agencies will take appropriate actions when rabbits or quality habitat are. We agree that consideration of the pygmy rabbit is important. BLM and NPS policy insures that appropriate measures will be taken to reduce or eliminate negative impacts to the pygmy rabbit and its habitat. Additionally, our goal of restoring degraded sagebrush steppe habitat will provide additional quality pygmy rabbit habitat over the current situation.</td>
</tr>
<tr>
<td>123 / 026</td>
<td>DEIS at 17 claims that sagebrush-steppe restoration is common to all alternatives. Yet, there is no incorporation of passive restoration, no grappling with the futility of undertaking restoration while without any overarching livestock grazing management, etc.</td>
<td>See DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. Restoration treatments are not necessarily active and can include passive methods depending on the current condition of the vegetation and desired future conditions. Additional information regarding restoration treatment methods and protocols is included in the Proposed Plan/FEIS.</td>
</tr>
<tr>
<td>123 / 032</td>
<td>Instead of use of native plants would be emphasized, use of native plants in post-fire and rehab, must be mandatory.</td>
<td>See DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. Restoration treatments are not necessarily active and can include passive methods, such as temporary rest from livestock grazing, depending on the current condition of the vegetation and desired future conditions. The use of native plants is emphasized in all restoration projects and only native species would be used on projects in the Pristine Zone. Additional information regarding restoration treatment methods and protocols is included in the Proposed Plan/FEIS.</td>
</tr>
</tbody>
</table>
### Topic Vegetation

<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 063</td>
<td>DEIS at 59. The acres of lands to be treated under all alternatives appear to be completely arbitrary, and so the numbers could be easily changed under any alternative. These acreages should not be the basis for saying one alternative is better or worse than the other. What exactly is the basis of the land area acreage targeted for treatment under all Alternatives? The EIS fails to present an up-to-date assessment or other information on the ecological condition of all Monument lands. Which are in poor, fair, good, or excellent condition? Have you revisited the old SVIM sites and compared past vs. present condition? If so, what are the results? What do current inventories – as of sagebrush-steppe species - tell you about the ecological condition?</td>
<td>A vegetation inventory and assessment for Laidlaw Park, Little Park, and Paddelford Flat was performed by the BLM in cooperation with The Nature Conservancy in 2002/2003 (Jurs and Sands 2004). This assessment was utilized in estimating proposed restoration acreages in the Monument. A map based on this assessment (Figure 15) showing the biotic integrity of Monument lands is included in the Proposed Plan/FEIS. Those areas identified as being in poor ecological condition, particularly those in Laidlaw Park, have been identified as highest priority for restoration treatment. Specific restoration treatment methods and locations would be defined in environmental assessments for restoration in Laidlaw Park and other areas of the Monument, which would be available for public review.</td>
</tr>
<tr>
<td>123 / 077</td>
<td>Map DEIS at 87 shows &quot;perennial grassland&quot;. These areas are the exotic crested wheatgrass or intermediate wheatgrass, but also may contain a significant amount of cheatgrass and other weeds. There is no assessment of the condition of interspaces. The Map shows that almost half the sagebrush-steppe habitats in the Monument have been converted to crested wheatgrass or cheatgrass. This map fails to show areas where cheatgrass dominated the understory of sagebrush communities.</td>
<td>The vegetation map included in the DEIS was produced from satellite imagery and is intended to give a general idea of vegetation distribution within the Monument. Please refer to DEIS p. 86 third paragraph in the right-hand column (Data from various vegetation studies . . .) for a discussion of the limitation of the vegetation map.</td>
</tr>
<tr>
<td>123 / 080</td>
<td>The DEIS provides no assessment of the probability of success of any treatments that it would conduct. The Plan must assess risks, and likelihood of success of treatments. There is also no requirement to use native vegetation its so-called restoration. What else, besides just rehabilitating by seeding, must managers do to effectively “treat” cheatgrass-infested interspaces? While it is nice that BLM and NPS “encourage” the use of native species, no requirement under any Alternative to actually use native species in treatments.</td>
<td>See p. 25 Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. Restoration treatments are not necessarily active and can include passive methods, such as rest from grazing, depending on the current condition of the vegetation and desired future conditions. Additional information regarding restoration treatment methods and protocols is included in the Proposed Plan/FEIS. Specific methods, analysis of treatment effects, and criteria for determining success of treatments will be addressed in environmental assessments for individual restoration projects. The use of native plants is emphasized in all restoration projects, pursuant to BLM policy and Executive Order 13112, Invasive Species, February 3, 1999, and only native species would be used on projects in the Pristine Zone.</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>123 / 081</td>
<td>Which areas, specifically, are dominated by native perennial grasslands? Does your statement on DEIS at 86 mean that you plan to burn kipukas? We believe this would be a big mistake.</td>
<td>The vegetation map included in the DEIS was produced from satellite imagery and is intended to give a general idea of vegetation distribution within the Monument. Please refer to DEIS p. 86 third paragraph in the right-hand column (Data from various vegetation studies . . .) for a discussion of the limitation of the vegetation map. Prescribed burning of kipukas is not being considered at this time.</td>
</tr>
<tr>
<td>123 / 086</td>
<td>As part of all alternatives, playas that have been damaged by gouging livestock ponds into them should be assessed for restoration potential.</td>
<td>Playas would be considered for restoration on a case-by-case basis. The DEIS (p. 29, Management Actions Common to All: Livestock Grazing) states “BLM may remove developments if they are no longer serving a useful purpose or resource objectives warrant their removal. Sites would be restored.” In addition, no additional playas would be modified or developed (DEIS p. 26, Management Actions Common to All: Water Resources). Language regarding the restoration of playas has been added to the Proposed Plan/FEIS.</td>
</tr>
<tr>
<td>123 / 097</td>
<td>In its Laidlaw EA as in the DEIS, BLM failed to consider any alternatives that maximize wildlife habitat protections, removed livestock use from sensitive areas, undertakes actions necessary to protect sagebrush communities threatened by weed invasion, etc. Laidlaw EA at 13-14 describes surveys for migratory birds, and widespread declines between 1980 and 2002. EA at 13. The 2002 migratory bird data showed widespread declines of sage thrashers and sage sparrows, declines which are most likely correlated to declines in sagebrush and native grass cover. Response to Protest at 16 describes Aroga moth-caused mortality of sagebrush. EA at 7: “fires, livestock grazing practices and road maintenance have created disturbances which have allowed … weeds to spread”. Laidlaw EA at 8 “portions of this allotment are currently experiencing large amounts of Wyoming and Basin big sagebrush mortality” reasons –include “grazing pressure”. Laidlaw EA at 189: “much of the native plant community in the southern portion of Laidlaw Park has been replaced with cheatgrass”. This all highlights the need for strong, decisive action to protect remaining habitats from causes of degradation an – action completely cast aside in the EA and DEIS.</td>
<td>All alternatives contain specific management guidance for wildlife protection, particularly sagebrush steppe obligates. Measures are in place to protect the sagebrush steppe in the Monument (see Management Guidance Common to All Alternatives: Vegetation, Including Special Status Species, and Fire Management; and Wildlife, Including Special Status Species; DEIS pp. 25-26.) In addition, all allotments must meet or be progressing towards meeting Idaho Standards and Guidelines, including Standard 4 (Native Plant Communities), and Standard 8 (Special Status Species) (DEIS p. 29, Management Guidance Common to All Alternatives: Livestock Grazing).</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>123 / 102</td>
<td>The Laidlaw EA stated that Laidlaw Park is an isolated ecological community 58, 618 acres native vegetation, 28,000 acres annual grasses, 6,960 acres seeding. Its isolation “makes it well suited for the study of native plants and potential natural vegetative communities”. We have been trying to obtain a copy of this survey for months, and have been told by BLM that it is complete, and that we needed to contact TNC. We have done so, and they have not provided us with a copy in time for use in these comments. It appears that BLM is purposefully not incorporating this study’s results into the DEIS. We request to be able to submit additional comments when we finally obtain this document.</td>
<td>The vegetation inventory and assessment performed by Jurs and Sands (2004) was utilized in estimating proposed restoration acreages in the DEIS. A map based on this assessment (Figure 15) showing the biotic integrity of Monument lands is included in the Proposed Plan/FEIS. Those areas identified as being in poor ecological condition, particularly those in Laidlaw Park, have been identified as highest priority for restoration treatment. Specific restoration treatment methods, based on recommendations from the Jurs and Sands (2004) report, would be defined in an environmental assessment for restoration in assessment area.</td>
</tr>
<tr>
<td>123 / 151</td>
<td>The evaluation of Vegetation, including special status species, completely limits assessment of the impacts on vegetation of livestock use and disturbance across nearly all sagebrush lands of the Monument. As DEIS maps of allotments show, nearly all of these sagebrush lands are located inside a confusion of grazing allotments. This must be addressed in a Supplemental EIS.</td>
<td>Potential impacts of livestock use as it varies by alternative were analyzed in the DEIS, Ch. 4. Specific effects of allotment management decisions will be addressed in project- or allotment-level environmental assessments.</td>
</tr>
<tr>
<td>123 / 152</td>
<td>What are vegetation conditions inside exclosures in the Monument and surrounding increase livestock grazing and trampling impacts – all unassessed.</td>
<td>The agencies used the most current data available to them in preparation of the DEIS.</td>
</tr>
<tr>
<td>123 / 157</td>
<td>As the EIS has failed to study and assess the impacts of passive restoration, it cannot conclude that restoration under Alt. C would occur more slowly.</td>
<td>The intent under alternative C was that treatments would possibly be applied more slowly as less intrusive technology becomes available. See p. 25, Management Actions Common To All Alternatives for Vegetation, Including Special Status Species, and Fire Management. Restoration treatments are not necessarily active and can include passive methods, e.g. rest from livestock grazing, depending on the current condition of the vegetation and desired future conditions. Additional information regarding restoration treatment methods and protocols is included in the Proposed Plan/FEIS.</td>
</tr>
<tr>
<td>123 / 164</td>
<td>The DEIS can not claim it is using “integrated weed management” if it fails to employ passive restoration techniques – i.e. take action to prevent infestations to protect expensively treated areas when grazing again resumes, specify limitations n livestock grazing of infested areas, etc.</td>
<td>Restoration goals always include short- and long-term management of noxious weeds utilizing both passive and active methodologies associated with an Integrated Weed Management program. If monitoring shows that grazing is impacting the restoration process, temporary removal of livestock is a legitimate response to correct the problem.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>123 / 168</td>
<td>While the DEIS uses ICBEMP guidance as an excuse to treat large areas, it ignores guidance in ICBEMP, such as Wisdom et. al. (2000), that emphasizes protection of sagebrush steppe habitats - instead of the accelerated disturbance and more roads, more livestock projects, likely more AU/Ms actually grazed and more fragmentation that will occur under the Preferred Alternative of this myopic EIS. Prevent conditions that favor vegetation problems, i.e. protect the good or better ecological condition communities that remain. Restore ecological integrity on sites with vegetation problems. Restoration must be performed in a precautionary manner. BLM has countless examples of the failure of aggressive pseudo-restoration/treatment scattered across the Snake River Plain and the interior West. Indeed, the “aggressive” techniques proposed by BLM resemble the livestock forage projects undertaken in the Vale Project – herbiciding, disking, seeding exotics. It is appalling that BLM does not even commit to using native plant species in its aggressive restoration efforts. While such false restoration may produce more cattle and sheep forage, it should be called “treatment”, and not “restoration”. Emphasis must be placed on the use of passive restoration techniques, and protection of remaining sagebrush lands. Economics alone dictates, this, as aggressive restoration may costs over $100 per acre, with no guarantee of success. Failure is common – due to dry winters or springs, insects, livestock trespass devouring new seedlings and transporting weed seeds, etc. Passive restoration includes: * Area, road and OHV route closures. * Voluntary livestock permit retirement. * Retirement of vacant grazing allotments. This EIS must authorize grazing permit retirement, so that complicated (and costly) Land Use Plan amendments are not necessary when this inevitably arises during the life of the plan. * Excluding livestock from areas with aggressive weed infestations, uplands “at risk” of weed infestation, special status species habitats, etc. * Restrictions on livestock activities such as salt placement, herding, location of sheep camps. * Removal of livestock facilities that are causing damage, fostering weed spread, etc. Vegetation Treatments are Actions, based on scientific evidence, that will: Affect the conservation and restoration of native vegetation communities, watersheds and wildlife habitats.</td>
<td>To protect sagebrush steppe communities and reduce fragmentation, acreage of Pristine Zone was increased and acreage of Passage Zone decreased in the Proposed Plan. See DEIS p. 25, Management Guidance Common to All Alternatives for Vegetation regarding protection and restoration of sagebrush steppe habitats.</td>
</tr>
<tr>
<td>123 / 185</td>
<td>Prevent conditions that favor vegetation problems, i.e. protect the good or better ecological condition communities that remain. Restore ecological integrity on sites with vegetation problems. Restoration must be performed in a precautionary manner. BLM has countless examples of the failure of aggressive pseudo-restoration/treatment scattered across the Snake River Plain and the interior West. Indeed, the “aggressive” techniques proposed by BLM resemble the livestock forage projects undertaken in the Vale Project – herbiciding, disking, seeding exotics. It is appalling that BLM does not even commit to using native plant species in its aggressive restoration efforts. While such false restoration may produce more cattle and sheep forage, it should be called “treatment”, and not “restoration”. Emphasis must be placed on the use of passive restoration techniques, and protection of remaining sagebrush lands. Economics alone dictates, this, as aggressive restoration may costs over $100 per acre, with no guarantee of success. Failure is common – due to dry winters or springs, insects, livestock trespass devouring new seedlings and transporting weed seeds, etc. Passive restoration includes: * Area, road and OHV route closures. * Voluntary livestock permit retirement. * Retirement of vacant grazing allotments. This EIS must authorize grazing permit retirement, so that complicated (and costly) Land Use Plan amendments are not necessary when this inevitably arises during the life of the plan. * Excluding livestock from areas with aggressive weed infestations, uplands “at risk” of weed infestation, special status species habitats, etc. * Restrictions on livestock activities such as salt placement, herding, location of sheep camps. * Removal of livestock facilities that are causing damage, fostering weed spread, etc. Vegetation Treatments are Actions, based on scientific evidence, that will: Affect the conservation and restoration of native vegetation communities, watersheds and wildlife habitats.</td>
<td>See p. 25 Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. Restoration treatments are not necessarily active and can include passive methods, such as rest from grazing, depending on the current condition of the vegetation and desired future conditions. Additional information regarding restoration treatment methods and protocols is included in the Proposed Plan/FEIS. Specific methods, analysis of treatment effects, and criteria for determining success of treatments will be addressed in environmental assessments for individual restoration projects. The use of native plants is emphasized in all restoration projects, pursuant to BLM policy and Executive Order 13112, Invasive Species, February 3, 1999, and only native species would be used on projects in the Pristine Zone.</td>
</tr>
</tbody>
</table>
These include: prevention treatments that will result in measurable soil, hydrological, and vegetation changes that resist invasive exotic species; active and passive restoration treatments that restore native vegetation and/or conditions favorable to native communities. Any treatments must be based on assessments of: 1) The condition of vegetation; 2) Major human causes of disturbance 3) Opportunities for conservation of native vegetation and prevention of soil disturbance and vegetation problems; 4) Results of past vegetation treatments. For example, BLM has disastrously applied herbicides on the Snake River Plain (the Oust fiasco), and this should make the agency very wary about herbicide use in unpredictable wild land settings; 5) Likelihood of treatment options for achieving long-term restoration.

123 / 186

In order to determine current conditions and identify actions in alternatives, the DEIS must: Map and Identify (collecting new baseline information where necessary): 1) Key areas of native vegetation (in Craters – all) and high ecological integrity. 2) Suitable and critical habitat for habitat-specialist species. 3) Suitable habitat for wide-ranging species such as sage grouse that require use of extensive and temporally diverse (winter, summer habitats) within the ecoregion. 4) Hotspots of diversity. 5) Habitats “at risk” of further fragmentation or degradation. 6) Areas where restoration will increase potential for habitat connectivity. 7) Areas that could benefit from improved management or restoration to maintain or enhance ecological integrity.

123 / 187

It must also: * Collect information on current ecological condition and special status species occurrence and habitats * Identify spatial and temporal association of vegetation problems and compare and contrast with the spatial and temporal occurrence of past and continuing human activities. * Identify key areas to phase out grazing – key habitats, areas where grazing is clearly incompatible with vegetation and habitat recovery. * Conduct a road and off-road vehicle routes assessment with the goal of closing roads and routes in ecologically sensitive areas * Identify invasive exotic species and exotic species plantings to restore. Cheatgrass, intermediate wheatgrass and crested wheatgrass areas must be restored. A key component of plant communities that is altered by physical damage due to livestock grazing (and sheep browsing) is the structural diversity of

Inventory of vegetation and wildlife resources of the Monument is ongoing through cooperative efforts with Idaho State University, Idaho Bird Observatory, and The Nature Conservancy (Jurs and Sands 2004). Some of this information was integrated into the DEIS and Proposed Plan/FEIS and future results will be integrated into implementation-level planning efforts.

Thank you for your comment. Implementation relative to closure and restoration of routes will be addressed in a Travel Management Plan (DEIS p. 12, Future Planning Needs and p. 28 Management Guidelines Common to All Alternatives: Land Use and Transportation). Implementation of restoration and fuels reduction projects will be guided by the final Monument Proposed Plan/FEIS. Project-level environmental assessments would apply current inventory and evaluation of vegetation conditions (e.g. Jurs and Sands 2004), best available science and plant materials, Desire Future Conditions and Management Actions outlined in the Proposed Plan/FEIS, and all applicable law and policy. See also DEIS p. 25-26, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management, and Wildlife, including Special Status Species.
Vegetation

sagebrush, bitterbrush and other native shrubs. Livestock impacts simplify structure – a particular concern in lands grazed by both sheep and cattle. Restoration of structural diversity of native shrubs must be part of the goal any “treatment”. Plans must include honest assessment of: current site conditions, vulnerable wildlife and plant species habitats, habitat connectivity for special status species and species of concern, past and present (ongoing) activities leading to vegetation problems, passive and active restoration needs; feasible restoration goals. Treatments should be prioritized based on cessation of activities that impede natural recovery, i.e. passive restoration, active restoration treatments that incorporate passive restoration, and last -active restoration treatments to restore ecological integrity. Use a precautionary approach that incorporates the best available science, least intrusive techniques to restore ecological integrity, least risky intervention techniques, recovery plans for species of concern, prevention strategies to reduce the need for chemical and mechanical treatments or prescribed fire, so that the number of acres treated annually will decline over the life of the EIS.

Invasive species must be minimized through conservation and restoration of native vegetation communities, watersheds, and wildlife habitats. Executive Order No. 13112, “Invasive Species” describes two facets of invasive species control: prevent the spread of invasive species, and restore native species and habitats to reduce the effects of invasive species and to prevent further spread. The long-term DEIS management must: Identify and lessen the conditions that cause or favor the introduction, establishment, and spread of invasive species - and identify methods to ameliorate those conditions. Due to large-scale loss of sagebrush-steppe, and the continuing structural alteration and understory alteration and degradation of remaining grazed sagebrush-steppe lands, the DEIS must avoid roadless areas, old growth, special status species habitats, ecologically sensitive areas, and areas of high ecological integrity (non-fragmented). Any treatments should not: increase motorized vehicle use or access, increase fire risk through invasion of exotic plants or accumulation of activity fuels, limit native pant recovery through chipping or ground disturbing activities. Science-based protocols must be designed to prevent the spread of invasive species in relation to all activities that have been identified in the scientific literature to as primary facilitators of the establishment and spread of invasive species, watershed degradation, and loss of native species.
Treatments of Vegetation must be undertaken as follows: 1) Use the least intrusive/extensive/risky methods. Methods must aim to enhance wildlife habitats and populations. 2) Analyze potential effects of site-specific treatments on an array of species; reliance on assessment of effects only on umbrella species is not sufficient. An example of the insufficiency of analysis of effects solely on umbrella species involves sagebrush canopy “thinning” for sage grouse. This may negatively impact nesting cover for migratory bird species of concern, pygmy rabbit and other species. 3) Be part of an over-all ecologically based restoration plan and may include: biological control, cultural practices, mechanical treatments, chemical treatments, prescribed fire. 4) Base selection on ecological priorities for restoration rather than economic benefits; size of the proposed treatment area, its location, and the biology of the target invasive species. 5) Except for treatment of small infestations without motorized equipment, use direct treatments within designated wilderness or WSAs only in conjunction with efforts to halt avoidable spread of invasives into wilderness from outside areas. 6) Prioritize non-chemical methods over chemical methods. 7) Small infestations must have higher priority than larger infestations, i.e. there might still be some hope of stopping smaller infestations in wild lands. 8) Plant and seed appropriate native species to compete with exotics. 9) Use cultural treatments that have been shown to be effective in restoring native vegetation in scientific studies. 10) Use mechanical treatments that have been shown to be effective in restoring native vegetation in scientific studies (mowing, spot fire, mastication, weed eaters, mulching hand pulling). 11) Chemical treatments should use application methods that minimize exposure to people, wildlife, native plants. Spot treatments are preferred over broadcast. Follow-up with technique to get native vegetation to grow again. Don’t just spray and walk away. 12) No use of broadcast herbicides near rare plant, amphibian and other chemical-sensitive species habitats. Avoid use of broadcast herbicides as much as possible. 13) Avoid application of herbicides (atrazine) that may affect aquatic species, i.e. near playas. 14) Only use herbicides that minimize adverse effects on environmental and human health, based on knowledge of all ingredients in the formulation, should be used. 15) Prohibit all use of sulfonyleurea herbicides and other acetolactate synthase-inhibiting herbicides due to their demonstrated ability to damage off-site native or crop species.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter No./</td>
<td>Comment</td>
</tr>
<tr>
<td>Comment No.</td>
<td>Response</td>
</tr>
<tr>
<td>152 / 001</td>
<td>16) Design any treatments to account for wildlife habitat needs, for example, timing and location of activities. No treatments during nesting season, wintering season or other sensitive periods. Herbicides can have numerous toxic effects on workers, nearby residents, beneficial soil organisms, and native plant species. Herbicides simplify the vegetation community. They may render the treated site more vulnerable to return of invasive species. Herbicides and other aggressive treatments alone do not address the conditions that favor the introduction, establishment, spread of exotic species.</td>
</tr>
<tr>
<td>81 / 002</td>
<td>Fire Management</td>
</tr>
<tr>
<td>104 / 010</td>
<td>While I support aggressive weed control, fire management, and restoration, the proposal to further develop roads will actually increase the threat of noxious weeds and fire risk, as well as accelerate damage to wilderness values and geologic features.</td>
</tr>
<tr>
<td>70 / 013</td>
<td>Passive restoration methods should be included, such as removal of unnecessary water developments that injure wildlife and spread weeds, and seeding with native plants only, in the restoration of cheatgrass infested areas.</td>
</tr>
<tr>
<td></td>
<td>...should be an increased risk of human-caused fires. The FEIS should include data on the location and source of past fires in this area and analyze how each alternative will affect the probability of these ignitions.</td>
</tr>
<tr>
<td></td>
<td>What is the basis for suggesting that &quot;the potential for human caused fires under Alternative D could be less than in Alternative A because D would involve less accommodations of visitors in the including increased weed spread and fire ignition? comes with improved access (roads)?</td>
</tr>
<tr>
<td></td>
<td>Analysis in the DEIS (Ch. 4) acknowledges the risk of increased road improvement relative to weed infestation, fire risk, wilderness values and geologic features. In response to comments such as this the ID team reduced the amount of Passage Zone in the Proposed Plan/FEIS, particularly in Laidlaw Park. The implementation plan for transportation will address road maintenance and improvement within specific areas and zones of the Monument, with consideration to these and other issues.</td>
</tr>
<tr>
<td></td>
<td>See DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management.</td>
</tr>
<tr>
<td></td>
<td>A fire history map is included in the Proposed Plan/FEIS. Analysis of the impacts of each alternative on potential for fire ignition and spread is included in the DEIS (Ch. 4). Statistics on the cause of ignitions in the Monument are included in the 2004 South Central Idaho Fire Management Plan, which is available through the Shoshone Field Office.</td>
</tr>
<tr>
<td></td>
<td>Alternative D emphasizes a higher level of vegetation restoration treatments to reduce flammable fuels and the concurrent risk of catastrophic wildland fire. This was included in Alternative D to a) restore degraded sagebrush steppe communities and b) reduce spread of human-ignited fire associated with potential increased visitation.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>123 / 111</td>
<td>All BLM lands, including Laidlaw Park, are threatened by the aggressive fire arm of BLM, and the actions it has been known to take in Idaho to ramrod spurious projects forward. For example, the Inside Desert fuelbreaks EA is a harebrained plan to kill sagebrush to, ostensibly, try to prevent more fires from burning the Inside Desert. Sagebrush is to be killed with the persistent herbicide Tebuthiuron along the main access road to the east side of Craters. Yet, Monument staff were not even told that Idaho Falls BLM was doing this. In order to limit the ability of citizens to stop a project for which inadequate analysis had been conducted, and which very likely through killing sagebrush and other disturbance will result in MORE cheatgrass and fire danger, BLM issued a Full Force and Effect Decision. As a result, chemical-sensitive visitors to the east side of the Monument will be subject to dust containing an herbicide known to persist in soils for a decade or more. Throughout this analysis, the cumulative impact of the aggressive fire arm of BLM, operating under the cover of the Healthy Forests Initiative, must be considered in assessing cumulative impacts.</td>
</tr>
<tr>
<td>123 / 158</td>
<td>There is no need to burn aspen to improve condition/stimulate sucker growth. Please see the work of Dr. Charles Kay on the impacts of livestock on aspen herbivory, and incorporate this into the SEIS.</td>
</tr>
<tr>
<td>123 / 192</td>
<td>Extreme caution must be used in any application of prescribed fire. The Snake River Plain is full of examples of disastrous post-prescribed fire cheatgrass invasions. Fire should NOT be used to “thin” sagebrush. In fact, almost the only prescribed burning that should be allowed is to kill cheatgrass seed - in areas that have become cheatgrass monocultures due to the combined effects of grazing and fire. Any proposal to “thin” sagebrush must be examined for effects on habitats on a broad spectrum of sagebrush-obligate species. Given the large-scale loss of big sagebrush through fire and through purposeful agency projects of the past, continued sagebrush die-off, the unwillingness of the DEIS to address grazing changes at all, and the presence of intermediate wheatgrass and other purposefully seeded exotics that would increase with sagebrush removal, it is hard to envision circumstances in the Monument that would warrant sagebrush thinning here. For example, the pygmy rabbit requires dense and</td>
</tr>
<tr>
<td>Topic</td>
<td>Fire Management</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Letter No./</td>
<td>Comment</td>
</tr>
<tr>
<td>Comment No.</td>
<td>structurally diverse canopy cover of big sagebrush – BLM, in the name of trying to promote forb diversity, is foolishly is thinning big sagebrush in the Upper Pahsimeroi by beating it. This is the dead opposite of what is required by the pygmy rabbit, and the DEIS must recognize the need for species-specific analysis. All of the following must be documented and assessed prior to prescribed burns or any other treatment, and an overall examination provided in the SEIS: * Long-term damage to biological soil crusts. * Soil erosion through wind and runoff events. * Long-term loss of nutrients from already nutrient-deficient soils. * Loss of populations and habitat of special status species. * Loss of populations and habitat of special status species. * Risk of invasive species. * Any radionuclides in the soil or vegetation of the area. * Interrelation between treatment projects on Monument and other state, private and federal lands in the surrounding area. * Indigenous uses of plants that may be impacted. * Impacts on air quality. * Lethal effects of treatment on native vegetation within treatment area (for example, fire may kill Idaho fescue). * Likelihood that “treatment” may give competitive advantage to aggressive exotics. For example, intermediate wheatgrass has been seeded in large areas in the northern part of the Monument following 1992 fires. IWG is an aggressive rhizomatous exotic species that may increase following fire. Its rhizomes/tillers cover the ground, precluding the establishment of native species. IWG is known to be invading the margins of slickspots that provide habitat for a rare plant, slickspot peppergrass. * Assessment of amount of existing fragmentation. Any treatment should: * Use existing roads wherever possible. * Commit to restoration of any routes created. * Limit ground disturbance. * Contain the treatment (fire, chemical) within the area targeted. As part of any treatment or following wildfire, to restore natural processes, comprehensive restoration assessments with clear objectives, in conjunction with other active or passive methods must occur and must include: * Minimize introduction of invasive species during and after fire suppression operations * Clean equipment of invasive species seeds before moving equipment off road to build any firebreaks. * Seal all firebreaks to prevent vehicle access. * Minimize post-fire disturbance to burned areas to allow natural recovery. * Measurable recovery criteria to be established, monitored and met</td>
</tr>
</tbody>
</table>
Fire Management

before livestock grazing can resume on any sites. * Changes in livestock use, stocking rates and other grazing management must be undertaken to protect (as best as possible) the * Revegetation. All planned treatments must use only native species. The seed must be acquired in advance of undertaking any treatment. Locally adapted ecotypes must be used if at all possible. Focus must be on plants that will actually grow (such as small native Poas), and not large cattle forage-producing species. * Following fire or other disturbance, do not propose reseeding unless it can be shown that natural regeneration is unlikely. In post-wildfire situations, place highest priority on re-seeding native species. Only use exotics if alternatives are not available. Then, use exotic bunchgrasses – that mimic structure of native plant community. Do NOT seed intermediate wheatgrass. It is virtually impossible to remove from a site once established. Any sites seeded to exotics on an emergency basis must be prioritized for ultimate removal of exotics and re-seeding with native species. Availability of native seeds should be assured by establishing a contract system that will provide growers (local?) the necessary assurance that native, locally-adapted seed/plants will be purchased if grown. Determine, in landscape, and watershed assessments, the feasibility of providing habitat for wildlife or plant species that have been extirpated.

Travel and Access

Roads: The DEIS recognizes as “roads” too many oldvehicle tracks that have not been built or maintained, and that serve no public purpose. We urge BLM and NPS to distinguish between legitimate reads and jeep tracks out in the sagebrush. See Chapter (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Draft Management Plan / Environmental Impact Statement, road and trail definitions have been refined (See Proposed Plan/FEIS Chapter 3, Land Use and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas. See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired
<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Travel and Access</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>142 / 001</td>
<td>Although the DEIS appears to meet the requirements set forth by the National Environmental Policy Act, I believe it needs a stronger definition of a road to more clearly state which routes will permit motorized travel. I would also like to urge the agencies to adopt Alternative C as the preferred alternative for management of the Monument and preserve over the next 15-20 years.</td>
<td>See Chapter 3 (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Draft Management Plan/Environmental Impact Statement, road and trail definitions have been refined (See Chapter 3, Land Use and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas.</td>
</tr>
<tr>
<td>101 / 001</td>
<td>I support leaving existing trails and roads open for public access. I strongly support the Minidoka/Arco road as a passage route. I believe that the best multiple use is Plan B, although some minor modifications outlined in Plan D may be appropriate. It is inconceivable that access would be denied to 750,000 acres. I am opposed to degradation of the Monument but think the public needs to be able to see all the features available. A sound plan that has good signage and improved roads would be appropriate. Access from the south is important due to the natural attraction of the Monument. A loop including the Minidoka/Arco and Kimimah/Calix/Carey roads should be included and was supported by then Interior Secretary Babbitt at the original hearings. Hunting in the Preserve can not be utilized without access. The road improvements would enhance the safety of visitors and others and provide better fire and emergency protection.</td>
<td>Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed Plan/FEIS, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access. See Chapter One, Future Planning Needs, Transportation Planning. In the Proposed Plan/FEIS we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan</td>
</tr>
</tbody>
</table>
### Topic: Travel and Access

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>137 / 001</td>
<td>Hunting should be allowed in the BLM managed areas within the Monument, but roads or trails should not be developed in the more pristine regions where special geological features need to be preserved and protected.</td>
<td>In the Proposed Plan/FEIS we have adopted an expanded Pristine Zone similar to Alternative C, which will afford the most passive protection to geologic resources through limited access. The preserve portions of the Monument, which makes up the majority of the Pristine Zone will still allow hunting, the only part of the Monument closed to hunting is the old original Monument.</td>
</tr>
<tr>
<td>116 / 001</td>
<td>I feel strongly disappointed in having the preferred management option to be designated be Alternative O. This option allows an unacceptable level of aggressive restoration, weed control, and fire management. Worst of all, Alternative O contains a vague definition of roads that will most certainly lead to increased off-road vehicle (OHV) use. That use damages the wilderness values and special geologic features which were intended to be protected. I want to point out that what disappoints me about the Alternative O road classifications and definitions used in the analysis, is that they appear to be arbitrary, and worst of all, even contrary to the intent of the Clinton Presidential Proclamation. I find it unacceptable that under Alternative O there is egregious classification of unauthorized, unmaintained, user-created &quot;two tracks,&quot; as roads. These unauthorized and unplanned routes are not &quot;roads,&quot; and it is important that they be eradicated and restored to natural conditions.</td>
<td>See Chapter 3 (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Draft Management Plan / Environmental Impact Statement, road and trail definitions have been refined (See Chapter 3, Land Use and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas. See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan/FEIS. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>142 / 001</td>
<td>Although the DEIS appears to meet the requirements set forth by the National Environmental Policy Act, I believe it needs a stronger definition of a road to more clearly state which routes will permit motorized travel.</td>
<td>See Chapter 3 (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Draft Management Plan / Environmental Impact Statement, road and trail definitions have been refined (See Chapter 3, Land Use</td>
</tr>
</tbody>
</table>
**Topic**

**Travel and Access**

<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 / 001</td>
<td>In analyzing impacts, the EIS should reflect that any type of structure or road in this type of terrain can be seen from a long way off, so their impacts affect visitors in the pristine areas, many miles away from the actual site.</td>
</tr>
<tr>
<td>70 / 001</td>
<td>the selected alternative will increase roads and road maintenance while at the same time acknowledging that roads are primary contributors to wildfire, weed transportation and increased visitor use. The use of corridor Passage Zones in the pristine areas has the same effect as treating the whole pristine area as a roading opportunity.</td>
</tr>
<tr>
<td>15 / 001</td>
<td>In regard to your study of the craters of the moon lava flow, concerning access of existing trails, and roads, as was stated at your meeting of 5/13/04. After reading and hearing the discussion of the three proposals, I feel that all existing trails, and roads, should be left open to motorized vehicles as they are now. These roads were built by my grandfather George Pfister, and other neighbors in the area in the early 1900's. They did this as an access to harvest cedar posts for fencing their farms. They had just homesteaded these farms. The roads have been in use from then until now. It has been many years since cedar posts have...</td>
</tr>
<tr>
<td>26 / 001</td>
<td>The City of Heyburn supports the Arco-Minidoka Road improvements. We believe this road will offer many economic opportunities for this area.</td>
</tr>
</tbody>
</table>

**Response**

and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas.

Please refer to DEIS, Chapter 2, page 41, Definition of Visual Resource Management Classes.

In response to this comment and many others expressing either support for increasing or decreasing the amount of area included in the Passage Zone, as well as additional consideration of the environmental consequences, the agencies modified the areas contained in the Passage Zone in Alternative D as presented herein as the Proposed Plan.

See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.

Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed Plan/FEIS, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access.
<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 / 001</td>
<td>I believe that the only way to prevent the damage from becoming even more extensive is to close the Wood Road Kipuka trail to all motorized traffic, from the trailhead beyond. To allow motorized traffic past that point is almost to invite abuse through either ignorance of the law or a disregard for it. Given the present evidence of illegal traffic, past the trailhead it is almost impossible to control off-highway vehicle in any sort of meaningful way, especially given the sparse resources available to you for enforcement of this and other laws and regulations in managing the Monument.</td>
<td>The Wood Road Kipuka trail is closed to motorized vehicles and has been since 1980 when this area was included in the Great Rift Wilderness Study Area designation. In two of the draft alternatives, including the Preferred Alternative, this area would be zoned Pristine and no roads or motorized vehicle trails would be permitted. The agencies acknowledge that enforcement of this particular motorized vehicle closure has been lacking.</td>
</tr>
<tr>
<td>92 / 001</td>
<td>The current development already gives the general public enough access to the Monument. The recent additions to the Monument must remain undeveloped and people who wish to explore these areas must be able to experience a pristine wilderness. No new roads should be developed and many of the existing roads should be closed. Any remaining roads should also have restrictions to minimize motorized recreation.</td>
<td>See Chapter 2, Alternative D Description and Map. In the Proposed Alternative, Passage Zone was significantly reduced in response to public comment and after additional consideration of the potential impacts to resources. Creating Passage Zone corridors does not mandate an increase in the number or current standard of roads (See chapter 2, Description of Management Zones). See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>120 / 001</td>
<td>While the National Park/BLM preferred alternative, Alternative D, supports aggressive weed control, fire management, and restoration, this proposal would further develop roads. Roads, as you know, will actually increase the threat of noxious weeds and fire risk and will accelerate development for visitor use and recreation.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>42 / 001</td>
<td>I am writing in support of the improvement of the Minidoka-Arco Road. I feel it is important to have a good road so searches can be conducted. I also feel the road needs to be in good order for not only S&amp;R, but law enforcement, fire, and EMS. For the general public I also believe that there should be access to existing roads and trails.</td>
<td></td>
</tr>
<tr>
<td>10 / 001</td>
<td>We understand that the designation of the Monument/Preserve has, and will continue to, create demand for public access. We believe it is the obligation of responsive government and the clarion call of orderly planning to provide for the essential needs of the public. We see the need for adequate, appropriate and safe access to such significant places of public interest and history, which the Monument/Preserve constitutes, as the type of need deserving the utmost attention. We have also been advised by the Mini-Cassia Transportation Committee in this matter. We heartily agree with the Committee's recommendations that Alternative (D) is the preferred option, and should include limited options in Alternative (B), to-wit: 1) including the entire Arco-Minidoka Road as a &quot;passage&quot; route; and 2) including the entire Carey-Kamima Road as a &quot;passage&quot; route. By adopting this Alternative, with designated options, we are confident that you would be serving the best interests of all citizens especially those seeking access to view our interesting and historic landscape.</td>
<td></td>
</tr>
<tr>
<td>27 / 001</td>
<td>We would urge that you include the entire Arco-Minidoka Road as a &quot;passage&quot; route and that you include the entire Carey-Kimama Road as a &quot;passage&quot; route. The recent change to the area makes it a much more desirable destination as a NPS Visitor Center. We often hear of people that drive the present route and have trouble because they do not realize how poor the route is. We also have been made aware that the better route would facilitate safety and fire suppression and that is a major reason for the improvement.</td>
<td></td>
</tr>
</tbody>
</table>

Response:

Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.

Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed Plan/FEIS, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access.

Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed Plan/FEIS, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access.
**Topic**

**Travel and Access**

<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 / 001</td>
<td>The City of Minidoka would like to express our support and desire to have the road from Minidoka to Arco improved. We would very much like to see the road suitable for all vehicles, as we have numerous tourists stopping for directions to Arco and we have to turn them around and discourage desert travel. We truly feel this road would benefit not only travelers, but destinations on both ends.</td>
<td>Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed Plan/FEIS, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access.</td>
</tr>
<tr>
<td>9 / 001</td>
<td>It is proposed that the following items from Alternative B be included in Alternative D: 1.) Include the entire Arco-Minidoka Road as a &quot;passage&quot; route. 2.) Include the entire Carey-Kimama Road as a &quot;passage&quot; route. We are adamant in our support for the Arco-Minidoka route. The Monument/Preserve designation has created a demand by the public for access. The road from Minidoka will become an attractive alternative to those wanting to go through the Monument/Preserve and to have that as an alternative to reaching the NPS Visitor Center. People will attempt to use the existing road with potential catastrophic results so it must be adequate.</td>
<td>Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed Plan/FEIS, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access.</td>
</tr>
<tr>
<td>8 / 001</td>
<td>After reviewing your DEIS, it would appear to be important that the Alternative (D) should include parts of options in Alternative (B). The entire Arco-Minidoka road as a &quot;passage&quot; route and Carey-Kimama as a &quot;passage&quot; route are important to the people wanting to go through the Monument/Preserve and to have that as an alternative to reaching the NPS Visitor Center.</td>
<td>In response to this comment and many others expressing either support for increasing or decreasing the amount of area included in the Passage Zone, as well as additional consideration of the environmental consequences, the agencies modified the areas contained in the Passage Zone in Alternative D as presented herein as the Proposed Plan.</td>
</tr>
<tr>
<td>104 / 001</td>
<td>A map should be provided that shows the Pristine Zone roads and trails as well as a map for Class II Trails open to single-track motorized use. The specific purpose and need for each road also needs to be described in the FEIS, along with the risks associated with each road. Examples of use include administrative use for restoration, recreational two-track use, recreational gravel use, recreational paved use. Examples of risk for each segment include wildlife habitat fragmentation, noxious weed spread, increased grazing developments, vandalism of cultural and geological resources, and incompatibility with pristine recreational experiences.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Topic</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>122 / 001</td>
<td>Travel and Access</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We urge NPS/BLM to develop a Management Plan that blends Alternatives C and D, one that places a greater emphasis on non-motorized access and protection of the primitive character of the Monument while still pursuing an active and effective restoration program. The Preferred Alternative does not adequately protect the primitive character of the Monument. The presence of unique geological and biological features, extensive road-free or relatively road-free areas, and the lack of easy motorized access are what make the Monument nationally-significant. While we applaud the agencies' recognition of the need for conducting restoration work in degraded areas, this work cannot be done at the risk of inadvertently encouraging rising levels of motorized use in the Monument. The real long-term legacy of the Monument expansion will be the preservation of large areas of sagebrush steppe and lava flows that are both ecologically healthy and allow for primitive recreational and hunting experiences. We are in opposition to the approach to roads and motorized trails embodied in the Preferred Alternative. There is simply too much risk that there will be an increase in motorized use of trails and roads that currently see very seasonal and limited vehicular use. The quantity of access appears to be more of a concern than providing high quality experiences. While we support active restoration measures, BLM/NPS must find ways to minimize and reduce, not maintain or even increase, the number of roads available for motorized use.</td>
<td></td>
</tr>
<tr>
<td>38 / 001</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Mini-Cassia Economic Development Commission supports the proposed extension of a highway from Minidoka to Arco. This addition will provide an economic impact to the community of Minidoka and provide a safe and more economical means for locals and tourists to travel from our area to the National Monument.</td>
<td></td>
</tr>
<tr>
<td>121 / 001</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>…and trails and begun its planning process from there. We believe this, coupled with the policy of defining any obviously-traveled vehicular path as a road, will inevitable result in unnecessarily</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Response</td>
<td></td>
</tr>
<tr>
<td></td>
<td>road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan. In addition, the Proposed Management Plan is in fact a combination of Alternatives C and D. The Passage Zone is decreased, with the Pristine Zone increased. We have incorporated your comments, see changes to Alternative D.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed P/FEISlan, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is</td>
<td></td>
</tr>
</tbody>
</table>
Appendices

APPENDIX L

557

Topic: Travel and Access

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 64 / 001</td>
<td>While I support aggressive weed control, fire management, and restoration, the proposal to further develop roads will actually increase the threat of noxious weeds and fire risk, as well as accelerate damage to wilderness values and geologic features.</td>
<td>appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>ex 63 / 002</td>
<td>Worst of all, Alternative D contains a vague definition of roads that will most certainly lead to increased off-road vehicle (OHV) use. That use damages the wilderness values and special geologic features which were intended to be protected. I want to point out that what disappoints me about the Alternative D road classifications and definitions used in the analysis, is that they appear to be arbitrary, and worst of all, even contrary to the intent of the Clinton Presidential Proclamation. I find it unacceptable that under Alternative D there is egregious classification of unauthorized, unmaintained, user-created &quot;two tracks&quot; as roads. These unauthorized and unplanned routes are not &quot;roads,&quot; and it is important that they be eradicated and restored to natural conditions.</td>
<td>Analysis in the DEIS (Ch. 4) acknowledges the risk of increased road improvement relative to weed infestation, fire risk, wilderness values and geologic features. In response to comments such as this the ID team reduced the amount of Passage Zone in the Proposed Plan/FEIS, particularly in Laidlaw Park. The implementation plan for transportation will address road maintenance and improvement within specific areas and zones of the Monument, with consideration to...</td>
</tr>
</tbody>
</table>

See Chapter 3 (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Draft Management Plan / Environmental Impact Statement, road and trail definitions have been refined (See Chapter 3, Land Use and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas. See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all... |
<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 / 002</td>
<td>The plan should cut back on vehicle access through the Monument, retaining only routes that serve a purpose consistent with the Monument mandate, and closing and rehabilitating all other vehicle tracks. We urge that the Arco-Minidoka road not be upgraded or paved, as it introduces vehicle traffic too close to the primitive and Pristine Zones.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan. Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed Plan/FEIS, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access.</td>
</tr>
<tr>
<td>15 / 002</td>
<td>…they carved out this precious way of life that we enjoy today. I have some concerns about the wilderness study that brought about these three proposals. After talking to the Monument manager Jim Morris, and the director of the B.L.M. office I discovered that they had located very few of the exciting roads and trails. This leads me to believe that the study was not very thorough. I would like our heritage that we have in this area to remain available for many years to come.</td>
<td>See Chapter 3 (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Draft Management Plan / Environmental Impact Statement, road and trail definitions have been refined (See Chapter 3, Land Use and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas.</td>
</tr>
</tbody>
</table>
### Topic

**Travel and Access**

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>70 / 002</td>
<td>We need a map showing the Pristine Zone roads and trails. In general roads in the Pristine area should be restricted or eliminated. P. 116: Class II Trails open to single track motorized use needs a map so we can see where they are and make appropriate comments.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan. In addition: See alternative maps for transportation network. All roads within Pristine Zone will be closed by this plan. No Class II trails currently exist in the Monument.</td>
</tr>
<tr>
<td>14 / 002</td>
<td>…have not been considered roads at all. We ask BLM and NPS to modify the plan to close and revegetate all vehicle routes that do not serve the purposes for which the Monument was established. We would favor the approach NPS has taken in other national monuments and national parks, strictly controlling vehicle access to protect the resource. The time has long passed when a spiderweb of jeep tracks can be allowed to mar this wonderful Monument area.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>Topic</td>
<td>Travel and Access</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>120 / 002</td>
<td>104 / 002</td>
</tr>
<tr>
<td>Comment</td>
<td>...then maintain Primitive Zones, with a minimum of passage and use. Management goals should include road closure and rehabilitation.</td>
<td>It seems highly contradictory to propose increasing the Passage Zone in Alternative D from 4800 acres to 9900 acres for the sake of remediation efforts, when the very problems that are targeted for remediation are due in large part to the introduction of roads in previously unroaded areas. This historical problem is noted in the discussion of noxious weeds. The increase in vehicular traffic as well as grazing from increased access to remote areas provided by this alternative would exacerbate this problem further. It seems particularly misleading to suggest that “...impacts from damage, theft, and vandalism near roads and trails would be likely to be similar to those of Alternative A” when access increases significantly under Alternative D (P. 157). There seems to be a presumption that there will be no increased use of roads in spite of the fact the roads will be improved to enhance delivery of administrative (weed control/restoration) and fire services. Yet in the discussion on WSA’s, the plan states “the level of illegal off-road use would be higher near access roads.” The impacts from this expansion of access should be classified as major instead of “negligible to potentially major”.</td>
</tr>
<tr>
<td>Response</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
<td>See Chapter 3 (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Draft Management Plan / Environmental Impact Statement, road and trail definitions have been refined (See Chapter 3, Land Use and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas. See Chapter 2, Alternative D Description and Map. In the Proposed Alternative, Passage Zone was significantly reduced in response to public comment and after additional consideration of the potential impacts to resources. Creating Passage Zone corridors does not mandate an increase in the number or current standard of roads (See chapter 2, Description of Management Zones).</td>
</tr>
</tbody>
</table>
### Topic: Travel and Access

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 / 002</td>
<td>Unnecessary roads identified during the planning process should be marked for closure and restoration to natural conditions. Under no circumstances should unofficial, user-created roads be designated as official roads, provided and maintained, or marked in any way with signs or on Monument maps provided to visitors. Such unofficial roads should be marked for closure and restoration.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>121 / 002</td>
<td>…purposes. We believe that the planning team should reconsider its definition of a “road,” as the majority of the roads identified as roads are not roads in any sort of common-sense definition, and do not correspond with the intent of the presidential proclamation. We wish to strongly emphasize that we believe that only those roads which have been constructed and maintained by means other than simple vehicular travel merit the definition of the term “road.”</td>
<td>Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed Plan / FEIS, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access. See Chapter 3 (DEIS Pg. 112) Changes to Land Use and Transportation / Travel and Access. In response to public comment concerning a lack of clarity in road definitions in the Draft Management Plan / Environmental Impact Statement, road and trail definitions have been refined (See Chapter 3, Land Use and Transportation / Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>105 / 002</td>
<td>The DEIS analysis is lacking in sound science and professional judgment to back up the conclusions reached in alternatives B and D. Predictions that increased access will have minimal negative impacts to Monument resources and values are based on an ideal situation where the agencies have huge budgets to provide for signs, staff, enforcement and monitoring. With the majority of road improvements located on BLM lands, one would think that the BLM would have the resources to pay for all of the necessary enforcement and monitoring. However, current management points to a problem of shared resources between the two agencies. This is likely to continue and the resources found on NPS managed lands are likely to suffer significant negative impacts due to increased access to BLM managed lands. NPS is not likely to get increased funding for monitoring and enforcement. BLM appears to want to spend money that is available on aggressive restoration, not on monitoring and enforcement throughout the Monument. To be clear, the management and budget decisions that are influencing these processes do not seem to be made by the staff of the Monument but are being made by state, regional and national agency staff as well as Congress. I feel that there are already too many roads and access trails in and around the Monument. There is almost no difference in Class C and Class D roads and trails between Alternative C and D (637 versus 634 miles, respectively). I strongly prefer Alternative C, but with more emphasis in closing unimproved roads/trails and requiring access by foot only.</td>
<td>The impact assessment is described separately and somewhat differently for different resources. For example, under Geologic Resources, it is recognized that road improvements could have potentially major long-term adverse impacts on resources such as caves due to increased numbers of visitors. However, in selecting the Proposed Plan/FEIS, the agencies have taken into consideration the expected impacts on resources and the agencies’ future management capabilities to deal with such impacts. See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan. See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>Topic</td>
<td>Travel and Access</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Letter No./ Comment No.</strong></td>
<td><strong>Comment</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>95 / 003</td>
<td>An aggressive herbicide program may not be the answer, when the spread of noxious weeds can be attributed directly to grazing procedures and roads. Upgrading roads in primitive areas will only increase this.</td>
<td>The DEIS acknowledges that roads, vehicles, humans, and animals are known vectors to the spread of noxious weeds (DEIS Ch. 3, Discussion on Noxious and Exotic Species, p. 92). A full Integrated Weed Management Program addresses a broad range of prevention, education, and control activities to combat noxious weeds (see DEIS p. 25 Management Guidelines Common to All Alternatives: Vegetation, Including Special Status Species, and Fire Management).</td>
</tr>
<tr>
<td>127 / 003</td>
<td>We also recognize access to the Monument is an issue with the development of the Arco-Minidoka road but with limited budgets, this would be our third priority.</td>
<td>While not specifically proposing any improvement to the Arco-Minidoka Road, the agencies, in the Proposed Plan/FEIS, allow for accommodating improvement to the section of the road within the Monument if, at a future time, the local authorities decide to improve the section of the Arco-Minidoka Road to the north of the Monument boundary.</td>
</tr>
<tr>
<td>2 / 003</td>
<td>The draft states that the NPS and BLM prefer Alternative D. This alternative supports road enhancements and building. In an effort to “safeguard the volcanic features and geologic processes for the Great Rift”, it would seem that the preferred alternative D, opens up the Monument's land to commercial services and motor vehicles/ease of transporting to the…</td>
<td>See Chapter 2, Alternative D Description and Map. In the Proposed Alternative, Passage Zone was significantly reduced in response to public comment and after additional consideration of the potential impacts to resources. Creating Passage Zone corridors does not mandate an increase in the number or current standard of roads (See chapter 2, Description of Management Zones). In addition, The environmental analysis (Chapter 4) has been amended to include more discussion of the expected impact on these resources from improved access roads.</td>
</tr>
<tr>
<td>122 / 003</td>
<td>We urge NPS/BLM to adopt an alternative that would include a detailed travel plan with specific designations for those routes that would be available to motorized use. The travel plan should specifically articulate that all non-designated roads would be closed to motorized use, with the exception of specifically permitted management or administrative uses. The plan also should include details regarding how vehicles will be managed to ensure that non-motorized regulations are followed.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>Topic</td>
<td>Travel and Access</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Letter No./Comment No.</strong></td>
<td><strong>Comment</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>121 / 003</td>
<td>All alternatives must include a transportation plan and implementation timeline that identifies the actions, including road closures or travel restrictions, necessary to protect the resources identified in the establishment of the Monument. All alternatives must include an analysis of how the proposed management actions will protect or threaten sensitive natural, cultural, biological, or geological resources. The plan should provide for a comprehensive inventory, with timeline, of the resources to be protected by the management plan.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>105 / 003</td>
<td>The proclamation provides the agencies with a mandate to • manage the area to preserve the Monument objects; • prohibit all motorized and mechanized vehicle use off road (except for emergency or authorized administrative purposes); and • prepare a transportation plan that addresses the actions, including road closures or travel restrictions, necessary to protect the objects The agencies' failure to present more detailed alternatives as proposed transportation networks in the DEIS is a failure to comply with the proclamation, as well as with obligations under applicable regulations. The proclamation requires the agencies to prepare a transportation plan that addresses actions needed to protect Monument objects, which includes determining roads to be closed and other travel restrictions. We urge the agencies to conduct a more comprehensive and specific recommendations to start travel management planning as part of this broad planning effort.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>103 / 004</td>
<td>The road classifications and definitions used in the analysis appear to be arbitrary and contrary to the intent of the presidential Proclamation—for example, classification of unauthorized, unmaintained, user-created “two tracks” as roads.</td>
<td>See Chapter 3 (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Draft Management Plan / Environmental Impact Statement, road and trail definitions have been refined (See Chapter 3, Land Use and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas.</td>
</tr>
<tr>
<td>70 / 004</td>
<td>roads in spite of the fact the roads will be improved to enhanced delivery of administrative (weed control/restoration) and fire services. Yet in the discussion on WSA’s the plan states “the level of illegal off-road use would be higher near access roads.” P 217: same as above...i.e., illegal use would occur with improved access. The impact of the preferred alternative will be an increase and improved maintenance of roads and with that increase more visitor use and consequent impact. This needs to be acknowledged and dealt with.</td>
<td>Alternative D has been adjusted to decrease the miles of road within the Passage Zone. The impacts of that adjustment have been analyzed throughout the document.</td>
</tr>
<tr>
<td>120 / 004</td>
<td>Secondly, Blaine County is not interested in accepting responsibility for any more road maintenance in that region. To put it bluntly, the road issue is terribly overdone in Alternative D. Apparently much thought has been given to the idea...</td>
<td>Thank you for the comment. The plan, under “Management Common to All Alternatives” has been modified to clarify that no road upgrades or commitments to future maintenance of roads under the jurisdiction of county or highway districts would occur without that county or highway district concurrence.</td>
</tr>
<tr>
<td>104 / 004</td>
<td>All motorized travel should be restricted to roads designated through a planning process that considers natural and historical objects of interest in need of protection. Unnecessary roads identified during the planning process should be marked for closure and restored to natural conditions. The road classifications and definitions used in the analysis appear to be arbitrary and contrary to the purpose of the Presidential Proclamation. It is particularly troubling that unauthorized, unmaintained, user-created “two-track” trails are classified as roads. Under no circumstances should unofficial or user-created roads be designated as official roads, provided any maintenance, or marked in any way on maps provided for visitors. Such unofficial roads should be closed and restored.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>73 / 004</td>
<td>In Chapter 4, Page 151 the draft covers the Lost River Off-Highway Vehicle Management Demonstration Project. The draft states &quot;IDPR is seeking exemptions from licensing and insurance requirements for off-highway vehicle (OHV) travel on county roads and for crossing US 93.&quot; We are not seeking an exemption from insurance requirements under this proposal. Idaho Code 49-426 allows counties and highway district to exempt certain roads from the license plate requirements. It does not allow those counties to exempt roads from insurance requirements. The sentence needs to be reworded to read &quot;IDPR is seeking an exemption from licensing requirements for off-highway (OHV) travel on county roads and for crossing US 93.&quot;</td>
<td>A text change was made to Proposed Plan/FEIS as suggested.</td>
</tr>
<tr>
<td>122 / 004</td>
<td>We strongly believe that NPS/BLM should adopt an alternative that emphasizes foot and horseback travel, facilitated through the use of licensed outfitters and guides who can help provide high quality experiences and would assist the agencies in protecting the Monument. These guiding services would also help bring additional sources of revenues to the local communities near the Monument.</td>
<td>The Proposed Management Plan will emphasize outfitters and guides for visitor experience and resource protection. Your comments have been considered, see changes to Alternative D. While Alternative D does not specifically emphasize foot and horse travel, it does not exclude these travel activities. Specific outfitting and guide plans are outside the scope of this overall Management Plan.</td>
</tr>
<tr>
<td>121 / 004</td>
<td>…should not seek to undermine its intent. All user-created roads, trails, ways and routes should be considered unauthorized and illegal intrusions into the landscape and should be immediately and permanently closed to motorized use. No new…</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
</tbody>
</table>
The agencies are also obligated to address off-road vehicle usage. Executive Order No. 11644 (1972) (as amended by Executive Order No. 11989 (1977)) required the agencies to make designations as to use of routes by off-road vehicles. BLM promulgated regulations that require the agency to “designate all public lands as either open, limited or closed to off road vehicles.” 43 C.F.R. §8342.1. BLM is specifically obligated to make such designations in its RMP process, with public participation. 43 C.F.R. §8342.2. As explicitly stated by BLM regulations (43 C.F.R. § 8342.2(a)): The designation and redesignation of trails is accomplished through the resource management planning process described in Part 1600 of this Title. Current and potential impacts of specific vehicle types on all resources and uses in the planning area shall be considered in the process of preparing resource management plans, plan revisions, or plan amendments. In making designations, the agencies are obligated by both the Executive Orders and BLM’s regulations (43 C.F.R. § 8342.1) to ensure that areas and trails are located: The agencies are also obligated to address off-road vehicle usage. Executive Order No. 11644 (1972) (as amended by Executive Order No. 11989 (1977)) required the agencies to make designations as to use of routes by off-road vehicles. BLM promulgated regulations that require the agency to “designate all public lands as either open, limited or closed to off road vehicles.” 43 C.F.R. §8342.1. BLM is specifically obligated to make such designations in its RMP process, with public participation. 43 C.F.R. §8342.2. As explicitly stated by BLM regulations (43 C.F.R. § 8342.2(a)): The designation and redesignation of trails is accomplished through the resource management planning process described in Part 1600 of this Title. Current and potential impacts of specific vehicle types on all resources and uses in the planning area shall be considered in the process of preparing resource management plans, plan revisions, or plan amendments. In making designations, the agencies are obligated by both the Executive Orders and BLM’s regulations (43 C.F.R. § 8342.1) to ensure that areas and trails are located: collection, and excessive erosion.”

See Chapter 3 (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Draft Management Plan / Environmental Impact Statement, road and trail definitions have been refined (See Chapter 3, Land Use and Transportation/Travel and Access, Road and Trail Definitions). These definitions apply to a road and trail inventory based on best available data at the time of this draft which includes 1:24000 USGS topographic maps, BLM 1:100,000 topographic maps and a 2002 survey of roads, ways and trails in and around existing wilderness study areas. See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for Travel and Access within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan/FEIS. There will be no net increase in road mileage under this plan. Additionally see page 28 DEIS, Land Use and Transportation Common to All.
### Travel and Access

<table>
<thead>
<tr>
<th>Topic</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>more specifics as part of this plan and begin to identify routes, specify closures, and provide a range of route density expectations. Further, the agencies are well aware of the existing and ongoing damage to the Monument objects that they are bound to protect from motorized use. Delay in the enforcement and monitoring of these known illegal routes and in the immediate emergency closure of roads and routes would allow this damage to continue and is unacceptable. As noted above, the proclamation (as well as interim management) closed the entirety of the Monument lands to all types of mechanized and motorized use “off road.” The management plan cannot undo this restriction and should not seek to undermine its intent. As an initial matter, the agencies should distinguish routes or trails that are not roads. The legislative history of FLPMA provides a definition of a road, by providing a definition of “roadless” (H.R. Rep. No. 94-1163 at 17 (1976)): The word “roadless” refers to the absence of roads, which have been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road. In addition, the Code of Federal Regulations (43 C.F.R. § 19.2(e)) establishes the following definition: An improved road that is suitable for public travel by means of four wheeled, motorized vehicles intended primarily for highway use. Any route not meeting these definitions is not a “road” and, under the proclamation, must not be open to motorized and mechanized travel. Based on these definitions, all user-created roads, trails, ways and routes should be considered unauthorized and illegal intrusions into the landscape and should be immediately and permanently closed to mechanized and/or motorized use under all alternatives. Under the road classification system used in the DEIS, Class 2 trails are open to motorized/mechanized travel in addition to other non-motorized/non-mechanized forms of travel. This use is prohibited by the proclamation, because it permits motorized use of trails, which do not meet the legal definition of a road. All Class 2 trails should be closed to motorized/mechanized use (except for limited emergency or administrative use as necessary) and converted to Class 1 trails through modification of the routes to prevent such improper uses. Class D roads are defined as “primitive roads that were not constructed, but established over time by the passage of motorized vehicles.” Based</td>
<td></td>
</tr>
</tbody>
</table>
on the legal definitions of a road, the Class D routes (which are user-created) are not roads and permitting vehicles to use these routes would violate the proclamations. All Class D roads should be closed to motorized/mechanized use (except for limited emergency or administrative use as necessary) and converted to Class 1 Trails. Class C routes are defined as unimproved, with a natural surface, which "may be either constructed or established over time by repeated passage of vehicles." Based on the legal definitions of a road, Class C routes that are user-created are not roads, so permitting vehicles to use these routes would violate the proclamations. All user-created Class C roads should be closed to motorized/mechanized use (except for limited emergency or administrative use as necessary) and converted to Class 1 Trails.

165 / 004 Alternative D's proposed maintenance and reclassification of roads, and the planting of nonnative forage could retard recovery of native plant communities needed by sage grouse and other sage-obligate species. The DEIS has identified improved roads and the establishment and spread of non-native plant species as impacts to the system and yet has chosen an alternative that facilitates these actions more than other alternative(s). The maintenance of roads for the purposes of administrative and fire suppression will only facilitate the use of these roads by the public. This is a reoccurring process throughout the west that has shown to expedite the spread of noxious weeds and increase the frequency of man-made fires.

Analysis in the DEIS (Ch. 4) acknowledges the risk of increased road development relative to weed infestation. See Chapter 2, Alternative D Description and Map. In the Proposed Alternative, Passage Zone was significantly reduced in response to public comment and after additional consideration of the potential impacts to resources. Creating Passage Zone corridors does not mandate an increase in the number or current standard of roads (See chapter 2, Description of Management Zones). In response to comments such as this the ID team reduced the amount of Passage Zone in the Proposed Plan/FEIS, particularly in Laidlaw Park. The implementation plan for transportation will address road development within specific areas and zones of the Monument, with consideration to these and other issues.

There is no guidance in the plan for “the planting of non-native forage.” Overarching management guidance directing restoration in the Monument can be found on DEIS p. 25, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. The use of native plants is emphasized in all restoration projects, pursuant to BLM policy and Executive Order 13112, Invasive Species, February 3, 1999, and only native species would be used on projects in the Pristine Zone.
<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>121 / 005</td>
<td>Depending on the risk posed to surrounding resources, an administrative use designation of certain existing roads may be an option for access limited to the permittee and the managing agencies. The terms and conditions of such special use and access must be clearly spelled out in the management plan.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan. Additionally, limited use designations will be added to the transportation plan.</td>
</tr>
<tr>
<td>105 / 005</td>
<td>In creating a transportation plan, the agencies should also incorporate the following: 1. Focus on Monument objects: We believe that the BLM and NPS must first inventory the objects of historic and scientific interest and other resources for which the Monument was created or which may be legally protected. The agencies’ first priority is to protect the Monument objects and they are also bound to protect sensitive species, so identifying the location of Monument objects and sensitive species is the key to planning for their protection. Once the inventory is complete, the agencies can identify those objects or other resources that should be accessible to the public and at which levels, as well as which areas of the Monument require more extensive protection from motorized or mechanized vehicle use. A transportation system is important to allow for use and enjoyment of the Monument. However, to achieve the protective purposes of the Monument, the BLM and the NPS must establish a transportation system for use and enjoyment that permits visitors to get to specific destinations if vehicle use will not damage the area. The proclamation makes the Monument, and thus the objects it was designated to protect the dominant reservation. The BLM and NPS are required to protect these resources above other uses and, where possible, find lower impact ways to move visitors through.</td>
<td>Thank you for your comments. They will be taken into consideration when the agencies develop a transportation plan for the Monument. This plan is expected to be developed in the first phase of Monument implementation-level plans. See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan/FEIS. There will be no net increase in road mileage under this plan. See Chapter 3 (DEIS Pg. 112) Land Use and Transportation/Travel and Access. In response to public comment concerning a lack of clarity in the Proposed Plan/FEIS, road and trail definitions have been refined (See Chapter 3, Land Use and Transportation/Travel)</td>
</tr>
</tbody>
</table>
more sensitive areas. 2. Only roads with a “destination” or other necessary use, should remain open: The agencies should determine what roads are necessary for access to appropriate Monument objects, where they should be located, and the restrictions needed on timing and levels of use. The legal definition of a road, as discussed above, specifically excludes roads created solely by the passage of vehicles. The agencies should adopt this definition and use it as the basis for compliance with the proclamation’s prohibition against motorized and mechanized vehicle use “off-road.” For any road that the agencies are considering maintaining, the agencies should also inspect the condition of the road to ensure that it does not harm the Monument objects, landscape, natural and cultural resources, wildlife, wildlife habitat, wilderness, and other visitor experiences. Road density due to casual use has become a major problem in the Monument, in that numerous roads, ways, trails, and two-tracks that have developed from casual use. Many of these routes or trails must be closed immediately. If the agencies determine that any route meets the definition of a road, then they must evaluate it to determine whether the road can exist without harming the Monument objects and other resources. Also, duplicative roads, ways and trails should be evaluated, and if identified as a necessary access route, should be limited to the least environmentally damaging road. All other routes leading to the same place should be closed and revegetated, as well as posted, blocked or otherwise modified by the agencies to discourage continued use. Since over 70 percent of the Monument lands are Wilderness Study Areas, it is imperative that the agencies prohibit construction or creation of new routes in these areas. New roads, trails, ways or other routes are illegal as of the date that the Wilderness Study Area was established and cannot be developed as part of the planning process. User created roads, trails, ways and other routes must be considered an illegal incursion into the Monument. No new routes across the lava fields should be allowed. The management plan should designate specific roads as open or closed to motorized use. Some trails should be specifically designated for non-motorized use. Some of these trails should be outside of the WSAs to allow visitors the opportunity to visit some areas through a non-motorized experience. Non-motorized access should also be encouraged if any historical, cultural, biological, geological, paleontological or other significant
resources are at risk of vandalism and damage from motorized use. Consideration should also be given to limited use of roads if they are deemed critical access routes for a small number of livestock permittees. Depending on the risk posed to surrounding resources, an administrative use designation may be an option for access limited to the permittee and the managing agencies. The terms and conditions of such special use and access should be clearly spelled out in the management plan and should become a term and condition upon which the allotment is evaluated for compliance with the BLM’s Rangeland Health Standards and Guidelines as developed through the RACs. Once critical and agreed upon access roads and trails are identified and a transportation network established through the planning process, the NPS and BLM should develop a travel map. This map should identify roads available for motorized vehicles and trails available for non-motorized uses. The map and additional visitor information should make it clear that off-road motorized use is prohibited to protect the resources in the Monument. This information should be readily available on user maps, kiosks or signs, and on the BLM and NPS web sites. The transportation plan, as part of the resource management plan, must mandate road closures when necessary to prevent the spread of invasive plant species and to protect cultural and geological resources and natural resources and wildlife habitats. Road closures may also be necessary at certain times to protect vegetation from fire caused by vehicles (e.g., catalytic converters). Overall, road, way and trail management should strive to eliminate unnecessary and little used routes. Any road improvements or developments should be analyzed for their potential significant impacts to the resources of the Monument. New roads should not be built and existing roads should not be significantly improved. Road maintenance should be minimal and conducted only when necessary for specific access or safety, but in no case should roads be upgraded or widened without proper analysis of potential environmental consequences. This is consistent with current BLM Interim Management Policy for National Monuments and NCAs, “Road improvements should be minimal and designed solely to correct those conditions that are unsafe or hazardous. Activities that maintain, as opposed to enhance, existing roads may be permissible.” (DEIS p. 293) 3. Road classifications should be based on use of roads and not solely on manner of construction: Once the agencies identify roads
<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(using the legal definition of roads), they should classify the roads by use. The classifications included in the current DEIS are based on the way that roads are constructed and, to some extent, maintained. In determining those roads that should be kept open, the agencies should classify the roads based on whether they are needed for long-term access or temporary uses. Roads with only temporary uses can then be targeted for closure or restricted use. Roads needed for long-term access can be further assessed as to their specific needs (servicing an important public destination or only needed for limited activities), and a complementary maintenance program and other limitations on use implemented. Based on the proclamation, the agencies’ primary obligation is to protect Monument objects, including through prohibiting off-road use of vehicles. Therefore, the agencies must justify their decision to keep roads open based on a necessary destination or use, in conjunction with the agencies’ assessment that keeping the road open will not pose an avoidable risk of damage to Monument objects. 4. Travel management decisions should be based on a scientific assessment of road densities and effects: Certain decisions to sanction, build, or maintain roads can impose detrimental and long-lasting effects on the landscape. Roads and other transportation features have numerous effects on wildlife, including mortality from collisions, modification of animal behavior, disruption of the physical environment, alteration of the chemical environment, spread of exotic species, and changes in human use of the lands and water (Trombulak and Frissell 2000). Specific examples include habitat loss and fragmentation; diminished animal use of habitats because of noise, dust emissions, and the presence of humans; loss of forage for herbivores; interference with wildlife life-history functions (for example, courtship, nesting, and migration); spread of non-native species carried by vehicles and along disturbed corridors created by road establishment and maintenance; increased poaching or unethical hunting practices; increased recreation by off-road vehicles and associated impacts; and degradation of aquatic habitats. Road access also increases vandalism, theft, and damage to archeological and cultural sites. management plan and should become a term and condition upon which the allotment is evaluated for compliance with the BLM’s Rangeland Health Standards and Guidelines as developed through the RACs. Once critical and agreed upon access roads and trails are identified and a transportation network</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Travel and Access</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Comment</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>established through the planning process, the NPS and BLM should develop a travel map. This map should identify roads available for motorized vehicles and trails available for non-motorized uses. The map and additional visitor information should make it clear that off-road motorized use is prohibited to protect the resources in the Monument. This information should be readily available on user maps, kiosks or signs, and on the BLM and NPS web sites. The transportation plan, as part of the resource management plan, must mandate road closures when necessary to prevent the spread of invasive plant species and to protect cultural and geological resources and natural resources and wildlife habitats. Road closures may also be necessary at certain times to protect vegetation from fire caused by vehicles (e.g., catalytic converters). Overall, road, way and trail management should strive to eliminate unnecessary and little used routes. Any road improvements or developments should be analyzed for their potential significant impacts to the resources of the Monument. New roads should not be built and existing roads should not be significantly improved. Road maintenance should be minimal and conducted only when necessary for specific access or safety, but in no case should roads be upgraded or widened without proper analysis of potential environmental consequences. This is consistent with current BLM Interim Management Policy for National Monuments and NCAs, “Road improvements should be minimal and designed solely to correct those conditions that are unsafe or hazardous. Activities that maintain, as opposed to enhance, existing roads may be permissible.” (DEIS p. 293) 3. Road classifications should be based on use of roads and not solely on manner of construction: Once the agencies identify roads (using the legal definition of roads), they should classify the roads by use. The classifications included in the current DEIS are based on the way that roads are constructed and, to some extent, maintained. In determining those roads that should be kept open, the agencies should classify the roads based on whether they are needed for long-term access or temporary uses. Roads with only temporary uses can then be targeted for closure or restricted use. Roads needed for long-term access can be further assessed as to their specific needs (servicing an important public destination or only needed for limited activities), and a complementary maintenance program and other limitations on use implemented. Based on the proclamation, the agencies’ primary obligation is to</td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>Topic</td>
<td>Travel and Access</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>protect Monument objects, including through prohibiting off-road use of vehicles. Therefore, the agencies must justify their decision to keep roads open based on a necessary destination or use, in conjunction with the agencies’ assessment that keeping the road open will not pose an avoidable risk of damage to Monument objects. 4. Travel management decisions should be based on a scientific assessment of road densities and effects: Certain decisions to sanction, build, or maintain roads can impose detrimental and long-lasting effects on the landscape. Roads and other transportation features have numerous effects on wildlife, including mortality from collisions, modification of animal behavior, disruption of the physical environment, alteration of the chemical environment, spread of exotic species, and changes in human use of the lands and water (Trombulak and Frissell 2000). Specific examples include habitat loss and fragmentation; diminished animal use of habitats because of noise, dust emissions, and the presence of humans; loss of forage for herbivores; interference with wildlife life-history functions (for example, courtship, nesting, and migration); spread of non-native species carried by vehicles and along disturbed corridors created by road establishment and maintenance; increased poaching or unethical hunting practices; increased recreation by off-road vehicles and associated impacts; and degradation of aquatic habitats. Road access also increases vandalism, theft, and damage to archeological and cultural sites. Spatial analysis is the appropriate way to take this “hard look” at the impacts of routes on the Monument objects and the agencies should apply these techniques in order to meet the requirements of NEPA. In addition to NEPA’s “hard look,” the Federal Land Policy and Management Act (FLPMA) requires that, in managing the public lands, the BLM “take any action necessary to prevent unnecessary or undue degradation of the lands.” 2 FLPMA also requires that the BLM “minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved.” 3 Further, when conducting land use planning, agencies must give priority to designating and protecting ACECs and consider physical, biological, economic and other sciences.4 The agencies</td>
<td>Response</td>
</tr>
</tbody>
</table>
cannot evaluate consequences to the environment, determine avoidable or excessive degradation or assess how best to designate and protect ACECs without adequate data and analysis. Therefore, NEPA also requires that the “hard look” at environmental consequences be based on “accurate scientific information” of “high quality.” Essentially, NEPA “ensures that the agency, in reaching its decision, will have available and will carefully consider, detailed information concerning significant environmental impacts.” We recommend that the agencies use information from a thorough inventory of the Monument and the spatial analysis techniques summarized above to carefully evaluate the impacts of alternative transportation systems on Monument objects. 5. Firm schedule for closures: Where the agencies identify roads and trails for closure or imposition of other restrictions on time and manner of use, the plan should include a firm schedule for completing closures and imposing other restrictions. 6. Overview of travel management planning process: We recommend that the agencies conduct travel management planning in accordance with the following steps: We recommend a process that includes the following steps: (1) Classify existing routes according to previous designations, destination, access to valid and existing rights, and route conditions (and specify whether the route meets the legal definitions of a road cited above). (2) Identify the presence and assess the condition of Monument objects and other on-the-ground resources, for example wildlife, soil types, slope, geologic features, roadless areas, and archeological or historic sites. (3) Assess present and predicted future fiscal and personnel resources. (4) Summarize public recreation desires and current recreational opportunities. (5) Assess route density and distribution in comparison to on-the-ground resources assessed in Step 2. (6) Identify the overall recreational and travel goals for the entire area, based on the proclamation. (7) Identify geographic subunits and, for each subunit, develop desired future conditions and indicators and standards needed to achieve the desired future conditions. [Please note that this is the step where the range of alternatives is created.] (8) Assess and designate routes at the site-level, considering each route’s classification, reasonable access to valid and existing rights, goals and objectives, agency management capability, and impacts to high priority resources. Except for routes subject to valid existing rights or necessary for
### Travel and Access

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>administrative or emergency access, routes that do not meet the legal definition of a road should be closed.</td>
<td>(9) Review route assessment at the landscape level, considering goals and objectives, landscape health, agency management capacity, and protection and high priority biological, physical and cultural resources. (10) Develop and implement a monitoring plan, including hiring sufficient enforcement personnel to protect the Monument and specifying required changes to management to implement further protections where desired future conditions are not being met. Using this approach, route designation (Step 8) is conducted in the appropriate context to allow assessment of the multiple uses and values of an area, development of a reasonable range of alternatives and thorough assessment of potential environmental consequences, while considering existing planning decisions and management capability. As a general approach to route designation within the Monument, we would propose the following general methodology: (1) Site-level road/route assessment. If any of the answers are &quot;no,&quot; the route should be closed. a. Is the route a Class A road, Class B road or constructed Class C road? [Essentially, does the route meet the legal definition of a “road” discussed above?] b. If so, does the road have a destination? c. If so, does it contribute to the goals and objectives of the subunit? d. If so, is it consistent with the purposes of the Monument (e.g., avoid impacts to Monument objects)? e. If so, are the agencies reasonably capable of managing visitors on and near the road? f. If so, does the road avoid impacts to other high priority resources identified? g. If so, keep the road. If not, consider options to ensure that other high priority resources are protected. Options include rerouting, seasonal closure, permanent closure, enhanced ranger presence and/or education. (2) Supplemental road/route assessment for roads classified as reasonable access to valid and existing rights, or as necessary for “emergency or authorized administrative purposes”: a. Is the route the only reasonable access to valid and existing rights, or is it critical for “emergency or authorized administrative purposes”? b. If no, and if the route would be closed or subject to limitations under Step (1), then close the route. If yes, were any of the answers in Step (1) “no”? c. If no, keep the route open. If yes, then limit access to administrative or authorized purposes only, and consider seasonal closures or rerouting to protect high priority resources.</td>
<td></td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Topic</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>116 / 006</td>
<td>Travel and Access</td>
<td>There must be a comprehensive road inventory that is conducted with a management goal of maximizing the miles of roads designated for closure and restoration to natural conditions.</td>
</tr>
<tr>
<td>125 / 006</td>
<td>Travel and Access</td>
<td>BRC has received information from members living in surrounding communities about specific roads on the south end of the Wapi flow and in the Great Rift WSA. These roads provide a very valuable recreational experience. We strongly urge the BLM to work with our members to identify the specific roads and trails that appropriate to remain open, and designate them are open either in the Final Management Plan or in subsequent travel planning.</td>
</tr>
<tr>
<td>105 / 006</td>
<td>Travel and Access</td>
<td>Since the agencies are not including a travel plan as part of this RMP, then the agencies should make a threat of noxious weeds, wildlife disturbances, and impacts to the natural setting and solitude.</td>
</tr>
<tr>
<td>Comment No.</td>
<td>Topic</td>
<td>Travel and Access</td>
</tr>
<tr>
<td>-------------</td>
<td>-------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>103 / 007</td>
<td>Signage, development, road maintenance, and motorized travel should be kept to a minimum throughout the Monument and preserve. The general public should be encouraged and directed to the “old,” developed portion of the Monument for most visitor experiences. Use and visitation to the lands recently added to the Monument and Preserve should be for those people seeking solitude and a remote and primitive wilderness experience, and &quot;at your own risk.&quot; front country zones. Road inventory should be comprehensive with a management goal of road closure and rehabilitation.</td>
<td></td>
</tr>
<tr>
<td>121 / 007</td>
<td>…order to protect the natural and cultural objects identified in the proclamation, the designation of roads and trails and travel restrictions must be done as part of the current planning process. The transportation plan should be completed during this planning process and integrated into the comprehensive management plan, not deferred to a later date. The transportation plan should not only close roads and impose travel restrictions, as appropriate, immediately upon completion of the plan, but also outline the conditions that will trigger future road closures and travel restrictions.</td>
<td></td>
</tr>
<tr>
<td>122 / 008</td>
<td>We urge NPS/BLM to allow use of the historic sheep trailing route from Paddelford Flat to Highway 20. This trail is of significant historical and cultural value and its use should be preserved. The</td>
<td></td>
</tr>
</tbody>
</table>

**Response**

zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.

See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.

See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.

Future sheep trail use on NPS lands requires further analysis. Ultimately, the status of the historic sheep trail will be an implementation-level decision. See Appendix F of the Proposed Plan/FEIS.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Travel and Access</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter No./Comment No.</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>121 / 008</td>
<td>The transportation plan should seek to use only existing roads and should analyze the current condition of these roads. A very important part of the transportation plan is the definitions of what legally constitutes a road. The legal definition of a road is derived from the definition of “roadless” in the legislative history of FLPMA: “The word “roadless” refers to the absence of roads which have been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.” An accurate and precise definition of a road is necessary to meet the obligations articulated by the proclamation, especially in the context of the prohibition against motorized and mechanized vehicle use “off-road.”</td>
</tr>
<tr>
<td>104 / 009</td>
<td>...restrictions and high standards to prevent the spread of seeds. The most effective way to deal with this problem would be to implement an alternative that emphasized Pristine Zone designations. In the event that roaded access is imperative for restoration efforts, the BLM and NPS should limit access to administrative use only through a series of gates and closures and maintain these roads in their current condition.</td>
</tr>
<tr>
<td>Topic</td>
<td>Travel and Access</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
</tr>
<tr>
<td></td>
<td><strong>Letter No./ Comment No.</strong></td>
</tr>
<tr>
<td></td>
<td>70 / 012</td>
</tr>
<tr>
<td></td>
<td>165 / 012</td>
</tr>
<tr>
<td></td>
<td>121 / 013</td>
</tr>
<tr>
<td></td>
<td>165 / 020</td>
</tr>
<tr>
<td>Topic</td>
<td>Comment</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>Travel and Access</td>
<td>The relationship between transportation and access and past, ongoing and proposed livestock grazing is not described. DEIS at 13-14 addresses livestock grazing under “Authorized Uses”.</td>
</tr>
<tr>
<td></td>
<td>Page 167-Affected Environment; Impacts from Alternative C: It is stated that a decrease in access would occur under this alternative. We do not believe that this is entirely accurate. There would be a decrease in motorized access, but access from foot or pack animal would remain the same. Legal access to a given area is not being altered, only the means by which an area can be accessed.</td>
</tr>
<tr>
<td></td>
<td>In the description of “Passage Zones”, the DEIS should describe the link between road upgrades and livestock facilities. When a Supplemental DEIS is undertaken to examine the impacts of livestock projects and associated roading, evaluation of road closures should be part of this process, and thus revision of the Passage Zone area under a new range of alternatives.</td>
</tr>
<tr>
<td></td>
<td>There has been no rationale provided for including all of the many roads shown on the map of Alt. D as “passage” roads. This is a dramatic increase in Upgraded roads from Alt. A, the current situation. There is no recreational justification for the large network of roads and upgraded roads in Laidlaw Park. There has been no study undertaken or information that shows that these roads are necessary for livestock purposes, either. Designation of a “Passage” Zone here will doom these areas to even more livestock project and other developments. In fact, structuring alternatives in this plan in this way can be interpreted as a move to facilitate and expand livestock use and all its weed-spreading and habitat fragmenting effects in the heart of the World’s largest kipuka. The definition of “Passage Zone” must be changed to prohibit new livestock facilities or expanded water hauling.</td>
</tr>
</tbody>
</table>
### Topic: Travel and Access

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 044</td>
<td>The roads of Alt. D directly conflict with many of the DEIS DFCs, such as “continuity of habitat for special status species and general wildlife will be emphasized” – as roads serve as conduits for weed spread that will thwart any “restoration” projects, lead to increased fires and fragmentation, etc.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>123 / 045</td>
<td>The present situation – where many of the roads are not “front country” allows fire response time just fine – as vehicles can readily traverse jeep trails. If fire access is needed, the plan should provide for use of the road corridors on an “emergency only” basis.</td>
<td>Zoning does not guarantee that roads would be improved -- it simply provides for guidance and flexibility based on resource values and management needs. Thank you for your comment. It will be considered in the crafting of the travel implementation plan.</td>
</tr>
<tr>
<td>123 / 047</td>
<td>The network of “passage” areas and roads and likely new livestock developments under Alt. D conflicts with Map Figure 7 VRM classifications. Please explain how livestock facilities are compatible with “Class 2” VRM categories.</td>
<td>Refer to page 137 for detailed VRM classifications. All livestock facilities in the Passage Zone will be subject to Class Two VRM restrictions.</td>
</tr>
</tbody>
</table>
### Letter No./Comment No.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel and Access</td>
<td>this many roads open, you essentially condemn the lands of the “primitive” zone to become an OHV enforcement nightmare. These roads, and their location, have absolutely nothing to do with a strategic placement for fire access/suppression. The only reason many of these roads exist is because of livestock projects and permittee driving to place salt, park sheep wagons, etc. The road network (much of it unnecessary) simply grew in association with livestock activities and was not regulated by BLM.</td>
<td>appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan/FEIS. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>123 / 056</td>
<td>DEIS at 53 wrongly claims that “air quality” will remain the same under all alternatives. That is not the case – more roads = more dusty, bare erosion surfaces to produce wind-borne dust. Depending on just how many and what type of chemicals BLM plans on using in its treatments, Alt. D may add significant chemical pollutants in the air and roadside dust, may infiltrating waters flowing into seasonal playas, etc.</td>
<td>The section referenced indicated that for the purposes of selecting a preferred alternative, air quality was not a factor in the “Choosing by Advantages” process. The DEIS did not state that air quality would remain the same under all alternatives. The DEIS stated the differences in air quality impacts between the four alternatives were not “substantial” enough to include air quality as a factor in the CBA process. The air resource section of Chapter 4 of the DEIS discusses the differences in air quality impacts of the four alternatives. Both fugitive dust from vehicle traffic on roads and smoke from prescribed fires were predicted to be higher under Alternative D.</td>
</tr>
<tr>
<td>123 / 073</td>
<td>By keeping all existing minor roads and two tracks open, Alt. D maximizes chances for ill-prepared visitors to become disoriented and lost; to set fires by parking catalytic converters on top of cheatgrass, etc. The status quo livestock grazing, high road densities in sagebrush and cheatgrass and weed infested lands; and use of herbicide must be considered here. Plus, the chance of prescribed fire escaping from “treatments” Must be assessed. Improving more roads will result in higher speeds on loose gravel Thus, it decreases public safety and health.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>123 / 091</td>
<td>How might the intensive restoration, many roads, upgraded gravel roads and livestock grazing here contribute to fugitive dust?</td>
<td>These impacts to air resources were addressed in the DEIS on pages 182-186.</td>
</tr>
<tr>
<td>123 / 093</td>
<td>DEIS at 115-116. There seems to be some discrepancy between the description of the Class C road, and the photo. If Class C roads have an “unimproved, natural surface”, why do you claim that maintenance costs are $200-$400/mile. Class C roads aren’t improved – are they?</td>
<td>A class C road is defined as a road that has been constructed or established over time by repeated use. The definition goes on to say “a minimal amount of maintenance is limited primarily to surface grading to allow vehicle passage within the original road corridor. See Travel and Access, Chapter 3, Proposed Plan/FEIS.</td>
</tr>
</tbody>
</table>
**Topic**

**Travel and Access**

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 108</td>
<td>DEIS at 128 describes the number of miles of vehicle ways in the WSA at the time of inventory. However, many more miles may now exist due to unauthorized activity, fire suppression, etc. How many more miles now exist, and where are they located? Please present a map for comparative purposes. As part of the DEIS, closure and restoration of all unauthorized ways, fire equipment scars, etc. must be undertaken.</td>
<td>The WSA inventory data is the most recent data available on ways within WSAs.</td>
</tr>
<tr>
<td>123 / 141</td>
<td>The impacts analysis for roads for other Alternatives is NOT the same as Alternative A. The DEIS plans to improve more roads, thus facilitating access to remote areas, especially near the lava edges, and increasing potential for vandalism of cultural and other sites associated with these margins.</td>
<td>Not all alternatives considered in the draft DEIS involve the upgrading of roads and, consequently, improving access to remote areas. The impacts of improved access to cultural resources have been analyzed on pages 89-90 of the draft DEIS. The impacts of reduced access to cultural resources have been analyzed on pages 191-192 of the draft EIS.</td>
</tr>
<tr>
<td>123 / 144</td>
<td>From review of the maps, it does not really appear that there will be many more road developments under Alt. B than D. The DEIS provides no rationale for identifying the various roads to be Upgraded under the various alternatives. The DEIS has failed to reveal the areas where restoration is planned, or which roads are deemed necessary for fire activities. As this is the basis of this alternative, you must clearly identify and provide maps of all of this. Analysis of Alt. D and roads is flawed, as grazing would potentially increase dramatically, since upgrading roads allows new livestock projects since the area then becomes classified as “passage” zone. DEIS Map of Alt. D roads shows upgraded roads along/near to large areas of lava, including right next to the Bear Den Butte WSA, compare Map Figure 9 (DEIS at 48), and Map Figure 18. (DEIS at 129). Yet, the DEIS fails to analyze these impacts on WSA values of solitude, naturalness, primitive recreation and special features.</td>
<td>See Chapter 2, Alternative D Description and Map. In the Proposed Alternative, Passage Zone was significantly reduced in response to public comment and after additional consideration of the potential impacts to resources. Creating Passage Zone corridors does not mandate an increase in the number or current standard of roads (See chapter 2, Description of Management Zones). See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan. In addition, we have included additional maps detailing priority rehab areas in the Proposed Plan/FEIS.</td>
</tr>
<tr>
<td>123 / 155</td>
<td>DEIS at 167 fails to assess the role of vehicles in transporting weed seeds. More roads = more surfaces with weeds. It does acknowledge that more fragmentation would occur, but does not consider the synergistic, linked and cumulative impacts of fragmentation by roads, expanded or existing livestock facilities, and aggressive vegetation. treatments.</td>
<td>The analysis for vegetation, including special status species and fire management, (DEIS pp. 162-171) acknowledges the potential for weed spread by vehicles, as well as road maintenance activities.</td>
</tr>
</tbody>
</table>
**Topic**

### Travel and Access

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 167</td>
<td>DEIS at 177 admits that fragmentation from roads, trails, facilities, exists. Yet, under the Preferred Alternative, this fragmentation would be expanded as road upgrades and livestock projects expand.</td>
<td>See Chapter 2, Alternative D Description and Map. In the Proposed Alternative, Passage Zone was significantly reduced in response to public comment and after additional consideration of the potential impacts to resources. Creating Passage Zone corridors does not mandate an increase in the number or current standard of roads (See chapter 2, Description of Management Zones). See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan. See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan. Thank you for your comments. We will consider these points in the Travel Management and Integrated Weed Management implementation plans.</td>
</tr>
<tr>
<td>123 / 189</td>
<td>Minimize the introduction, establishment and spread of invasive species due to roads and OHVs by the following methods: Roads, vehicle route construction, use and maintenance must be addressed by: 1) Develop maps and databases of all systems; 2) Precede all road or route reconstruction, and any consideration of adding existing illegal or user-created roads and off-road vehicle routes to the transportation system, by NEPA analysis of their impact, including potential to facilitate the spread of invasive species into native ecosystems 3) Close or restrict non-essential, designated routes for motorized travel in areas at high risk for spread of invasive species; 4) Implement measures that reduce the likelihood of weed seed dispersal. 5) Consider restricting road grading activities in areas with high populations of invasive species; 6) Implement full area closures that prohibit all motorized travel on lands outside of designated NEPA analyzed transportation systems 7) Identify and designate for obliteration non-essential system and non-system roads and off-road vehicle routes that do not comply with native vegetation protection goals; 8) Reclaim obliterated roads to native vegetation.</td>
<td>See Chapter One, Description of Management Zones. See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan. Thank you for your comments. We will consider these points in the Travel Management and Integrated Weed Management implementation plans.</td>
</tr>
<tr>
<td>Topic</td>
<td>Recreation</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>2 / 001</td>
<td>…the BLM and NPS, can you explain to me what philosophy both parties have or foresee on Cave Management within the Monument?</td>
<td>As stated on page 13 of the DEIS, a Cave Management Plan would be developed pursuant to the Final EIS to meet the requirements of the Federal Cave Resources Protection Act.</td>
</tr>
<tr>
<td>41 / 001</td>
<td>I am writing to express my support for the concept of an upgraded and realigned road connecting the Idaho cities of Minidoka and Arco. I see this as an important step which would benefit the communities of Arco, Mackay, Minidoka, Rupert, Heyburn, Burley in the Cassia, Minidoka and Butte counties. An adequate road upgrade and realignment would provide for recreation, tourism, farm to market, desert access and viewing, INEEL access, fire suppression, hunting, search and rescue access and a very beneficial north south route.</td>
<td>Upgrading or maintaining the Arco-Minidoka Road to a higher standard is not a management recommendation in the Proposed Plan/FEIS, however the dashed Passage Zone within the Monument would allow for improvements should the responsible county governments decide to upgrade the Arco-Minidoka Road in the future. See DEIS heading of Chapter 2, Alternative D, Travel and Access.</td>
</tr>
<tr>
<td>125 / 004</td>
<td>The decision to be made regarding the level of use of motorized vehicles in the Monument is one of the most contentious issues in this planning process. Based on the very restrictive prescriptions on motorized vehicle use in most of the alternatives, I know the great majority of resident public land users in Idaho will feel a strong sense of outrage if any of those alternatives were selected. This would be unfortunate in light of the fact that the many assumptions made regarding these proposed restrictions are not supportable by adequate scientific information, use of available factual data, deductive reasoning, sound recreation management principles and holistic analysis. BLM should provide vehicle assisted public land visitors a full range of recreational opportunity. BLM should formulate a complete and accurate inventory of currently used travelways. BLM should realize that there is extensive opportunity for &quot;Pristine&quot; recreational pursuits already provided in current management and there is no need to provide additional &quot;primitive&quot; or &quot;pristine&quot; opportunity. Conversely, there is a need to provide more designated motorized trails.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
</tbody>
</table>
This [growing OHV] popularity is evidenced by the fact that recreational enthusiasts are buying OHV's at the rate of 1,500 units per day nationwide, with nearly one-third of them doing so as first-time buyers. 1  

[BLM's OHV] Strategy recognizes, as does policy outlined in BLM Manual 8340 (May 25, 1982), that off-road vehicle use is an 'acceptable use of public land wherever it is compatible with established resource management objectives.' As established by the Federal land Policy and Management Act of 1976 (FIPMA), the BLM is required to manage public lands on the basis of multiple use and sustained yield, while protecting natural values. 2  

Motorized OHV use is now firmly established as a major recreational activity on BLM-administered public lands. 2

Unwisely, rather than work to accommodate the increased demand for OHV recreation, BLM has frequently reacted by restricting OHV opportunities. But more importantly, opportunities to manage OHV use by marking roads and trails, providing usable maps, identifying OHV trails and systems and entering into cooperative management agreements with OHV user groups have, by and large, been ignored by the BLM. BLM cannot legitimately address increasing legitimate OHV demand by refusing to accommodate such demand. BLM planning must provide for the dramatic increasing demand for OHV recreation opportunities and anticipate even more demand in future years. The Final Management Plan must prudently provide for increased OHV recreation opportunities to meet current and anticipated demand. The planning team should look to County and Local Governments as well as individuals and user groups for assistance in identifying opportunities for OHV recreation. The planning team should develop management alternatives that allow for proactive OHV management. The Final Management Plan should include specific provisions to mark, map and maintain existing OHV opportunities. The Final Plan should include instructions to engage in cooperative management with OHV Groups and individuals. The planning team should give serious consideration to provisions in the Final Management Plan that allow full implementation of the agencies OHV policy and even direct land managers to identify and develop OHV travel systems in appropriate areas.

Response

See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.
<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>121 / 009</td>
<td>The management plan should include a monitoring plan to ensure primitive camping and recreation does not damage resources. Steps that will be taken to relocate or close and rehabilitate areas with conflicts between visitors and resource protection should be identified.</td>
</tr>
<tr>
<td>104 / 017</td>
<td>The plan seems to imply that irresponsible OHV use is currently a problem and/or will be in the future by noting, “Most OHV activity takes place on the existing road network…” (P. 133). Information should be provided about OHV use that is occurring elsewhere besides the existing road network in order to provide an understanding of the scope of the problem as well as the potential for increased risk from greater user-access to various parts of the Monument. The FEIS should describe the illegal OHV use in the southern end of the Monument and ways to address this issue.</td>
</tr>
<tr>
<td>104 / 018</td>
<td>The plan should provide more information comparing the potential impacts from OHV’s associated with each alternative. The DEIS notes that increased access from expansion of Passage Zone would increase the risk of illegal off-road use. As a preventative measure, administrative roads should be gates and closed to all other motorized use.</td>
</tr>
<tr>
<td>123 / 039</td>
<td>DEIS at 31 describes two programs. Are these part of the Idaho Parks and Recreation. If so, we are concerned that these programs may have a strong bias towards motorized use, at the expense of other uses. Why are you not developing a plan tailored for Craters?</td>
</tr>
<tr>
<td>123 / 041</td>
<td>Recreation (DEIS at 31) fails to describe the possible negative impacts on back country recreation of relying on extensive guide services, as proposed here. We have encountered lands in the Bennett Hills where guided therapy groups frequently take clients, and they are becoming beat out and heavily impacted by human use. Do you anticipate both guided recreation and therapy groups here? What upper cap or limit will you place on permits for commercial recreational or therapy on Craters lands? Who is operating here at present? What is the current number of guided trips per year, visitors using these services, etc.? What impacts are occurring?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>On pages 12-13 of the DEIS, future planning needs are discussed. Many of the implementation plans describe, such as the Wilderness/Wilderness Study Area Plan, the Cave Management Plan, and the Cultural Resources Plan, would provide for periodic monitoring and protection of resources from adverse impacts, such as primitive camping and recreation.</td>
</tr>
<tr>
<td>On page 148, under &quot;Incomplete or Unavailable Information&quot; the DEIS states &quot;data about visitor use is available for the original Monument, but such information for the remaining area is limited.”</td>
</tr>
<tr>
<td>On page 148, under &quot;Incomplete or Unavailable Information&quot; the DEIS states &quot;data about visitor use is available for the original Monument, but such information for the remaining area is limited.” As stated on page 12 of the EIS, a Travel Management Plan would be developed pursuant to the Final EIS to address these issues.</td>
</tr>
<tr>
<td>Idaho’s State Comprehensive Outdoor Recreation and Tourism Plan and the Idaho Outdoor Recreation Demand Assessment are tools available to the agencies to provide information on recreation use patterns, trends and facilities that may be required. They do not set agency policy for federal lands.</td>
</tr>
<tr>
<td>There is currently one permitted guide service in the Monument, conducting less than three guided trips a year. The agencies do not foresee a dramatic increase in the number and types of guide services within the Monument. Additional information has been added to the Final EIS to clarify the potential impacts of outfitters and guides.</td>
</tr>
<tr>
<td>Topic</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td><strong>Letter No./Comment No.</strong></td>
</tr>
<tr>
<td>123 / 075</td>
</tr>
<tr>
<td>123 / 114</td>
</tr>
<tr>
<td>123 / 118</td>
</tr>
<tr>
<td>123 / 127</td>
</tr>
<tr>
<td><strong>Topic</strong></td>
</tr>
<tr>
<td>147 / 001</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>130 / 002</td>
</tr>
<tr>
<td>142 / 004</td>
</tr>
<tr>
<td>165 / 008</td>
</tr>
</tbody>
</table>
## Special Designation Areas

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>105 / 009</td>
<td>The EIS discusses the proposed designation of an ACEC for North Laidlaw Park. However, the conclusions reached regarding the need to designate the area as an ACEC or not should be reevaluated. While current management has left the area in good condition, it is hard to say what the next 15 to 20 years will bring. The area certainly qualifies for ACEC designation. But it is not safe to assume that current management, regulation, and law will remain the same and will stay in place for the life of this plan. Therefore, it is both necessary and wise to designate a place as special as Laidlaw Park as an ACEC. It is the best and only way to recognize and be certain that management actions will, in fact, protect the special resources and values for the future. The need to designate the area as an ACEC is also evident in the treatment of the issue in the planning process and planning documents. The section discussing the ACEC designation is relegated to an appendix in the back of the planning document. And, only one alternative looks at designating the area as an ACEC. It is not clear as to why alternatives B and/or D did not also look at ACEC designation. The fact that only 1 out of 4 alternatives even considers such designation and the associated actions shows a lack of understanding and commitment to take such actions if the ACEC were not designated. The designation of an ACEC and the related management actions for the area should be part of each alternative in the plan as a way to recognize and protect the high quality native vegetation, wildlife habitat and scenic values of this irreplaceable treasure. Laidlaw Park has a unique aspen stand, key habitat for sage grouse and other sagebrush steppe obligates and many other distinctions enumerated on pages 338 and 339 in the DEIS. It is the world’s largest kipuka, has extraordinary scenic values and serves as a very important reference site for ecologically comparable, more heavily grazed sites. Additionally, the proclamation highlighted the importance of this area. The proposed actions should be changed to reflect a change to point c) “Water hauling to temporary sites will remain at the current level.” This management direction should be revised. It is presumptive to conclude that grazing will continue in this area at current levels and for the life of the plan. It would be better to say “water hauling to temporary sites may remain at the current level or may be decreased, but it will not be increased.” This provides more management flexibility. All alternatives, especially the agency-preferred alternative, should reflect designation of North Laidlaw Park as an ACEC and the management actions describes</td>
<td>Please refer to DEIS Appendix G, pp. 337-341. The ID team followed the appropriate process in analyzing the values in North Laidlaw Park to determine if the area qualified for ACEC status. The proposed ACEC was included and analyzed in Alternative C, the logical alternative to include the potential protection provided by the proposed ACEC. Further, to demonstrate a commitment to maintaining the high ecological condition of the area, protective measures were included in Alternative D, the preferred alternative, that limit livestock developments, specifically to maintain the light use that the area has received for years and that has resulted in the current condition (DEIS p. 49). Additional protective measures have been included in the Proposed Plan/FEIS, including decreasing the acreage of Passage Zone and increasing the acreage of Pristine Zone in Laidlaw Park. By comparing the effects of managing the area as an ACEC in Alternative C with the effects of managing the area with the protective measures in Alternative D we found no advantage in designating the area an ACEC and that we can achieve the same results with the protective measures in Alternative D. Therefore we concluded that it is unnecessary to designate the area as an ACEC.</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>128 / 010</td>
<td>Please create ACECs for Cinder Gardens on Ant Butte and for key spring- and rare- systems in the Monument.</td>
<td>Blaine County has a free use permit at Ant Butte and has periodically mined cinder from the butte. Therefore, Ant butte does not appear to meet the relevance and criteria for an ACEC as described in Appendix G. Most of the cinder cones within the Monument lie within the Pristine Management Zone in all Alternatives, which serves to provide protection to the cones and attendant cinder gardens through limited access.</td>
</tr>
<tr>
<td>104 / 019</td>
<td>…standards. In all alternatives, North Laidlaw Park should be designated as an Area of Critical Environmental Concern to ensure protection of the sagebrush steppe habitat. This would be far more effective than simply instituting restoration plans to mitigate impacts from the past and those that will occur in the future. The FEIS could vary the size of this ACEC in each alternative, but significant portions should be included in each alternative to protect the values at risk.</td>
<td>The commenter did not provide any new information or studies that would update the analysis of relevance and importance criteria, resulting in a determination that ACEC status is warranted. Management direction to protect the high quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See DEIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and pp. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. To further protect the area, the preferred alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Topic</td>
<td>Wilderess Study Areas</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>103 / 002</td>
<td></td>
<td>This leads to a major complaint I have, which is the absolute lack of consideration of the wilderness quality lands included in the expanded boundaries. The current Craters of the Moon Wilderness Area must be substantially expanded beyond the current core area. Please revise the Plan with concrete steps to analyze, inventory, and to recommend to Congress ALL qualifying wilderness-quality lands in the Monument and Preserve. Complementary to this, the Plan must outline the requirement that all wilderness quality lands are managed consistent with their being designated as such by Congress in the future. The management must not allow any degradation of these areas to occur.</td>
</tr>
<tr>
<td>12 / 002</td>
<td></td>
<td>All Wilderness Study Areas should be managed under National Park Service guidelines and regulations.</td>
</tr>
<tr>
<td>116 / 003</td>
<td></td>
<td>Make certain that the Plan will manage all Wilderness Study Areas under the more protective NPS guidelines and regulations. The preferred alternative should include designation of North Laidlaw Park, one of the least disturbed, large areas of sagebrush steppe, as an Area of Critical Environmental Concern.</td>
</tr>
<tr>
<td>18 / 003</td>
<td></td>
<td>Wilderness and ACEE: We urge that the wilderness study areas be managed under NPS policies and regulations, rather than the weaker BLM interim management policy.</td>
</tr>
<tr>
<td>21 / 003</td>
<td></td>
<td>Wildlands Management- All Wilderness Study Areas should be managed consistent with the NPS's WSA standards. Designate North Laidlaw Park as an Area of Critical Environmental Concern, to ensure protection of sagebrush steppe habitat.</td>
</tr>
<tr>
<td>142 / 004</td>
<td></td>
<td>All Wilderness Study Areas should be managed under National Park Service guidelines and regulations. The preferred alternative should include designation of North Laidlaw Park, one of the least disturbed, large areas of sagebrush steppe, as an Area of Critical Environmental Concern.</td>
</tr>
</tbody>
</table>

**Response**

Both agencies inventoried all lands within the current Monument boundaries to determine areas with wilderness qualities. These inventories began in the 1960s and continued through the 1980s. These studies resulted in designation of the 43,243 acre Craters of the Moon Wilderness in 1970 and 469,009 acres of Wilderness Study Areas of which 408,110 acres have been recommended to the U.S. Congress for designation. Existing law and agency policy require management of Wilderness Study Areas to protect the wilderness qualities until Congress determines whether or not to designate the lands as wilderness.

NPS and BLM are required follow their individual agency management policies including the management of WSA. Changes to those policies are beyond the scope of this plan.

NPS and BLM are required follow their individual agency management policies including the management of WSA. Changes to those policies are beyond the scope of this plan.

NPS and BLM are required follow their individual agency management policies including the management of WSA. Changes to those policies are beyond the scope of this plan.

NPS and BLM are required follow their individual agency management policies including the management of WSA. Changes to those policies are beyond the scope of this plan.

NPS and BLM are required follow their individual agency management policies including the management of WSA. Changes to those policies are beyond the scope of this plan.
<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>122 / 009</td>
<td>NPS/BLM must work to protect all roadless areas and WSAs within the expanded Monument. In fact, NPS/BLM must adopt an Alternative that restores the integrity of WSAs that have suffered incursions by motorized vehicles since the original designation of those WSAs. As we have stated above, these areas represent one of the greatest attributes of the Monument and represent the core of the Monument expansion’s long term legacy to the American people.</td>
<td>The Proposed Plan/FEIS classifies most WSAs in the Pristine Zone where any existing vehicle routes would be closed to unauthorized motorized use.</td>
</tr>
<tr>
<td>128 / 010</td>
<td>The NPS should expand and propose WSAs for wilderness protection then manage them to strictly protect these proposals.</td>
<td>Almost 440,000 acres (94%) of NPS lands in the Monument are either designated wilderness or wilderness study areas. Existing law and policy require protection of the wilderness character of these lands.</td>
</tr>
<tr>
<td>121 / 010</td>
<td>The management plan for the Monument should identify a process by which Wilderness Study Areas not currently recommended for wilderness designation are reevaluated for their wilderness characteristics and suitability for wilderness designation. These BLM and NPS lands were evaluated users and decades ago for their eligibility to be included in the National Wilderness Preservation System. Today many of these lands still provide solitude, naturalness, scenic beauty and other wilderness characteristics that may have been overlooked and would make them eligible for wilderness designation. We also ask you to evaluate and inventory any lands that may qualify for Wilderness Study Area status, but were not inventoried during the original process.</td>
<td>The agencies previously inventoried lands within the current Monument boundaries to determine areas with wilderness qualities. These inventories began in the 1960s and continued through the 1980s. These studies resulted in designation of the 43,243 acre Craters of the Moon Wilderness in 1970 and 469,009 acres of Wilderness Study Areas of which 408,110 acres have been recommended to the U.S. Congress for designation. Existing law and agency policy require management of Wilderness Study Areas to protect the wilderness qualities until Congress determines whether or not to designate the lands as wilderness. The agencies do not believe the land use situation within or adjacent to the Monument warrants re-inventory of lands for wilderness suitability.</td>
</tr>
<tr>
<td>105 / 010</td>
<td>NPS management of WSAs calls for management as if the area were designated wilderness. BLM management of portions of WSAs should be coordinated with NPS management and should rise to a higher standard – equivalent with NPS standards, in order to help prevent confusion and resource damage and degradation. There is nothing in BLM’s IMP re: WSAs that prohibits or discourages management to a higher standard – especially on discretionary issues such as roads. We appreciate the recognition, common to all alternates, of our comments regarding the 660-foot strip of non-wilderness between the Craters of the Moon Wilderness boundary and the original Monument boundary. (DEIS p. 30).</td>
<td>The Proposed Plan/FIS includes direction for NPS and BLM to develop a joint Wilderness Management Plan for all wilderness and wilderness study areas within the Monument. Both agencies must follow individual agency policies which include making detailed management decisions in an implementation plan. The Proposed Plan/FEIS classifies most WSA lands, including those on BLM portions of the Monument, as Pristine Zone which is closed to non-administrative motorized and mechanized vehicle use.</td>
</tr>
</tbody>
</table>
Wilderness Study Areas

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>121 / 011</td>
<td>Wilderness Study Area status should be granted to any eligible areas left out of the wilderness designation in the “old” NPS national Monument because of the idea that a “buffer-strip” was needed between designated wilderness and non-wilderness. This wilderness designation was, along with the wilderness on Petrified Forest Nation Park, one of the first two wilderness designations within the NPS. The then-director was not friendly toward wilderness, so there were all sorts of bad policies that sought to minimize wilderness came out to the outer Monument or Monument boundary, there would have to be a non-wilderness “buffer-strip.” That idea has since been proven to be false and the policy was changed a few years later. However, we are not aware that this issue was ever corrected for the Craters of the Moon Wilderness Area.</td>
<td>In the event that portions of the Great Rift WSA adjacent to the Craters of the Moon Wilderness are designated as wilderness, the draft plan/EIS (page 30) recommends that the non-wilderness buffer strip within the NPS Monument be designated wilderness as well. This management action has been retained in the Proposed Plan/FEIS.</td>
</tr>
<tr>
<td>123 / 040</td>
<td>Wilderness Management actions should include removal of livestock projects that may be impairing Wilderness values. The DEIS should provide a summary of monitoring data for WSAs that examines any livestock impacts.</td>
<td>WSA’s have specific regulations which already guide activities and associated impacts. Under the DEIS managers would continue to have the authority to remove livestock or livestock facilities for resource benefit if needed. Livestock projects within WSA are managed according to BLM’s Interim Management Policies for Lands under Wilderness Review, Handbook H8550-1 to prevent impairment of wilderness values.</td>
</tr>
<tr>
<td>123 / 057</td>
<td>In addition, the DEIS could take this opportunity to expand Wilderness recommendations – but unfortunately has not done so. We ask that an expanded analysis of additional roadless lands suitable for Wilderness be included as part of the SEIS. Plus, the effects of (and intrusions into) Wilderness vary under Alternatives, even without any analysis of grazing changes. For example, herbicide dust may blow into Wilderness under the treatment Alt. (D), killing or weakening plants inside Wilderness. As Alt. D maximizes the number of Open roads leading to and even bordering WSAs, the likelihood of human-caused fires is increased under Alt. D. Noise from vehicles, which travels for several miles in clear desert air will be greater under Alt. D. Likelihood of weed invasion form vehicle-transported weeds areas near WSAs, and ultimately into WSAs is increased under Alt. D.</td>
<td>The agencies do not believe the land use situation within or adjacent to the Monument warrants re-inventory of lands for wilderness suitability. The general nature of this type of broad plan makes analysis of the potential impacts from “herbicide dust” blowing into Wilderness nearly impossible. Analysis of such potential impacts will be conducted for site specific restoration projects. The Proposed Plan/FEIS expands the Pristine Zone (as compared to the draft Alternative D) to include almost all of the WSA. These areas would be closed to motorized vehicle use. The potential for spread of invasive weeds and creation of unauthorized vehicle routes is noted on page 217 of the Draft EIS(second to last paragraph).</td>
</tr>
</tbody>
</table>
### Topic: Wilderness Study Areas

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 107</td>
<td>As part of this process, an inventory of all lands should be conducted to determine if additional roadless acreages lying outside WSA exist, and if closing minor two tracks or ways would result in expanded wilderness-potential acreage. If so, where are they? How will Alt. D (and all alternatives) affect the possible future expansion of WSAs/Wilderness? What is the condition of all roads, ways, trails that currently bound WSAs?</td>
<td>The agencies do not believe the land use situation within or adjacent to the Monument warrants re-inventory of lands for wilderness suitability. The wilderness inventory and recommendation process for BLM lands is summarized pages 127 and 128 of the Draft EIS. The Proposed Plan/FEIS expands the Pristine Zone (as compared to the draft Alternative D) to include almost all of the WSA. These areas would be closed to motorized vehicle use. None of the alternatives propose developments or activities which would preclude future wilderness designation of WSA lands. The status of roads, ways, and trails which bound WSAs is shown in Figure 13 on page 113 of the Draft EIS.</td>
</tr>
</tbody>
</table>

### Topic: Budget

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>39 / 003</td>
<td>We would also like to mention that the BLM and National Park Services must be realistic in their expectations based on budgets available for staffing, monitoring, enforcement, interpretation, facilities, maintenance, and resource protection and restoration. There must be appropriate funding available to carry out the actions that will be described in the future management plan.</td>
<td>Comment noted.</td>
</tr>
<tr>
<td>142 / 005</td>
<td>The agencies should be realistic in their expectations and projections based on budgets available for staffing, monitoring, enforcement, interpretation, facilities, maintenance, and resource protection. Signage, development, road maintenance, and motorized travel should be kept to a minimum. Only signs necessary for safe orientation within the Monument and to direct visitors to designated motorized routes should be erected.</td>
<td>Comment noted.</td>
</tr>
<tr>
<td>142 / 005</td>
<td>The agencies should be realistic in their expectations and projections based on budgets available for staffing, monitoring, enforcement, interpretation, facilities, maintenance, and resource protection. Signage, development, road maintenance, and motorized travel should be kept to a minimum. Only signs necessary for safe orientation within the Monument and to direct visitors to designated motorized routes should be erected.</td>
<td>Comment noted.</td>
</tr>
</tbody>
</table>
The agencies should be realistic in its expectations and projections based on budgets available for staffing, monitoring, enforcement, interpretation, facilities, maintenance and resource protection.

As part of the cost for all alternatives, you must calculate the costs of “restoration” – both the pseudo-restoration you propose under the DEIS definition, and true restoration, with and without continued livestock grazing. Please also calculate the annual costs (including agency staff) of livestock grazing administration, monitoring and facilities to the public on these lands. Here are some questions to be addressed: What will the annual weed suppression costs be over the life of the plan with status quo grazing practices? With significantly reduced livestock numbers? With passive restoration? How long will any of the DEIS’ pseudo-restoration projects persist with continued livestock grazing? With significantly reduced livestock grazing? How much will it later cost to restore lands where you plan to shift livestock use as you undertake restoration/treatment? A Supplemental DEIS must be prepared that accurately portrays grazing costs (ecological and economic) and that takes a “hard look” at a broad range of alternatives that significantly address grazing impacts to soils, native vegetation, microbiotic crusts, weed infestation and spread, recreation, native animals, playas, cultural sites, recreational uses, etc. The DEIS must also assess the probability of success (or failure) of any plantings – particularly any plantings employing native vegetation with status quo grazing.

The minimized need for development and staffing within the Monument would result from the use of partnerships at off-site facilities, under Alternative D.
<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>124 / 001</td>
<td>I would like to encourage you to designate North Laidlaw Park as an ACEC in the plan you are developing.</td>
<td>The commenter did not provide any new information or studies that would update the analysis of relevance and importance criteria, resulting in a determination that ACEC status is warranted. Management direction to protect the high quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See DEIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and pp. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. To further protect the area, the preferred alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.</td>
</tr>
<tr>
<td>71 / 001</td>
<td>Designate N, Laidlaw Park as ACEC.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>46 / 001</td>
<td>I oppose the BLM's adoption of Alternative D as the preferred alternative and urge the adoption of Alternative C as the alternative that best preserves the Monument's primitive character. Alternative C provides greater protection for the Monument's natural resources and wildlife by limiting motorized vehicle use and routes. However, I urge the BLM to increase protections for wilderness areas by designating North Laidlaw Park an Area of Critical Environmental Concern and by further restricting road development and maintenance as well as off-road vehicles.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>39 / 002</td>
<td>We also would like to see the Area of Critical Environmental Concern (ACEC) designation for northern Laidlaw Park that is mentioned in Alternative C to be added to Alternative D. We believe this ACEC is an important component in the future management plans.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>Topic</td>
<td>Management Zones</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Letter No./ Comment No.</strong></td>
<td><strong>Comment</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>44 / 002</td>
<td>Designate North Laidlaw Park as an Area of Critical Environmental Concern.</td>
<td>The commenter did not provide any new information or studies that would update the analysis of relevance and importance criteria, resulting in a determination that ACEC status is warranted. Management direction to protect the high quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See DEIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and pp. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. To further protect the area, the preferred alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.</td>
</tr>
<tr>
<td>111 / 002</td>
<td>I further object to the agency’s refusal to designate an Area of Critical Environmental Concern in Laidlaw Park. Sagebrush steppe is one of the most degraded and endangered habitat types in the West, perhaps particularly on the Snake River Plain. ACEC designation and proper management of Laidlaw Park, including elimination of livestock grazing, would help protect an important, relatively high-quality sagebrush community.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>106 / 002</td>
<td>I have not visited the North Laidlaw Park, but would highly recommend that it be designated as an Area of Critical Environmental Concern, so as to contrast with any improvements in the Laidlaw Park proper.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>95 / 002</td>
<td>I would also urge that Laidlaw Park be designated an Area of Critical Environmental Concern to help better protect the sagebrush communities there.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>44 / 002</td>
<td>Designate North Laidlaw Park as an Area of Critical Environmental Concern.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>63 / 003</td>
<td>Preservation of natural and cultural resources must take precedence over all development, whether for visitor use or for recreation. Visitors should be encouraged and first directed to the original and more developed portion of the Monument for most interpretation and recreational experiences. Use and visitation to the lands recently added should be for those people seeking... solitude and a remote and primitive wilderness experience. The preferred alternative should include designation of North Laidlaw Park, one of the least disturbed, large areas of sagebrush steppe, as an Area of Critical Environmental Concern.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>89 / 003</td>
<td>There is not even a requirement to seed native plant species following a treatment! Plus, the Preferred Alternative rejects designation of an Area of Critical Environmental Concern in Laidlaw Park. An ACEC designation would help protect one of the last remaining better condition sagebrush communities on the entire Snake River Plain.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>81 / 003</td>
<td>An ACEC designation should be considered for Laidlaw Park, and native plant species reseeded there.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>73 / 003</td>
<td>In Alternative E, in Chapter 2, Page 30, one of the management actions states, &quot;Selected Class D roads in the Primitive and Pristine Zones could be converted to trails or closed for resource protection.&quot; Table 5 identifies that 167 miles of these roads are within primitive and Pristine Zones. The Pristine Zone concept is inconsistent with roads in these areas, so 9 miles of roads within the Pristine Zone can be either closed or converted to non-motorized trails. The public should clearly understand the inconsistency between pristine areas and roads in the Final Management Plan. If a primitive road in pristine area needs to remain on the system because of management access or public access, then the area surrounding the road should be reclassified to primitive status to resolve the inconsistency.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>102 / 004</td>
<td>Designate an ACEC in Laidlaw Park that encompasses all remaining sagebrush communities.</td>
<td>The commenter did not provide any new information or studies that would update the analysis of relevance and importance criteria, resulting in a determination that ACEC status is warranted. Management direction to protect the high quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See DEIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and pp. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. To further protect the area, the preferred alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.</td>
</tr>
<tr>
<td>88 / 004</td>
<td>Designate an ACEC in Laidlaw Park that encompasses all remaining sagebrush communities.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>63 / 005</td>
<td>Management zoning (i.e. level of development) should maximize the amount of pristine, and then Primitive Zones, with a minimum of passage and even less front country zones. There must be a comprehensive road inventory that is conducted with a management goal of maximizing the miles of roads designated for closure and restoration to natural conditions.</td>
<td>See Chapter One, Future Planning Needs, Transportation Planning. In the proposed Management Plan we describe desired future conditions and management actions for the type of roads and access that is appropriate within each of four management zones. The plan also classifies and inventories the type of roads and trails currently in existence within the Monument. Specific decisions on Access and Transportation beyond those already defined in the management zone descriptions will be made in the upcoming implementation level Comprehensive Travel Management Plan. This implementation plan will include a detailed map including all designations for access and travel within the Monument, including road travel restrictions and road closures to meet resource management objectives, such as protection of special status species habitat, defined in the Proposed Plan. There will be no net increase in road mileage under this plan.</td>
</tr>
<tr>
<td>103 / 005</td>
<td>The preferred alternative should include designation of North Laidlaw Park, one of the least disturbed, large areas of sagebrush steppe, as an Area of Critical Environmental Concern.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>111 / 005</td>
<td>The agencies should designate a Laidlaw Park ACEC that encompasses and protects all remaining sagebrush communities.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>128 / 005</td>
<td>Also, please designate North Laidlaw Butte as part of the unique ACEC (if you need me to more formally propose it, I will if you would contact me), or establish a similar NPS designation if that is needed (after all, you guys are supposed to talk to each other despite your different mandates). Laidlaw Park shares some of the vegetative values with North Laidlaw Butte but with the greater remoteness of the Butte they are less damaged. This could provide a no-livestock grazing study to compare it to Laidlaw Park management. North Laidlaw Butte also has the benefit of providing a beautiful view from above the floor of lava. Please leave this area as undisturbed as possible.</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>159 / 005</td>
<td>Plus, the Preferred Alternative rejects designation of an Area of Critical Environmental Concern in Laidlaw Park. An ACEC designation would help protect one of the last remaining better condition sagebrush communities on the entire Snake River Plain.</td>
<td>The commenter did not provide any new information or studies that would update the analysis of relevance and importance criteria, resulting in a determination that ACEC status is warranted. Management direction to protect the high quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See DEIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and pp. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. To further protect the area, the preferred alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.</td>
</tr>
</tbody>
</table>
### Management Zones

<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>70 / 006</td>
<td>Why is the Pristine Zone reduced in Alt. D by some 90,000 acres from Alt C? If the area considered in C is eligible for pristine classification, it should also be so in D. The areas affected seem to be the lava edges which typically contain the greatest biological diversity, frequent cultural areas and no critical roads necessary for administration. Reconfigure Alt D to include the larger Pristine acreage and in Alternative C</td>
<td>See Chapter 2, Alternative D Description and Map. In the Proposed Alternative, Passage Zone was significantly reduced in response to public comment and after additional consideration of the potential impacts to resources. Creating Passage Zone corridors does not mandate an increase in the number of current standard of roads (See chapter 2, Description of Management Zones).</td>
</tr>
<tr>
<td>82 / 006</td>
<td>Designate an ACEC in Laidlaw Park that encompasses all remaining sagebrush communities.</td>
<td>The commenter did not provide any new information or studies that would update the analysis of relevance and importance criteria, resulting in a determination that ACEC status is warranted. Management direction to protect the high quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See DEIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and pp. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. To further protect the area, the preferred alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.</td>
</tr>
<tr>
<td>125 / 007</td>
<td>BLM is apparently attempting a zone management concept, which is not authorized by law or regulation. BLM must formulate management plans that reflect the policy of the United States regarding all public lands, including National Monuments.</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>125 / 008</td>
<td>The effort to designate &quot;Primitive Zones&quot; within the Monument Plan process violates FLPMA. &quot;Pristine Zones&quot; are, in essence, de-facto Wilderness management. This violates law and regulation. Section 201 of FLPMA places a general requirement on BLM to inventory all public lands for various resource values. Section 202 contains general planning provisions. Both require BLM to manage using the principles of multiple use and sustained yield. Neither mention wilderness specifically nor do they suggest any justification for the approach suggested in this planning effort – i.e. designation of &quot;Wilderness/Primitive/Pristine Lands&quot;. The planning team may not like it, but Congress has established a policy for managing public lands. The development of preliminary alternatives that include designating &quot;Management Areas&quot; is an attempt to subvert BLM's policy mandate. FLPMA Title II, particularly subsection (c)(1) that specifically requires development and revision of land use plans on the basis of &quot;principles of multiple use and sustained yield,&quot; FLPMA section 102(a)(7) also specifically requires that &quot;goals and objectives be established by law as guidelines for public land use planning, and that management be on the basis of multiple use and sustained yield unless otherwise specified by law. Attempting to exclude lands from multiple use mandate via the designation of &quot;Management Areas&quot; or &quot;Management Zones&quot; also subverts the implementing regulations found at 43 C.F.R. 1600 et seq. that require planning based upon multiple use and sustained yield, including subsection 1601.0-2: &quot;The objective of resource management planning by the BLM is to maximize resource values for the public through a rational, consistently applied set of regulations and procedures which promote the concept of multiple use management and ensure participation by the public, state and local governments, Indian tribes and appropriate Federal agencies...&quot; For the most part, the BLM has totally ignored the FLPMA Section 603 wilderness inventories, studies, and decisions. It also completely ignores the extensive data and public input collected during the 603 process. It also ignores the fact that all BLM lands (except in Alaska) have been previously inventoried for wilderness values under Section 603 and formal recommendations made to the Congress by the President of the United States, as required. The BLM is totally ignoring decades of prior wilderness policy, procedures and guidance on wilderness inventories, existing inventory records,</td>
<td>The DEIS does not violate FLPMA.</td>
</tr>
</tbody>
</table>
official determinations of wilderness suitability and unsuitability. There is no justification, no mandate in FLPMA and no process requirement for managing lands in management zones that resemble wilderness management, or are de-facto Wilderness management. Under FLPMA §603, the Secretary of the Interior was directed to review the public lands and identify those areas that meet the wilderness criteria contained in sec. 2(c) of the Wilderness Act, 16 U.S.C. § 1131 (c). Those areas that have wilderness characteristics were then to be studied to determine their suitability for inclusion in the National Wilderness Preservation System. The Secretary was required to make recommendations on their suitability or nonsuitability to the President by Oct. 21, 1991. That date has expired. Congress clearly set its deadline. Congress did not authorize a never ending wilderness inventory and review process outside FLPMA §603. Additionally, and importantly, the Federal Courts have weighed in on management paradigms that resemble or are de-facto Wilderness Areas. In "State of Wyoming v United States Department of Agriculture" (01-CV-86-B) Judge Clarence Brimmer ruled: In establishing the NWPS [National Wilderness Preservation System], Congress unambiguously provided that "no Federal lands shall be designated as 'wilderness areas' except as provided for in [the Wilderness Act] or by a subsequent Act." Brimmer goes on to note: In fact, the primary purpose of the Wilderness Act was to provide: [a] statutory framework for the preservation of wilderness [that] would permit long-range planning and assure no further administrator could arbitrarily or capriciously either abolish wilderness areas that should be retained or make wholesale designations of additional areas in which use would be limited. (quoting H.R. Rep. No. 88-1538).
Creating “Pristine Zones” pursuant to FLPMA is an attempt to subvert Congressional directives found throughout Title II of FLPMA. The planning team is unlawfully attempting to make wilderness the priority way to protect the resources identified in 102(a)(8) instead of ACECs. The use of Pristine Areas or an attempt to substitute the Congressional directive found at Section 201 (a) of FLPMA calling for the Secretary to “prepare and maintain on a continuing basis an inventory of all public lands and their resources and other values (including, but not limited to, outdoor recreation and scenic values), giving priority to areas of critical environmental concern [ACEC] (emphasis added). This is contrary to Congressional directive found in Title II and Title VI of FLPMA. The Congressional directive found at Section 201 (a) of FLPMA calls for the Secretary to “prepare and maintain on a continuing basis an inventory of all public lands and their resources and other values (including, but not limited to, outdoor recreation and scenic values), giving priority to areas of critical environmental concern [ACEC] (emphasis added), not wilderness or “Pristine Zones” or other such de-facto WSA. Naturally, BLM may formulate management plans that protect Monument resources, but it must do so lawfully, using site specific use allocations or the ACEC. BLM may not use the Zone Management concept. BLM should abandon the concept of establishing “Pristine Zones”, BLM should abandon the concept of managing for “wilderness character”, by designating “Management Zones” are de-facto WSA’s (such as Pristine Management Areas) that are not authorized by law. When attempting to manage for “Pristine” and/or “unconfined recreation” BLM must use sound and valid principles of recreation management and legally authorized designations such as those contained in the Recreation Opportunity Spectrum. BLM should seek to manage for sensitive resources by developing site specific management plans formulated pursuant to the designation of Areas of Critical Environmental Concern.
Topic | Management Zones
------|-------------------
Letter No./ | Comment
Comment No. | Response

70 / 010 | How does the restoration acreage correlate with the 90,000 acres of Pristine Zone shift discussed in Zone Characterizations?

The intent of the increase in restoration acreage in Alt. D over Alt. C was to treat as much of the area in the Monument that has been identified as having poor ecological integrity as possible over the life of the plan. (See Jurs and Sands 2004 and map of potential restoration acreages, included in the Proposed Plan/FEIS.) Some of this area is in Wilderness Study Area. In Alternative C, the boundaries for the Pristine Zone were synonymous with the WSA boundary, regardless of ecological condition (See DEIS, p. 23, for zone descriptions). Zoning, or WSA status, does not exclude the potential for restoration treatment -- it simply prescribes the range of treatment methods that should be used given the designation. The intent of Alt. C was to have more focus on preservation as opposed to proactive restoration. The proposed restoration acreages were estimated with that intent in mind.

Thank you for your suggestions.

105 / 013 | We encourage expansion of the Pristine Zone beyond even alternative C's recommendations. Pristine zoning should not be excluded from an area just because there currently exists a medium probability of encountering livestock and associated facilities. We also encourage expansion of the Primitive Zone beyond the amount called for in any of the alternatives. Primitive Zoning should be the second most common amount of land in the preferred alternative.

The commenter did not provide any new information or studies that would update the analysis of relevance and importance criteria, resulting in a determination that ACEC status is warranted. Management direction to protect the high quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See DEIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and pp. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. To further protect the area, the preferred alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.

123 / 014 | The ACEC should be part of ALL Alternatives analyzed. Extreme political bias has been introduced into this process- basically, the livestock industry and Bush administration despises land protection. Since ACEC provides an opportunity for special management. The sad thing here is how much the ACEC lands are currently being impacted (and community condition eroded) due to livestock grazing and especially associated spread of exotic species.

The intent of the increase in restoration acreage in Alt. D over Alt. C was to treat as much of the area in the Monument that has been identified as having poor ecological integrity as possible over the life of the plan. (See Jurs and Sands 2004 and map of potential restoration acreages, included in the Proposed Plan/FEIS.) Some of this area is in Wilderness Study Area. In Alternative C, the boundaries for the Pristine Zone were synonymous with the WSA boundary, regardless of ecological condition (See DEIS, p. 23, for zone descriptions). Zoning, or WSA status, does not exclude the potential for restoration treatment -- it simply prescribes the range of treatment methods that should be used given the designation. The intent of Alt. C was to have more focus on preservation as opposed to proactive restoration. The proposed restoration acreages were estimated with that intent in mind.

Thank you for your suggestions.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Management Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter No./ Comment No.</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>70 / 017</td>
<td>there is a general agreement that we need to guide visitors towards the main visitor facilities along the Frontcountry Zone and in the Kings Bowl area, but there is no discussion of how that area is to be redeveloped to encourage visitors.</td>
</tr>
<tr>
<td>165 / 027</td>
<td>Page 337-Appendix G Proposed Laidlaw Park ACEC: The document states that ACEC designation may not be necessary because “current management, regulation, and law provide sufficient protection for the values identified.” Given that Laidlaw Park is unique and valuable because of its plant community, the Service recommends it be provided the protection given by ACEC designation and the prioritization of resource conservation it affords.</td>
</tr>
<tr>
<td></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td></td>
<td>This plan is intended to provide a general framework for how the Monument in general will be managed, and a little more specifically what to expect within the different zones, such as the Frontcountry Zone. This is the “what”. The “how” will be developed in concert with public input in later implementation level planning. Expanding the visitor center, reconstructing roads and parking areas, and trail improvements are already underway or planned for the near future within the existing Frontcountry zoned area managed by the NPS adjacent to U.S. Highway 20/26/93.</td>
</tr>
<tr>
<td></td>
<td>The commenter did not provide any new information or studies that would update the analysis of relevance and importance criteria, resulting in a determination that ACEC status is warranted. Management direction to protect the high quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See DEIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and pp. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. To further protect the area, the preferred alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>123 / 110</td>
<td>DEIS at 130. We are deeply disappointed at the inclusion of the</td>
</tr>
<tr>
<td></td>
<td>Laidlaw ACEC only under Alt. C. You have provided no legitimate</td>
</tr>
<tr>
<td></td>
<td>rationale, science-based or otherwise, for not recognizing it as an</td>
</tr>
<tr>
<td></td>
<td>ACEC under all Alternatives. How is designation of an ACEC</td>
</tr>
<tr>
<td></td>
<td>incompatible with any of the alternatives? How can designation of</td>
</tr>
<tr>
<td></td>
<td>an ACEC not significantly help you to attain your goals? You</td>
</tr>
<tr>
<td></td>
<td>cannot claim that it will prohibit restoration. In fact, it will</td>
</tr>
<tr>
<td></td>
<td>significantly help all forms of passive restoration. Plus, your</td>
</tr>
<tr>
<td></td>
<td>extreme aggressive pseudorestoration is not going to occur in the</td>
</tr>
<tr>
<td></td>
<td>northern part of Laidlaw Park anyway - unless through continued</td>
</tr>
<tr>
<td></td>
<td>abusive livestock grazing and overstocking. BLM succeeds in</td>
</tr>
<tr>
<td></td>
<td>turning what in the early 1990s was described as one of the best</td>
</tr>
<tr>
<td></td>
<td>remaining the sagebrush-steppe communities still extant in the</td>
</tr>
<tr>
<td></td>
<td>Snake River Plain into a cheatgrass wasteland.</td>
</tr>
<tr>
<td>123 / 183</td>
<td>Laidlaw Park requires Special Management Attention because it is</td>
</tr>
<tr>
<td></td>
<td>a remnant court ruling on Laidlaw Park S&amp;G EA and Determination</td>
</tr>
<tr>
<td></td>
<td>deficiencies and flaws.</td>
</tr>
<tr>
<td>Topic</td>
<td>Soundscape</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
</tr>
<tr>
<td>104 / 011</td>
<td>Regarding the visitor experience, there needs to be a stronger statement under desired future conditions and management actions. There should be two additions including: (1) &quot;no commercial air tour landing within the Monument&quot; and (2) &quot;no commercial over flight of Pristine Zones.&quot;</td>
</tr>
<tr>
<td>104 / 012</td>
<td>Cumulative impacts of Alternative D from roads, commercial flights and landings, and radio tower locations should be considered major, not minor. Vehicular traffic would increase significantly due to the increase in designated Passage Zone, which would degrade the soundscape further than the status quo. Thus it is difficult to comprehend why the impacts would be listed as similar to those of Alternative A. Additionally, given that commercial services are emphasized in this alternative with a focus on outfitter and guide services, it seems likely that the soundscape would be adversely affected more from this alternative than from any other offered alternatives. It also seems likely that this emphasis would further increase air traffic in the area.</td>
</tr>
<tr>
<td>123 / 123</td>
<td>How much noisier will these lands be with more upgraded roads, more livestock facilities or more water hauling? How much noise do livestock facilities or water hauling currently generate? For example, sounds from generators at wells can carry for several miles in arid desert air.</td>
</tr>
<tr>
<td>123 / 174</td>
<td>Upgraded roads would mean more livestock water hauling, and thus increased loud vehicle noise (likely diesel truck). More livestock grazed with more facilities, or shifted use, will result in more unnatural livestock sounds disturbing wild land settings.</td>
</tr>
<tr>
<td>Topic</td>
<td>Comment</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Viewscape</td>
<td>70 / 005 In a landscape that features a night viewscape without any light intrusion, p. 02- it is hard to understand or justify the conclusion that the effects of lighted towers, &quot;on solitude and natural conditions in wilderness areas (and anywhere else in the Monument) could be negligible to minor.&quot; The effects of night light from towers will be both long term and major and needs to acknowledge in the plan by not allowing such construction.</td>
</tr>
<tr>
<td></td>
<td>104 / 013 In a landscape that features a night viewscape without any light intrusion, it is hard to understand or justify the conclusion that the effects of lighted towers &quot;...on solitude and natural conditions in wilderness areas could be negligible to minor...&quot; (P. 214). Unimpeded night views are an increasingly rare natural resource which should be protected through adherence to dark shy principles. The adverse effects of night light from towers will be both long term and major and needs to be acknowledged when discussing future plans for constructing new structures in the area.</td>
</tr>
<tr>
<td>Grazing</td>
<td>159 / 001 The EIS, jointly prepared by BLM and the NPS, fails to take actions necessary to protect the vanishing Craters sagebrush ecosystem and its plummeting sage grouse, pygmy rabbit and migratory songbird populations. 30% of the BLM-managed lands (these are the lands that are grazed by livestock-NPS manages the ungrazed lava) are in such poor condition that BLM proposes massive &quot;treatments&quot; Instead of analyzing alternatives that change cattle and sheep grazing disturbance, a primary cause of the weed infestations and altered fire cycles that plague the Monument, all four agency alternatives keep livestock grazing constant, and make no significant changes in grazing at all.</td>
</tr>
</tbody>
</table>
Appendices: APPENDIX L

<table>
<thead>
<tr>
<th>Topic</th>
<th>Grazing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter No./ Comment No.</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>107 / 001</td>
<td>It is strongly proposed that all fences should be taken out of Laidlaw Park allotment and that livestock shall be free to graze without fenced pastures. Fenced pastures were erected for cattle grazing in order to practice rest rotation but positive results have not materialized. Rest rotation absolutely is not a good practice for domestic sheep and wildlife use. Fenced-in rest rotation has not contributed positively in Laidlaw Park allotment. Cattle permittees in Laidlaw Park did not license for the year 2004 grazing season because it was not economical, since fencing of the pastures added to their demise with limited water availability. Cattlemen believe that the Laidlaw Park cattle grazing has become too expensive and does not provide for sufficient gains for meat production under present conditions.</td>
</tr>
<tr>
<td>111 / 001</td>
<td>The Craters sagebrush ecosystem is at risk, as are native animal species, especially sage grouse, pygmy rabbit, and migratory songbirds, that it supports. The BLM and the NPS each has an obligation to take steps to conserve these species. Yet the Plan and DEIS ignore the most obvious first step of any solution to the Preserve's weed and altered fire regime problems-removing cattle and sheep from these areas. The “treatments” (use of herbicides, mechanical and fire treatments, and seedings) that BLM proposes instead would be expensive, wasteful, and/or destructive. Because the DEIS wholly fails to consider reducing or eliminating livestock grazing, it is plainly inadequate. The DEIS and plan are also flawed for failing to consider closing roads and for actually proposing to upgrade roads in “primitive” zones.</td>
</tr>
</tbody>
</table>
Grazing

There is far too much emphasis on increasing roads in the Monument (read more fragmentation) and I see no attempt to reduce grazing by cattle and sheep. I have conducted two Breeding Bird Survey (BBS) Routes in the Craters area for the last 15+ years. These are twenty-five mile routes with three-minute stops every half mile, starting at a half-hour before dawn, and run each June. One runs from US 93 near Carey and runs through Paddleford Flats and on down toward Kamima. The other starts at the Craters headquarters and ends in Arco. I have noticed in both BBS routes that sagebrush obligate birds, such as Brewer's sparrows, sage sparrows, and sage thrashers are found in far greater numbers in ungrazed portions, such as near the headquarters area, and in inaccessible areas of rugged lava/sage interface. I have encountered sage grouse also in these areas, but not on an annual basis. As I get into more degraded areas, or those with more introduced grasses, such as crested wheatgrass, I find only generalist species of birds, such as vesper sparrows, homed larks or western meadowlarks. There seems to be an abrupt transition in both routes, and it is associated with grazing of domestic livestock and conversion of native shrub-steppe to grasslands. I noted in the DMP/EIS that there are plans to plant hybrid perennial grasses for rehabilitation of depleted areas, and I caution you not to do this to large areas, as native wildlife populations remained reduced for extensive time periods (Reynolds and Trost, 1979, 1980, & 1981). Both the Paddleford Flats and Laidlaw Park areas seem quite depleted of sagebrush obligate birds, despite the fact that sage is the most abundant vegetation. This year I had to wait for a large flock of sheep that were being trailed north on the Carey-Kamima Road towards Paddleford Flats. Detection of birds in the wake of the sheep was almost nil for several miles. This was in June, the breeding season for these birds, and the area looked like a war zone after the sheep had passed-almost none were detected. I would bet that avian productivity was reduced to near zero for at least one hundred meters on each side of the road. My question is, why can't these sheep be trucked to summer pastures the way it is done in much of the Arco Desert?

In response to this and similar comments, modifications were made in the Proposed Plan/FEIS to reduce the number and size of areas zoned as Passage within the Monument. Sheep are occasionally trucked.
### Appendix L

#### 615

<table>
<thead>
<tr>
<th>Topic</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grazing</td>
<td>There is a conflict of interest written into this plan that I find confusing. At the same time that you intend &quot;no net loss&quot; of sagebrush steppe communities, you also intend sustainable forage for livestock, yet you also plan &quot;minimizing of invasive species&quot; by the use of herbicides. Forgive me for feeling like I have to point out something so obvious, but livestock IS AN INVASIVE SPECIES. The historical overgrazing by livestock is directly linked to the decline in sagebrush areas and the increase in invasive species. Thousands of acres of cheatgrass and crested wheatgrass currently existing inside the Monument are also all INVASIVE SPECIES. So I strongly suggest that you go back to the drawing board and come up with an alternative which drastically reduces livestock thus limiting the spread of weeds, thereby INCREASING the sagebrush communities and wildlife habitat. &quot;No net loss&quot; of sage habitat is one sad goal. In tons, how much herbicide do you intend to use within the Monument over the next decade? Please just get to the correct solution immediately. Get rid of the livestock and let the biologists guide a return to a healthy natural state. It will cost us all a lot less in dollars, destroyed ecosystems, lost habitat, lost species, herbicidal health effects, time and stress. No cows or sheep, no rolling acres of wheat lined by invasive species, no extra roads serving livestock facilities, restored sage communities, watersheds functioning naturally... That's a Craters of the Moon Monument that I want to visit. Thank you for listening to me.</td>
<td>This EIS has identified which lands are available and unavailable for livestock grazing. This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: &quot;Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.&quot; Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives.</td>
</tr>
<tr>
<td></td>
<td>The EIS, jointly prepared by BLM and the NPS, fails to take actions necessary to protect the vanishing Craters sagebrush ecosystem and its plummeting sage grouse, pygmy rabbit and migratory songbird populations. 30% of the BLM-managed lands (these are the lands that are grazed by livestock - NPS manages the ungrazed lava) are in such poor condition that BLM proposes massive &quot;treatments&quot;. Instead of analyzing alternatives that change cattle and sheep grazing disturbance, a primary cause of the weed infestations and altered fire cycles that plague the Monument, all four agency alternatives keep livestock grazing constant, and make no significant changes in grazing at all.</td>
<td>This EIS has identified which lands are available and unavailable for livestock grazing. This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: &quot;Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.&quot; Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives.</td>
</tr>
</tbody>
</table>
**Grazing**

**Letter No./Comment No.**

89 / 001

The Draft Management Plan and EIS for Craters of the Moon National Monument and Preserve fails to take actions necessary to protect the vanishing Craters sagebrush ecosystem and its plummeting sage grouse, pygmy rabbit and migratory songbird populations. Instead of analyzing alternatives that change cattle and sheep grazing disturbance, a primary cause of the weed infestations and altered fire cycles that plague the Monument, all four agency alternatives keep livestock grazing constant, and make no significant changes in grazing at all.

127 / 001

As to the continued management of the Craters, Butte County first priority is expecting the multiple use policy will be followed which allows for continued grazing and hunting on the parts of the Monument as was promised at the time the Craters was expanded.

81 / 001

It is clear that all of the Alternatives offered are heavily weighted toward livestock production, with little regard for wildlife habitat, native vegetation, and biodiversity. None of the four Alternatives seriously addresses grazing impacts, leaving livestock levels basically unchanged. In the interest of true multiple use, I strongly urge you to prepare a Supplemental EIS which would include a science based assessment of grazing suitability of the lands in question. The supplemental EIS should consider changes to and reduction of grazing, especially as they would relate to weed spread, habitat destruction and water quality issues.

129 / 001

The number of grazing permits and active AUMs has remained in tact in the area managed by the BLM (BLM). While this is critical to the continued viability of the livestock operations that depend on these areas for a portion of the yearlong forage requirements, it is just as critical that the permittees be able to access these areas for administrative purposes. Areas key to the success of rangeland grazing operations include water sources, salt and mineral distribution sites, and other facilities used throughout the grazing season. Access to these areas must be included as an distractive term of the grazing permit.

**Response**

Same response as previous comment.

The Draft Plan/EIS did not propose any new closures to hunting or the elimination of livestock grazing.

This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives.

The Management Plan maintains access to permittees for administrative purposes. See page 116 of the DEIS.
<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 001</td>
<td>The DEIS not present a reasonable range of alternatives related to livestock grazing. We request that a Supplemental EIS be prepared that addresses a wide range of DEIS deficiencies, especially in relation to livestock grazing and its current and future effects, as described throughout the following comments. Livestock grazing is the overwhelmingly dominant land use on almost every acre of the Monument that is not solid lava. It is leading to rapid deterioration and alteration of the native sagebrush vegetation and associated wildlife species.</td>
<td>This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives. Same response as previous comment</td>
</tr>
<tr>
<td>159 / 002</td>
<td>Instead of analyzing alternatives that change cattle and sheep grazing disturbance, a primary cause of the weed infestations and altered fire cycles that plague the Monument, all four agency alternatives keep livestock grazing constant, and make no significant changes in grazing at all.</td>
<td>Temporary removal of livestock is a viable action taken to protect areas from impacts associated with livestock grazing. This is commonly done during restoration efforts. None of the alternatives mandate grazing to continue at the current levels. Chapter 3 is a description not a mandated prescription/alternative of existing conditions. It allows grazing to continue at present levels until individual allotment assessments determine the need to make adjustments to meet standards as stated on page 120 paragraph 1.</td>
</tr>
<tr>
<td>82 / 002</td>
<td>even allows upgrading of roads in &quot;primitive&quot; zones. Effects of grazing and roads upon weed dispersal, erosion, and wildlife habitat are well documented in the literature. All alternatives considered would continue grazing at the same level as is currently in effect.</td>
<td></td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>162 / 002</td>
<td>We are however, concerned regarding the status of livestock grazing management within the Monument and the lack of analysis in the DEIS. The Laidlaw Park portion of the Monument maintains one of the last remaining large, contiguous blocks of low elevation sagebrush habitat in the area administered by the BLM's Shoshone Field Office. This area provides critical breeding, brood rearing, and winter habitat for sage-grouse and other sagebrush dependent wildlife. In addition, the allotment provides important seasonal habitat for pronghorn and elk and important transition range for migrating mule deer. Improper grazing management can constitute a significant impact to vegetation resources and subsequent wildlife habitat. Alteration of plant community structure, species diversity, and plant abundance can impact the availability of food and cover resources for wildlife. In addition, grazing livestock and associated operations can displace wildlife from seasonally important habitats including breeding and nesting habitat and winter range. We recognize grazing has historically occurred within the Monument expansion since post settlement by pioneers. Further, we acknowledge the administrative rationale to address grazing management on the Monument through the BLM's Standards and Guidelines process. However, analysis relative to impacts of livestock grazing on wildlife resources and other features common to a visitor’s expectation should be reviewed in this EIS. In technical correspondence to BLM regarding the standards and guidelines assessment of the Laidlaw Park Allotment, we identified several wildlife related issues and provided management recommendations to address the needs of wildlife on the allotment (see attached). The assessment noted a general lack of species and structural diversity (forbs and large, perennial bunchgrasses) throughout the Laidlaw Park Allotment coupled with a widespread distribution and abundance of cheatgrass. To our knowledge, only one management guideline identified by the IDFG was incorporated in the final decision—prohibiting sheep bedding on active sage-grouse leks during the breeding season. As demonstrated in the assessment. Livestock grazing has had a significant impact on vegetation resources within the Monument—Monument provides an opportunity to examine past grazing practices and evaluate new alternative grazing management strategies that address the needs of important wildlife resources and better fit the Monument.</td>
<td>This issue is dealt with under separate NEPA documents associated with the Laidlaw Park Grazing Plan.</td>
</tr>
<tr>
<td>Topic</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>Grazing</td>
<td>Restoration of native plant communities, protection of soils, and protection and restoration of sage grouse habitat have all been identified as objectives in this DEIS. Even though livestock grazing and its associated activities (road development, introduction of invasive species, plantings of non-native forage, habitat fragmentation due to fencing) have been consistently identified as impacts in the DEIS, no alternative provides BLM the tools to reduce the numbers and/or change the timing and movement of livestock within the Monument in order to meet the goals presented in this document. On page 52, the DEIS states that elimination of livestock was not considered in any of the alternatives because a “no grazing” alternative would not be consistent with the language in Proclamation 7373 (Federal Register, v.65 pp 69221). Nonetheless, the proclamation states that livestock grazing will continue to be managed in a way that is consistent with BLM regulations and policy. BLM policy and regulations certainly allow for removal and/or reduction of livestock to meet management objectives. The Service is specifically identifying grazing as a concern because a number of allotments within the Monument are not meeting standards at this time. The Service is not necessarily endorsing an alternative that proposes the elimination of livestock grazing, we are merely stating that as a document of disclosure and public review, the range of alternatives should include possible modifications to a land use (grazing) that can have profound impacts on the very resources the BLM and NPS have identified as priorities. We strongly recommend that an alternative be developed and considered that would provide the BLM with the tool of modifying livestock numbers and distribution, as necessary, to meet management objectives.</td>
<td>This Draft Plan/EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives.</td>
</tr>
<tr>
<td></td>
<td>This brings me to my most vehement point: establish a no-grazing area within Snowdrift Crater and covering the land to the Northeast of it to the lava. One fence should be constructed from the southeast side of Snowdrift Crater (by the “parking area”) to the lava directly east; in addition, another short fence should be constructed from the north side of Snowdrift to the lava on the north. (Another possibility would be to fence an additional part of Little Laidlaw Park with a short fence at its narrowest point, and closing this land to livestock grazing. But that is not my proposal.) Only by eliminating of animals and plants be made. I can only conclude that you don't want to study the possibility of being wrong; that is no way to do science. Only by eliminating livestock grazing could</td>
<td>This would be considered in implementation level decisions.</td>
</tr>
<tr>
<td>Topic</td>
<td>Grazing</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Comment</td>
<td>the grasses, forbs, and sagebrush come back enough for sage grouse and other nearly-threatened animals and more common species to survive so that raptors, foxes, coyotes, raccoons, skunks, snakes, and other carnivores could occasionally catch pikas, rabbits, and squirrels while these prey can occasionally escape and reproduce. If the comparison for livestock grazing practices needs to be in an area with similar rainfall (which I doubt, as rainfall is virtually the same throughout the kipuka), BLM could also monitor Little Laidlaw Park as a comparison. Payment for the fence by Snowdrift Crater ought to be extracted from the abundant money out of the fire suppression funds. There are many ways that the money could be found in the Monument/Preserve. I refer BLM to its governing mandates in FLPMA. Section 202(c)(3) requires that BLM &quot;give priority to the designation and protection of [ACECs].&quot; Section 202(c)(6) directs the agency to &quot;consider the relative scarcity of the values involved and the availability of alternative means ...and sites for realization of those values.&quot; In any situation where the &quot;values involved&quot; include livestock production, roaded recreation opportunities, and preservation of healthy sagebrush communities, the latter must take precedence. There is simply no &quot;scarcity&quot; of either livestock pasture (private or public) or roaded recreation areas, and there exist many readily available alternative means for providing or producing these commodities elsewhere, at less risk to irreplaceable natural, publicly owned resources. Further, section 202(c)(7) requires weighing &quot;long-term benefits to the public against short-term [private] benefits.&quot; The long-term benefits of sustaining healthy sagebrush communities vastly outweigh the minimal economic benefits that inure to those few persons permitted to graze livestock on these lands and the benefits of convenience or pleasure derived by road users. Prepare a Supplemental EIS. This EIS must examine a broad range of alternatives including changes and reductions in livestock use necessary to limit weed spread, protect remaining sagebrush communities and wildlife habitat, and allow real restoration of tens of thousands of acres of cheatgrass and crested wheatgrass wastelands that currently exist inside the Monument. *** Conduct a science-based assessment of the suitability of these lands for grazing. ***</td>
<td></td>
</tr>
<tr>
<td>Response</td>
<td>Please refer to Appendix G of the Proposed Plan/FEIS. The ID team followed the appropriate process in analyzing the values in North Laidlaw Park to determine if the area qualified for ACEC status. The proposed ACEC was included and analyzed in Alternative C, the logical alternative to include the potential protection provided by the proposed ACEC. Further, to demonstrate a commitment to maintaining the high ecological condition of the area, protective measures were included in Alternative D, the preferred alternative, that limit livestock developments, specifically to maintain the light use that the area has received for years and that has resulted in the current condition (DEIS p. 49). Additional protective measures have been included in the Proposed Plan/FEIS, including decreasing the acreage of Passage Zone and increasing the acreage of Pristine Zone in Laidlaw Park. By comparing the effects of managing the area as an ACEC in Alternative C with the effects of managing the area with the protective measures in Alternative D we found no advantage in designating the area an ACEC and that we can achieve the same results with the protective measures in Alternative D. Therefore we concluded that it is unnecessary to designate the area as an ACEC. This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: &quot;Laws, regulations, and policies followed by the</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Grazing</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Prepare a Supplemental EIS. This EIS must examine a broad range of alternatives including changes and reductions in livestock use necessary to limit weed spread, protect remaining sagebrush communities and wildlife habitat, and allow real restoration of tens of thousands of acres of cheatgrass and crested wheatgrass wastelands that currently exist inside the Monument. *** Conduct a science-based assessment of the suitability of these lands for grazing.</td>
<td></td>
</tr>
<tr>
<td>102 / 003</td>
<td><strong>Response</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives. BLM will continue to monitor and use all available data which could include utilization pattern mapping, trend data, and S&amp;G allotment assessments to determine suitability for grazing.</td>
<td></td>
</tr>
<tr>
<td>113 / 003</td>
<td>The preferred alternative states &quot;to protect vegetation resources, no new livestock developments would be permitted in North Laidlaw Park pasture and Bowl Crater allotment”. This Association does not agree with this management directive. A new well needs to drilled in North Laidlaw Park which would not only be of benefit to livestock permisses but to the wildlife in this area as well. As stated above, the plan needs to be flexible. There may be a time when a specific livestock improvement (either permanent or temporary) is needed for the benefit of not only the livestock grazing operation but for the overall betterment of the area as well. Keep that flexibility.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Response</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives. BLM will continue to monitor and use all available data which could include utilization pattern mapping, trend data, and S&amp;G allotment assessments to determine suitability for grazing.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The high ecological condition of North Laidlaw Park has been maintained with light livestock use, primarily due limited water developments in that area. The ID Team felt that restriction of water developments in North Laidlaw Park would be the most effective way to maintain the existing light livestock use in that area at this level of planning.</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Letter No./Comment No.</td>
<td>Comment</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Grazing</td>
<td>123 / 003</td>
<td>Characterized by bunchgrasses, forbs and shrubs with soil interspaces of microbiotic crusts, the sagebrush ecosystem did not evolve with herds of large, hoofed ungulates (Mack and Thompson 1982). The current vegetation originated in the Pleistocene, with little grazing by large native herbivores, and bison scarce in the intermountain region. “The vegetation of the pristine sagebrush/grasslands was relatively simple and extraordinarily susceptible to disturbance ... the native vegetation lacked the resilience, depth, and plasticity to cope with concentrations of large herbivores. The plant communities did not bend to adapt; they shattered. This tends to make the review of grazing in the sagebrush/grasslands a horror story, resplendent with examples of what should not have been done” (Young and Sparks 1985 in Young 1994). Native bunchgrasses are weakened and killed by the chronic effects of livestock grazing. Microbiotic crusts that fix nitrogen, protect against erosion and help exclude weeds are destroyed by trampling. Alien annual cheatgrass and other weeds invade depleted understories and clog the now bare interspaces. Cheatgrass produces continuous fine fuels so fires flash across the landscape. Larger areas burn more frequently and uniformly, and few unburned patches remain. This phenomenon accelerates, with conversion to annual grassland the end result. As remaining habitat patches become smaller, species disappear. As fires become larger, more uniform and more frequent, the landscape changes from a species-rich matrix to a species-poor matrix dominated by exotic, annual species (Whisenant 1991). Plant communities set on this trajectory with repeated disturbance cross thresholds from which they can not recover, and restoration is not possible (Knick et al. 2003). In contrast to uplands, most riparian systems will exhibit recovery following livestock removal. Highest elevation sagebrush communities are more resilient than lower elevation communities. Unfortunately, cheatgrass and other weeds are now evolving to grow at higher elevations. “The end results could be the conversion of these native ecosystems to unproductive and simplistic annual grasslands lacking not only native vertebrates but also those invertebrates involved in the operation of the ecosystem including energy flow, water cycling and nutrient balance”. (Billings 1994). The horror story continues to this day in the Monument, with livestock disturbing soil surfaces, and nipping bunchgrasses to levels far too low. Weeds invade, and</td>
</tr>
</tbody>
</table>
### Topic: Grazing

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>95 / 004</td>
<td>livestock act as their vectors of dispersal, transporting weeds in fur, mud, and dung (Belsky and Gelbard 2000). Fragmentation proceeds at multiple levels – while a veneer of sagebrush may remain, livestock may have removed or simplified critical habitat components. For example, sagebrush broken and battered by livestock converging on water loses the structural complexity required by the pygmy rabbit. To achieve any permanent positive results, I believe that there should be a science-based assessment of the suitability of these lands for grazing before any management plan is put into place, rather than starting with the objective of keeping current grazing practices as they are currently.</td>
<td>BLM will continue to monitor and use all available data which could include utilization pattern mapping, trend data, and S&amp;G allotment assessments to determine suitability for grazing. This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives.</td>
</tr>
<tr>
<td>89 / 004</td>
<td>Prepare a Supplemental EIS. This EIS must examine a broad range of alternatives including changes and reductions in livestock use necessary to limit weed spread, protect remaining sagebrush communities and wildlife habitat, and allow real restoration of tens of thousands of acres of cheatgrass and crested wheatgrass wastelands that currently exist inside the Monument. Conduct a science-based assessment of the suitability of these lands for grazing.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>Topic</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>Grazing</td>
<td>In sum, I urge the agencies to revise the DEIS or prepare a supplemental EIS, which considers an acceptable range of reasonable alternatives, including reducing or eliminating livestock use as necessary to protect existing sagebrush communities, and measures to begin the long process of restoring areas now dominated by cheatgrass, crested wheatgrass, and other nonnative plants. Before livestock grazing is authorized on any Monument/Preserve lands, their suitability for grazing must be assessed. This assessment must employ accepted ecological measures.</td>
<td>This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives.</td>
</tr>
<tr>
<td>Grazing</td>
<td>A key factor in the proper management of a livestock operation is accessibility to the in regards to road closures should be part of the plan.</td>
<td>BLM will continue to monitor and use all available data which could include utilization pattern mapping, trend data, and S&amp;G allotment assessments to determine suitability for grazing. This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives.</td>
</tr>
<tr>
<td>Grazing</td>
<td>Prepare a Supplemental EIS. This EIS must examine a broad range of alternatives including changes and reductions in livestock use necessary to limit weed spread, protect remaining sagebrush communities and wildlife habitat, and allow real restoration of tens of thousands of acres of cheatgrass and crested wheatgrass wastelands that currently exist inside the Monument. Conduct a science-based assessment of the suitability of these lands for grazing.</td>
<td></td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>159 / 006</td>
<td>Prepare a Supplemental EIS. This EIS must examine a broad range of alternatives including changes and reductions in livestock use necessary to limit weed spread, protect remaining sagebrush communities and wildlife habitat, and allow real restoration of tens of thousands of acres of cheatgrass and crested wheatgrass wastelands that currently exist inside the Monument. Conduct a science-based assessment of the suitability of these lands for grazing.</td>
<td>See response to previous comment.</td>
</tr>
<tr>
<td>106 / 006</td>
<td>One of the stated purposes for the expansion of the Monument was to benefit greater sage grouse, which are currently being considered for listing under the ESA. On page 169 of the DMP/EIS it states that in the Laidlaw Park area there are 79 known grouse leks with only 184 birds when last surveyed. Of these 79 leks, only 29, or 37% were active. I submit to you that such a low number of active leks with relatively few birds is already a sign of a population that is in trouble. I think this calls for drastic action, such as removing cattle and sheep grazing in the entire area. Grouse require sage and grasslands in a healthy mixture, as the DMP/EIS noted, but they also require native succulent forbs, especially in the spring when the females have to lay eggs. They can't lay eggs on a sage diet alone, and there are few insects available in April. Domestic livestock preferentially remove these plants, and are thus in direct competition with grouse at this critical season. Since when does the NPS allow commercial alien grazers on their lands? I feel that the DMP/EIS should accept Alternative C as the preferred alternative and use the nearly half-million dollar ($446,000/year) difference between it and Alternative D to buyout grazing allotments and private in-holdings in these areas critical for sage grouse.</td>
<td>Current federal regulations prevent buyouts of grazing allotments.</td>
</tr>
<tr>
<td>129 / 006</td>
<td>While livestock may impact resources, the impacts portrayed in the &quot;Unavoidable Adverse Impacts&quot; section (pg239) unnecessarily concentrate on those associated with livestock. The &quot;damage, theft, vandalism, foot-traffic, and other caused disturbances&quot; associated with geologic resources also impact many other facets of the Monument that are currently only attributed to livestock. Cultural resources are a prime example of finite resources damaged more extensively by direct human activity (theft or vandalism) than by livestock. ISDA strongly suggests that the team make a complete assessment of current and potential impacts to these resources by direct human activity in addition to those caused by livestock.</td>
<td>The unavoidable adverse impacts of theft and vandalism have been mentioned for Alternative B on p. 241 because of the intensity of recreational use expected under that alternative. The impacts of theft and vandalism were deemed to be of lesser intensity under Alternatives A, C and D comparatively, but the DEIS does assess the impacts of theft and vandalism to cultural resources under all alternatives on pages 188-193. On page 239 of the DEIS, adverse impacts have been analyzed and are attributed to humans as well as to livestock; for example, “Damage, theft, vandalism, foot traffic, and other human-caused disturbances to geologic resources…”</td>
</tr>
<tr>
<td>Topic</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>Grazing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Letter No./Comment No.</strong></td>
<td><strong>Comment</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>122 / 006</td>
<td>There is solid scientific evidence, developed by the U.S. Sheep Experiment Station in Dubois, Idaho, that carefully implemented fall sheep grazing can be a useful tool for restoring forb and grass levels in sagebrush steppe. The University of Idaho currently is developing weed control programs using sheep and goats. We urge NPS/BLM to carefully and thoroughly assess the feasibility of using sheep as a management tool for achieving restoration of sagebrush steppe where appropriate.</td>
<td>The targeted use of livestock as a cultural or biological tool for noxious weed control is recognized under the Proposed Plan/FEIS as a viable option within a fully implemented Integrated Weed Management Program. See FEIS Chapter 2, Management Actions Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management. Thank you for your comment.</td>
</tr>
<tr>
<td>128 / 007</td>
<td>Please consider assessment of plant types and seed production, plant growth, seedling survival in hard soils, and percent bare ground in your grazing assessments relative to soil types, climate, and landforms. Please also write into your grazing Guidelines a condition that habitat for endangered or threatened species must be improved. Similarly, please apply management practices that promote habitat for physical and biological conditions to sustain native plant populations and wildlife habitats in plant communities. In places dominated by non-native plants and grasses, turn these lands into having native plants and grasses; again reduce grazing and then seed the areas with native seeds. Please stand by your Guidelines # 6 and #7 that you haven’t in the past. Always maintain better than viable numbers of T&amp;E species within the Monument.</td>
<td>The planning team has been working with those permittees affected by the boundary adjustments to make the transition accurate and appropriate.</td>
</tr>
<tr>
<td>129 / 007</td>
<td>While it is true that removal of exposed lava flows will not appreciably reduce the available forage base for grazing permits, care should be taken to ensure that only those lands of truly exposed lava are removed from the grazing permits. ISDA supports the recommended adjustments to the boundary and jurisdictional changes proposed within Appendix C.</td>
<td></td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>122 / 007</td>
<td>NPS/BLM must adopt an alternative that permits continued livestock grazing in BLM-managed portions of the Monument. As an active and direct participant in the field meetings that occurred with Secretary Babbitt preceding the proclamation that led to the Monument’s expansion, Lava Lake firmly believes that it was fully and clearly within the intent of the Proclamation that livestock grazing be continued within the Monument consistent with the regulations governing BLM. Efforts to use language in the Proclamation to advocate for wholesale removal of all livestock grazing from the Monument are inconsistent with the intent and the letter of the Proclamation and undermine the collaborative spirit that supported the Clinton Administration’s efforts to bring greater levels of protection to this remarkable area. We believe that sheep grazing can be compatible with the preservation and restoration of the primitive nature of the Monument and the improvement of their ecological condition. Clearly, sheep grazing levels have to be set at a level supported by up-to-date field assessments and evaluated through quantitative field monitoring. BLM’s proposed grazing decision for Laidlaw Park Allotment is currently under appeal but that decision will obviously need to be integrated with the final management plan for the Monument. While Lava Lake has commented extensively on the BLM’s standards and guidelines process and the proposed and final grazing decisions for Laidlaw Park, several points merit emphasis in these comments. First, Lava Lake supports a grazing program that takes place in the context of the restoration of native plant communities in Laidlaw Park and which does not significantly detract from the primitive character of the Monument. Second, we also have consistently advocated for the implementation of a quantitative monitoring program that will allow BLM and permittees to objectively and accurately evaluate year-to-year impacts of sheep grazing. Finally, we continue to be concerned about the artificial constraints imposed by current fencing in Laidlaw Park on sheep grazing patterns and the rest-rotation program proposed by BLM. We believe that the fences reduce our collective ability to implement a sound grazing strategy, create artificial and unnecessary trailing and grazing bottlenecks, impede wildlife movements, and detract from the primitive character of Laidlaw Park. Lava Lake supports the removal, over a period of time, of the fencing in Laidlaw Park and promotes the reliance on active or abandoned roads to delineate pasture boundaries and guide livestock movements. There is no</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thank you for your comment. This will be considered in the appropriate implementation-level plans.</td>
<td></td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>128 / 008</td>
<td>Identifying 36,963 AUMs in table 15 (and particularly the 11,431 AUMs in Laidlaw Park allotment) of the EIS is absolutely absurd! This fails to consider potential future decreases in use (voluntary or mandatory), seasonal drought, closures for fire management, or other management prescriptions and unforeseen consequences. This sort of figure should only be set in site-specific documents, if there. They are precise and specific in contrast to virtually all other directions in a programmatic land use plan like this one. Delete this specific information which could be taken for accurate by ranchers and BLM, which, of course, you wouldn’t want. They should be mentioned in the Future Planning Needs portion of the plan. It is notable that the 11,431 AMUs in Laidlaw Park Allotment fail to meet standards.</td>
<td>See Table 20 and revised Livestock Grazing text in Chapter 3, Proposed Plan/FEIS.</td>
</tr>
<tr>
<td>129 / 008</td>
<td>The nominated Laidlaw Park ACEC, as shown in Appendix G, is not appropriate. The BLM has Standards for Rangeland Health and Guidelines for Livestock Management that provide for the attainment of rangeland health while still providing for utilization to benefit the operations of local ranchers. The designation of this area calls for additional protection that is not necessary and would limit the availability of many management tools currently used by resource managers and users.</td>
<td>The proposed ACEC is included in Alternative C. It is not proposed in the Preferred Alternative at this time. Thank you for your comment.</td>
</tr>
<tr>
<td>123 / 009</td>
<td>For example, an Alternative that terminates livestock grazing across remaining sagebrush habitats in Laidlaw Park (where there is still some hope of keeping the land from turning into a complete Weed Hell), while allowing some grazing to continue in the cheatgrass-infested southern areas, should be assessed as part of a reasonable alternatives range. It would protect the significant values of the Monument. Another example is development of an alternative that addresses the role of livestock in the infestation and spread of weeds as well as alteration of fire cycles.</td>
<td>Thank you for your comment. We will consider these points in the appropriate implementation- and project-level plans.</td>
</tr>
</tbody>
</table>
165 / 010  Page 49 -Alternative D; Vegetation; Management Actions, 2nd bullet: It is unclear how active restoration/rehabilitation of 80,000 acres of annual grassland and low elevation sagebrush steppe will impact use of livestock allotments in those areas being treated. Livestock allotted to areas being treated by fire and other mechanisms (mechanical, chemical) will need to go elsewhere in many cases. The Service recommends that the final document disclose the destination of displaced livestock, what success criteria will need to be met before they can be placed back on the treated allotment, whether or not other BLM allotments will be used to support the displaced livestock, or what contingency plans will be in place if the treated areas do not meet success criteria within the predicted time frame. These nuances are very important when assessing the utility of an action or an alternative that calls for a particular prescription.

Response

Livestock management following restoration treatment and other specific project-level resource management issues and objectives, including criteria for success or treatment, are addressed in project-level environmental assessments.

165 / 010  Page 46 -Alternative C; We suggest that "no new livestock developments in the proposed Laidlaw Park ACEC" may be too restrictive. If this alternative were chosen and the BLM subsequently finds that moving livestock facilities to a new location within the proposed ACEC would be beneficial to wildlife and native plant communities, they would be unable proceed because of this restriction. If the absolute number of developments in the proposed ACEC is the issue, we recommend that the statement read "no net increase of livestock developments or the acreage they impact and no new developments unless it results in a net benefit to those resources identified as needing improvement or protection." This would allow moving fence and water developments to new locations if it resulted in a net gain in overall plant community health in Laidlaw Park.

Response

Thank you for your comment. The recommended change has been made to the text.

123 / 011  As grazing permit retirement is a very foreseeable during the life of this plan, this plan should examine and authorize it.

Response

Appendix F in the Proposed Plan/FEIS, addresses livestock administration adjustments, which includes suspending a permit for resource benefit.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Grazing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter No./Comment No.</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>123 / 012</td>
<td>Analysis of the current ecological condition of the land and the impacts of livestock grazing is absent. Plus, the effects of the various alternatives on extending livestock grazing are not analyzed. A Supplemental EIS must be prepared to address these many deficiencies. Passive restoration, as described in Appendix A of our comments, must be incorporated as part of all action alternatives.</td>
</tr>
<tr>
<td>123 / 013</td>
<td>The DEIS presents information on livestock stocking rates (as in Table 15, DEIS at 119) that has no relation to the much-reduced actual use that now occurs under depleted vegetation conditions. It provides no data on actual use, changes with drought, high utilization levels, weed infestations associated with livestock projects, etc. Such information is necessary to provide a foundation and historical context so that the levels and impacts of public lands ranching and its implications to Monument resources and values can be understood. The DEIS team cannot cast this off onto future allotment-level decisions. That would result in no foundation for livestock management being laid out in the EIS, as well as no current inventory of livestock-related activities and impacts on these lands. It would also mean that analysis of indirect, cumulative and synergistic impacts analyses of livestock grazing would be deficient.</td>
</tr>
<tr>
<td>Topic</td>
<td>Comment</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Grazing</td>
<td>Grazing discussions in the entire plan seem to focus on the impact of the plan on grazing and not the impact of grazing on the land. Considering that grazing is recognized as the largest major disturbance historically leading to soil disturbance, plant diversity loss and the consequent introduction of weeds and subsequent fire regime changes, it would be appropriate to have a discussion of that historical impact. If monitoring shows that grazing is impacting the restoration process, removal needs to be a legitimate response.</td>
</tr>
<tr>
<td></td>
<td>Several allotments, including the proposed ACEC in Laidlaw Park, are not meeting rangeland health standards. All of the alternatives, including Alternative D, do not provide the tool of reducing or eliminating livestock grazing, whether temporary or permanent, in areas not attaining standards.</td>
</tr>
</tbody>
</table>
Grazing

Letter No./
Comment No. | Topic |
--- | --- |
123 / 014 | The DEIS fails to lay out the link between livestock and the proliferation of roads. The primary cause of the large network of roads that penetrate so much of the non-lava land (and even some of the lava land!) in the Monument is activities associated with public lands ranching, and/or attempts to patch the damage done by grazing. As part of this EIS process, you must address livestock-ranching activity related roading. As part of this, examine the purpose of the road, road redundancy, etc. The DEIS, for example, does not even address practices like parking sheep wagons in inappropriate locations. | Response |

70 / 015 | In light of the above, the plan needs to justify the conclusion on P. 157 that, “Grazing and associated trailing would result in the same negligible to minor adverse impacts described for the other alternatives, since grazing would not be managed any differently.” Grazing has had and will have a major impact on the landscape. P. 235: The conclusion: “effects on the natural soundscape would result mainly from transportation, administrative uses, and grazing,” indicates that grazing would be a major source of impact and conflicts with the note above. | Livestock impacts to geologic resources are considered negligible to minor because (1) livestock trailing generally occurs along existing improved roads, (2) historic uses have not proven to be a major impact to geologic resources, and (3) livestock use and trailing is not expected to increase. The conclusion on page 235 of the DEIS refers to impacts to soundscapes from livestock operations as well as vehicle and fire management operations. The two impacts are addressed separately. |

104 / 015 | Additionally, the plan should justify the conclusion that the impacts associated with grazing would be the same as those associated with any other impact because they are managed differently. It seems likely that expansion of the Passage Zone would affect trailing of livestock and thus have an impact on surrounding areas. The plan acknowledges the likelihood of different impacts (or the intensity of those impacts) by noting on page 70, “…and expanded Passage Zone…would result in minor to moderate beneficial effects from increased access and more ability to create new facilities. The Pristine Zone could restrict or increase the costs associated with grazing, a moderate adverse impact.” This implies that increasing the Passage Zone or Pristine Zone would have a direct effect on grazing. Thus the impacts expected from each alternative should be analyzed accordingly. | See page 205-209 of the DEIS for a more detailed description of the environmental consequences pertaining to livestock grazing. |

123 / 015 | The DEIS also fails to identify the link between livestock grazing disturbance and weed infestation and spread. As a result, actions necessary to control weed spread by livestock are lacking from the DEIS. For example, there are no provisions to cleanse/purge livestock of weed seeds before moving into the lands of the Monument. Under all alternatives, livestock should be quarantined for the period of time necessary to cleanse systems of weeds. | The DEIS acknowledges that roads, vehicles, humans, and animals are known vectors to the spread of noxious weeds (Ch. 3, Discussion on Noxious and Exotic Species, p. 92). A full Integrated Weed Management Program addresses a broad range of prevention, education, and control activities to combat noxious weeds (see DEIS p. 25, Management Guidelines Common To All Alternatives: Vegetation, Including Special Status Species, and Fire Management). |
Grazing

**Letter No./ Comment No.**

**Comment**

consumed, cleaned of mud or burs/seeds in fur before being transported onto the Monument.

70 / 016  This section acknowledges the role neighboring agriculture contributes to the littering and deposits of solid waste in remote areas, but I do not see any management action notes on reduction and removal. We need a waste reduction and removal action note.

104 / 016  The two livestock trails that do not follow designated roads and cross lava flows should be addressed under the plan. Information should be provided regarding the previous and future impact of these operations. This information is relevant considering the plan is aimed at restoring natural resources and grazing can have significant negative impacts.

123 / 016  Livestock grazing affects and/or degrades all components listed under the “Purpose and Significance” of the Monument (DEIS at 6-7). Components include: Safeguard volcanic features, scientific, educational and interpretive activities, maintain wilderness character, perpetuate scenic vistas, protect kipukas. Laidlaw Park is the world’s largest kipuka, and it is NOT protected under the Preferred or other Alternatives.

123 / 018  Neither the confusion of old, out-dated Land Use Plans listed in DEIS at 11, or the DEIS, provides no modern-day inventory of any kind or current-day analysis of grazing and roading. Thus, it is critical that a SEIS be developed to do this. As written, the Alternatives provide no concrete guidance - including goals, objectives and management actions for livestock activity plans (such as the Laidlaw Park livestock grazing decision).

**Response**

This is an implementation level comment. The Craters of the Moon National Monument and Preserve has historically and will continue to promote waste removal projects.

The primary impacts from livestock trailing typically affect soil and vegetation. These impacts have been discussed in the Environmental Consequences chapter of the DEIS. Historic impacts to resources are discussed in the Affected Environment chapter of the DEIS. Trailing on existing roads minimizes impacts. Trailing off the designated roads increases impacts caused from repeated hoof alterations to soil, vegetation, and rocks. This can leave visible ruts on the landscape.

The DEIS does place restrictions on livestock grazing to protect natural resources. Examples of restrictions include excluding livestock from areas, identifying areas available and not available to grazing, allotment management plan conformance with the new Plan, allotment boundary adjustments, allotment conformance with Idaho Standards for rangeland Health and Guidelines for Livestock Grazing Management which requires all allotment to be meeting or making significant progress towards meeting applicable standards. Some specific protections to natural resource conditions are included in the Management Guidance Common to All Alternatives Livestock Grazing section, and the Summary of Alternatives in table 7. Alternative C specifically prohibits new livestock facilities in the north pasture of Laidlaw Park.

This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: "Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative
### Topic: Grazing

<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 021</td>
<td>While the DEIS describes “increased risks” in relation to other uses (fire, safety, etc.), there are many “risks” associated with livestock grazing, especially the overlapping sheep and cattle grazing conducted on many areas of the Monument. Risks include cheatgrass invasion, weed invasion, diseases such as Q fever, water-borne pathogens, etc. that affect public uses and safety.</td>
<td>The DEIS acknowledges that roads, vehicles, humans, and animals are known vectors to the spread of noxious weeds (Ch. 3 Discussion on Noxious and Exotic species, p. 92). A full Integrated Weed Management Program addresses a broad range of prevention, education and control activities to combat noxious weeds (See DEIS p. 25, Management Actions Common to All Alternatives: Vegetation Including Special Status Species and Fire Management). The danger of Q fever is considered to be very minimal on rangeland in Idaho. There are only four known cases of Q fever recorded in Idaho since 1990. The risk on public lands to the users is very limited, since Q fever have been directly correlated to occupational exposure involving veterinarians, meat processing plant workers, sheep and dairy workers, livestock farmers and researchers at facilities housing sheep. The important fact of the Q fever bacteria is that during the birthing, the organisms are shed in high numbers within the amniotic fluids and placenta, birthing generally occurs on private lands.</td>
</tr>
<tr>
<td>165 / 022</td>
<td>Page 71- Special Designation Areas: Under Alternatives C and D, it is stated that livestock impacts “could be moderate in some local areas where livestock concentrate”. This statement is inaccurate. The DEIS identifies Laidlaw Park as being an area where grazing standards are not being met (DEIS Page 120). This conveys more than a “moderate impact” and if monitoring is being done correctly, the failure to meet standards is indicative of the whole allotment and not just “where livestock concentrate”.</td>
<td>Please read the Environmental Consequences section on page 213-217 of the DEIS for a more detailed definition of the methodology and assumptions.</td>
</tr>
<tr>
<td>123 / 022</td>
<td>14. Photo caption is not ATV use – but pickup tracks. Many hills across SW Idaho have tracks just like this – associated with the parking of sheep camps parked without control nearly anywhere across the landscape. Please review letters of 2002-3 on the Bennett Hills sheep wagons and knapweed infestations, cross-country driving of water haul trucks, etc. We have walked sheep camp-road after sheep camp road in the Bennett Hills, and found knapweed associated with every one, and sheep water haul trucks driving crosscountry, including in WSAs.</td>
<td>Photo caption has been changed.</td>
</tr>
<tr>
<td>165 / 023</td>
<td>Page 73- Visitor Experience; Recreation and Public Safety; All Alternatives: It is unclear how ongoing livestock operations can result in “long-term negligible to minor beneficial effects”.</td>
<td>Please read the Environmental Consequences section on page 222 of the DEIS for a more detailed definition of the methodology and assumptions.</td>
</tr>
</tbody>
</table>

Page 71- Special Designation Areas: Under Alternatives C and D, it is stated that livestock impacts “could be moderate in some local areas where livestock concentrate”. This statement is inaccurate. The DEIS identifies Laidlaw Park as being an area where grazing standards are not being met (DEIS Page 120). This conveys more than a “moderate impact” and if monitoring is being done correctly, the failure to meet standards is indicative of the whole allotment and not just “where livestock concentrate”.

Page 73- Visitor Experience; Recreation and Public Safety; All Alternatives: It is unclear how ongoing livestock operations can result in “long-term negligible to minor beneficial effects”. The
<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 023</td>
<td>While the DEIS asks if there will be new guidelines for weed, grasshopper and other management, it fails to ask, “will there be new guidelines for livestock grazing?” Likewise, Visitor Experience.</td>
<td>This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives.</td>
</tr>
<tr>
<td>165 / 024</td>
<td>Page 120-Affected Environment; Livestock Grazing: It is stated that grazing preference is not expected to change because most allotments are attaining or making progress toward uniform achievement. Table 16 indicates otherwise. Standards and guidelines have been applied to 14 of the 23 allotments. Table 16 indicates that standards were not meant for 5 out of the 13 allotments or, one out of three allotments is not meeting standards. In addition, the allotments that are not meeting standards (376,000 acres) contain 40,000 more acres than those meeting standards (336,000 acres). The Service recommends that the final document address whether the allotments not meeting standards were in areas important of sage grouse, pygmy rabbits, and neo-tropical migrants. We also recommend that, if grazing preference is not expected to change, the rationale for this decision be described.</td>
<td>There are changes other than AUM adjustments which would promote meeting standards. The number of AUMs in the table (Table 21 in the Proposed Plan/FEIS) may reflect adjustments.</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Topic</td>
<td>Comment</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>123 / 027</td>
<td>Grazing</td>
<td>Why is there no discussion of “carrying capacity” or suitability for livestock, and “limits of acceptable change” as they relate to Livestock?</td>
</tr>
<tr>
<td>123 / 028</td>
<td>Grazing</td>
<td>DEIS at 21 states that “each separate zone has distinct settings to be provided and maintained”, and “physical settings consider the degree of naturalness and amount and type of facilities ...”. Yet, the DEIS has provided no map of livestock facilities, sheep bed sites, water haul sites and other facilities that would allow it to determine these zones, or the visual qualities associated with them. Livestock facilities and disturbance affect visual quality, ecological integrity and visitor use and enjoyment. It appears that BLM is allowing the location of livestock facilities to be a primary influence on how it defines zones. Is that the case? Please describe how you have taken this into account? “Passage” Zone has “high” degree of livestock encounters and maintained roads, primitive has “medium” degree of livestock encounters and 2-track or high clearance roads. Pristine has a “low”? Yet, you have failed to provide maps that show the location of projects. Aren’t there currently livestock projects and zones of livestock concentration in the Primitive Zone. Does this mean that you plant to shift cattle out of the Primitive Zone into the passage zone? With livestock grazing, sheep wagons, salt lick or mineral site placement, sheep bedding wastelands, etc. how can lands be considered “pristine”?</td>
</tr>
</tbody>
</table>

Response

This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives. Please see Figure 18 in the Proposed Plan/FEIS.
### Appendix L

#### Topic: Grazing

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 031</td>
<td>DEIS vegetation goals common to all alternatives are protecting existing sagebrush steppe communities, restoring degraded areas, post-fire rehab, sagebrush management. If that is the case, current on livestock impacts and the role of livestock in retarding attainment of these goals must be fully assessed.</td>
<td>The ID Team felt that the level of detail regarding soils data was adequate to make informed decisions at the RMP/GMP level of analysis. Additional information found in the NRCS Soil Surveys will be used for implementation- and project-level planning.</td>
</tr>
<tr>
<td>123 / 035</td>
<td>Where are the 5000 acres of BLM land NOT available for livestock use? The DEIS provides no guidance for the S&amp;G Determinations. The EIS should provide for removal of livestock facilities in Primitive and Pristine Zones, and any locations where they are causing harm to soils, waters, vegetation, leading to weed increases/invasion, fragmenting/altering wildlife habitats, etc.</td>
<td>The Livestock Grazing section of the Affected Environment on page 117 describes the lands not available to grazing as “…acres of BLM administered land adjacent to privately owned agriculture fields and NPS-administered lava, which are not within a grazing allotment.” Generally these areas are southeast of Cary and on the east side of Wapi flow. Guidance for S &amp; G determinations are on page 120 and Appendix F of the DEIS. For improved accuracy and in response to public comments, revisions to GIS data, analysis and calculations have been made resulting in changes to the ACEC figures between the DEIS and the Proposed Plan/FEIS. Specifically, there are 1,800 acres of BLM-administered lands designated not available for grazing.</td>
</tr>
<tr>
<td>123 / 036</td>
<td>There is no real guidance provided in this plan for managing or changing livestock grazing to protect or enhance Monument values. The DEIS brushes aside any guidance or control, and only providing for Standards and Guidelines review. Yet, in the Laidlaw Park allotment, BLM referred to amending the Laidlaw grazing plan in the future - based on finalization of the Craters RMP. As there is no guidance in the DEIS (not even to protect cultural sites from livestock damage), we can expect NO changes to protect Monument values to be applied as part of S&amp;G livestock grazing determinations. The DEIS perpetuates harmful grazing practices and degradation.</td>
<td>All Allotment Management Plans for allotments within the Monument will be amended to follow guidance by this EIS. This specifically provides guidance and restrictions which apply to livestock grazing by closing areas to grazing, removing acres from allotments, and provides restrictions/guidance by implementing management zones. This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&amp;G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives. The DEIS does place restrictions on livestock grazing to protect natural resources. Examples of restrictions include excluding livestock from areas, identifying areas available and not available to grazing, allotment management plan conformance with the new Plan, allotment boundary adjustments, allotment conformance with Idaho Standards for rangeland Health and Guidelines for Livestock Grazing Management which requires all allotment to be meeting or making significant progress towards...</td>
</tr>
</tbody>
</table>
Grazing

123 / 037
We remind the DEIS preparers that the Monument Proclamation did not say that livestock grazing was sacred and immutable. Rather, it provides for continued livestock use on BLM lands – at unspecified levels, and management under existing regulations, including FLPMA. FLPMA allows for some lands to be used for less than all purposes. The Proclamation in no way constrains development of clear and necessary livestock grazing goals, objectives and management actions to protect important Monument resources and values.

123 / 038
While BLM (DEIS at 29) refers to livestock developments being consistent with desired future conditions, nothing in this plan scientifically presents vegetation, soils, cultural, weed infestation site or other data, or an analysis of impacts of livestock projects on these factors, that would allow BLM to determine desired future condition.

123 / 051
Not only did the DEIS not analyze a “no livestock grazing alternative”, it failed to analyze any alternative that would significantly reduce livestock numbers. As livestock use and spread of weeds are inextricably tied to the very serious degradation of native vegetation and invasion of rush skeletonweed and other species here, it is imperative that BLM analyze a range of alternatives that significantly alters and reduces livestock disturbance; provides for long periods of post-treatment rest, etc. Elsewhere, the DEIS outrageously describes shifting livestock use to other and unknown areas while “restoration” occurs without any analysis of the impacts of these shifts.

123 / 052
All restoration activities should be done with minimal new structures - use existing pasture boundary fences under all circumstances. Electric fences are notorious for failing – one-time grazing inundation of newly treated sites can destroy hundreds of thousands of dollars of re-seeding effort.

Response

meeting applicable standards. Some specific protections to natural resource conditions are included in the Management Guidance Common to All Alternatives Livestock Grazing section, and the Summary of Alternatives in table 7. Alternative C specifically prohibits new livestock facilities in the north pasture of Laidlaw Park.

Grazing practices must conform to resource management direction and Standards and Guidelines. The Standards and Guidelines require changes to grazing systems if Standards are not being met.

The DEIS states on page 29, “BLM may remove developments if they are no longer serving a useful purpose or resource objectives warrant their removal. Sites would be restored.” Thank you for your comment.

This EIS has identified which lands are available and unavailable for livestock grazing (See page 117, Chapter 3 under Livestock Grazing). This fulfills BLM Land Use Planning Appendix C requirements for decisions pertaining to Livestock Grazing. The S&G process is the chosen method to address livestock stocking rates rather than across the board reductions or increases because it allows managers to assess each grazing allotment individually and determine if adjustments are needed in the allotment. None of the alternative mandate grazing to continue at existing levels. The Proclamation expanding the Monument states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Therefore a No Grazing alternative was not considered viable. The BLM does have flexibility to temporarily remove livestock to help achieve desired resource objectives.

Thank you for your comment. This has been considered in the Final EIS.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Grazing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter No./ Comment No.</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>123 / 053</td>
<td>While BLM claims to have evaluated alternatives (53) to see how well they protect natural and cultural resources (including restoring degraded sagebrush vegetation, and prevent introduction of weeds and damage to cultural resources, provide a quality visitor experience, allow opportunities for solitude) it has provided no rationale for essentially ignoring assessment of an alternative range of livestock grazing and restoration actions. Instead, the DEIS here claims that the alternatives and the management actions were essentially the same for grazing! This is arbitrary and biased. In doing this, the DEIS failed to take a “hard look” at the environmental consequences of the MOST WIDESPREAD AND ENVIRONMENTALLY SIGNIFICANT AND DAMAGING ACTIVITY that occurs across nearly all non-lava lands.</td>
</tr>
<tr>
<td>123 / 055</td>
<td>The DEIS claims its CBA process was “anchored in relevant facts”: Yet, any analysis process was not anchored in relevant facts if it did not consider a range of livestock grazing alternatives and actions, and overlay that with the cumulative and synergistic effects of roads under the various alternatives. Example: Grazing largely unchanged cows and sheep and more open roads under Alt. D = more weeds than Alt. C.</td>
</tr>
<tr>
<td>123 / 061</td>
<td>The “Mitigation Measures” (DEIS at 55-57) do not in any way adequately mitigate the effects of livestock grazing (status quo practices continued, no effort to limit livestock and rancher/herder weed spread, no protection for vegetation – such as modern-day limits on utilization, removal of harmful structures, etc., no protection of cultural sites from livestock impacts, no minimization of livestock grazing and trampling effects on soil and water resources – not even restoring any playas. The Preferred Alternative makes no effort to address the root cause of vegetation problems and altered fire ecology (i.e. livestock grazing). It opens the door to expanded livestock facilities, water hauling, etc. The vast array of roads that will remain open and the increased risk of fire danger, weed spread, etc., there can be no mitigation claimed for the preferred alt. As open roads are maximized, human-caused disturbance of wildlife is maximized. While claiming there would be areas with no hunting for public safety, it fails to provide areas that are now grazed that will not be</td>
</tr>
<tr>
<td>Topic</td>
<td>Comment</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Grazing</strong></td>
<td>Grazing so that the public can enjoy ungrazed lands free of livestock pathogens. As previously discussed, the many open and improved roads and status quo livestock plus aggressive treatment of Alternative D will maximize air quality problems. Status quo livestock and maximum open and upgraded roads will lead to maximum erosion, disruption of site stratigraphy, exposure of artifacts to the surface and subsequent looting, maximum difficulty in controlling vandalism, etc.</td>
</tr>
<tr>
<td>123 / 064</td>
<td>Why is “not permit any new livestock developments in North Laidlaw Park and Bowl Crater” not part of all alternatives? Why is there no Alternative that emphasizes no new livestock Developments – period?</td>
</tr>
<tr>
<td>123 / 070</td>
<td>As previously stated, the DEIS fails provide an alternative that examines minimized livestock disturbance, and thus decreased flammable weed infestation and spread. Then, its assessment of major long-term beneficial impacts from keeping roads open and upgrading many roads while continuing status quo grazing while at the same time opening the lands up to large-scale “restoration” disturbance, is deeply flawed.</td>
</tr>
<tr>
<td>123 / 074</td>
<td>We request that the BLM and NPS analyze soils and test sheep currently grazed in the Monument for Q fever. Please see CDC data on Q fever and its implications, Attached.</td>
</tr>
<tr>
<td>123 / 078</td>
<td>DEIS at 88 fails to mention the role of livestock grazing in loss of sagebrush steppe, i.e. setting the stage for altered fire frequencies and casing weed infestation and spread. Throughout the discussion of sagebrush communities, complexly interspersed across the landscape, the DEIS fails to provide any information on their current condition, and the role of livestock grazing and livestock projects in altering site condition.</td>
</tr>
<tr>
<td>123 / 079</td>
<td>The DEIS at 89 claims “the northern part of Laidlaw Park has not been overgrazed. However, “historic” overgrazing, frequent</td>
</tr>
<tr>
<td>Topic</td>
<td>Comment</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Grazing</td>
<td>wildfires, Aroga moth infestations, cheatgrass invasion, and noxious weeds have negatively affected the southern portions ...”. What, exactly, is “overgrazing”, and how does it differ from current and ongoing grazing practices?</td>
</tr>
<tr>
<td></td>
<td>Please review references such as Anderson and Holte (1982) which describes increasing canopy cover and increasing understory grasses on areas on the Snake River Plain where grazing has been removed. Many of the processes that you blame for causing loss of native understory grasses are set in motion or caused by livestock.</td>
</tr>
<tr>
<td>123 / 082</td>
<td>Instead of just allowing status quo predator killing, we request that you analyze an alternative that focuses on killing identified problem animals, and not blanket or non-specific aerial gunning in advance of sheep moving into an area and other such methods. As part of this plan, you should assess alternatives that minimize conflicts with predators - and require permittees to use a broad range of non-lethal methods before resorting to APHIS predator killing. Sheep should not be allowed to graze in areas where there are chronic conflicts with predators. Please identify such areas.</td>
</tr>
<tr>
<td>Topic</td>
<td>Comment</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Grazing</strong></td>
<td></td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>of livestock grazing: “this Protest is outside the scope of this document. Suitability studies are conducted at the Land Use Plan Level Analysis”’. So, why has no suitability or capability study been presented as part of the Craters DEIS?</td>
</tr>
<tr>
<td>123 / 113</td>
<td>While the DEIS proposes that all visitors remain on trails, it does nothing to address the livestock grazing and trampling damage that occurs here. How does visitor trampling in Laidlaw Park compare to livestock trampling? Please quantify the relative disturbance caused.</td>
</tr>
<tr>
<td>123 / 126</td>
<td>While the DEIS assumes continued livestock grazing, there is nothing at all in the Proclamation that limits the DEIS from providing goals, objectives and management actions to control it. Unless you do that here, livestock grazing will be conducted without any guidance from a Land Use Plan. Sadly, the reality is that the old Land Use Plans documents actually control grazing more than this DEIS. Something is better than NOTHING, which is what the DEIS does. By stating that livestock grazing will governed by applicable laws and regulations and the Standards of Rangeland health, and taking no action here to address or control it, you are leaving management free-floating, with no overarching guidance. FRH assessments occur on an allotment-by-allotment basis. There is no broad or landscape-level look taken at the effects. The DEIS is the document that must do that, and it has not. While livestock grazing is subject to the S&amp;G, it is the role of this RMP to set Goals and Objectives and Management Actions. You have failed to do so.</td>
</tr>
<tr>
<td>123 / 128</td>
<td>Specific locations must be identified for sheep camps – as they concentrate use, spread weeds (witness the knapweed infestations in nearly all sheep camp locations in the Bennett Hills) and camps limited to only those areas. Areas identified must minimize conflicts with recreational visitor use.</td>
</tr>
<tr>
<td>123 / 134</td>
<td>Please explain how failing to address and provide goals, objectives and management actions for livestock grazing is compatible with avoiding or minimizing adverse impacts on resources. Livestock grazing impairs sagebrush ecosystems, whose integrity is necessary to fulfill specific purposes identified in the enabling legislation. Its regulation and amelioration or curtailment of its impacts are critical to protecting both the natural and prehistoric cultural integrity of the Monument.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Neither the Proclamation nor the DEIS restricts visitor use to trails.</td>
</tr>
<tr>
<td></td>
<td>On page 29 the DEIS states desired future conditions pertaining to livestock grazing.</td>
</tr>
<tr>
<td></td>
<td>Sheep herders would continue to use traditional sheep bed grounds. Establishment of new camp sites would be unlikely. BLM makes recommendations regarding the use of existing sheep bed grounds and discourages the use of new areas at annual meetings with the grazing permittees. If a specific need is identified, the BLM would close sheep bed grounds on a case-by-case basis, as warranted.</td>
</tr>
<tr>
<td></td>
<td>On page 29 the DEIS states desired future conditions pertaining to livestock grazing.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>123 / 140</td>
<td>Please provide science supporting the conclusion that impacts of new livestock developments – such as water troughs or wells, would be minor.</td>
</tr>
<tr>
<td>123 / 142</td>
<td>The analysis for livestock trailing is only made on the basis of a comparison between alternatives, and no assessment of the real damage caused by trailing livestock, especially across lava, through areas of sensitive species habitat, etc., is made. This masks impacts. The whole reason for not analyzing a range of livestock grazing alternative actions appears to be purposeful avoidance of analysis of the honest impacts of grazing, and the science that shows grazing harms.</td>
</tr>
<tr>
<td>123 / 149</td>
<td>DEIS at 160 claims new livestock facilities would only create “moderate” impacts, but the Smith allotment fiasco. DEIS at 161 fails to assess the cumulative impacts of livestock facilities (including new pipelines, troughs, water hauling in “passage” zones) on disturbance of soils.</td>
</tr>
<tr>
<td>123 / 153</td>
<td>DEIS at 164 errs in claiming there would be no change in livestock use. By allowing more livestock facilities in upgraded “Passage one” areas under Alt. D, livestock grazing would be increased and/or significantly shifted with new epicenters of damage, and this would allow likely increases in actual use by livestock, as water allows extensive use of new areas, increased water hauling on “improved” roads extends degradation, etc.</td>
</tr>
<tr>
<td>123 / 161</td>
<td>Existing livestock projects and livestock use have severe impacts on playas and water for Q fever. Here again, the DEIS pawns off assessment of impacts of livestock impacts on playas standards for livestock grazing.</td>
</tr>
<tr>
<td><strong>Response</strong></td>
<td>Two livestock trails that cross lava flows now administered by the NPS are specifically identified on page 121 of the DEIS. Appendix F in the Proposed Plan/FEIS addresses potential future uses of these trails.</td>
</tr>
<tr>
<td></td>
<td>The Proclamation recognized existing roads and two-tracks across narrow strips of exposed lava for trailing livestock. There are two additional livestock trails specifically identified on page 121 which will be further evaluated for impacts as stated in Appendix F on page 335.</td>
</tr>
<tr>
<td></td>
<td>Monument-wide management actions and cumulative impacts of livestock facilities on soil resources were analyzed and characterized at an appropriate level of intensity for the DEIS (See Ch. 4 of the DEIS, pp. 158 – 162). Specific, project-level analysis of cumulative impacts will be provided in individual range improvement project Environmental Assessments.</td>
</tr>
<tr>
<td></td>
<td>The placement of livestock facilities within an allotment would be analyzed in planning documents appropriate for the scope of the project. The designation of Passage Zone does not guarantee the installation or improvement of any facilities or roads that are allowed by the zone description, but simply allows for a greater level of flexibility based on anticipated management needs. However, in response to public concerns, the ID team reduced the amount of Passage Zone that was originally proposed in Alternative D in the Proposed Plan/FEIS, particularly in Laidlaw Park.</td>
</tr>
<tr>
<td></td>
<td>BLM does not identify playas as riparian areas according to the riparian area definition in the BLM Technical Reference TR 1737-9 and 11. TLM presently has no data or standards to evaluate playas. Therefore, BLM will use the professional judgment to determine if the standards for rangeland health are being met or we are moving towards meeting them, that the health of the playas will also be met. The DEIS does not alter grazing management so the impacts of grazing on water quality are substantially the same for all alternatives. The Draft EIS page 172) concludes that livestock grazing is expected to be long term with intensity ranging from negligible to potentially major in local sites depending upon the concentration and duration of livestock use.</td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>123 / 166</td>
<td>Here, too, the DEIS admits that livestock distribution may change with new developments, but fails to analyze the impacts of existing or potential new developments. There is no analysis of the impacts of current grazing standards on wildlife – for example, what effect will 50% or greater livestock utilization have on sage grouse nesting cover?</td>
</tr>
<tr>
<td>123 / 169</td>
<td>See previous discussions of air pollution from soil displaced by livestock and containing possible livestock-harbored pathogens such as Q fever, road upgrades, herbicides, restoration projects, etc. In particular, airborne livestock pollutants must be considered here.</td>
</tr>
<tr>
<td>123 / 170</td>
<td>The DEIS admits (at 206) ICBEMP directs BLM to update Land Use plans to address major issues. Livestock grazing is a major issue. You have not prepared a plan that addresses its impacts, in violation of the MOU.</td>
</tr>
<tr>
<td>123 / 172</td>
<td>DEIS at 209 describes shifting livestock use to other allotments as treatments are done. It appropriate stocking rates, and identify how this use will occur. Please evaluate all the harmful impacts of “improved” livestock distribution.</td>
</tr>
<tr>
<td>123 / 173</td>
<td>Please evaluate all the harmful impacts of grazing both sheep and cattle on the same lands.</td>
</tr>
<tr>
<td>123 / 175</td>
<td>The DEIS has failed to assess the irreversible harms caused by new or shifted livestock facilities and use, an Upgraded road network and myriad open roads leading to more human-caused fires and more irreversible weed invasions, etc. The EIS has also failed to assess the ongoing irreversible changes to native plant communities being caused by status quo livestock grazing practices.</td>
</tr>
<tr>
<td>Topic</td>
<td>Graziing</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
</tr>
<tr>
<td>123 / 181</td>
<td>DEIS at 334 describes “livestock administration and states that under the DEIS, “there is no change in AUM preference, acres available for grazing, acres not available for grazing, or allotment size from one alternative to another.</td>
</tr>
<tr>
<td>123 / 188</td>
<td>The introduction, establishment and spread of invasive species due to livestock grazing must be minimized by the following methods: 1) Retire domestic livestock grazing permits at earliest opportunity where grazing has been found to promote invasive species invasion or persistence; 2) Prioritize invasives prevention and restoration activities for areas where domestic livestock grazing has been permanently ended 3) Manage livestock movement patterns to insure animals are not moving seeds of invasive species from infested to non-infested areas; 4) Manage livestock grazing to favor native species (set use/utilization standards that protect plants, allow no critical growing period grazing); 5) Remove livestock facilities that are fostering invasive species invasion, or leading to degradation of native communities or key wildlife habitats. 6) Avoid grazing in systems that still contain a strong component of native perennials, biological soil crusts, or other features known to act as natural barriers to invasion or increase of invasive exotic species.</td>
</tr>
<tr>
<td>123 / 193</td>
<td>Livestock Control Post- Treatment or Post-Fire * Clear and measurable standards of recovery must be established and be met post-treatment or post-fire, before any livestock grazing disturbance can again resume on a site. * Monitoring must be used to inventory baseline conditions at the landscape and local levels. Measure whether positive goals for native ecosystem recovery, conservation and integrity are being attained. Track biodiversity and health using an increaser/decrease species procedure (including biological crusts, wildlife, and endemic/sensitive species). Practice precaution retain, flexibility, and respond to change, unforeseen harm, failure to reach objectives, and/or new information. Quantify invasive species population changes Monitoring of vegetation treatments must relate the clearly stated objectives of all restoration projects, be an integral component of each project, be incorporated in to the initial costs of each project. Use scientific principles of experimental design including replication and measurements from untreated areas for comparison with treated locations, use a process responsive to all-party and scientific input, outline clear procedures for responding to monitoring and evaluation results.</td>
</tr>
</tbody>
</table>
## Topic: Grazing

<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>125 / 010</td>
<td>methods for treatments, livestock grazing, all actions must be: Relevant, sensitive, available, measurable, defensible, verifiable, inclusive, scheduled. All proposals must contain a description of the monitoring that will be necessary, and an annual report prepared and presented to the public. An over-all assessment of “risk” associated with any treatment must be prepared. Risk includes failure of any seeded species, chances of exotic invasion, human health effects, etc. Monitoring needs to be documented so that it can be independently reviewed by non-BLM/agency scientists, the scientifically-literate public, and others who are concerned about the ecological health of federal public lands.</td>
</tr>
</tbody>
</table>

## Topic: NEPA Process

<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>125 / 010</td>
<td>Impacts should be evaluated and disclosed in a fair and unbiased manner and with a relative sense of magnitude. Analysis of vehicle use should be compared and contrasted to analysis of the environmental effects of natural events including floods, wildfires, drought etc. The absence of a rational connection between the facts found and the choice made has been defined by the courts as arbitrary and capricious (Natural Resources v. U.S., 966 F.2d 1292, 97, (9th Cir. '92). A clear error of judgment; an action not based upon consideration of relevant factors and so is arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law or if it was taken without observance of procedure required by law (5 USC. 706(2)(A) BLM’s environmental analysis of alternatives must not be pre-occupied With documenting what can be presently observed on the ground (at various points in time) while ignoring the legally relevant issue of whether on-the-ground conditions constitute significant impacts to the human environment.</td>
</tr>
<tr>
<td>104 / 020</td>
<td>Irreversible and Irretrievable Commitments of Resources- Information should be provided that compares the irreversible and irreplaceable commitments of resources in each Alternative. This information is important considering that most of the irreversible impacts are associated with increases in the acreage of Passage Zone.</td>
</tr>
</tbody>
</table>

The DEIS includes discussion of the methodologies used and the assumptions made in analyzing the potential impacts of the alternatives on Monument resources. Thus, for each resource topic, the sources of data are identified, the basis of the analysis is described, and the levels of impact intensities are defined. The types of impacts, including cumulative impacts, examined in the DEIS are described in detail on page 148. The "Irreversible and Irretrievable Commitment of Resources" section of the Final EIS discusses the irreversible and irreplaceable impacts to various resources under each alternative.
<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>160 / 001</td>
<td>I am writing to express my great disappointment with the proposed management plan for the Craters of the Moon National Monument (CMNM). The plan in its present state does nothing to address the needs of vanishing wildlife and plant species in the CMNM, nor does it allow for recovery of the area from years of overgrazing and ecosystem degradation due to excessive road-building. Please consider this as an earnest request to go back to the drawing board and prepare a plan that truly addresses the needs of the wild creatures and native plant species that inhabit Craters of the Moon. This unique ecosystem must not be allowed to become just another dead landscape!</td>
</tr>
<tr>
<td>159 / 001</td>
<td>The Draft Management Plan and EIS for Craters of the Moon National Monument and Preserve fails to take actions necessary to protect the vanishing Craters sagebrush ecosystem and its plummeting sage grouse, pygmy rabbit and migratory songbird populations.</td>
</tr>
<tr>
<td>128 / 002</td>
<td>The values of the ACEC area should include the ecology of animals and their interactions in the ACEC area such as among grouse, pygmy rabbits, prairie or peregrine falcons, antelope, deer, elk, and other species including birds and reptiles. The NPS notes that there are 300 species in this area. Have you reported half that number? The interactions of these species have never been adequately studied on Idaho's BLM land and they certainly should. It would be better to do this sort of study on land that was ungrazed by livestock, but that does not seem possible on BLM land because of your intransigence, no matter how unique that land may be.</td>
</tr>
</tbody>
</table>

**Response**

The agencies believe that the restoration objectives will improve habitat for many wildlife species. The closure of roads in the Pristine Zone will also improve habitat and reduce fragmentation over time. Thank you for your comment. The Proposed Plan/FEIS does call for an increase in rehabilitation of areas back to functional sagebrush systems as well as the protection of existing habitats. In response to this and similar comments additional protections for sage-grouse have been incorporated into the Proposed Plan/FEIS. These can be found in Wildlife Section and Management Actions in the plan. The proposed management actions call for an increase in inventory (collection of baseline data) and monitoring of several species of interest.
<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>103 / 003</td>
<td>I also am disappointed that the management of these park lands as prime wildlife habitat is not made a higher priority. There should be plans made to reintroduce species that are threatened or endangered in other parts of the West, back into this very large and therefore prime wildlife acreage. This Monument provides an opportunity for an ecosystem approach to these lands and the restoration of the wildlife so heavily impacted by development and human activities in the West.</td>
<td>The re-establishment of bison, grizzly bear, and bighorn sheep (the only three species know to previously occur in this region) has been studied. The conclusions were that there is insufficient habitat within the Monument to support either bison or grizzly bears. Bighorn sheep re-establishment is not feasible as long as domestic sheep grazing occurs where the two species may interact.</td>
</tr>
<tr>
<td>106 / 004</td>
<td>Roads create fragmented habitats, and with the proposed increase under Alternative D, they will result in increased road kill. This is especially true for sage grouse that often forage or have their leks along open areas.</td>
<td>In response to this and similar comments, modifications were made in the preferred alternative to reduce the number and size of areas zoned as Passage within the Monument.</td>
</tr>
<tr>
<td>165 / 005</td>
<td>The Service recommends that pygmy rabbit populations and their potential habitat within the Monument be identified and each alternative be assessed for its potential impact on pygmy rabbit populations. This sagebrush obligate species is identified by the BLM as a sensitive species and by the Idaho Fish and Game as a game species of special concern. Many public lands activities could have negative impacts on pygmy rabbits and their habitat, including off highway travel, hunting, fire (both prescribed and wildfire), livestock grazing, and pesticide use. In particular, we suggest that proposed fire projects be scrutinized carefully with regard to the potential for impacts to this species. Pygmy rabbits are reluctant dispersers and do not do well over large fragmented habitats. The timing, shape, size and juxtaposition of a fire footprint on the landscape are important considerations when managing for pygmy rabbits.</td>
<td>Many of the impacts mentioned will be addressed later in implementation-level plans including Transportation, Fire, and Wilderness Management Plans. Each of these plans, as well NEPA documents for individual projects, will address pygmy rabbits as well as other sensitive or rare species. Specific project planning will also address the needs of these species. Inventory work for rabbits will continue and the agencies will take appropriate actions when rabbits or quality habitat are identified. We agree that consideration of the pygmy rabbit is important. BLM and NPS policy insures that appropriate measures will be taken to reduce or eliminate negative impacts to the pygmy rabbit and its habitat. Additionally, our goal of restoring degraded sagebrush steppe habitat will provide additional quality pygmy rabbit habitat over the current situation.</td>
</tr>
<tr>
<td>88 / 006</td>
<td>developments. Existing water developments in Craters are not only epicenters of weed infestation and spread, the troughs have been documented to drown migratory birds, Inhabitants including antelope and even prairie falcons.</td>
<td>It is already BLM policy to require escape ramps on all livestock water troughs and tanks.</td>
</tr>
<tr>
<td>89 / 006</td>
<td>water developments. Existing water developments in Craters are not only epicenters of weed infestation and spread, the troughs have been documented to drown migratory birds, mammals including antelope and even prairie falcons.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>Comment</td>
<td>Response</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>102 / 006  developments. Existing water developments in Craters are not only epicenters of weed infestation and spread, the troughs have been documented to drown migratory birds, mammals including antelope and even prairie falcons.</td>
<td>Same response as previous comment.</td>
<td></td>
</tr>
<tr>
<td>165 / 006  The Service recommends that the final document identify where the areas to be restored are located in relation to areas of sage grouse habitat, cattle allotments that are or are not meeting standards, healthy seed source areas for sagebrush and associated native vegetation, pygmy rabbit habitat, and habitat for neo-tropical migrant birds that are obligate to certain stand densities (often different from sage grouse needs) such as sage sparrow, Brewer's sparrow, and sage thrasher. This is necessary information to disclose in order for the public and interested agencies to assess the impacts the different alternatives may have on &quot;public trust&quot; resources.</td>
<td>A vegetation inventory and assessment for Laidlaw Park, Little Park, and Paddelford Flat, which considered habitat needs for sagebrush-steppe obligate wildlife, was performed by the BLM and The Nature Conservancy in 2002/2003 (Jurs and Sands 2004). This evaluation was utilized in estimating proposed restoration acreages in the Monument. A map based on this assessment (Figure 15) showing the biotic integrity of Monument lands is included in the Proposed Plan/FEIS. Those areas identified as being in poor ecological condition, particularly those in Laidlaw Park, have been identified as highest priority for restoration treatment. As directed by Management Guidance Common to All Alternatives (DEIS p. 25) and Management Guidance specific to the preferred alternative (DEIS p. 49), restoration treatments would be placed to protect existing sagebrush steppe, restore degraded communities, and enlarge and connect fragmented stands. Specific restoration treatment methods and locations would be defined in environmental assessments for restoration in Laidlaw Park and other areas of the Monument, which would be available for public review.</td>
<td></td>
</tr>
<tr>
<td>111 / 007  Existing livestock water developments, which promote the spread of weeds and drowned migratory birds and other animals, should be closed or, where wildlife are shown to depend on the water source, redesigned to prevent drowning.</td>
<td>It is already BLM policy to require escape ramps on all livestock water troughs and tanks.</td>
<td></td>
</tr>
<tr>
<td>159 / 008  Existing water developments in Craters are not only epicenters of weed infestation and spread, the troughs have been documented to drown migratory birds, mammals including antelope and even prairie falcons. Conduct real restoration, relying on passive restoration techniques wherever possible (limit livestock grazing, close roads, remove livestock facilities that are causing weed spread). Use only native plants in all seedings.</td>
<td>It is already BLM policy to require escape ramps on all livestock water troughs and tanks.</td>
<td></td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>82 / 008</td>
<td>Existing water developments in Craters are not only epicenters of weed infestation and spread, the troughs have been documented to drown migratory birds, mammals including antelope and even prairie falcons.</td>
<td>It is already BLM policy to require escape ramps on all livestock water troughs and tanks.</td>
</tr>
<tr>
<td>128 / 011</td>
<td>Use no poisonous control of invertebrates, as for Mormon Crickets, in Laidlaw Park Kipuka. This is especially critical in light of the occurrence of what I'm told is a rare variety of grasshopper—the Idaho point-headed grasshopper—as well as other invertebrates that would be killed by the poison. Spraying in the North Laidlaw ACEC is not appropriate in any event.</td>
<td>This issue is dealt with under separate NEPA documents associated with the statewide agreement with USDA.</td>
</tr>
<tr>
<td>70 / 011</td>
<td>Arial gunning does create major short term impact to the soundscape without specifically treating direct predator control on offending animals. &quot;Demonstrated need&quot; should not include general population reduction on the Monument or preserve. Arial gunning should not be allowed.</td>
<td>Thank you for your comment, we have made appropriate and responsive changes to Chapter 2.</td>
</tr>
<tr>
<td>128 / 013</td>
<td>Protect fairy shrimp in all playas in the Monument.</td>
<td>Protection of playas is provided for in management directions common to all, Water resources, p. 26 in the DEIS. Additional protection has been added to the Proposed Plan/FEIS (See Appendix J, Fire Management and Vegetation Treatment Protocols).</td>
</tr>
<tr>
<td>121 / 015</td>
<td>We understand that Wildlife Services currently conducts annual aerial gunning of coyotes and other predators prior to the turn out of livestock over the non-WSA lands in the Monument. We believe destruction of natural predators and other parts of a natural ecosystem are inconsistent with the purposes of the Monument. We ask the NPS and the BLM to discontinue this practice within the Monument and exempt the Craters of the Moon National Monument and Preserve from predator control projects that do not specifically target an individual aggressor. An exemption also makes sense because less than 30 percent of the Monument qualifies for aerial gunning predator control without environmental analysis. The use of poisons, traps, and other methods for predator control in the Monument should not be allowed either. Poisons, traps, and other mechanisms can cause significant harm to other wildlife species, as well as people and pets visiting the Monument.</td>
<td>Thank you for your comment. We have made appropriate and responsive changes to Chapter 2.</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>104 / 021</td>
<td>The FEIS needs to detail the degree to which each alternative will benefit wildlife within the Monument. Specifically, the REIS should expand its analyses of sage grouse, pygmy rabbit and migratory songbird populations.</td>
<td>NEPA requires the EIS to disclose the effects of the alternatives. We believe the analysis is sufficient. No rational is provided to support the need to expand the analysis. We have however, identified new information on some species and have incorporated it into the analysis.</td>
</tr>
<tr>
<td>165 / 026</td>
<td>Page 249-Consultation with the U.S. Fish and Wildlife Service. We recommend the last sentence of the paragraph be changed to read: “Informal consultation with USFWS…” Informal consultation is an optional process that includes all discussions, etc., between the agencies to assist the Federal action agency in determining whether formal consultation is required.</td>
<td>The recommended text change was made.</td>
</tr>
<tr>
<td>123 / 033</td>
<td>DEIS at 26 describes Actions and stipulations necessary to protect special status species would be made part of monitoring plans (limiting fragmentation of special status species populations with road networks). What about fragmentation caused by sheep bed grounds, salting, water hauling, etc.? Plus, without conducting necessary baseline inventories for special status species as part of the DEIS process, you cannot have an understanding of habitat components that must be protected. Important information on current populations of special status species and species of concern must be collected. How are their habitats fragmented? What is a viable population level? How will you address sagebrush-die-off, livestock structural alteration of shrubs and other factors?</td>
<td>We agree with this comment. The DEIS was prepared with best information available to the agencies. The proposed management actions call for increased inventory (collection of baseline data) and monitoring of both Special Status plant and animal species. See page 26 of the DEIS.</td>
</tr>
<tr>
<td>123 / 066</td>
<td>While the DEIS claims it will adopt interagency habitat guidelines for sage grouse and sagebrush steppe obligates and that it will authorize actions and stipulations to protect special status species habitats, it provides no management goals, objectives or guidance to minimize or control livestock impacts to these species. It even fails to identify important and critical habitats for special status species, an essential component of a land management plan.</td>
<td>The DEIS specifies that Rangeland Health Standards and Guidelines will be used to guide livestock management. Rangeland Health Standards and Guidelines (which dictate habitat goals) requires healthy, diverse, and productive native animal habitats and native plant populations be maintained or achieved. This process also assists the agencies in identifying important habitat.</td>
</tr>
</tbody>
</table>
**Topic:** Wildlife

<table>
<thead>
<tr>
<th>Letter No./Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 087</td>
<td>While DEIS at 101 discusses the occurrence of pygmy rabbit and sage grouse, the DEIS fails to describe and assess the impacts of current land use activities on these species. How is livestock grazing affecting these species? As part of our comments, we are attaching a copy of the pygmy rabbit petition that details livestock impacts to burrows, herbaceous vegetation and sagebrush structure required by the pygmy rabbit, and its impacts to sagebrush ecosystems. Please incorporate this and information found in the Literature Cited into the Supplemental EIS so that you can better describe the Affected Environment, and understand the environmental impacts of any alternatives.</td>
<td>The effects of current management are found in Chapter 4 under alternative a (pages 176-178 of the DEIS). The agencies will review the pygmy rabbit petition and incorporate appropriate information.</td>
</tr>
<tr>
<td>123 / 088</td>
<td>While you discuss the potential for grasshoppers to be pests, you do not describe the link between disturbed lands and higher population levels of these species.</td>
<td>Comment is noted.</td>
</tr>
<tr>
<td>123 / 116</td>
<td>Please also detail all hazards to recreationalists from Wildlife Services, as a subsidy to the livestock industry, killing predators in or surrounding the Monument. What are the hazards associated with use of M-44s, traps, aerial gunning and other WS activities? Which of these activities are currently carried out on Monument lands? As part of this process, you must limit WS activities to killing target animals only, not broadcast aerial slaughter and trapping as has occurred in the past. Plus, there must be limitations on WS activities and associated disturbance of wintering big game, lekking sage grouse, etc. In which allotments, and where, has WS operated in the past? How many coyotes, bobcats, badgers, etc. are killed by WS inside the Monument, and where, on an annual basis? What methods are used? This DEIS must forbid involvement of WS in “research” on Monument lands. WS in southern Idaho has a history of seeking to expand its activities by engaging in what it terms “research” to kill sage grouse predators. This involves the use of the arsenal of lethal methods previously described as well as poisons to kill corvids—and who knows what new chemicals may be proposed for use over the life of this plan. The DEIS must forbid WS conducting lethal research on Monument lands. As you may be aware, a federal court found that environmental analysis of a 2003 sage grouse predator killing plan was insufficient – lack of analysis, and a scorched earth approach characterizes such proposals from WS, and this plan must prohibit such activities.</td>
<td>Thank you for your comment. We have made appropriate and responsive changes to Chapter 2.</td>
</tr>
<tr>
<td>Letter No./Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>123 / 159</td>
<td>As you have failed to conduct necessary baseline inventories for special status species, you can not conclude that impacts of either ongoing activities or new actions will be minor under any alternatives (DEIS at 168, for example).</td>
<td>We utilized the best available information in conducting our analysis. Funding and personnel limitations precluded doing intense surveys for every species. We did contract for the most recent data concerning sage grouse and pygmy rabbit. Since you have not provided any data that would question our analysis we must conclude that the information we used is correct and adequate.</td>
</tr>
<tr>
<td>123 / 162</td>
<td>In this Laidlaw assessment, BLM relied on old, stale data that did not reflect the true current degraded state of the land after several years of drought. BLM also tried to extend big game and other species.</td>
<td>This comment is outside the scope of the DEIS.</td>
</tr>
<tr>
<td>123 / 163</td>
<td>DEIS at 176 to 182. The DEIS grossly under-represents the impacts to wildlife and How will you monitor populations? Please note that many species that are declining do not require a disturbance “mosaic” game?</td>
<td>We agree with this comment. The DEIS was prepared with best information available to the agencies. The proposed management actions call for increased inventory (collection of baseline data) and monitoring of both Special Status plant and animal species. See page 26 of DEIS. The effects of current management are found in Chapter 4 under alternative a (pages 176-178 of the DEIS). The agencies will review the pygmy rabbit petition and incorporate appropriate information.</td>
</tr>
<tr>
<td>123 / 165</td>
<td>We believe your assertion that Lewis’ woodpecker, red-naped sapsucker and other species would be adversely affected by fire suppression is nonsense. These species also use trees that succumb to natural mortality. The more aspen suckers that escape devouring by livestock, the greater potential habitat for aspen-dependent cavity nesters.</td>
<td>Comment is noted by the agencies.</td>
</tr>
<tr>
<td>123 / 180</td>
<td>While the DEIS provides lists of special status species and migratory species on the Monument, it provides scant analysis of impacts of current activities, or alternatives, to these species. The number of species on these lists show how essential baseline surveys are to allow a “hard look” to be taken in the DEIS (SEIS).</td>
<td>We agree with this comment. The DEIS was prepared with best information available to the agencies. The proposed management actions call for increased inventory (collection of baseline data) and monitoring of both Special Status plant and animal species. See page 26 of the DEIS.</td>
</tr>
<tr>
<td>Topic</td>
<td>Socioeconomics</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td><strong>Letter No./Comment No.</strong></td>
<td><strong>Comment</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>120 / 003</td>
<td>Most of the Craters of the Moon National Monument is located within Blaine County. It will be local law enforcement paid by Blaine County taxpayers who will be responsible for problems resulting from the increase use of the Monument. More visitors, and more problems will arise from Alternative D than our Preferred Alternative C.</td>
<td>The agencies acknowledge the valuable services including law enforcement, search and rescue, and structural fire provided by the counties in which the Monument is located. The agencies will continue to cooperate closely with the counties through mutual aid agreements to minimize impact upon these rural counties.</td>
</tr>
<tr>
<td>125 / 003</td>
<td>Socio-economic effects of each alternative must be properly analyzed. Economic effects on rural development are often seen as a peripheral consequence instead of as a valid issue or even documented need in Alternative formulation. It is essential, that an Alternative be formulated that makes some attempt at developing rangeland and forest management projects and uses that will proactively stimulate local, rural economic growth. This is extremely important to community leaders, both in and out of government, in order for them to judge the effectiveness of alternatives in aiding rural development. It is also required by NEPA, in order to portray a sound range of alternatives based on the identified issues. Economics has equal standing with other factors in that law and deserves equal attention.</td>
<td>The NPS and BLM proactively involved local county and community officials in scoping of the Draft Management Plan and development of the management alternatives analyzed. Through this process, several economic issues were identified and included in the alternatives. These include provisions for locating Monument facilities outside the Monument, opportunities for surrounding “gateway” communities to provide services and facilities to visitors, and opportunities for outfitter and guide operations and concession activities within the Monument, among others. A more thorough analysis of the potential economic and social impacts of the management alternatives has been included in the FEIS.</td>
</tr>
<tr>
<td>123 / 059</td>
<td>Please provide the costs to taxpayers of components of alternatives, such as treatment costs per acre under Alternative D actions that are contemplated.</td>
<td>The estimated costs of the alternatives, described on pages 53 – 55 of the DEIS, were developed for comparative purposes only. The precision of this level of estimation is not sufficient to accurately identify costs of specific projects or costs per acre.</td>
</tr>
<tr>
<td>123 / 124</td>
<td>The discussion of economics fails to provide information on the limited economic value of livestock grazing associated with the Monument. You cannot point to Ag. Statistics – as “farming” has ranching subsumed within it. How much does the grazing program on Monument lands cost to administer? What is the estimated value of recreational opportunities lost due to livestock grazing? What are the costs to wildlife populations, and thus to wildlife-viewing, photography, hunting and other recreation?</td>
<td>Additional information on Socioeconomic impacts has been added to the FEIS.</td>
</tr>
<tr>
<td>Topic</td>
<td>Socioeconomics</td>
<td>General</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Letter No./</td>
<td>Comment</td>
<td>Comment</td>
</tr>
<tr>
<td>Comment No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>123 / 171</td>
<td>There is no evidence that anything in this EIS will cause “dramatic economic</td>
<td>Analysis in the DEIS (Ch. 4) acknowledges the risk of increased road</td>
</tr>
<tr>
<td></td>
<td>changes” economic importance of livestock grazing here.</td>
<td>improvement relative to weed infestation, fire risk, wilderness values</td>
</tr>
<tr>
<td>123 / 179</td>
<td>DEIS at 303 claims that livestock grazing contributes to the health of local</td>
<td>and geologic features. In response to comments such as this the ID</td>
</tr>
<tr>
<td></td>
<td>economies, but fails to quantify the economic impacts (positive and especially</td>
<td>team reduced the amount of Passage Zone in the Proposed Plan/FEIS,</td>
</tr>
<tr>
<td></td>
<td>negative) of public lands livestock grazing.</td>
<td>particularly in Laidlaw Park. The implementation plan for</td>
</tr>
<tr>
<td></td>
<td></td>
<td>transportation will address road maintenance and improvement within</td>
</tr>
<tr>
<td></td>
<td></td>
<td>specific areas and zones of the Monument, with consideration to these</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and other issues.</td>
</tr>
<tr>
<td>152 / 001</td>
<td>While I support aggressive weed control, fire management, and restoration,</td>
<td>Analysis in the DEIS (Ch. 4) acknowledges the risk of increased road</td>
</tr>
<tr>
<td></td>
<td>this proposal to further develop roads and will actually increase the threat of</td>
<td>improvement relative to weed infestation, fire risk, wilderness values</td>
</tr>
<tr>
<td></td>
<td>noxious weeds and fire risk, as well as accelerate damage to wilderness values</td>
<td>and geologic features. In response to comments such as this the ID</td>
</tr>
<tr>
<td></td>
<td>and geologic features. I support the adoption of Alternative C, which actively</td>
<td>team reduced the amount of Passage Zone in the Proposed Plan/FEIS,</td>
</tr>
<tr>
<td></td>
<td>restores primitive and pristine areas and ensures the strongest conservation</td>
<td>particularly in Laidlaw Park. The implementation plan for</td>
</tr>
<tr>
<td></td>
<td>protections for the Monument in the future.</td>
<td>transportation will address road maintenance and improvement within</td>
</tr>
<tr>
<td></td>
<td></td>
<td>specific areas and zones of the Monument, with consideration to these</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and other issues.</td>
</tr>
<tr>
<td>154 / 001</td>
<td>While the need for weed control, fire management, and restoration, are very</td>
<td>The support of communities adjacent to the Craters of the Moon</td>
</tr>
<tr>
<td></td>
<td>important the proposal to further develop roads will more than likely increase</td>
<td>National Monument and Preserve is an important link for visitors to</td>
</tr>
<tr>
<td></td>
<td>the threat of noxious weeds and fire risk.</td>
<td>the area. We expect this relationship to become stronger. The agencies</td>
</tr>
<tr>
<td>34 / 001</td>
<td>I am writing in support of the City of Arco continuing to be the Gateway for</td>
<td>do not designate a community as the official “Gateway” to the Monument,</td>
</tr>
<tr>
<td></td>
<td>the Crater's of the Moon National Monument. Arco is the closest town and has</td>
<td>but ideally one or more communities strategically located near the</td>
</tr>
<tr>
<td></td>
<td>always supported the families, employees and visitors of the Crater's of the</td>
<td>Monument will determine for itself to associate in a positive way with</td>
</tr>
<tr>
<td></td>
<td>Moon.</td>
<td>the Monument. The agencies intend to work closely with all communities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>surrounding the Monument.</td>
</tr>
<tr>
<td>Topic</td>
<td>General</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td><strong>Letter No./ Comment No.</strong></td>
<td><strong>Comment</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>24 / 001</td>
<td>I am writing this letter in support of Butte County and the city of Arco becoming the Gateway for the Crater’s of the Moon National Monument. My reasons are that the City of Arco has two major state highways joining together so that many tourists use to go to the Crater’s of the Moon.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>23 / 001</td>
<td>It has come to our attention that there is a question as to what city will have the 'Gateway to the Craters of the Moon' designation. The city of Arco has long had that designation and we sincerely wish to keep it. As the President of the Butte County Chamber of Commerce, I pledge our support of that continued designation. As a Chamber we will do all that is in our power to lend our support to the Monument and to keeping the 'Gateway' designation for the City of Arco.</td>
<td>The support of communities adjacent to the Craters of the Moon National Monument and Preserve is an important link for visitors to the area. We expect this relationship to become stronger. The agencies do not designate a community as the official “Gateway” to the Monument, but ideally one or more communities strategically located near the Monument will determine for itself to associate in a positive way with the Monument. The agencies intend to work closely with all communities surrounding the Monument.</td>
</tr>
<tr>
<td>25 / 001</td>
<td>This letter is written on behalf of the Board of Trustees of the Butte County Joint School District #111 in support of Arco as the 'Gateway To The Craters Of The Moon National Monument.'</td>
<td>The support of communities adjacent to the Craters of the Moon National Monument and Preserve is an important link for visitors to the area. We expect this relationship to become stronger. The agencies do not designate a community as the official “Gateway” to the Monument, but ideally one or more communities strategically located near the Monument will determine for itself to associate in a positive way with the Monument. The agencies intend to work closely with all communities surrounding the Monument.</td>
</tr>
<tr>
<td>30 / 001</td>
<td>On behalf of the Arco City Council and the residents of Arco, I am writing to you concerning the Visitor Centers and the Gateway to the Craters of the Moon. We would encourage you to retain this honor in Butte County.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>32 / 001</td>
<td>I am proud of the title of Arco as the Gateway to the Craters of the Moon. I sincerely hope that we will be able to retain this title where it has been proudly represented.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>73 / 001</td>
<td>In the Introduction on Page 3, the plan states that Craters of the Moon National Monument was the first national park site in Idaho. According to BLM Land Status records approximately 37,130 acres of Yellowstone National Park is in Idaho. We recommend that the sentence be rewritten to &quot;Craters of the Moon National Monument, the first national Monument in Idaho, Was established on May 2, 1924.&quot;</td>
<td>Thank you for pointing this out. The text has been corrected.</td>
</tr>
<tr>
<td>Topic</td>
<td>General</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td><strong>Letter No./</strong>&lt;br&gt;<strong>Comment No.</strong></td>
<td><strong>Comment</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>31 / 001</td>
<td>I would like to see Arco Idaho claim the title of &quot;Gateway to the Craters&quot; simply because, Arco is the Gateway to the Craters.</td>
<td>The support of communities adjacent to the Craters of the Moon National Monument and Preserve is an important link for visitors to the area. We expect this relationship to become stronger. The agencies do not designate a community as the official “Gateway” to the Monument, but ideally one or more communities strategically located near the Monument will determine for itself to associate in a positive way with the Monument. The agencies intend to work closely with all communities surrounding the Monument.</td>
</tr>
<tr>
<td>33 / 001</td>
<td>I am writing this letter in support of Arco remaining the “Gateway to the Craters of the Moon”. We have two major state highways joining together that give many tourists access to the Craters of the Moon. We need the designation of “Gateway to the Craters of the Moon” in order to help our community continue, on the flip side of the coin the Craters of the Moon needs us in order to give the tourists the most easily accessible and affordable route to the Craters with amenities as stated above, which in turn helps the entire State of Idaho.</td>
<td>Same response as previous comment.</td>
</tr>
<tr>
<td>126 / 001</td>
<td>EP A supports the revision of current management to encourage desired conditions in the Monument and better collaboration among agencies and partnerships outside the Monument in order to facilitate education for visitors. Consequently, EPA has rated the Preferred Alternative LO -Lack of Objections. This rating and a summary of our comments will be published in the Federal Register. A summary of the rating system we used in our evaluation of the Draft EIS is enclosed.</td>
<td>Thank you for your review and comment.</td>
</tr>
<tr>
<td>125 / 002</td>
<td>All of the Alternatives focus on “restoration” and preservation. BLM should formulate an alternative that works toward protecting Monument resources as well as meeting policy goals outlined in FLPMA Section 201 by focusing on the use of active, hands-on methods of resource management. Assuming that the BLM will forgo the policy goals outlined in FLPMA Section 201 and instead manage for “wilderness values”, “desired future conditions” and “restoration”, then the BLM should formulate an alternative that does so by focusing on the use of active, hands-on methods of resource management.</td>
<td>How resources management is achieved will be dealt with at the implementation-level planning.</td>
</tr>
<tr>
<td>127 / 002</td>
<td>Our seconded priority is in regard to maintaining and improving the facilities on the Monument. We believe it is important with limited budgets to concentrate on those improvements to the facilities at the existing entrance west of Arco. Arco has been and</td>
<td>Thank you for your comment.</td>
</tr>
</tbody>
</table>
should continue to be the gateway to the Craters and the improvements should be directed towards the headquarters.

73 / 002 In Chapter 2, Page 32, another Management Action states that an intergovernmental coordinating group would be considered to ensure consistency of this plan with other state and local plans. Section 202 (f) and Section 309 (e) of the Federal Lands Policy Management Act (FLPMA) provides that Federal, State, and local governments and the public be given adequate public notice and opportunity to comment on the formulation of standards and criteria for, and to participate in, the preparation and execution of plans and programs for the management of public lands. The establishment of such a group would help with this requirement.

82 / 003 truly an ecologically unacceptable range of choices. The resulting EIS and Management Plan are thus fatally flawed, and most likely invalid at the outset. Under NEPA rules I believe, you must consider the FULL range of alternatives, and this plan certainly does not do that.

Comment noted.

The Council on Environmental Quality (CEQ) guidelines for implementing NEPA requires federal agencies to analyze all “reasonable” alternatives that substantially meet the purpose and need for the proposed action. The purpose of the Monument Management Plan (Plan/EIS) is to provide for management of the Craters of the Moon National Monument and Preserve within the provisions of the Proclamation, and to meet the requirements of the Federal Land Policy and Management Act (FLPMA) and other laws and regulations. Because the Proclamation states that certain uses will not continue, and that other uses will continue consistent with federal laws and regulations, actions that do not comply with the Proclamation would not meet the purpose and need for the plan and therefore were not included in alternatives that were analyzed in this Environmental Impact Statement (EIS).

Proclamation 7373 states: “Laws, regulations, and policies followed by the BLM in issuing and administering grazing permits or leases on all lands under the jurisdiction shall continue to apply with regard to the lands in the Monument administered by the BLM.” Based on this language, a “no livestock grazing” alternative would not meet the purpose and need and would not be consistent with the Proclamation. The BLM’s authority to manage grazing under existing laws, regulations, and policies would continue under all the alternatives considered. Livestock use authorizations, under any of the alternatives, would be adjusted consistent with evaluations identifying the need for changes in livestock use to meet the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management.
<table>
<thead>
<tr>
<th>Topic</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter No./ Comment No.</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>128 / 004</td>
<td>The stand of aspen that grows in Snowdrift Crater should be protected from livestock grazing and be interpreted with a sign explaining how the aspen got to growing there and about the historic gathering of ranchers which Secretary Babbitt convened to create the Monument. Despite all the times I have gone to Snowdrift Crater I have never heard how the aspens got there - was it only shade or is there moisture in the ground there?</td>
</tr>
<tr>
<td>113 / 005</td>
<td>An explanation of the importance of the area to the livestock industry should be part of any interpretation/visitor understanding efforts. The Idaho Rangeland Resource Commission should be consulted in regards to various educational tools available that would tell folks the history of grazing in the area as well as the importance of the area to the industry.</td>
</tr>
<tr>
<td>123 / 008</td>
<td>The EIS fails to address a broad range of alternatives that will fulfill the stated purpose and need “a comprehensive framework for managing public lands within the newly expanded Monument over the next 15 to 20 years”, and to replace the fragmented plans. The DEIS also fails to identify what must be included as a key part of the Purpose and Need: to protect the significant values of the public lands identified in the Monument Proclamation.</td>
</tr>
<tr>
<td>105 / 012</td>
<td>As with state and private land issues that require legislative solutions, so does any boundary adjustment to the Monument. Boundary adjustments should only be allowed when they are necessary to achieve a specific Monument management goal. The DEIS fails to identify any areas outside of the boundary that would add significant resources to the Monument as suggested in our scoping comments. For example, we would like to see the Monument boundary adjusted westward to include Sand Butte. Whether the entire boundary is elongated around Sand Butte, or whether Sand Butte is an island of Monument managed land should be evaluated. We respectfully request that this option be looked at during the next step in the Monument planning process with the intent of making a recommendation to Congress in the future.</td>
</tr>
</tbody>
</table>
The Service has concerns with the statement that Alternative D best meets the definition of the Environmentally Preferred Alternative. The proposed reclassification and maintenance of roads conflicts with Section 101 of the National Environmental Policy Act (NEPA) which burdens the federal government to "Preserve important historical, cultural and natural aspects of our natural heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice."

It is our opinion that the alternative identified to best meet national environmental goals would be the one that maintains and protects the integrity of the largest section of landscape. As currently written, Alternative C provides this best. However, we see the opportunity to modify either Alternative C or D to incorporate the best actions under both alternatives.

The Planning Team should revisit its failure to address hazardous materials. We ask that the BLM review and enter into the record the letters, and photos of the Smith allotment livestock well oil spill, junk petroleum product jugs, and other debris left littering and polluting public lands very near the east side of the Monument as a result of permittee well-related activities. Please also include the Appeal of this Decision in the record. Plus, sheep in particular may be coated with toxic pesticides used to kill vermin. Do these materials then accumulate in sheep bedding sites, or elsewhere? Do they become airborne in wind, or dust, and thus have the potential to become inhaled by visitors? Also here, a discussion of herbicide use, transport and application in the Monument, especially as it relates to the large-scale vegetation treatments that are proposed, is essential. Will the public be exposed to long-lasting and persistent chemicals like Tebuthiuron? Carcinogens like Tordon?

The selection of the environmentally preferred alternative is based upon a combination of factors outlined in Section 101 of NEPA as described on page 55 of the DEIS. The Proposed Plan/FEIS reduces the extent of the 660 foot Passage Zone corridors by over 30% and freezes the road system at current maintenance standards. No new roads or upgrades of existing roads will be done until a detailed transportation plan is completed.

Although unsightly and unhealthy, the amounts of petroleum products at the Smith Well are not categorized as "hazardous materials" and do not lie within the Monument boundary. The agencies have no concrete data produced by scientific study to suggest pesticides used on livestock contaminate soils within the Monument to dangerous levels. Agency use of herbicide is subject to its own NEPA review and would be analyzed on a case-by-case basis.
### Topic

<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 029</td>
<td>Part of the management guidance must be undertaken as part of the DEIS process is conducting resource inventories and surveys. This is necessary to provide a baseline of information, as in many cases (livestock, cultural, vegetation condition, etc.) you have provided no information that allows a reasoned analysis of impacts of alternatives. For example, to determine how many acres need to be “restored” – as specified under various alternatives, you must know the condition and extent of degraded communities, where any projects may best focus on connectivity, etc. This is essential to determine if you have a reasonable range of alternatives.</td>
</tr>
<tr>
<td>132 / 058</td>
<td>Please explain in detail what is meant by “partnering” for interpretation and orientation outside the Monument. Are you planning on outsourcing or privatizing any government functions in the process? If so, please explain what these are, and what impacts this may have on the resources of the Monument, recreation for the general public, etc. What would costs be?</td>
</tr>
</tbody>
</table>

### Response

The estimated restoration acreages were based on inventories conducted by BLM and The Nature Conservancy (see Jurs and Sands 2004). These inventories identified areas with poor, fair, and good ecological integrity. Areas identified as having poor ecological integrity, particularly those in Laidlaw Park, were identified as highest priority for restoration treatment. A generalized restoration map is included in the Proposed Plan/FEIS.

The DEIS (p. 24, Desired Future Conditions and Management Actions for Natural Resources common to all alternatives) recognizes and provides for resource inventory and monitoring to provide a basis for management decisions.

The agencies believe that the baseline information presented in the Draft Management Plan/Environmental Impact Statement is relevant and appropriate to the level of detail called for in the analyses. These analyses are necessarily broad to encompass the vast geographic extent of the Monument and the time period over which the Plan will be applied. Many of the management actions identified in the DEIS would be subject to additional impact analyses with the preparation of future implementation-level plans, for example site restoration plans. Such implementation-level projects and plans would include additional NEPA analysis and baseline information of sufficient detail to support identification and analysis of reasonably foreseeable adverse impacts on the human environment. If this information is not available at the time such plans are proposed, appropriate resource inventories and surveys would then be conducted by the agencies to obtain the necessary data.

Simply stated, this “management action” calls for the agencies to be proactive in seeking opportunities with local communities and other agencies for providing interpretation and visitor orientation outside the boundaries of the Monument, minimizing the need to provide new facilities within the Monument.
### Topic | General | Response
---|---|---
| **Letter No./
Comment No.** | **Comment** | **Response** |
<p>| 123 / 060 | Dubbing Alt. D “the environmentally preferred Alternative” is deceptive and misleading. The DEIS has both failed to conduct essential baseline information, undertake essential analysis, develop a reasonable range of alternative actions (ignoring any changes in grazing, distorting “benefits” of Alt. D, downplaying risks and harms). It makes no sense to “restore” if you don’t address the root cause of ecological problems. Alternatives only evaluate a limited range of actions, and the Alternatives contain “poison pills” components. For example – the maze of roads that are falsely claimed necessary for fire suppression under all Alternatives, including Alt. C. There is no way the DEIS can determine that it is fulfilling responsibilities as trustees, ensuring safe, healthful, productive, aesthetic and culturally pleasing surroundings; attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable or unintended consequences; preserve important historic, cultural, and natural aspects of the natural environment and support diversity and choice; achieve a balance between population and resource use; enhance the quality of renewable resources and “approach the maximum attainable recycling of depletable resources”, while failing to provide any controls of any kind on livestock grazing, which is the dominant land use. | The DEIS (p. 24, Desired Future Conditions and Management Actions for Natural Resources common to all alternatives) recognizes and provides for resource inventory and monitoring to provide a basis for management decisions. The estimated restoration acreages were based on inventories conducted by BLM and The Nature Conservancy (see Jurs and Sands 2004). These inventories identified areas with poor, fair, and good ecological integrity. Areas identified as having poor ecological integrity, particularly those in Laidlaw Park, were identified as highest priority for restoration treatment. A generalized restoration map is included in the Proposed Plan/FEIS. Land uses and environmental factors that lead to ecological degradation were addressed in the DEIS. Management guidance designed to avoid future problems is outlined in the “Common to All Alternatives” section (DEIS pp. 24-32) and in the descriptions of the alternatives. Additional management guidance, in response to public comments, has been added to the Proposed Plan/FEIS. |
| 123 / 090 | What are the industrial point sources of pollution at INEEL, and what pollutants do they produce? | A table indicating industrial point sources from the counties surrounding the Monument has been included in the air quality section of Chapter 3 of the Final EIS. |
| 123 / 092 | What radionuclides have been monitored here? When? How do their levels compare with background amounts of the radioactive elements? Please provide this data for public review in the SEIS. Please present the visibility and haze data, the radioactivity data, and other information on air pollution in more detail. | Additional information regarding radionuclides which have been monitored and a brief summary the results of that monitoring have been included in the air quality section (Chapter 3) of the Final EIS. Detailed summaries of these monitoring programs are available from the Idaho Department of Environmental Quality (<a href="http://www.oversight.state.id.us">http://www.oversight.state.id.us</a>) and the U.S. Department of Energy (<a href="http://www.stoller-eser.com/index.htm">http://www.stoller-eser.com/index.htm</a>). A summary of visibility data is presented in the air quality section of Chapter 3 of the Final EIS. Detailed visibility information is available on the internet at (<a href="http://vista.cira.colostate.edu/views/">http://vista.cira.colostate.edu/views/</a>). |</p>
<table>
<thead>
<tr>
<th>Letter No./ Comment No.</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 105</td>
<td>As part of this process, the DEIS must place a cap on the acreage that may be mined for gravel or other materials under the Free Use Permits. Where are these located, and how much gravel remains at them? How will more upgraded roads increase gravel demand?</td>
<td>Please see pages 124-126 of the DEIS for information on mineral materials within the Monument. On page 124, the DEIS states that the Proclamation withdrew all federal lands and interests in lands within the Monument from entry, location, selection, sale, leasing, or other dispositions. It goes on to state, new federal mineral leases or prospecting permits may not be issued, nor may new mining claims be located within the Monument. Please see pages 209-212 of the DEIS for a discussion of the impacts to mineral materials under various alternatives.</td>
</tr>
<tr>
<td>123 / 106</td>
<td>As part of this DEIS, the 2000 DEIS fire management plan should be reviewed and updated to reflect the ever-increasing loss of sagebrush (die-off).</td>
<td>Protocols for fire management have been included in the proposed plan. These protocols, as well as management direction in the DEIS (p. 25), discuss protection of sagebrush steppe as a fire suppression priority. The protocols are consistent with those outlined in the 2004 South Central Idaho Fire Management Plan, which further defines resource protection within the Monument.</td>
</tr>
<tr>
<td>123 / 112</td>
<td>The aggressive pseudo-restoration theme of the DEIS, the failure to designate the Laidlaw ACEC, and the profound failure to address and provide goals and objectives to alter livestock grazing will guarantee that “interpretive themes” for visitor experience (DEIS at 131) of a “landscape of lava and sagebrush – one of the few remaining examples of what is natural” are not able to be met. If these are indeed what is intended, then designation of ALL remaining sagebrush habitats as ACECs, controls on grazing damage, and passive restoration must be part of all Alternatives. As part of the interpretation, under all alternatives, please provide visitor displays that describe the unraveling of the sagebrush ecosystem under livestock grazing (continuing to the present day) and fire.</td>
<td>Restoration efforts and livestock grazing would follow the resource management objectives defined in the DEIS. The commenter did not provide any new information or studies that would update the analysis of relevance and importance criteria, resulting in a determination that ACEC status is warranted. Management direction to protect the high quality vegetation resources in North Laidlaw Park, similar to that proposed for the nominated ACEC, was included in Alternative D (See DEIS p. 49, Vegetation, Including Special Status Species, and Fire Management for Alternative D; and pp. 340, Appendix G). Analysis of the relevance and importance criteria for establishment of North Laidlaw Park as an ACEC did not indicate that ACEC status is required for protection of the area. To further protect the area, the Preferred alternative was modified to increase the acreage of Pristine Zone and decrease the acreage of Passage Zone in North Laidlaw Park. Management direction under Alternative D (p. 49) states that the high ecological condition of North Laidlaw Park would be maintained and no new livestock water developments would be allowed.</td>
</tr>
</tbody>
</table>
| Letter No./
<table>
<thead>
<tr>
<th>Comment No.</th>
<th>Topic</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 115</td>
<td>General</td>
<td>DEIS at 135 and 136 fails to address the health risks associated with too many and confusing roads, use of chemical herbicides (more herbicide use accompanies status quo grazing, more upgraded roads and aggressive treatments), use of guard dogs by permittees, use of other chemicals on public lands in livestock operations (please review our letters and Appeal of the Smith allotment pipeline and the mess of oil and other chemicals polluting and littering BLM lands in association with a livestock watering operation in this allotment that includes portions of the east side of the Monument.</td>
</tr>
<tr>
<td>123 / 122</td>
<td>General</td>
<td>We are glad to see you have incorporated darkness provisions. However, there are no limitations or guidance for lighting of facilities provided here.</td>
</tr>
<tr>
<td>123 / 125</td>
<td>General</td>
<td>Why have you decided to define the cumulative impacts analysis area separately under each “resource type”? What is meant by resource type? How is livestock grazing a “resource type”?</td>
</tr>
</tbody>
</table>

**Response**

Page 135 specifically states that “Due to the size of the Monument and the complexity of the road system, navigation can be confusing. The BLM maintains a system of directional signs on the Monument; however many roads and ways have appeared through-out the years, making map-based navigation difficult.” Guard dog interaction with visitors has not been considered a frequent problem influencing visitor safety. Page 136 refers to guard dog safety hazards to visitors. Oil spills, chemical pollutants, and litter associated with livestock operations or any other use is prohibited and typically mediated once reported. We would appreciate reports of any such activity in the future.

Detailed guidance for lighting of facilities is beyond the scope of this plan. Such guidance will be incorporated into each specific implementation plan for any new facilities or upgrades to existing facilities. Effects of such lighting will be examined in the NEPA documents accompanying such plans.

As described on page 148 of the DEIS, the area for analysis of cumulative impacts changes by resource topic because projects that make up the cumulative impact scenario do not affect all resources equally.
123 / 129  The DEIS can not constrain your analysis of impacts for each alternative to the land area included in the Proclamation. For example, the grazing allotments that impinge on the Monument also cover vast surrounding areas. Fuels projects (like the Big Desert Fuelsbreak EA) have the potential to accelerate weed spread (on visitor tires, livestock) on the eastern edge of the Monument – including into Monument lands. Other developments, such as the huge new livestock pipeline constructed on contiguous lands must be examined for the likelihood of increasing weed infestations, accelerating degradation of remaining sagebrush habitats, and loss of wildlife populations shared with the Monument. How do such activities elevate the importance of taking strong and decisive management actions to protect Monument lands? Likewise, the importance of the values of lands in the proposed Laidlaw Park ACEC (and indeed all sagebrush lands remaining in the Monument) must be viewed and evaluated in a regional light. Relative scarcity must be examined.

123 / 130  A July 12, 2004 Shoshone BLM EA describes ‘the area southwest of Sand Butte Crater has relatively few shrubs and a history of large wildfires… cheatgrass… rush skeletonweed …, a state-listed noxious weed is common …’. This area is located just west of Craters – wind typically blows from this direction, and will readily transport the small, light wind-dispersion-adapted rush skeletonweed seeds into livestock or road disturbed areas of the Monument. Cumulative impacts of degradation of neighboring lands must be assessed. Interestingly, this small EA describes mule deer migration corridors, sage grouse lek locations, etc. All of this type of basic information must be presented in the DEIS – and it is not. That is the only way an integrated, comprehensive look at indirect, cumulative or synergistic impacts of Alternatives and management actions can be taken. Under cumulative impacts, the DEIS must also consider any potential energy projects, fire project or other actions or developments that may affect Monument lands or wildlife populations.
<table>
<thead>
<tr>
<th>Topic</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter No./Comment No.</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>123 / 131</td>
<td>DEIS at 148. If data is not available for wildlife, vegetation, weeds, etc., it must be collected as part of the DEIS process. Otherwise, you will never be able to understand the amount of fragmentation that may result from activities under this plan. This further demonstrates the need for preparation of a Supplemental EIS. What in the world have agencies been doing over the course of several years. As previously described, even basic information like mule deer migration corridor location is omitted from the DEIS. Impacts of past agency projects that have affected lands—for example, the disastrous prescribed fire and sagebrush control projects of the past—must be assessed. Estimate how much land in the five-county areas is now dominated by cheatgrass or crested wheatgrass.</td>
</tr>
<tr>
<td>123 / 135</td>
<td>It is unclear whether the “Impairment of Resources” section applies only to NPS lands or to all lands. Please explain clearly.</td>
</tr>
<tr>
<td>123 / 145</td>
<td>This same type of minimizing impacts, myopically constraining analysis to a narrow, confined and inadequate range of alternatives, and then deeming impacts only “minor” or “moderate”, without any science-based analysis or rationale, pervades the analysis of all elements of the environment in the DEIS, and further demonstrates the need for preparation of a Supplemental EIS.</td>
</tr>
<tr>
<td>123 / 148</td>
<td>Alternative A is essentially the no action alternative. DEIS at 160 claims it would have no major adverse impacts on a resource or value whose conservation is necessary to fulfill the purposes identified in the legislation, or key to natural or cultural integrity. Yet, status quo livestock grazing, trampling and livestock facilities have resulted in widespread fire and large-scale weed invasion, loss of sage grouse leks and migratory bird population declines (see Laidlaw EA), drowning of migratory birds, mammals and even prairie falcons, and many other adverse impacts. You have failed to assess the serious environmental effects of these ongoing activities.</td>
</tr>
</tbody>
</table>
BLM’s “planning criteria” for vegetation and several other elements ignores mention of FLPMA, which provides for designation of ACECs, and specifically allows for lands not to all be abused at the same level. The agency “planning criteria” fails to address livestock grazing in any substantive way whatsoever. DEIS at 299 admits that BLM is required to give priority to designation and protection of ACECs as part of land use planning. Instead, here, BLM buries the ACEC in only one Alternative, and provides little analysis at all of the ACEC and how it may help protect the values of the Monument. The failure to address livestock grazing violates BLM’s planning criteria for sustainability.

We request that NPS withdraw from a joint EIS venture with BLM, as BLM’s recent examples of this. A Supplemental EIS must be prepared that contains essential baseline data and that can be obtained.

The current preferred alternative, Alternative D, should be abandoned. If not, Alternative D requires substantial revisions in order to meet the Proclamation goals set forth by President Clinton’s action under the Antiquities Act to expand the Craters of the Moon National Monument.

Each of the alternatives affords the high degree of protection for Monument resources required by Proclamation 7373. As the preferred alternative in the DEIS, and now the proposed alternative in the Final Management Plan, Alternative D has been revised to reflect many of the comments received from the public during the review process.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Visual</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter No./Comment No.</strong></td>
<td><strong>Comment</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>123 / 120</td>
<td>Upgrading roads plus leaving nearly all other roads open will ensure</td>
<td>A supplemental EIS is not warranted. Please see Chapter 4 for a discussion of impacts.</td>
</tr>
<tr>
<td></td>
<td>that the goal “to perpetuate scenic vistas and open landscape for</td>
<td></td>
</tr>
<tr>
<td></td>
<td>future generations is not met. Roads are not part of scenic vistas.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plus, upgrading roads means more places for livestock facilities – as</td>
<td></td>
</tr>
<tr>
<td></td>
<td>livestock and infrastructure are permitted in the “passage” zone that</td>
<td></td>
</tr>
<tr>
<td></td>
<td>will result fork upgrading. How does livestock grazing and livestock</td>
<td></td>
</tr>
<tr>
<td></td>
<td>facilities alter the visual landscape? Please describe the current</td>
<td></td>
</tr>
<tr>
<td></td>
<td>environment, and compare between Alternatives in a Supplemental EIS.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How do existing “treatments” mar the visual landscape? How do they</td>
<td></td>
</tr>
<tr>
<td></td>
<td>otherwise affect recreational experiences?</td>
<td></td>
</tr>
<tr>
<td>123 / 173</td>
<td>Visual Resources. DEIS at 230-235. You can not claim that pseudo-</td>
<td>In the case of restoration efforts, structures such as fences are used to</td>
</tr>
<tr>
<td></td>
<td>restoration using pipelines, fences, etc.), and not part of the</td>
<td>protect the areas being restored. While fences may not match the</td>
</tr>
<tr>
<td></td>
<td>natural landscape. would significantly mar the visual lands.</td>
<td>characteristic natural landscape, they are a necessary tool in the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>restoration effort, a main purpose of which is to restore the viewshed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to its characteristic natural landscape.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic</th>
<th>Grazing &amp; Recreation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>123 / 136</td>
<td>If human visitors have so drastically affected spatter cones (loss of</td>
<td>The spatter cones are in the developed NPS portion of the Monument</td>
</tr>
<tr>
<td></td>
<td>2 feet in elevation), how much have livestock affected geologic</td>
<td>which is closed to grazing. Most of the geologic features in the</td>
</tr>
<tr>
<td></td>
<td>resources and soil erosion in the Monument? How much greater are</td>
<td>Monument are void of vegetation therefore the likelihood of livestock</td>
</tr>
<tr>
<td></td>
<td>livestock impacts in the sagebrush lands than visitor impacts</td>
<td>affecting the geologic resources is low.</td>
</tr>
<tr>
<td></td>
<td>to these resources/values?</td>
<td></td>
</tr>
<tr>
<td>Letter No./ Comment No.</td>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>123 / 138</td>
<td>While the analysis claims that grazing use of some areas may be limited, under the Preferred Alternative and upgraded road and MORE &quot;passage&quot; areas, more livestock grazing may be extended close to geologic features, resulting in significantly greater impacts. The analysis here of soils impacts overlooks the link between grazing disturbance, cheatgrass and weed spread, and fire – thus grazing is an indirect cause of fire-caused erosion and deposition of soils. More upgraded roads would mean larger disturbed rights-of-way, more wind-blown soil, and keeping all roads open along with upgrades will increase fire danger, with the result being more wind erosion. More upgraded roads would mean less control on looting of geological surface features.</td>
<td>There is not a mandate to upgrade roads in Alternative D (see desired future conditions and management actions as listed for Alternative D on page 50). In the Proposed Plan/FEIS, Alternative D will have some additional miles of road closure because of adopting a larger Pristine Zone and the amount of Passage Zone within the Monument has also been reduced. The DEIS dose not mandate upgrading roads for more passage, nor does it mean more livestock grazing may be extended close to geologic features. In fact roads could closed to prevent resource damage to geologic features.</td>
</tr>
</tbody>
</table>
a’a: A Hawaiian term for basaltic lava flows that are typically rough and jagged with a clinkery surface.

Acre-Foot: Amount of water that will cover 1 acre to a depth of 1 foot.

Active Preference (grazing): Current authorized use including livestock grazing and conservation use. Active use may constitute a portion, or all, of permitted use. Active use does not include temporary non-use or suspended use of forage within all or a portion of an allotment.

Adaptive Management: A type of natural resource management that implies making decisions as part of an ongoing process. It is a continuous process of planning, implementing, monitoring, evaluating, and incorporating new information into strategies to meet goals and objectives. It also provides a model for adjusting goals and objectives as new information develops and public desires change.

Adit: A nearly horizontal passage in an underground mine, driven from the surface, by which a mine may be entered, ventilated, or dewatered.

Age Class: An age grouping of trees according to an interval of years, usually 20 years. A single age class would have trees that are within 20 years of the same age, such as 1-20 years or 21-40 years.

Aggradation: The building up of land surfaces by sedimentation or deposition of mineral matter.

Air Quality: Class I Area – Areas designated under the Clean Air Act that are afforded this highest level of protection from air pollutants; generally consist of wilderness areas, national parks, and wildlife refuges.

Class II Area: Areas not designated included as Class I; additional air pollutant inputs may be permitted up to certain limits.

Airshed: A geographic area that shares the same air.

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

Allotment Management Plan (AMP): A documented program that applies to livestock grazing on public lands, prepared by consulting, cooperating, and coordinating with the permittee(s), lessee(s), or other interested publics.

All-Terrain Vehicle (ATV): Small three-wheel and four-wheel recreational motor vehicles capable of operating in rugged terrain.

Alluvium: Any sediment deposited by flowing water, as in a river bed, floodplain, or delta.

Animal Unit: One cow, one wild horse, two burros, or five sheep.

Animal Unit Month (AUM): The amount of forage required to sustain one mature cow or the equivalent (e.g., five sheep or five goats), based on an average daily forage consumption of 26 pounds of dry matter per day. The equivalent animal units for other ungulate species, based on a weight conversion (3 percent body weight per day), are: 10.5 for antelope; 7.6, deer; 2.1, elk; 1.2, moose; 0.9, wild horses; and 5.2, sheep.

Annual Vegetation: Plants that complete their life cycles and die in 1 year or less.

Appropriate Management Response (AMR): Specific actions taken in response to a wildland fire to implement protection and fire use objectives.

Category A: private lands, BLM facilities, and other areas with values where fire would not be desired.

Category B: areas where a variety of appropriate fire suppression techniques would be applied to meet the resource objectives specified in the Plan/EIS and other site-specific activity plans.

Aquifer: A saturated, permeable sediment or rock that can transmit significant quantities of water under hydraulic gradients.
Area of Critical Environmental Concern (ACEC): An area of public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources; or other natural systems or processes; or to protect humans from natural hazards.

Basalt: Fine-grained, dark-colored igneous rocks that are either intrusive or extrusive.

Beneficial Use: A use of water, such as domestic, municipal, agricultural, mining, stock watering, recreation, wildlife, or power generation, that provides a benefit.

Best Management Practice (BMP): Practices based on current scientific information and technology which, when applied during implementation of management actions, ensure that adverse impacts are minimized. BMPs are applied based on site-specific evaluation and represent the most effective and practical means to achieve management goals for a given site.

Biological Diversity (Biodiversity): The variety of life and its processes, and the interrelationships within and among various levels of ecological organization. Federal resource management agencies must examine the implications of management actions and development decisions on regional and local biodiversity.

Biological Integrity: The ability to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

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

Blister: A blister is formed by the swelling of the crust that occurs as a result of the expansion of gas or vapor beneath a flow; typically about 1 meter (3.3 feet) in diameter and hollow.

Block Lava: Lava with a surface of angular blocks and forms from very dense lava.

Bomb: Pyroclastic fragments greater than 64 millimeters (2.5 inches) in diameter that were molten or plastic at the time of ejection. The shape of a bomb is determined by the viscosity of the magma, velocity and length of flight, the rate at which the lava cooled, the rate of expansion of gases, and the type of deformation that occurred upon impact.

Breadcrust Bomb: A crust that cooled during flight such that as gases within it continued to expand, the crust cracked much like bread rising in an oven.

Broadcast Burn: A prescribed fire that burns a designated area. These controlled fires can reduce wildfire hazards, improve forage for wildlife and livestock, or encourage successful regeneration of trees.

Brood Rearing: Caring for young birds hatched at one time.

Butte: A detached low mountain or high mound rising abruptly from the general level of the surrounding plain; applied to peculiar elevations in the Rocky Mountain Region.

Cairns: Stones intentionally piled by humans.

Cambrian Period: From 500 million to about 544 million years ago, in which marine invertebrates were common.

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

Carbonate: A salt or carbonic acid, like limestone.
**Carrying Capacity:** The character of use that can be supported over a specific time by an area developed at a certain level without causing excessive damage to either the physical environment or the experience of the visitor.

**Cation:** An electrically charged particle (ion) with a positive charge.

**Cheatgrass:** (Bromus tectorum L, downy brome) An exotic annual grass, native to Eurasia and the Mediterranean, which can dominate disturbed ground in shrub-steppe ecosystems of the western United States and Canada.

**Chemical Control:** The use of pesticides and herbicides to control pests and undesirable plant species.

**Cenozoic:** The most recent era of geologic history (65 million years ago until the present) during which the earth’s modern landforms, animals, and plants came into being.

**Cinder:** Uncemented, glassy, vesicular (holes created by escaping gas bubbles), pyroclastic material. Cinder can be thought of as “volcanic froth.”

**Cinder Cone:** A steep, conical hill that is formed by the accumulation of cinders, spatter, and other pyroclastic material.

**Cinder Garden:** Gardens that occur on cinder deposits with little to no soil development.

**Class of Livestock:** The species of domestic livestock – cattle and sheep.

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

**Collector Roads:** These roads serve small land areas and are usually connected to a larger road or state highway.

**Community:** An assemblage of plant and animal populations in a common spatial arrangement.

**Consultation, Coordination, and Cooperation:** A process prescribed by the Public Rangelands Improvement Act of involving the permittee(s), lessee(s), federally recognized Native American tribes, and interested publics in the development of allotment management plans and other management programs on public lands. The process also includes trust responsibilities to federally recognized Native American tribes.

**Consumptive Use:** Recreation activities which consume natural resources. Hunting and fishing are regarding as consumptive recreation because wildlife species are consumed. Rockhounding is consumptive because nonrenewable resources are removed.

**Cow-pie Bombs:** Cow-pie bombs, also known as cow-dung and pancake bombs, form from very fluid lava that is still plastic when it lands, causing it to flatten upon impact; some still have a liquid core upon impact.

**Crater:** A circular depression in a volcano that formed from a gradual accumulation of pyroclastic material around the vent, an explosive eruption, or collapse.

**Critical Habitat, Designated:** Specific parts of an area occupied by a federally listed threatened or endangered plant or animal at the time it is listed that contain physical or biological features essential to the conservation of the species or that may require special management or protection. Critical habitat may also include specific areas outside an area occupied by a federally listed species if the Secretary of the Interior determines that these areas are essential for the conservation of the species.

**Cultivar:** A race or variety of a plant that has been created or selected intentionally and maintained through cultivation.

**Cultural Landscape:** A geographic area, including both cultural and natural resources and the wildlife...
or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

**Cultural Property:** The definite location of a past human activity, occupation, or use identifiable through field inventory, historic documentation, or oral evidence. Cultural properties include prehistoric and historic archaeological remains, or architectural sites, structures, objects, or places with important public and scientific uses.

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

**Cultural Resource Inventory:** Section 110 inventories – surveys done in response to the federal proactive responsibility to protect cultural resources

- **Section 106 inventories:** done in response to requirements of the National Historic Preservation Act – 3 types:
  - **Class I:** literature review and file search
  - **Class II:** intensive pedestrian survey of a sample of an area
  - **Class III:** intensive pedestrian survey of entire area

**Cultural Resource Management Plan (CRMP):** A brief activity plan in which the broad determinations (management objectives) made in a resource management plan (RMP) are developed into specific management decisions. CRMP development has two decision products: 1) the allocation of all of the planning area's cultural resources to categories (BLM Manual Section 8111.2); and 2) the establishment of related protection and information gathering priorities.

**Cumulative Impacts:** The impact on the environment that results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions.

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts can result from similar projects or actions, as well as from projects or actions that have similar impacts (40 CFR 1508.7).

**Current Annual Growth:** The amount of forage produced by a plant in one growing season.

**Deferment:** Nongrazing, either by delay or discontinuance of grazing, from the beginning of plant growth until the seed is set or the equivalent stage of vegetative reproduction.

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

**Desired Plant Community:** The plant community which provides the vegetation attributes required for meeting or exceeding RMP vegetation objectives. The desired plant community must be within an ecological site’s capability to produce these attributes through natural succession, management action, or both.

**Developed Recreation:** Recreation that requires facilities that, in turn, result in concentrated use of the area. For example, skiing requires ski lifts, parking lots, buildings, and roads. Campgrounds require roads, picnic tables, and toilet facilities.

**Dipteran:** Insects having usually a single pair of functional wings (anterior pair) with the posterior pair reduced to small knobbed structures and mouth parts adapted for sucking or lapping or piercing (i.e., true flies).

**Dispersed Recreation:** Recreation that does not occur in a developed recreation site, such as hunting, backpacking, and scenic driving.

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

**Easement**: A right or privilege one may have on another’s land.

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

**Ecosystem**: A functioning system comprised of a community of animals, plants, and bacteria and its interrelated physical and chemical environment.

**Ecotone**: A transition area between two distinct habitats, where the ranges of the organisms in each bordering habitat overlap, and where there are organisms unique to the transition area.

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

**Endemic**: Having a natural distribution confined to a particular geographical region.

**Environmental Assessment (EA)**: A concise public document that a federal agency prepares under the National Environmental Policy Act (NEPA) to provide sufficient evidence and analysis to determine whether a proposed agency action would require preparation of an Environmental Impact Statement (EIS) or a Finding of No Significant Impact. A federal agency may also prepare an EA to aid its compliance with NEPA when no EIS is necessary or to facilitate preparation of an EIS when one is necessary.

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

**Environmental Justice**: The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from operation or the execution of federal programs and policies. Executive Order 12898 directs federal agencies to make achieving environmental justice part of their missions by identifying and addressing disproportionately high and adverse effects of agency programs, policies, and activities on minority and low-income populations.

**Eolian Processes**: Wind erosion, transport, and deposition.

**Ephemeral**: Short-lived; usually only one day.

**Erosion**: The wearing away of land surface either by natural weathering processes (including water, wind, or ice) or human or animal activities.

**Erosion Blanket**: Material such as straw, jute matting, or rock that is applied to the land surface to minimize erosion of soil particles caused by the impact of rain drop splash and by flowing water.

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

**Exotic Plant Communities**: Assemblages of plants that are not indigenous to the area, such as cheatgrass, spotted knapweed, and leafy spurge.

**Exotic Species**: An animal or plant species that is not a part of an area’s original fauna or flora.
**Extirpated:** Completely gone from an area; destroyed completely.

**Fault:** A fracture or fissure in the earth’s surface.

**Fauna:** The animal life of an area.

**Fecal Coliform/Fecal Streptococcus:** Types of bacteria found in animal waste.

**Finding of No Significant Impact (FONSI):** A public document issued by a federal agency briefly presenting the reasons why an action for which the agency has prepared an Environmental Assessment does not have potential for a significant effect on the human environment and, thus, will not require preparation of an Environmental Impact Statement.

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

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

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

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

**Fire Cycle:** The average time between fires in a given area.

**Fire Fountain:** A rhythmic vertical fountain-like eruption of lava.

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

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

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

**Floodplain:** Level streamside land that may be subject to flooding.

**Flora:** The plant life of an area.

**Forage:** Vegetation of all forms available and of a type used for animal consumption.

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

**Four-Wheel Drive (4WD):** Trucks, cars, or sport utility vehicles with high clearance and the ability to operate off pavement, on rugged terrain, as well as on highways.

**Fragmentation:** The process of dividing habitats into smaller and smaller units until their utility, as habitat is lost.

**Fuel Loading:** Accumulation of natural combustible materials (fuel) that could burn in a fire.

**Fugitive Dust:** Particulate matter emissions that do not pass through a stack, chimney, vent, pipe, or similar opening.
**Gateway Communities:** Towns in the areas surrounding the monument, that often serve as entrance points for visitors to the monument.

**Geographic Information System (GIS):** GIS is both a database designed to handle geographic data as well as a set of computer operations that can be used to analyze the data. In a sense, GIS can be thought of as a higher order map.

**Geomorphic Processes:** Processes that change the form of the earth, such as volcanic activity, running water, and glacial action.

**Geomorphology:** A subdiscipline of geography, concerned with the study of the form and development of the landscape, includes such specializations as sedimentology.

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

**Grazing Management Practices:** Techniques used to manage livestock and include season, duration (amount of the time grazing occurs), intensity of use, numbers of livestock, kind of livestock, and distribution (e.g., salting, herding, and water development).

**Grazing Plan or Program:** A combination of grazing management and/or facilities used to ensure an expectation of meeting or making significant progress toward meeting the Standards for Range-land Health.

**Great Rift:** The Great Rift volcanic rift zone is a belt of open cracks, eruptive fissures, shield volcanoes, and cinder cones, which varies in width between approximately 1 and 5 miles. It begins north of the Monument, approximately 6 miles from the topographic edge of the Snake River Plain, in the vent area of the Lava Creek flows located in the southern Pioneer Mountains. The Great Rift extends southeasterly from the Lava Creek vents for more than 50 miles to somewhere beneath the Wapi Lava Field.

**Ground Fire:** A fire that burns along the forest floor and does not affect trees with thick bark or high crowns.

**Groundwater:** Water that has percolated downward from the ground surface through the soil pores.

**Habitat:** The natural abode of a plant or animal, including all biotic, climatic, and soil factors affecting life.

**Herbaceous:** Pertaining to or characteristic of an herb (fleshy-stem plant) as distinguished from the woody tissue of shrubs and trees.

**Hornito:** A rootless spatter cone (fed by lava from within an underlying lava tube) that has a steep sided, inverted cone shape and is formed from an accumulation of pyroclastic materials.

**Hydrologic Cycle:** The circulation of water in the atmosphere, on the surface of the earth, in the soil, and in the underlying rocks.

**Hydrology:** The science of dealing with the study of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere.

**Igneous Rock:** Rock, such as granite and basalt, that has solidified from a molten or partially molten state.

**Indicator:** Components or attributes of a rangeland ecosystem that can be observed and/or measured that provides evidence of the function, productivity, health and/or condition of the ecosystem.
**Indigenous (species):** Any species of wildlife native to a given land or water area by natural occurrence.

**Inflation Structure:** An inflation structure occurs along a crack where swelling of underlying lava causes one side to become uplifted relative to the other, whether due to degassing or influx of more lava.

**Inholding:** A non-federal parcel of land that is completely surrounded by federal land.

**Integrated Pest Management (IPM):** The use of all appropriate technologies and management techniques to bring about an effective degree of pest prevention and suppression in a cost-effective and environmentally sound manner (as defined by the World Health Organization Conference, Geneva, 1985). This definition also applies to Integrated Weed Management (IWM).

**Invasive Species:** In this document, the definition for this term is “a plant or animal species (typically non-native) that rapidly spreads into or displaces a desirable native species or community.” [Exception: An “invasive species”, as defined in Executive Order 13112, is a species that is (1) non-native (or alien) to the ecosystem under consideration and (2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive species can be plants, animals, and other organisms (e.g., microbes)].

**Irretrievable:** One of the categories of impacts mentioned in the National Environmental Policy Act to be included in statements of environmental impacts. An irretrievable effect applies to losses of production or commitment of renewable natural resources. For example, while an area is used as a ski area, some or all of the timber production there is irretrievably lost. If the ski area closes, timber production could resume; the loss of timber production during the time that the area was devoted to winter sports is irretrievable. However, the loss of timber production during that time is not irreversible, because it is possible for timber production to resume if the area is no longer used as a ski area.

**Irreversible:** A category of impacts mentioned in statements of environmental impacts that applies to non-renewable resources, such as minerals and archaeological sites. Irreversible effects can also refer to effects of actions that can be renewed only after a very long period of time, such as the loss of soil productivity.

**Karst:** An area underlain by limestone in which erosion has formed sinkholes, fissures, caverns, and underground streams.

**Key Habitats:** Key habitats contain generally large-scale, intact sagebrush steppe areas that provide sage grouse habitat during some portion of the year.

**Source Habitat:** Source habitats are a subset of Key habitat that support concentrated sage grouse populations. Source habitats are also commonly referred to as population strongholds. Data indicate that sage grouse populations in Source habitats have been generally stable or increasing since the drought of the early 1990s.

**Isolated Habitat:** Isolated habitats are a subset of Key habitat that support relatively small sage grouse populations. Isolated habitats are separated from other Key habitat by developed land or unsuitable habitat, such as farmland, forests, or grassland.

**Kiosks:** A stall set up in a public place where one can obtain information, e.g., tourist information.

**Kipuka:** <ke’ poo ka> Hawaiian word meaning “key”, or opening such as for a door. A mound of older land, usually covered by vegetation, which is surrounded by a younger lava flow.

**Lacustrine:** Relating to or living near lakes.

**Landscape:** A large land area composed of interacting ecosystems that are repeated due to factors such as geology, soils, climate, and human impacts.

**Late Pleistocene-Holocene:** Beginning about 11,000 years ago, the end of the glacial period (“Ice Age”) due to the multiple expansion and retreat of glaciers.
**Lava:** Lava is magma (molten rock) that has erupted onto the earth's surface; also used to refer to magma after it has solidified.

**Lava Curb:** Lava curbs form when blobs of lava floating in a river of lava accumulate on the edges of the flow and begin to build out. If the curbs build out far enough on either side to connect to each other and create a crust, they create a new lava tube roof.

**Lava Field:** A large contiguous area of lava formed from a lava flow.

**Lava Flow:** A lava flow can be described as an outpouring of molten rock onto the earth's surface forming a river or sheet.

**Lava Fountains:** A vertical eruption of lava from a vent or along a fissure. Lava fountains can reach a height of 2000 ft.

**Lava Lake:** A lake of molten lava, usually basaltic, contained in a vent, crater, or broad depression of a shield volcano.

**Lava Toe:** Small, bulbous extensions of lava that form at the front of pahoehoe flows by breaking through crusts on the flow front.

**Lava Tube:** Lava tubes form when the surface of flowing lava congeals forming a crust. The lava underneath the solidified crust continues to flow, now insulated from the cooling air. When the lava eruption ceases, and if the tube drains, a large tubular cave may be left behind.

**Leasable Mineral:** A mineral such as oil shale, oil and gas, phosphate, potash, sodium, geothermal resources, and all other minerals that may be developed under the Mineral Leasing Act of 1920, as amended.

**Lee (or Leeward) Side:** The side of something that is sheltered from the wind.

**Lek:** An assembly area where birds, especially sage grouse, carry on display and courtship behavior.

**Levee:** A natural or manmade feature of the landscape that restricts movement of water into or through an area.

**Licensed Vehicle:** A motor vehicle operating under a current state registration.

**Lichen:** A mutualistic association of a fungus and photosynthetic organism.

**Limited Designation (motorized travel):** BLM designation meaning that some restrictions apply to motorized travel on a specified route or in a specified area.

**Lithic Scatter:** Pertaining to or composed of stone scatter; a form of an archaeological resource.

**Litter:** Dead plant or animal material on the soil surface.

**Livestock Developments; Livestock Management Facilities:** Physical facilities, such as fences, water developments, and corrals that are used to handle and control livestock.

**Loess:** Unconsolidated, silt-sized particles with accessory clay and sand particles that are deposited primarily by the wind. Loess that has filtered down into cracks in the lava and between the cinders provides the growth medium for vegetation.

**Magma:** Molten rock beneath the earth's surface.

**Management Framework Plan (MFP):** Bureau of Land Management land use plan, predecessor to the Resource Management Plan (RMP).

**Mechanical Treatment:** Use of mechanical equipment for seeding, brush management, and other management practices.

**Mechanized Vehicle:** Mechanical transport designed to replace human labor and/or human physical capabilities. Mechanized vehicles include mountain bikes, horse drawn wagons, big game carriers, handcarts, and hang gliders.
**Mesic:** Conditioned by a temperate moist climate; neither dry nor wet; pertaining to conditions of medium moisture supply.

**Metamorphic:** Pertaining to, produced by, or exhibiting certain changes that minerals or rocks may have undergone since their original deposition, especially applied to the recrystallization which sedimentary rocks have undergone through the influence of heat and pressure, after which they are called metamorphic rocks.

**Microbiotic Crust:** Community of non-vascular primary producers that occur as a “crust” on the surface of soils and made up of a mixture of algae, lichens, mosses, and cyanobacteria (bluegreen algae).

**Midden:** The accumulation of debris and domestic waste products resulting from human use, especially an accumulation of shells or of cinders, bones, and other refuse on the supposed site of the dwelling places of prehistoric tribes. The long-term disposal of refuse can result in stratified deposits, which are useful for relative dating.

**Mineral Materials:** Materials such as common varieties of sand, stone, gravel, pumice, pumicite, and clay, that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended.

**Mineral Rights:** Ownership of all minerals, including all rights needed for access, exploration, development, mining, ore dressing, and transportation.

**Mineral Soil:** Soil that consists mainly of inorganic material, such as weathered rock, rather than organic matter.

**Mineral Withdrawal:** A withdrawal of public lands that are potentially valuable for leasable minerals. This precludes the disposal of the lands except with a mineral reservation, or unless the lands are found to not be valuable for minerals.

**Minority:** Defined by the U.S. Census as individuals who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

**Mitigation Measures:** Constraints, requirements, or conditions imposed to reduce or eliminate an anticipated impact to environmental, socioeconomic, or other resource value from a proposed action.

**Modification:** A fundamental change in the provisions of a lease stipulation, either temporarily or for the term of the lease. A modification may include an exemption from or alteration to a stipulated requirement. The modification may or may not apply to all other sites within the leasehold to which the restrictive criteria apply.

**Motorized Vehicle:** Vehicle powered by an engine, usually internal combustion.

**Multiple Use Management:** The definition of multiple use is defined in the Federal Policy and Management Act of 1976 as follows: “The management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resource or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform with changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historic values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of the uses that will give the greatest economic return or the greatest output.”
**Museum Collections:** Objects, specimens, and archival and manuscript collections that are important resources providing valuable information about processes, events, and interactions among people and the environment.

**National Ambient Air Quality Standards (NAAQS):** The allowable concentrations of air pollutants in the ambient (public outdoor) air specified in 40 CFR 50. NAAQS are based on the air quality criteria and divided into primary standards (allowing an adequate margin of safety to protect the public health) and secondary standards (allowing an adequate margin of safety to protect the public welfare).

**National Environmental Policy Act of 1969 (NEPA):** The federal law that established a national policy for the environment and requires federal agencies to (1) become aware of the environmental ramifications of their proposed actions, (2) fully disclose to the public proposed federal actions and provide a mechanism for public input to federal decision making, and (3) prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

**National Register of Historic Places (NRHP):** The official list, established by the National Historic Preservation Act, of the nation’s cultural resources worthy of preservation. The NRHP lists archaeological, historic, and architectural properties (districts, sites, buildings, structures, and objects) nominated for their local, state, or national significance by state and federal agencies and approved by the National Register Staff.

**National Wild and Scenic Rivers System:** Established by the Wild and Scenic Rivers Act of 1958 to protect rivers and their immediate environments that have outstanding scenic, recreation, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in free-flowing conditions. The system provides for the designation of three types of rivers: Recreation, Scenic, and Wild.

**Native American Graves Protection and Repatriation Act (NAGPRA):** Requires Federal Agencies to inventory human remains and associated funerary objects in existing Federal Museum collections and to provide culturally affiliated tribes with the inventory of collections. NAGPRA also requires repatriation, on request, to the culturally affiliated tribes.

**Native American Tribe:** Any indigenous cultural group in the conterminous United States that the Secretary of the Interior recognizes as possessing tribal status, i.e. federally recognized (listed annually in the Federal Register).

**Native Species:** Plants or animals indigenous to the area.

**Natural Quiet:** Refers to the state of having only natural sources of sound: wind, rustling leaves, water, and animal calls, for example.

**Naturalness:** In Section 2(c) of the Wilderness Act, the wilderness characteristic in which an area “generally appears to have been affected primarily by the forces of nature, with the imprint of people’s work substantially unnoticeable.”

**Night Sky:** A sky free of artificial light sources and related light pollution.

**Non-native Species:** Plants or animals that are not indigenous to the area. (See also “Exotic Species.”)

**Nonpoint Source Pollution:** Pollution whose source is not specific in location. The sources of the discharge are dispersed, not well defined, or constant. Rainstorms and snowmelt often make this type of pollution worse. Examples include sediments from logging activities and runoff from agricultural chemicals.

**Non-renewable Resource:** A resource whose total quantity does not increase measurably over time, so that each use of the resource diminishes the supply.

**Nonvascular Plant:** Plants that do not have specialized tissues for conducting water and synthesized foods, such as a moss or liverwort.
Notice of Intent: A notice in the Federal Register of intent to prepare an Environmental Impact Statement on a proposed action.

Noxious Weeds: According to the Federal Noxious Weed Act (Public Law 93-629), a weed that causes disease or has other adverse effects on humans and their environment and is therefore detrimental to public health and the agriculture and commerce of the United States. This is a legal designation by the state of Idaho.

Nutrient Cycle: The cyclical process by which plants and animals use chemical compounds and elements in the soil, water, and atmosphere to produce plants and animals and the decomposition of plants and animals to return chemical compounds and elements to the soil, water, and air for future use.

Obligate: Essential, necessary, unable to exist in any other state, mode, or relationship. See “Sagebrush Obligate.”

Off-Highway Vehicle (OHV): Any motorized vehicle designed for or capable of cross-country travel over lands, water, sand, snow, ice, marsh, swampland, or other terrain.

Off-Highway Vehicle Management Designations: Designations apply to all off-road vehicles regardless of the purposes for which they are being used. Emergency vehicles are excluded. The OHV designation definitions have been developed in cooperation with representatives of the U.S. Forest Service, National Park Service, and BLM state and district personnel.

Open: Designated areas and trails where OHVs may be operated. The BLM designation meaning that motorized travel on a specific route or in a specific area is permitted.

Limited: Designated areas and trails where the use of an OHV is subject to restrictions, such as limiting the dates and times of use (seasonal restrictions); limiting use to designated roads and trails; and limiting use to existing roads and trails. Combinations of restrictions are possible.

Closed: Designated areas, roads, and trails where the use of an OHV is permanently or temporarily prohibited. Emergency use of vehicles is allowed.

Pahoehoe: A Hawaiian term for a basaltic lava flow that has a smooth, billowy, or ropy surface.

Paleoecology: The study of the relationship of extinct organisms or groups of organisms to their environments.

Paleontological Resources (Fossils): The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.

Paleontology: The study of the fossil record of past geological periods and of the phylogenetic relationships between ancient and contemporary plant and animal specials.

Palustrine: Non-tidal inland wetlands dominated by terrestrial and emergent vegetation.

Particulate Matter: Fine liquid or solid particles suspended in the air and consisting of dust, smoke, mist, fumes, and compounds containing sulfur, nitrogen, and metals, typically averaging one micron or smaller in diameter.

Perennial Vegetation: Plants that have life cycle of 3 or more years.

Permitted Use: The forage allocated by, or under the guidance of, an applicable land use plan for livestock grazing in an allotment under a permit or lease and is expressed in animal unit months (AUMs).

Permittee: A person or organization legally permitted to graze a specific number and class of livestock on designated areas of public land during specified seasons each year.

pH: A measure of acidity or hydrogen ion activity. Neutral is pH 7.0. All values below 7.0 are acidic, and all values above 7.0 are alkaline.
**Phreatic:** Of or relating to groundwater.

**Pictograph:** Aboriginally painted designs on natural rock surfaces. Red ochre is the most frequently used pigment and natural or abstract motifs may be represented.

**Pioneer Plants:** Those that establish themselves first on disturbed areas or bare soil.

**Pit Crater:** Also known as a volcanic sink, is a circular-shaped depression with steep to vertical walls that formed by collapse of the ground that results from the removal of support such as from the withdrawal of the underlying magma.

**Playa:** A dried-up, flat-floored area representing the bottom of a shallow, undrained lake basin in which water accumulates and is often quickly evaporated.

**Pleistocene Age:** The latest major geological epoch from 11,000 to 2 million years ago, the time of human evolution. Also known as the “Ice Age” due to the multiple expansion and retreat of glaciers.

**Pre-existing Use:** Land use that may not conform to a zoning ordinance but existed prior to the enactment of the ordinance.

**Prescribed Burning:** Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions which allow the fire to be confined to a predetermined area and at the same time to produce the fire line intensity and rate of spread required to attain planned resource management objectives.

**Prescribed Fire:** Controlled application of fire to natural fuels under conditions of weather, fuel moisture, and soil moisture that would allow confinement of the fire to a predetermined area and, at the same time, would produce the intensity of heat and rate of spread required to accomplish certain planned benefits to one or more objectives to wildlife, livestock, and watershed values. The overall objectives are to employ fire scientifically to realize maximum net benefits at minimum environmental damage and acceptable cost.

**Prescribed Natural Fire:** Same as “Wildlife Fire Use.”

**Pressure Plateau:** A pressure plateau forms from a sill-like injection of new lava beneath the crust of an earlier flow that has not completely solidified.

**Pressure Ridge:** Elongated uplift of the congealing crust of a lava flow believed to be caused by the pressure of the underlying, still flowing, lava.

**Public Land:** Any land or interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except for (1) land located on the Outer Continental Shelf and (2) land held for the benefit of American Indians, Aleuts, and Eskimos.

**Pumice:** Pumice is a light colored, frothy volcanic rock having the composition of rhyolite. It is often buoyant enough to float on water.

**Pyroclastic:** Pyroclastic is a term that refers to volcanic rock material that is formed by a volcanic explosion or by ejection from a volcanic vent.

**Quartzite:** A granular stone formed of fused quartz grains. Commonly white, yellow or red. Used as a raw material, for flaked stone tools.

**Radiocarbon Dating:** An absolute dating method based on the radioactive decay of Carbon-14 contained in organic materials.

**Rafted Block:** Volcanic fragment that was caught up in a lava flow and detached from its source, such as a piece of crater-wall carried off much like an iceberg.

**Range Management:** The art and science of planning and directing range use intended to yield the sustained maximum animal production and perpetuation of the natural resources.

**Rangeland:** Land on which the potential natural vegetation is predominantly grasses, grass-like plants, forbs, or shrubs suitable for grazing or...
browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundra, and areas that support certain forb and shrub communities.

Rangeland Condition: The present status of a unit in terms of specific values or potential.

Rangeland Health: The degree to which the integrity of the soil and ecological processes of rangeland ecosystems is maintained.

Rangeland Improvements: Any activity or program on or relating to rangelands that is designed to improve forage production, change vegetation composition, control patterns of use, provide water, stabilize soil and water conditions, and enhance habitat for livestock, wildlife, and wild horses and burros. Rangeland improvements include land treatments (e.g., chaining, seeding, burning, etc.), water developments, fences, and trails.

Raptor: Bird of prey, such as the eagle, falcon, hawk, owl, or vulture.

Record of Decision (ROD): A document signed by a responsible official recording a decision that was preceded by the preparing of an Environment Impact Statement.

Reclamation: The reconstruction of disturbed ecosystems by returning the land to a condition approximate or equal to that which existed prior to disturbance, or to a stable and productive condition compatible with the land use plan. The immediate goal of reclamation is to stabilize disturbed areas and protect both disturbed and adjacent undisturbed areas from unnecessary degradation.

Recreation Visitor Day: Any recreational activity taking place within a 24-hour period, or portion thereof, for each individual recreating on public lands.

Rehabilitation: The activities necessary to repair damage or disturbance caused by wildfire or the fire suppression activity. Rehabilitation treatments can include herbicide use to control weeds and seeding with desirable vegetation.

Residual Vegetation: Amount, cover, and species composition of the vegetation on a site after it has been grazed for a period of time.

Resource Advisory Councils (RACs): Advisory councils appointed by the Secretary of the Interior and consisting of representatives of major public land interest groups (commodity industries, recreation, environmental, and local area interests) in a state or smaller area. RACs advise the Bureau of Land Management, focusing on a full array of multiple use public land issues. RACs also help develop fundamentals for rangeland health and guidelines for livestock grazing.

Resource Management Plan (RMP): A land use plan as described by the Federal Land Policy and Management Act to guide resource management and use allocation on public lands and resources administered by the BLM.

Rest: Nongrazing for a specified period of time, generally a full growing season up to one full year.

Restoration: Actions that proactively treat degraded vegetation with the intent of meeting resource management objectives. Restoration treatments can include prescribed fire, herbicide use to control weeds, and seeding with desirable vegetation.

Restoration Habitats: Potential restoration habitats have the potential to provide sage grouse habitat in the future. These are sagebrush steppe that have been converted to grassland or woodland or are in the successional process of converting to woodland. These areas are located in close proximity to Key or Source habitats. Data indicate that sage grouse historically occupied these areas and may still utilize some sporadically, such as during migrations. Restoration habitats have a high likelihood of being reoccupied if habitat suitability improves. The following are potential restoration habitats:

Restoration Type 1 (R1): Sagebrush-limited areas with acceptable understory conditions in terms of perennial grass species composition and may include native and seeded grass rangelands. These are important areas to protect from...
wildfire and encourage sagebrush establishment and retention. Inexpensive management treatments may be needed (e.g., sagebrush and/or forb seedings).

**Restoration Type 2 (R2):** Existing sagebrush cover in these areas may or may not be adequate to meet the needs of sage grouse, but understory herbaceous conditions are poor. Undesirable plants such as cheatgrass, medusa head rye, or other exotics are common to dominant.

**Restoration Type 3 (R3):** Key or Source habitat with juniper or other conifer encroachment. Sagebrush is usually present but is being threatened or reduced by conifer expansion. Opportunities exist for improving habitat through appropriate fire management response, prescribed fire, or chemical or mechanical means.

**Revegetation:** The reestablishment and development of a plant cover by either natural or artificial means, such as re-seeding.

**Ribbon Bombs:** Ribbon bombs are strands of fluid lava ejected from a vent that takes the shape of thin twisted “ribbons.”

**Rift Zone:** Area characterized by an open volcanic fissure.

**Right-of-Way (ROW):** A permit or an easement that authorizes the use of public land for certain specified purposes, commonly for pipelines, roads, telephone lines, electric lines, and reservoirs. It is also the reference to the land covered by such an easement or permit.

**Right-of-Way Corridor:** A parcel of land that has been identified by law, Secretarial Order, through a land use plan, or by other management decision as being the preferred location for existing and future right-of-way grants and suitable to accommodate one type of right-of-way or one or more rights-of-way which are similar, identical, or compatible.

**Riparian Area/Habitat:** A form of wetland transition between permanently saturated wetlands and uplands. The areas exhibit vegetation or physical characteristics that reflect permanent surface or subsurface water influence.

**Riparian Habitat:** Riparian habitat is defined as an area of land directly influenced by permanent (surface or subsurface) water and has visible vegetation or physical characteristics reflective of permanent water influence.

**Riparian Vegetation:** Plants adapted to moist growing conditions along streams, waterways, ponds, or other permanent water body.

**Road:** A transportation facility used primarily by vehicles having four or more wheels, documented as such by the owner and maintained for regular and continuous use. Includes the following classes:

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

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

**Class C Roads** have an unimproved natural surface and may be either constructed or established over time by repeated passage of vehicles. The natural surface may be dirt, sand, or rock. A minimal amount of maintenance, if any at all, is limited primarily to spot surface grading to allow vehicle passage within the original road corridor. Class C roads accommodate a much smaller range of vehicles than Class B roads, usually high clearance two-wheel drive
and four-wheel drive vehicles. Seasonal conditions or wet weather may render these roads impassable at any time. Class C roads are found primarily in the Passage and Primitive zones.

**Class D Roads** are primitive roads that were not constructed, but established over time by the passage of motorized vehicles. These roads receive no maintenance or grading. Occasional emergency repairs or limited maintenance may be performed for resource protection and administrative purposes. These roads are generally referred to as “two-tracks.” The condition of these roads varies from sometimes passable by a passenger car, to only suitable for high clearance four-wheel drives vehicles. Seasonal conditions or wet weather may render these roads impassable at any time. Class D roads are found primarily in the Primitive Zone.

**Rootless Vent:** See Hornito.

**Route:** A road-like feature by vehicles having two, three, four, or more wheels, but not declared a road by the owner and which receives no maintenance to guarantee regular and continuous use.

**Sacred Site:** Any specific, discrete, narrowly delineated location on Federal land that is identified by a Native American Tribe, or Native American individual determined to be appropriately authoritative representative of a Native American religion, as sacred by virtue of its established religious significance to, or ceremonial use by, a Native American religion.

**Sagebrush Obligates:** Restricted to sagebrush habitats during the breeding season or year round.

**Sagebrush Steppe Community:** A semi-arid plant community that is characterized by a predominance of big sagebrush and other sagebrush species, plus grasses and forbs.

**Saleable Minerals:** Minerals that may be sold under the Material Sale Act of 1947, as amended. Included are common varieties of sand, stone, gravel, and clay.

**Scoping:** The ongoing process to determine public opinion, receive comments and suggestions, and determine issues during the environmental analysis process. It may involve public meetings, telephone conversations, and/or letters.

**Scenic River:** A river or section of a river that is free of impoundments and whose shorelines are largely undeveloped but accessible in places by roads.

**Seasonal Utilization:** The amount of utilization that has occurred before the end of the growing season.

**Season-Long Use:** The term season-long use or passive, continuous grazing means grazing throughout the growing period, with little or no effort to control the amount of distribution of livestock use in area/pasture/allotments.

**Section 7 Consultation:** The requirement of Section 7 of the Endangered Species Act that all federal agencies consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service if a proposed action might affect a federally listed species or its critical habitat.

**Section 106 Consultation:** Also known as the 36 CFR 800 process. Discussions between a federal agency official and the Advisory Council on Historic Preservation, State Historic Preservation Officer, and other interested parties concerning historic properties that could be affected by a specific undertaking. Section 106 is the portion of the National Historic Preservation Act that outlines the procedure. The procedure is codified in 36 CFR 800.

**Section 110:** The section of NHPA that requires Federal Agencies to complete cultural resources surveys and reports for all its lands and existing projects.

**Sedimentary Rocks:** Rocks, such as sandstone, limestone, and shale, that are formed from sediments or from transported fragments deposited in water.
Seedlings: A tree grown from seed that has not reached a height of 3 feet or a diameter of 2 inches.

Sensitive Species: Plant and animal species not yet officially listed but that are undergoing status review for listing on the U.S. Fish and Wildlife Service official threatened and endangered list; species whose populations are small and widely dispersed or restricted to a few localities; and species whose numbers are declining so rapidly that official listing may be necessary. Sensitive species are listed by the Bureau of Land Management State Directors.

Shelly Pahoehoe: A type of pahoehoe lava that forms from highly gas-charged lava, often near vents or tube skylights, with a surface that consists of broken blisters, small open lava tubes, and thin crusts. In the Craters of the Moon Lava Field, surface crusts are typically about 10 centimeters (3.9 inches) thick.

Shield Volcano: A broad, gently sloping volcano that has a flattened dome shape, not unlike that of a knight’s shield. Shield volcanoes usually cover a large area and form from overlapping and interfingered, low viscosity lava flows.

Significant Progress: Measurable and/or observable (i.e., photography, use of approved qualitative procedures) changes in the indicators that demonstrate improved rangeland health.

Silt: Earthy sediment of fine particles of rock and soil suspended in and carried by water.

Slabby Pahoehoe: A type of pahoehoe with a surface that consists of a jumbled arrangement of jagged plates, or slabs, of pahoehoe that were rafted, sheared, tilted, upturned, overturned, and heaped on each other.

Spatter: An accumulation of very fluid pyroclasts (ejected material).

Spatter Cone: A spatter cone is a low, steep sided cone formed from the accumulation of spatter ejected from a vent or fissure.

Spatter Rampart: A broad, elongate embankment of spatter that is built by a curtain of fire and forms along either side of a fissure.

Special Management Areas: An area containing one or a combination of unique resources or values that receive more intensive management (e.g., ACECs, Special Recreation Management Areas, Wild and Scenic Rivers, etc.).

Special Status Species: Wildlife and plant species that are either federally listed as threatened or endangered, proposed threatened or endangered, candidate species, state-listed as threatened or endangered, or listed by a Bureau of Land Management State Director as sensitive or determined priority.

Speleothem: A mineral deposit of calcium carbonate that precipitates from solution in a cave.

Spindle Bomb: Volcanic bombs with a twisted shape; spindle bombs form from blobs of fluid lava that often take on a smooth stoss side (front side), a rougher lee side (backside) marked by ribs and fluting caused by frictional resistance to air, and have prominent, usually twisted, projections on either side that form as ribbon bombs separate.

Spiny Pahoehoe: A type of pahoehoe with a surface that consists of elongate vesicles that formed from stretching of very viscous lava, giving it a surface texture of small ridges or spines.

Squeeze Up: A bulbous blob of viscous, molten lava that was forced, by pressure, up through a fracture or opening in solidified lava.

Subsistence Use: The customary and traditional use by Native Americans of renewable resources on the public lands.

Successional Stage: A stage of development of a plant community with another. Conditions of the prior plant community (or successional stage) create conditions that are favorable for the establishment of the next stage.
SUM06 Statistic: The sum of hourly average ozone concentrations greater than 0.06 parts per million; used to assess potential air quality impacts relating to ozone levels.

Sustainable: The yield of a natural resource that can be produced continually at a given intensity of management is said to be sustainable.

Sustainability: The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

Suspended Animal Unit Months (AUMs): Temporary withholding from active use, through a decision issued by the authorized officer or by agreement, of part or all of the permitted use in a grazing permit or lease.

Sustained Productivity of the Range: Maintaining the production capability of the rangeland for long periods of time (100 years or more).

Tachylyte: A black, green or brown volcanic glass that forms when basaltic magma is rapidly chilled.

Tailings: The waste matter from ore after the extraction of economically recoverable metals and minerals.

Taxa: A group of organisms sharing common characteristics in varying degrees of distinction and constituting one of the categories in taxonomic classification, such as a phylum, order, family, genus, or species.

Take: As defined by the Endangered Species Act, “to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or attempt to engage in any such conduct.”

Tension Fractures: Tension fractures result from stresses that pull rocks apart.

Tephra: Volcanic ash.

Tertiary Period: The earlier (5 million to 12 million years ago) of the two geologic periods in the Cenozoic era of geologic time.

Threatened and Endangered Species: As defined in the Endangered Species Act of 1973, as amended (Public Law 93-205; 87 Stat. 884), an endangered species means “any species which is in danger of extinction throughout all or a significant portion of its range” and threatened species means “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Whether a species is threatened or endangered is determined by the following factors: (1) present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, sporting, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; or (5) other natural or human-made factors.

Total Dissolved Solids (TDS): Total concentration of salts in solution. High TDS solutions can change the chemical nature of water, exert varying degrees of osmotic pressure, and often become lethal to aquatic life.

Traditional Lifeway Values: Values that are important for maintaining a group’s traditional system of religious belief, cultural practice, or social interaction. A group’s shared traditional lifeway values are abstract, nonmaterial, ascribed ideas that cannot be discovered except through discussions with members of the group. These values may or may not be closely associated with definite locations.

Traditional Cultural Properties: A cultural property that is eligible for inclusion in the National Register of Historic Places because of its association with a living community’s cultural practices or beliefs that (a) are rooted in that community’s history and (b) are important in maintaining the community’s continuing cultural identity.

Trail: A linear feature constructed (or established by past use), with a single tread designated, designed, and intended for travel primarily by foot, beasts of burden, two-wheeled vehicles (e.g., mountain bikes and motorcycles), and various special equipment or machinery generally used for individual travel. Facilities used by jeep or four-
wheel drive are typically classified as “roads” or “ways.” Trails are sometimes referred to as “single track.”

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

**Class 2 Trails** are open to motorized/mechanized travel in addition to foot travel, pack animal, horseback, and other forms of passage. Examples of prohibited forms of travel include any vehicle with a footprint wider than an 18-inch tread (all-terrain vehicles, four-wheelers, and four-wheel-drive vehicles).

**Treaty:** A formal agreement between the United States and one or more Native American tribes. Typically, these arrangements ceded lands to the United States, reserving certain rights, privileges, and/or lands to the Native American signatories.

**Treaty Right:** Rights of land use retained by Native American tribes through treaty with the United States; such rights commonly include, but may not be limited to, hunting, fishing and gathering.

**Tree Mold:** A tree mold or lava tree forms when lava flows around a tree and chills, leaving behind a “mold” of the space occupied by the tree, or impression of the charred wood. Tree molds can also be horizontal if the tree was knocked down by the lava flow.

**Trust Responsibility (as so referred to as fiduciary responsibility):** The trust responsibility of the United States, executed through the Secretary of the Interior, to uphold obligations of the Federal Government to federally recognized Native American tribes. Court decisions have interpreted this responsibility to extend to all Federal agencies. This obligation requires a reasonable and good faith effort to identify and consider, and to carry out programs in a manner sensitive to and consistent with, Native American concerns and tribal government planning and resource management programs.

**Trust Resource:** Refers to those resources such as plants, animals and fish that Federally Recognized Tribes make use of when exercising their treaty rights on public lands; not to be confused with trust assets, which are those things held in trust by the federal government and managed solely for the benefit of tribes, such as trust lands, mineral estate on reservation, or grazing receipts.

**Tuff:** A compacted pyroclastic deposit of volcanic ash and dust that may contain up to 50 percent sediments such as sand or clay.

**Tumulus/Tamuli:** A tumulus is a dome or mound shaped structure on the crust of a lava flow caused by pressure from the difference in rates of flow beneath the crust. Unlike a volcanic blister a tumulus is a solid structure.

**Turbidity:** Muddiness created by stirring up sediment or having foreign particles suspended.

**Two-Wheel Drive (2WD):** Vehicle clearance generally lower than with a 4WD and not designed to travel off pavement.

**Understory:** Herbaceous plant components, including grasses and forbs, that grow beneath the overstory in stand of woody shrubs; or the herbaceous and woody shrubs growing beneath the overstory in a stand of trees.

**Ungulates:** Hoofed animals, including ruminants but also deer and elk.

**Untrammeled:** Not subject to human controls and manipulations that hamper the free play of natural forces. A word describing desired wilderness conditions used in the Wilderness Act.

**Utilization:** The portion of forage that has been consumed (or destroyed) by livestock, wild horses, wildlife, and insects during a specified period. The term is also used to refer to a pattern of such use (43 CFR 4100.0-5).
Valid Existing Rights: Locatable mineral development rights that existed when the Federal Land Policy and Management Act (FLPMA) was enacted on October 21, 1976. Some areas are segregated from entry and location under the Mining Law to protect certain values or allow certain uses. Mining claims that existed as of the effective date of the segregation may still be valid if they can meet the test of discovery of a valuable mineral required under the Mining Law. Determining the validity of mining claims located in segregated lands requires BLM to conduct a validity examination and is called a “valid existing right” determination.

Vascular: Having vessels for circulating or transmitting plant or animals fluids.

Variety Class: A way to classify landscapes according to their visual features. This system is based on the premise that landscapes with the greatest variety or diversity have the greatest potential for scenic value.

Vegetation Treatment: Changing the characteristics of an established vegetation type for the purpose of improving rangeland forage or wildlife habitat resources. Treatments are designed for specific areas and differ according to the area’s suitability and potential. The most common land treatment methods alter the vegetation by chaining, spraying with pesticides, burning, and plowing, followed by seeding with well-adapted desirable plant species.

Vesicle: A cavity or variable space in lava formed by the entrapment of a gas bubble while the lava was solidifying.

Visitor Day: Twelve visitor hours which one or more persons may aggregate continuously, intermittently, or simultaneously.

Visitor Use: Passive or active recreational activity on public land, which may involve either consumptive or non-consumptive use of the resources.

Visual Resource: A part of the landscape important for its scenic quality. It may include a composite of terrain, geologic features, or vegetation.

Visual Resource Management (VRM): A tool used by the Bureau of Land Management to help characterize and preserve the quality of visual resources. VRM classes are determined on the basis of overall scenic quality, distance from travel routes, and sensitivity to change:

Class I: Provides primarily for natural ecological changes only. It is applied to wilderness areas, some natural areas, and similar situations where management activities are to be restricted.

Class II: Changes in the basic elements caused by a management activity may be evident in the characteristic landscape, but the changes should remain subordinate to the visual strength of the existing character.

Class III: Contrasts to the basic elements caused by management activity may be evident and begin to attract attention in the landscape, but the changes should remain subordinate in the existing landscape.

Class IV: Contrasts may attract attention and be a dominant feature in the landscape in terms of scale, but the change should repeat the basic element of the characteristic landscape.

Volcanic Rift Zone: An elongate system of crustal fractures associated with underlying dike complexes.

Volcano: A vent in the earth’s surface through which magma, gases, or ash may erupt. The structure produced by ejected material.

Watershed: An area that collects and discharges runoff to a given point. It is often used synonymously with drainage basin or catchment.

Way: A road-like feature used by vehicles having four or more wheels, but not declared a road by the owner and which receives no maintenance to guarantee regular and continuous use.

Wayside: The edge of a road, path, or way (e.g., roadside).
**Wetland:** Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and which under normal circumstances support a prevalence of vegetation typically adapted for life in saturated soil conditions. Typical wetlands include marshes, shallow swamps, sloughs, lakeshores, bogs, wet meadows, river overflows, mud flats, and riparian areas.

**Wilderness Area:** An area of federal land designated by the United States Congress and defined by the Wilderness Act of 1964 as a place “where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.” Designation is aimed at ensuring that these lands are preserved and protected in their natural condition. Wilderness areas, which are generally at least 5,000 acres or more in size, offer outstanding opportunities for solitude or a primitive and unconfined type of recreation; such areas may also contain ecological, geological, or other features that have scientific, scenic, or historical value.

**Wilderness Inventory:** A written description of resource information and accompanying map of those public lands that meet the wilderness criteria as established under Section 603(a) of the Federal Land Policy and Management Act and Section 2(c) of the Wilderness Act.

**Wilderness Study Area (WSA):** An area designated by a federal agency as having wilderness characteristics, thus making it worthy of consideration by congress for wilderness designation. While congress considers whether to designate a WSA as a permanent wilderness, the federal agency managing the WSA does so in a manner as to prevent impairment of the area’s suitability for wilderness designation.

**Wildfire:** An unwanted wildland fire, regardless of ignition source, which is unplanned, has escaped control, or does not meet management objectives and therefore requires a suppression response.

**Wildland Fire Use (also called “Wildland Fire for Resource Benefit”):** A naturally ignited fire allowed to burn under designated conditions to meet resource management objectives.

**Withdrawal:** Removal or “withholding” of public lands from operation of some or all of the public land laws (settlement, sale, mining, and or mineral leasing). An action which restricts the use or disposal of public lands, segregating the land from the operation of some or all of the public land and/or mineral laws and holding it for a specific public purpose. Withdrawals may also be used to transfer jurisdiction of management to other federal agencies.

**Xenolith:** An inclusion of a foreign body of rock in an igneous rock.

**Xeriscaping:** Landscaping with drought-tolerant vegetation.
**ABBREVIATIONS AND ACRONYMS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>°F</td>
<td>degrees Fahrenheit</td>
</tr>
<tr>
<td>μg/m³</td>
<td>micograms per cubic meter</td>
</tr>
<tr>
<td>ACEC</td>
<td>Area of Critical Environmental Concern</td>
</tr>
<tr>
<td>AGI</td>
<td>Areas of Geologic Interest</td>
</tr>
<tr>
<td>AMP</td>
<td>Allotment Management Plan</td>
</tr>
<tr>
<td>APHIS</td>
<td>Animal and Plant Health Inspection Service</td>
</tr>
<tr>
<td>ATV</td>
<td>all-terrain vehicle</td>
</tr>
<tr>
<td>AUM</td>
<td>animal unit month</td>
</tr>
<tr>
<td>BLM</td>
<td>Bureau of Land Management</td>
</tr>
<tr>
<td>BMP</td>
<td>Best Management Practice</td>
</tr>
<tr>
<td>CBA</td>
<td>Choosing by Advantages</td>
</tr>
<tr>
<td>CEQ</td>
<td>Council on Environmental Quality</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CRMP</td>
<td>Cultural Resource Management Plan</td>
</tr>
<tr>
<td>DEIS</td>
<td>Draft Environmental Impact Statement</td>
</tr>
<tr>
<td>DOE</td>
<td>United States Department of Energy</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Analysis</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>EPA</td>
<td>United States Environmental Protection Agency</td>
</tr>
<tr>
<td>ESA</td>
<td>Endangered Species Act</td>
</tr>
<tr>
<td>ESR</td>
<td>emergency stabilization or rehabilitation</td>
</tr>
<tr>
<td>ESRP</td>
<td>Eastern Snake River Plain</td>
</tr>
<tr>
<td>FAA</td>
<td>Federal Aviation Administration</td>
</tr>
<tr>
<td>FCC</td>
<td>Fire Condition Class</td>
</tr>
<tr>
<td>FCRPA</td>
<td>Federal Cave Resources and Protection Act</td>
</tr>
<tr>
<td>FEIS</td>
<td>Final Environmental Impact Statement</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>FLPMA</td>
<td>Federal Land Policy and Management Act</td>
</tr>
<tr>
<td>FMDA</td>
<td>Fire Management Direction Amendment</td>
</tr>
<tr>
<td>FMP</td>
<td>Fire Management Plan</td>
</tr>
<tr>
<td>FY</td>
<td>fiscal year</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>GMP</td>
<td>General Management Plan</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>I</td>
<td>Interstate</td>
</tr>
<tr>
<td>ICBEMP</td>
<td>Interior Columbia Basin Ecosystem Management Project</td>
</tr>
<tr>
<td>ICDC</td>
<td>Idaho Conservation Data Center</td>
</tr>
<tr>
<td>IDFG</td>
<td>Idaho Department of Fish and Game</td>
</tr>
<tr>
<td>IDL</td>
<td>Idaho Department of Lands</td>
</tr>
<tr>
<td>IDPR</td>
<td>Idaho Department of Parks and Recreation</td>
</tr>
<tr>
<td>IMBA</td>
<td>International Mountain Biking Association</td>
</tr>
<tr>
<td>IMP</td>
<td>Interim Management Policy</td>
</tr>
<tr>
<td>IMPROVE</td>
<td>Interagency Monitoring of Protected Environments Program</td>
</tr>
<tr>
<td>INEEL</td>
<td>Idaho National Environmental and Engineering Laboratory</td>
</tr>
<tr>
<td>INPS</td>
<td>Idaho Native Plant Society</td>
</tr>
<tr>
<td>ITD</td>
<td>Idaho Transportation Department</td>
</tr>
<tr>
<td>LAC</td>
<td>Limits of Acceptable Change</td>
</tr>
<tr>
<td>lbs/acre</td>
<td>pounds per acre</td>
</tr>
<tr>
<td>MBTA</td>
<td>Migratory Bird Treaty Act</td>
</tr>
<tr>
<td>MFP</td>
<td>Management Framework Plan</td>
</tr>
<tr>
<td>mg/L</td>
<td>milligrams per liter</td>
</tr>
<tr>
<td>MGM2</td>
<td>Money Generation Model (NPS cost estimating software)</td>
</tr>
<tr>
<td>Monument</td>
<td>Craters of the Moon National Monument and Preserve</td>
</tr>
<tr>
<td>MOU</td>
<td>Memorandum of Understanding</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Meaning</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
</tr>
<tr>
<td>NADP</td>
<td>National Atmospheric Deposition Program</td>
</tr>
<tr>
<td>NAGPRA</td>
<td>National American Graves Protection and Repatriation Act</td>
</tr>
<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
</tr>
<tr>
<td>NHPA</td>
<td>National Historic Preservation Act</td>
</tr>
<tr>
<td>NNL</td>
<td>National Natural Landmark</td>
</tr>
<tr>
<td>NOI</td>
<td>Notice of Intent</td>
</tr>
<tr>
<td>NPS</td>
<td>National Park Service</td>
</tr>
<tr>
<td>NRCS</td>
<td>Natural Resources Conservation Service</td>
</tr>
<tr>
<td>NRHP</td>
<td>National Register of Historic Places</td>
</tr>
<tr>
<td>NRV</td>
<td>natural range of variability</td>
</tr>
<tr>
<td>NTN</td>
<td>National Trends Network</td>
</tr>
<tr>
<td>NWI</td>
<td>National Wetlands Inventory</td>
</tr>
<tr>
<td>OHV</td>
<td>off-highway vehicle</td>
</tr>
<tr>
<td>PL</td>
<td>Public Law</td>
</tr>
<tr>
<td>Plan/EIS</td>
<td>Craters of the Moon National Monument and Preserve Management Plan/Environmental Impact Statement</td>
</tr>
<tr>
<td>PM</td>
<td>particulate matter (PM10 = PM less than 10 microns in diameter; PM2.5 = PM less than 2.5 microns in diameter)</td>
</tr>
<tr>
<td>ppb</td>
<td>parts per billion</td>
</tr>
<tr>
<td>ppm</td>
<td>parts per million</td>
</tr>
<tr>
<td>ppm/hr</td>
<td>parts per million per hour</td>
</tr>
<tr>
<td>PSD</td>
<td>Prevention of Significant Deterioration</td>
</tr>
<tr>
<td>R&amp;PP</td>
<td>Recreation and Public Purposes Act</td>
</tr>
<tr>
<td>RAC</td>
<td>Resource Advisory Committee</td>
</tr>
<tr>
<td>RMIS</td>
<td>Recreation Management Information System</td>
</tr>
<tr>
<td>RMP</td>
<td>Resource Management Plan</td>
</tr>
<tr>
<td>RNA</td>
<td>Reserved Natural Area</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>ROW</td>
<td>right-of-way</td>
</tr>
<tr>
<td>RV</td>
<td>recreational vehicle</td>
</tr>
<tr>
<td>SCORTP</td>
<td>State Comprehensive Outdoor Recreation and Tourism Plan</td>
</tr>
<tr>
<td>SH</td>
<td>State Highway</td>
</tr>
<tr>
<td>SHPO</td>
<td>State Historic Preservation Officer</td>
</tr>
<tr>
<td>Stat.</td>
<td>Statute</td>
</tr>
<tr>
<td>SCORTP</td>
<td>State Comprehensive Outdoor Recreation and Tourism Plan</td>
</tr>
<tr>
<td>SUM06</td>
<td>the sum of hourly average ozone concentrations greater than 0.06 parts per million</td>
</tr>
<tr>
<td>U.S.</td>
<td>United States</td>
</tr>
<tr>
<td>US</td>
<td>United States Highway ##</td>
</tr>
<tr>
<td>USC</td>
<td>United States Code</td>
</tr>
<tr>
<td>USDA</td>
<td>United States Department of Agriculture</td>
</tr>
<tr>
<td>USDI</td>
<td>United States Department of the Interior</td>
</tr>
<tr>
<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
</tr>
<tr>
<td>USGS</td>
<td>United States Geological Survey</td>
</tr>
<tr>
<td>USRD</td>
<td>Upper Snake River District</td>
</tr>
<tr>
<td>VRM</td>
<td>Visual Resource Management</td>
</tr>
<tr>
<td>WS</td>
<td>Wildlife Services of the United States Department of Agriculture, Animal and Plant Health Inspection Service</td>
</tr>
<tr>
<td>WSA</td>
<td>Wilderness Study Area</td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY


Boggs, Bill. 2002. Telephone conversation with Boggs, Outdoor Recreation Planner, BLM Idaho Falls Field Office, on May 21, 2002, and reference to Desert Area Fact Sheet (Crystal Ice Caves/Kings Bowl Area Development History).


Clark, David. 2003. Personal communication with David Clark, Chief of Interpretation, Craters of the Moon National Monument, and Scott Earl, Idaho Cave Survey Director.


Idaho Department of Fish and Game. 2002a. Sage grouse statewide habitat maps. Unpublished data. Idaho Dept. of Fish and Game, Boise, ID.

Idaho Department of Fish and Game. 2002b. Sage grouse statewide survey data. Unpublished data. Idaho Dept. of Fish and Game, Boise, ID.
Idaho Department of Fish and Game. 2003. Unpublished survey or observation data from Idaho Department of Fish and Game.


Idaho Cooperative Fish and Wildlife Research Unit, University of Idaho, Moscow, ID. <http://www.
wildlife.uidaho.edu/idgap/idgap_data.asp>.

Laverty, L. and J. Williams. 2000. Protecting People and Sustaining Resources in Fire-Adapted
Ecosystems: A Cohesive Strategy. The Forest Service Management Response to the General


Liljeblad, Sven. 1960. Indians of Idaho: A Condensed History of Peoples who lived here for more than


Evaluation Wide Group and the Interregional Marketing Transmission Subcommittee.

Millar, and M. Olwell (eds.). Restoring Diversity - Strategies for Reintroduction of Endangered

Idaho, Columbia Plateau Natural Region Low Sagebrush Theme, Low sagebrush/Idaho Fescue
Subtheme. Unpublished Report provided by Idaho Natural Heritage Program, Idaho Department of
Fish and Game. Boise, ID. pp. 34.

report on file at USDI Bureau of Land Management, Shoshone Field Office. 21 pp. plus appendices.


Treaty with the Eastern Band Shoshoni and Bannock 1868, commonly referred to as the Fort Bridger Treaty (15 Statute 673).


CRATERS OF THE MOON NATIONAL MONUMENT AND PRESERVE
Proposed Management Plan and Final Environmental Impact Statement


Williams, R. 2002. USDA Wildlife Services, Arco, ID. Personal communication.


LIST OF PREPARERS

The Craters of the Moon National Monument Planning Team
Jim Morris, NPS, Monument Superintendent
Rick VanderVoet, BLM, Monument Manager, Shoshone Field Office
Adrienne A. Anderson, NPS, Planning Team Captain
Barbara Bassler, BLM, Planner
John Apel, NPS, Resources Program Manager
Marny Apel, NPS, Planner
David Clark, NPS, Chief of Interpretation
Lisa Cresswell, BLM, Archaeologist
Jesse German, BLM, GIS Specialist
Dave Freiberg, BLM, Outdoor Recreation Planner
Julie Hilty, BLM, Botanist/Fire Ecologist
Paul McClain, BLM, Wildlife Biologist
Codie Martin, BLM, Rangeland Management Specialist
Mike Munts, NPS, Wildlife Biologist
Doug Owen, NPS, Geologist/Acting Chief of Interpretation
Mike Saras, BLM, GIS Specialist
Mike Wissenbach, NPS, NEPA Coordinator
Paige Wolken, NPS, Vegetation Ecologist

Consultants
Sandi Arena, US Fish & Wildlife Service, Pocatello, Idaho
Terry Gregory, Wildlife Biologist, Idaho Dept. of Fish and Game, Fairfield, Idaho
Terry Heslin, BLM, Idaho State Office, Boise, Outdoor Recreation Planner
Paul Oakes, BLM, Planner, Pocatello Field Office
Mitch Werner, BLM, Writer-Editor, Pocatello Field Office
Mel Kuntz, USGS, Geologist, Denver, CO
Mike McDonald, Wildlife Manager, Idaho Dept. of Fish and Game, Jerome, Idaho
Rebecca Carter, Socioeconomic Consultant, Sonoran Institute, Tuscon, AZ
Nancy Van Dyke, Senior Consultant, URS Corporation, Denver, CO
Lisa Pine, Environmental Planner, URS Corporation, Denver, CO
Brenda Miller, Editor, URS Corporation, Denver, CO
Andy Richardson, Editor, URS Corporation, Denver, CO
Jody Glennon, Staff Assistant, URS Corporation, Denver, CO
Susan Pella, Technical Typist, URS Corporation, Denver, CO
Aileen Torres, Technical Typist, URS Corporation, Denver, CO
INDEX


ACEC (Area of Critical Environmental Concern) 47, 56, 60, 85, 136, 169, 178, 204, 225, 278-280, 324, Appendix G

air quality 11, 19, 20, 34, 71, 75, 141-143, 166, 218, 240-245, 286, 288, 290, 293

American Indians - see Native Americans

animal unit month (AUM) 154, 158, 231, 268

Arco 6, 20, 43, 49, 56, 62, 134, 143, 148, 166, 168, 175, 176, 179, 185, 187, 192, 194-197, 204, 205, 252, 259, 262, 263, 276-279, 281, 282, 287, 295, 300, 301, 303, 305, 307, 316, 318, 324, 326, 327

authorized uses 18, 156, 318

Bellevue 181, 183, 191, 193, 194-197

bicycling 71

Blaine County 120, 137, 146, 165, 179, 180-183, 185, 191, 196, 202, 204, 205, 276-279, 300, 302, 305, 327

boundary adjustments 3, 23, 70

Butte County 4, 137, 146, 148, 165, 179, 185-187, 192, 197, 203, 327

camping 43, 172, 173, 175, 267, 269, 270, 286-291, 293, 324


carrying capacity 22

cave management 15, 17, 324

concession/concessioner(s) 18, 160, 175, 180, 206, 326

cumulative impact scenario 14, 202, 203

endangered species 126, 129, 136, 137, 235, 236, 278, 316

environmental justice 21

erosion 74, 75, 108, 111, 126, 142, 145, 175, 207-222, 224, 226, 228, 247, 249-252, 256, 256, 259, 261, 262, 264, 305-310

ethnographic resources 144, 146, 147, 245, 254-260


floodplains 21, 111, 130

gateway communities 6, 18, 194, 283, 284, 292, 300, 304, 318, 326


Great Rift 3, 4, 6, 7, 11, 14, 18, 19, 69, 105, 107, 109, 133, 146, 163, 165, 166, 168, 169, 177, 208, 209, 278, 279

Hailey 178-181, 183, 191-197, 317, 318, 327

hiking 43, 71, 110, 160, 172, 173, 175, 177, 284, 288, 290, 301


CRATERS OF THE MOON NATIONAL MONUMENT AND PRESERVE
Proposed Management Plan and Final Environmental Impact Statement
Idaho Transportation Department 154, 205, 272


interim management guidelines 6, 43, 325, Appendix B

Ketchum 181, 183, 191-197, 327


Lincoln County 4, 178, 180, 181, 183, 190, 197, 203, 327


Minidoka County 4, 137, 148, 179, 189-192, 194-197, 203, 327

mitigation 74, 75, 203, 213, 254, 305

National Environmental Policy Act (NEPA) 14, 25, 43, 69, 136, 137, 294-297, 315, 320, 326
National Historic Preservation Act (NHPA) 14, 144, 245, 254, 320

National Register of Historic Places 145, 245, 316

Native Americans 11, 122, 144-148, 245, 254-258, 260, 315, 316, 326

noxious weeds 62, 117, 119, 120, 122, 126, 168, 202, 204, 205, 219-227, 278, 279, 306-312, 322, 324

noise 179, 235, 298, 299

off-highway vehicle (OHV) 151, 154, 173, 179, 205, 222, 223, 226, 275-277, 280, 285, 288, 298, 324

off-road vehicle (ORV) 30, 151, 153, 154, 276-280

outfitters/guides 62, 63, 172, 207, 210, 246, 267, 269, 270, 319, 326, 327

parking 22, 30, 49, 150, 153, 160, 211, 214, 250, 271, 273, 274

permit(s) 18, 20, 21, 151-154, 160, 163, 165, 166, 172, 173, 175, 180, 201, 208, 239, 260-262, 267-270, 300, 302-304, 306

Power County 4, 137, 143, 179, 187-189, 191, 203, 242, 319, 327

predator control 19, 71, 275


public scoping/involvement 12, 13, 70, 315, 317

purpose and need 6, 69

Resource Advisory Committee 317

road and trail classifications 16, 47, 55, 61, 68, 151, 178, 252, 259, 261

sage-grouse 7, 11, 116, 117, 131, 137, 139, 140, 147, 172, 232-239, 325

Section 106 144, 246-254, 320

Shoshone 6, 7, 11, 14, 19, 23, 75, 144, 146-148, 154, 173, 181, 183, 191, 193-197, 204, 316-318, 323, 326, 328


sustainable 11, 12, 74, 75, 203, 286, 288, 290, 293

Sun Valley 14, 41, 43, 171, 180, 181, 183, 192-196, 327

threatened and endangered species (special status species) 137, 141, 218-226, 232, 235, 236, 246, 278

tourism/ecotourism 179, 181, 205, 284, 286, 288, 302, 304

transportation plan 16, 323

treaty rights 21, 146, 147, 245, 254-260


valid existing rights 18, 161, 163, 164, 271-274

viewshed/viewscape 11, 19, 178, 294-297

visitor center 6, 22, 43, 62, 63, 72, 131, 143, 146, 148, 160, 170, 171, 179, 180, 194, 205, 208, 214, 216, 218, 220,
visual resource management 47, 48, 53, 178, 248, 255, 294

volcanic 3, 4, 6, 7, 11, 17, 105, 109-111, 129, 170, 178, 207, 209

water quality 74, 130, 202, 228-231, 321

weed management 63, 120, 203, 204, 215, 216, 220, 221, 234, 236, 252, 259, 281-284, 321, 322, 324

wetlands 79, 129, 130, 229, 234

wildlife 6, 13, 15, 20, 34, 50, 59, 64, 70, 75, 80, 94, 110, 116, 119, 122, 129, 131, 136, 137, 147, 156, 166, 168, 172, 179, 202, 204, 228, 232-240, 255-258, 275, 278, 301-312, 317, 322, 325-327

As the nation’s conservation agency, the Department of Interior has the responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environment and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.