Harpers Ferry Center
National Park Service
U.S. Department of the Interior

Craters of the Moon National Monument and Preserve Long-Range Interpretive Plan

November 2017

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Prepared by
Department of the Interior
National Park Service

Craters of the Moon National Monument and Preserve
Harpers Ferry Center Interpretive Planning

View of the Loop Road *Image Courtesy: Jake Frank*

On the cover: **Craters of the Moon is a volcanic wonderland that is fun to explore.**
Image Courtesy: Harpers Ferry Center

Bike Ride on Goodale's Cutoff *Image Courtesy: National Park Service*

The Planning Process

This Long-Range Interpretive Plan outlines recommendations for future interpretive services, facilities, and media. Many people representing federal, state, and local agencies; the local communities; and other partner organizations worked together to develop this plan. Our goal is to promote the park's collective resource values through specially planned visitor experiences and excellence in interpretation.

This Long-Range Interpretive Plan (LRIP) recommends actions that should occur over the next five to seven years. It identifies future audiences, describes visitor experience goals, and recommends a wide variety of interpretive and educational services that will best communicate the purpose, significance, and themes. The ultimate product is a cost-effective, tightly focused, high quality interpretive program that achieves management goals, provides appropriate visitor opportunities, and facilitates desired visitor experiences.

A stakeholder meeting was held on May 1, 2017. Planning workshops were held on May 2-4, 2017. Appendix A includes a listing of all workshop participants.

Barring legislative changes or major new revelations, the foundational elements expressed in this LRIP – significance statements and interpretive themes – will remain constant over the life of the plan. Specific recommendations about media and programs may need to be updated as staffing, funding, technology, or resource conditions change. Further design documents must be produced to implement some of the goals and recommendations in this plan.

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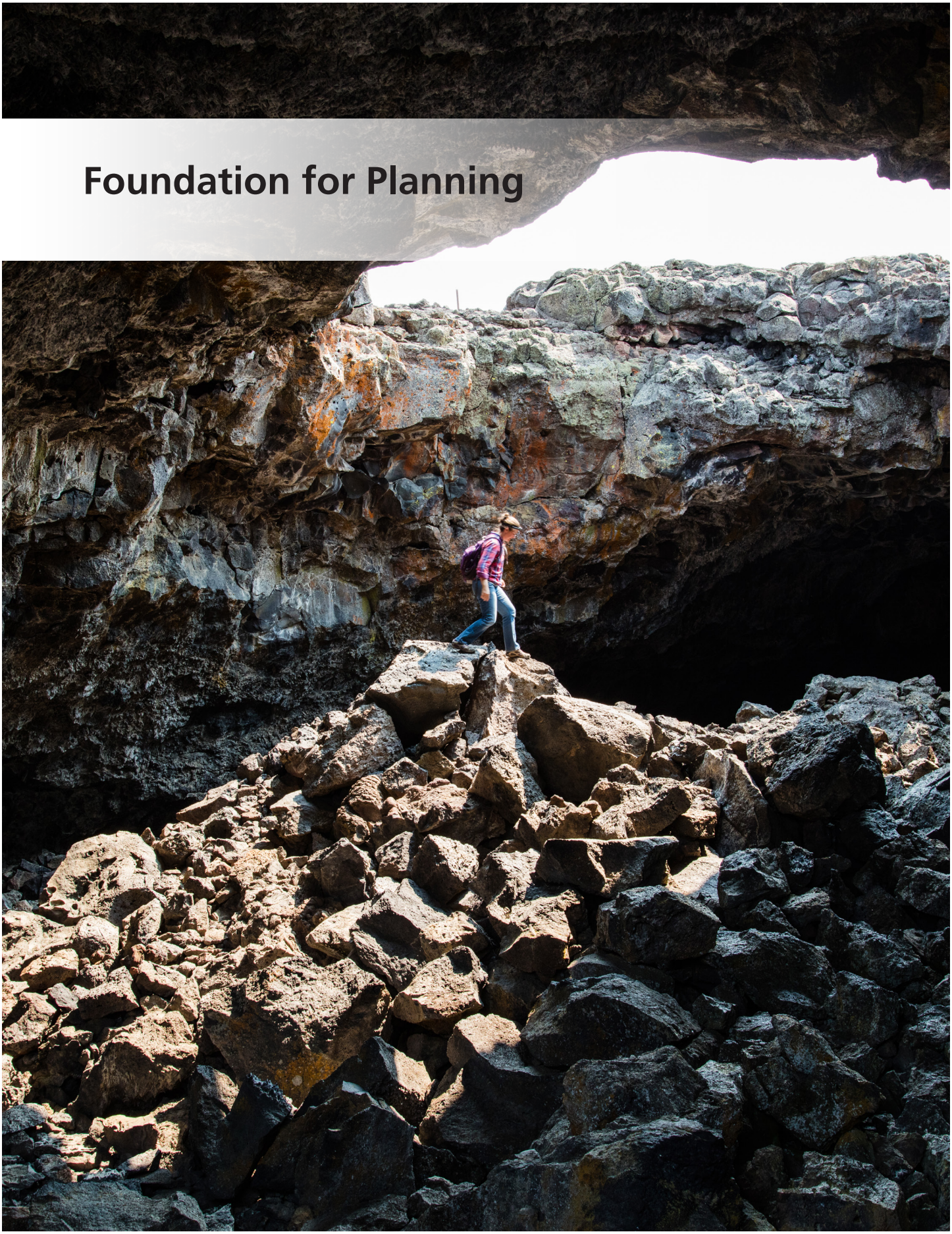
Foundation for Planning

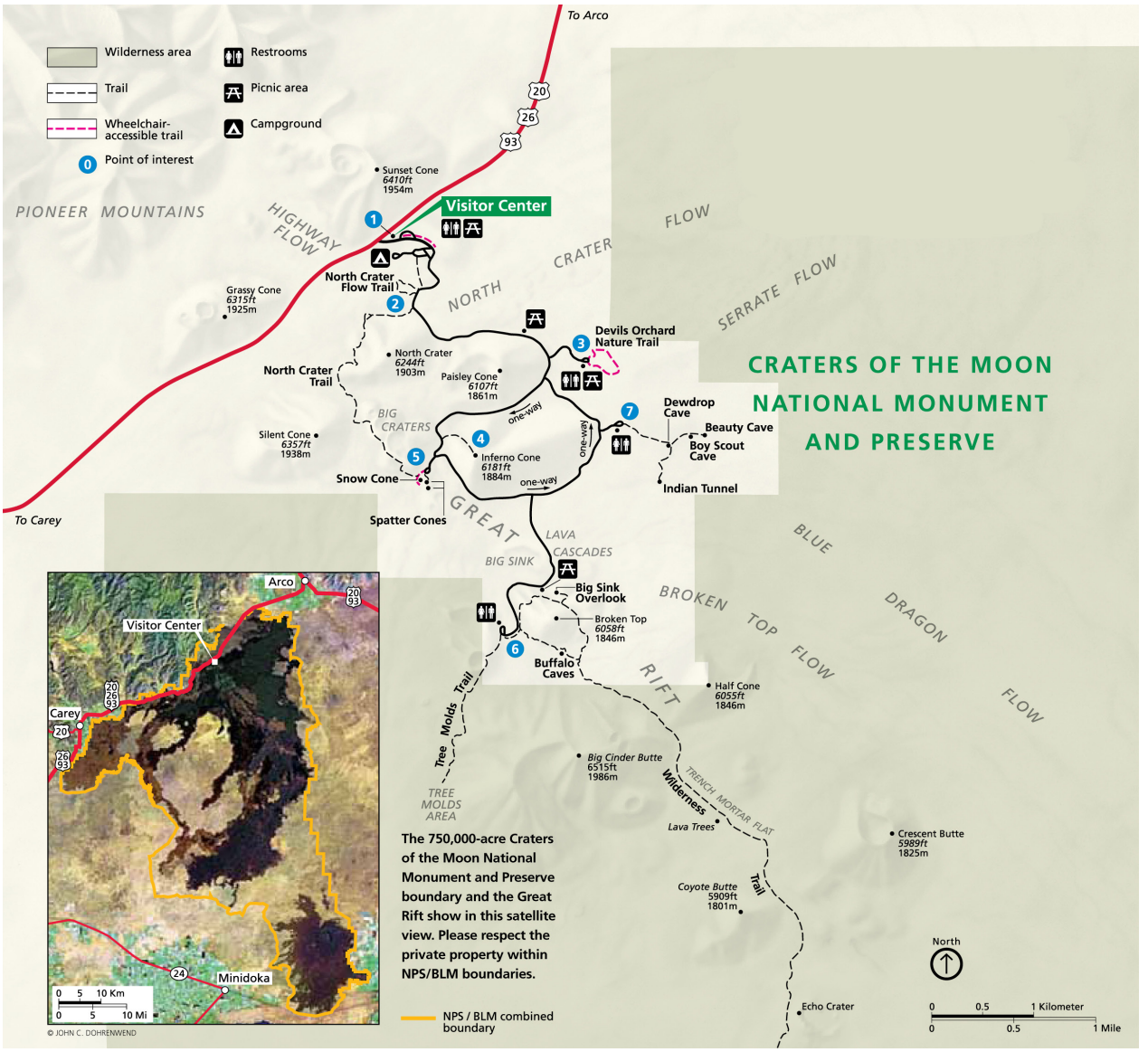


Hiker in Indian Tunnel *Image Courtesy: Jake Frank*

Site Background

Craters of the Moon National Monument and Preserve (the park) is located in south central Idaho in Blaine, Butte, Lincoln, Minidoka, and Power counties. It is within a one- to two-hour drive of Twin Falls, Idaho Falls, Pocatello, and other population centers along the Interstate 84 (I-84), I-86, and I-15 corridors.

President Calvin Coolidge established Craters of the Moon National Monument on May 2, 1924, for the purpose of protecting the unusual landscapes of the Craters of the Moon Lava Field. This "lunar" landscape was thought to resemble that of the moon and was described in the presidential proclamation as "a weird and scenic landscape peculiar to itself."



Park map *Image Courtesy: Harper's Ferry Center*

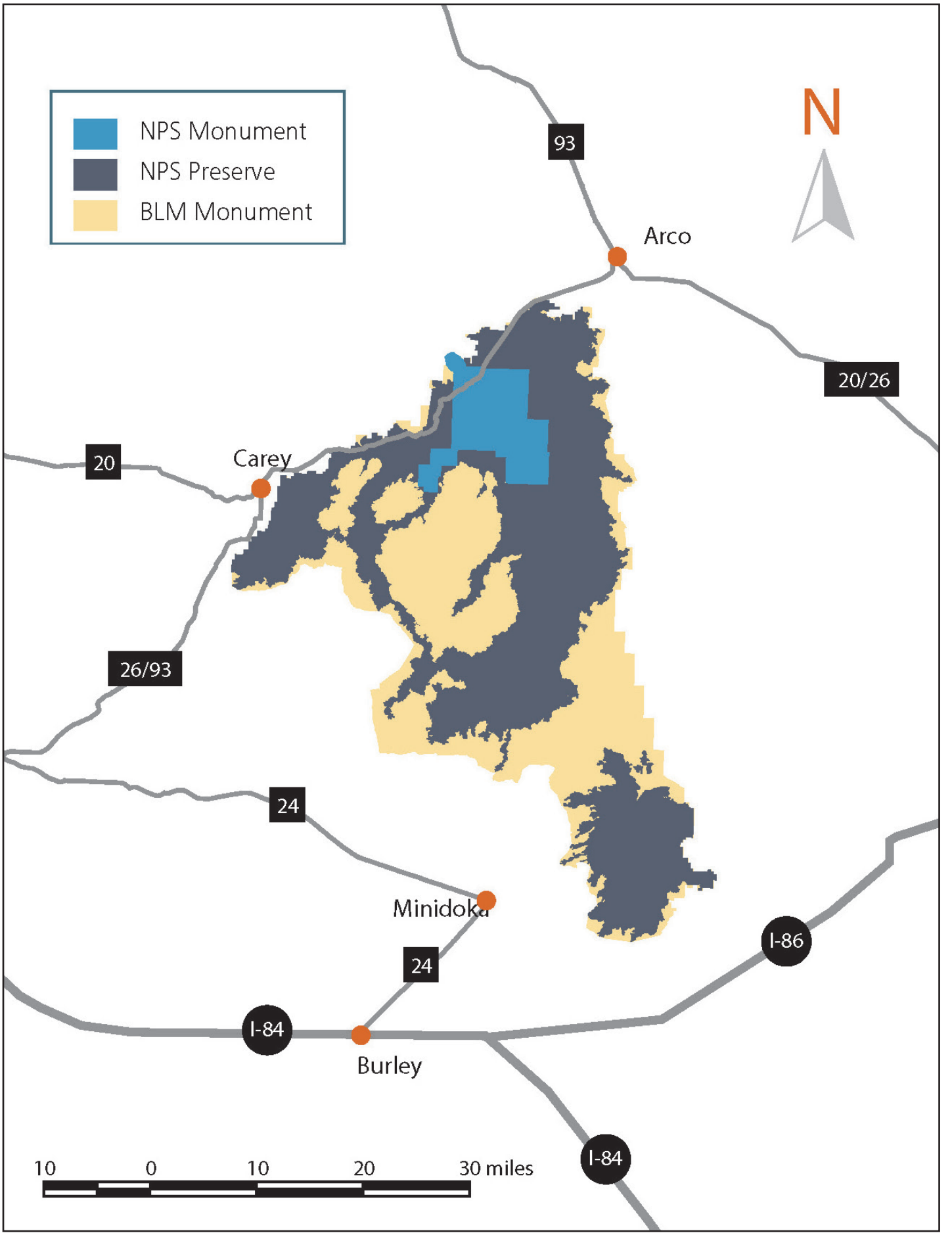
Since 1924, the park boundary has been adjusted and expanded numerous times. A 2000 presidential proclamation expanded Craters of the Moon National Monument from roughly 54,000 acres to approximately 753,000 acres to ensure protection of the Great Rift volcanic rift zone and its associated features. The proclamation also placed the lands under the administration of both the National Park Service and the Bureau of Land Management (BLM), with each agency having primary management authority over separate portions. On August 2002, Congress designated the NPS portion of the expanded monument as a national preserve (Public Law 107-213).

The three administrative units at Craters of the Moon include the BLM national monument, the NPS national monument, and the NPS national preserve. Cooperative interagency management of these units enhances public service and protection of nationally significant resources, while retaining many traditional uses of the land. This plan applies only to the two NPS-administered units.

The park 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 young lava fields: Craters of the Moon, Kings Bowl, and Wapi. The Craters of the Moon Lava Field is the largest basaltic lava field of predominantly Holocene age (less than 10,000 years old) in the conterminous United States.

The park also protects most of the Great Rift Region, which includes the numerous lava flows and other volcanic material from the Great Rift volcanic rift zone. It compares to other volcanic rift zones such as those found in Hawaii and Iceland. The Great Rift varies in width between 1 and 5 miles, extends for more than 50 miles, and is the deepest known land-based volcanic rift in the world.

Many features and structures associated with basaltic volcanism are represented in the Great Rift region, including various kinds of lava flows, volcanic cones, and lava tubes. Other features include explosion pits, lava lakes, squeeze-ups, basalt mounds, an ash blanket, low shield volcanoes, and various lava tube cave features. Some lava flows within the Great Rift volcanic rift zone diverged around areas of older lava and rejoined downstream to form isolated islands of older terrain known as “kipukas.” In many instances, the expanse of rugged lava surrounding these small pockets of soil has protected the kipukas from people, animals, and even nonnative plants. As a result, these kipukas represent some of the last undisturbed vegetation communities on the Snake River Plain.



Administrative Units *Image Courtesy: National Park Service*

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

Approximately 95% of the park is a wilderness study area or designated wilderness. The Craters of the Moon National Wilderness Area, designated in 1970, is located south of U.S. Highway 20/26/93 (U.S. 20/26/93) within the monument. A substantial portion of each of four wilderness study areas within the park includes lava flows administered by the National Park Service. The Bureau of Land Management manages 96,600 acres of the wilderness study area adjacent to the NPS-managed areas.

Both the Great Rift Region and sagebrush steppe ecosystems contain a wealth of cultural resources. Prehistoric hunting and plant gathering areas, along with food storage areas, date back to around 8,000 years ago, well before the last volcanic eruptions, which were probably witnessed by the Shoshone people. Resources from the more recent past represent the land's history of Basque sheepherding camps, cattle grazing, exploration, and recreation.

Most visitor and educational opportunities are located in the northern part of the park near U.S. 20/26/93 between the "gateway" communities of Carey and Arco, Idaho. In addition to guided walks and programs by NPS staff, the park has several self-guided trails with wayside exhibits and a seven-mile loop drive. Park facilities include a visitor center complex, which consists of a campground, museum, and bookstore, as well as the park headquarters.

Park Purpose

Craters of the Moon National Monument and Preserve protects a vast "weird and scenic landscape" with remarkable and diverse volcanic features, sagebrush steppe ecosystems, and wilderness, which provides opportunities to explore, understand, and value the rugged and remote high desert landscape of the Great Rift Region.

Statements of Significance

Significance statements are important for identifying resources management and interpretation priorities, and in defining the kinds of visitor experiences most appropriate for Craters of the Moon National Monument and Preserve.

- Active as recently as 2,000 years ago, the Craters of the Moon lava field is the largest post-ice age basaltic lava field in the lower 48 states. The lava field contains a remarkable and unusual diversity of exquisitely preserved basaltic volcanic features.

- The Great Rift is the deepest known land-based open volcanic rift in the world, and is nearly all contained within the park. It is also one of the longest volcanic rifts in the continental United States.

- Craters of the Moon National Monument and Preserve contains more than 500 kipukas, or isolated vegetation communities surrounded by lava, largely undisturbed by modern human activity. These communities are key benchmarks for scientific study of long-term ecological change in sagebrush steppe ecosystems.

- The combination of harsh, young volcanic terrain and extremes of a high desert climate have produced a diversity of habitats where plant succession is easily observed and where wildlife display remarkable adaptations that allow them to survive.

- As one of the first two simultaneously designated wilderness areas in the national park system, Craters of the Moon National Monument and Preserve is also the largest remaining area within the Snake River Plain that retains wilderness character. The monument and preserve, combined with the BLM managed monument, encompasses more than one-half million acres of undeveloped federal land.

- Clean air offers visitors expansive scenic views of the high desert and surrounding mountains, which change dramatically with the seasons and from day to the dark night skies.

- For thousands of years, people have explored, used, pondered, and even avoided this vast “weird and scenic landscape.” Members of the Shoshone-Bannock Tribe and the descendants of those who passed this way on Goodale’s Cutoff on the Oregon Trail retain enduring human connections to the landscape. Craters of the Moon National Monument and Preserve continues to inspire these lasting impressions.

Interpretive Themes

Interpretive themes are those ideas and concepts of the park that are key to helping visitors understand and appreciate the park's resources. These themes are derived from—and should reflect—park purpose and significance. The interpretive themes connect park resources to relevant ideas, meanings, concepts, contexts, beliefs, and values.

Volcanology

Craters of the Moon provides opportunities for people to experience a remarkably well preserved volcanic landscape.

- Short of traveling to Hawaii, Craters of the Moon provides one of the finest, most accessible and awe inspiring venues in the United States for people to experience and study volcanism in many different forms.

- Research continues to unravel the many mysteries of this landscape, and new knowledge acquired here helps scientists to better understand volcanic events that have occurred elsewhere.

Pahoehoe *Image Courtesy: National Park Service*

Great Rift

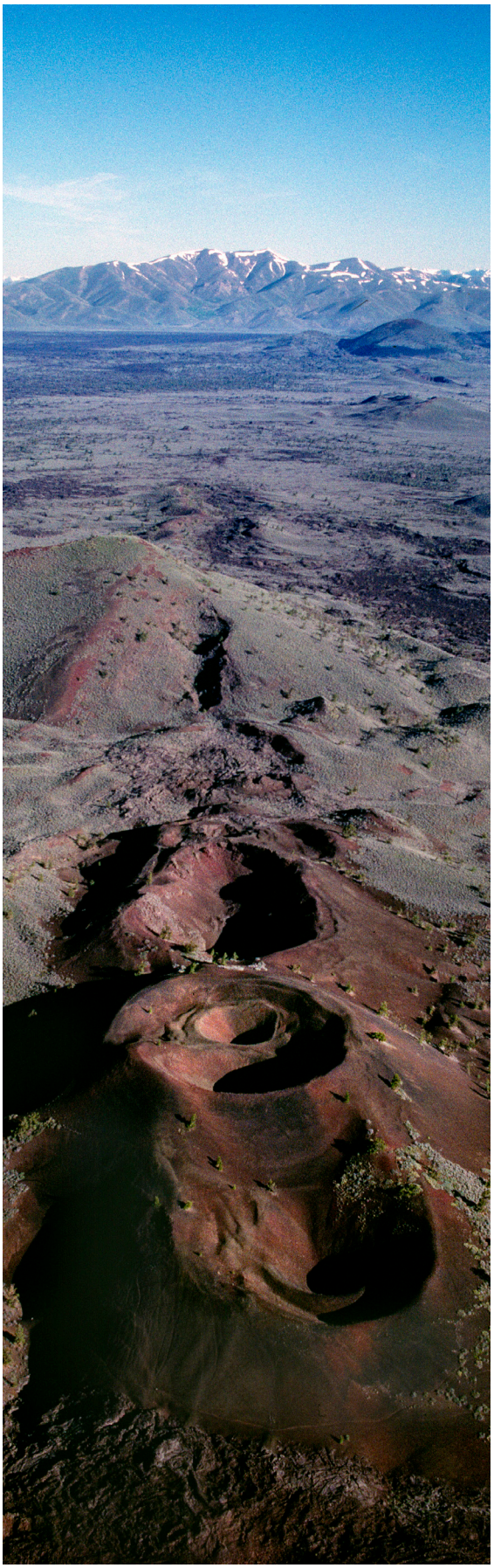
The Great Rift and its associated features are the most recent reminders of an awesome series of geologic events that began to shape the Snake River Plain 16 million years ago.

- The seemingly tranquil Snake River Plain conceals a violent geologic past in which mountain ranges were swallowed by unimaginably huge caldera forming eruptions as the North American plate moved over the Yellowstone hotspot. The most recent event created the Yellowstone caldera 640,000 years ago.

- Beginning 15,000 years ago, a great tear in the earth opened up and magma poured through to the surface during repeated episodes leaving behind a legacy of lava flows and other volcanic features. These features can be clearly viewed on many different scales: up close on trails or from distant images from space.

- Ongoing, but subtle, changes continue to affect the geology of Craters of the Moon as gravity, weather, and natural and human activities gradually alter this volcanic landscape.

- Continued stretching of the North American plate in this region combined with high levels of heat in the subsurface and a record of repeated eruptions indicate that there will likely be more volcanic events in the future.

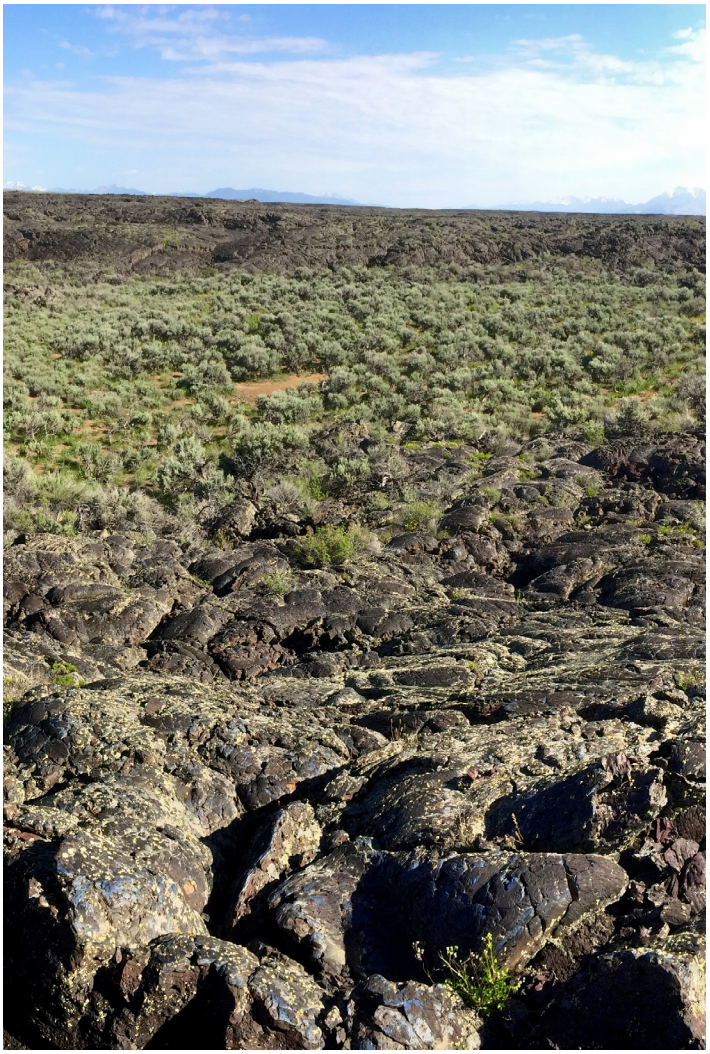


Aerial view of the Great Rift *Image Courtesy: Glen Oakley*

Kipukas

Searing lava flows that initially destroyed everything in their path today protect some of the last islands of intact sagebrush steppe communities on the Snake River Plain.

- Because many of the smaller kipukas in the Monument have been isolated from human activities, they provide important examples of what is "natural."
- The relatively pristine Kipukas also provide important information to scientists about how disturbed plant and animal communities elsewhere may be restored to natural conditions.



Kipuka *Image Courtesy: National Park Service*

Ecosystem

The geology of Craters of the Moon has created unique and unexpected habitats that provide for the survival of a surprising diversity of plant and animal species. This vast lava plain also provides for critical human needs throughout this high desert region.

- Plants and wildlife have found ingenious ways to survive and thrive through the extreme seasonal and more gradual long term climatic changes in this desert region. Many plants and animals utilize the relatively cool and moist cracks and lava tube caves in order to survive.
- Due to habitat degradation elsewhere, populations of sage-grouse, and other sagebrush obligate species, are increasingly isolated in areas with relatively healthy sagebrush steppe plant communities, like Craters of the Moon.
- The vast quantities of water stored by the lava rock aquifer below the Snake River Plain provides for human livelihood and survival throughout southern Idaho.

View from cone *Image Courtesy: Dave Clark*

Wilderness

Craters of the Moon contains vast areas managed to preserve wilderness characteristics.

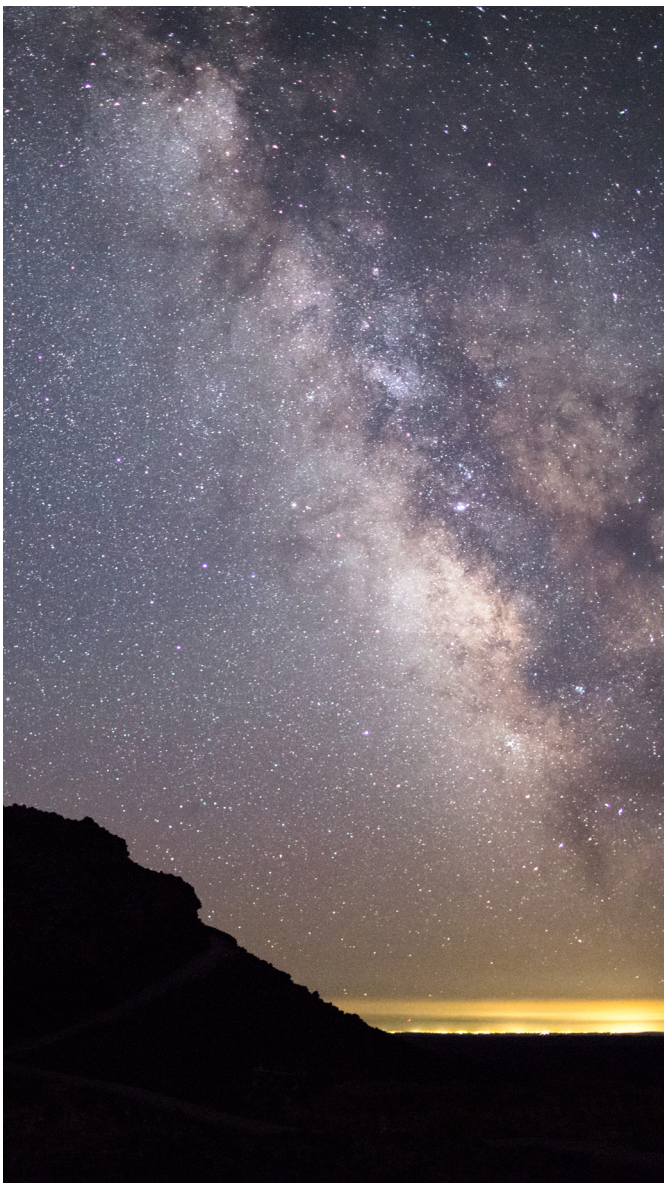
- As one of the first areas in the National Park System to be designated a federal wilderness, Craters of the Moon established a precedent of preservation that has been imitated in many other areas since 1970.
- Most of Craters of the Moon is already designated as Wilderness or has been recommended to Congress for Wilderness designation (Wilderness Study Areas). Natural quiet, dark skies, and an immense relatively undisturbed natural landscape are a few of the important qualities of these areas.
- Effective preservation of the wilderness character of Craters of the Moon requires thoughtful decision making by agency staff that is informed by good science, interagency cooperation, public involvement and support.

Sheep Trail Butte *Image Courtesy: Craig Wolfron*

Scenic Landscape

Clean air and natural darkness enhance opportunities for visitors to experience the immensity of the landscape in every season and through the star-filled skies at night.

- Far from cities and other impacts of civilization, Craters of the Moon retains relatively clean air and low levels of light pollution which optimize opportunities to view the immense lava landscape and the stars above.



Milky Way over spatter cones *Image Courtesy: Jake Frank*

Human Connections
For thousands of years, people have avoided, endured, and pondered this "weird and scenic" landscape.

- Ancient stone structures, well-worn trails across the lava, and oral traditions indicate that Native Americans traveled extensively through this lava landscape. Members of the Shoshone-Bannock tribes continue an enduring relationship with this area.

- Oregon-bound pioneers followed Goodale's Cutoff along the northern edge of the lava flows in the mid-1800's. Based on journal entries, the area left an indelible, but mostly negative, impression on these early visitors.

- Geologist Harold Stearns, who described the area as appearing like the "surface of the moon as seen through a telescope," explored and studied the area and became an outspoken advocate for its preservation.

- Robert Limbert, Idaho taxidermist and explorer, hiked the length of the Great Rift in 1920. His efforts drew national attention to the fascinating volcanic formations here–and the need to protect them.

- Since 1924 the National Park Service has cared for Craters of the Moon and welcomed visitors. In 2000 Craters of the Moon entered a new era when the NPS and BLM began to cooperatively manage a greatly expanded monument.

- Notable modern-day visitors include the Apollo Astronauts who came to learn basic volcanic geology in preparation for their moon missions. Recent geologic investigations that have found similarities between the geology of the Snake River Plain and the surface of Mars indicate that Craters of the Moon will continue to be an important place to further develop our understanding of the earth… and beyond.

2014 Foundation Document (Interpretive Themes) and 2007 LRIP (Sub-Themes)

Appendix C is an Interpretive Theme Matrix that describes each theme statement using examples of concepts/ ideas appropriate to the theme and examples of topics and stories that fit within each theme.

Because the field of interpretation is evolving, when developing programs and services, Craters of the Moon National Monument and Preserve will go beyond the traditional use of interpretive themes. Following the guidance outlined in the NPS *Foundations of 21st-Century Interpretation*, park staff will "actively pursue opportunities to increase audience participation by encouraging them to explore personal meanings within the resources and to extend those meanings to broader human and natural contexts in order to cultivate stewardship for each other and the earth."

Historic hand-tinted photograph *Image Courtesy: Robert Limbert*

Essential Questions

> Effective interpretation explores controversial and complex issues as a means of finding natural and cultural resources' evolving relevance in today's community. Interpretation honors and incorporates different types of truth – forensic/academic, personal, societal, and reconciliatory – and uses essential questions to invite dialogue, foster awareness, probe truths, and encourage collaborative solutions.
>
> Audience-centered programs and media must be dynamic and flexible, with intentional design and clear purpose. A cohesive experience for the audience is achieved by exploring an essential question or relevant idea supported by a purposeful interpretive framework. Essential questions are based on understanding of the resource, audience and the broader social context.
>
> *Foundations of 21st Century Interpretation Version 2017*

These essential questions were developed during the 2017 LRIP workshop and may be used by interpretive staff to "invite dialogue, foster awareness, probe truths, and encourage collaborative solutions."

Volcanology

- How can we know what happened here in the past?
- What ways have volcanic eruptions changed the course of natural and human history?

Great Rift

- Where is the volcano?
- When CRMO erupts again what will you do?

Ecosystem

- Is sagebrush-steppe an important habitat to protect? Why or why not?
- Should we do everything in our power to preserve the ecosystem of CRMO against climate change and other human caused forces? Why or why not?
- How does geology affect life and life affect geology?
- How can plants and animals survive in such a harsh environment?

Kipukas

- How do we know what is "natural"?

Wilderness

- What is the value of wilderness at Craters? What does wilderness mean to you?
- Is it important to preserve a dark night sky? Why or why not?

Human Connections

- What do the lava flows mean to the people of the Snake River Plain?
- When you consider the history of human interactions with this landscape, how do we balance preserving important resources with sustaining traditional relationships?
- How have human relationships with this landscape changed over time? How has it remained the same?

Mission and Strategic Goals

Park staff will meet annually to revise as needed and reconfirm their commitment to the mission and goals outlined in this plan.

Mission

We seek to preserve the natural and cultural resources of Craters of the Moon National Monument and Preserve by providing opportunities for visitors, and other constituents, to make their own connections with the significance of the Monument so they may care about and care for this special place. Our work reflects professional excellence and is accomplished through initiative, integrity, open communication and synergism with our coworkers and partner organizations. The lava inspires us to preserve the past, protect the present and prepare for great things in the future.

Strategic Goals

I. Visitors, and other constituents, are provided opportunities to make their own connections with the significance of CRMO so they may care about and care for this special place.

II. Children, students and teachers are provided opportunities to make their own connections with the significance of CRMO so they may care about and care for this special place. Educational programs and products also facilitate the group's learning objectives.

III. Division employees, and our associates in partner organizations, maximize professional development and contribute to and enhance opportunities for the public to make their own connections to the significance of CRMO through effective leadership, team work, and cooperation.

Kids on North Crater Trail *Image Courtesy: Matt Daniel*

Interpretation Management Goals

The following goals were developed during the planning workshop and reflect how interpretation and education will support broader management goals with an emphasis on helping people understand the value of the resource and fostering a sense of stewardship:

- Integrate science, history, and current research into interpretation and education programs and services.
- Strengthen existing and develop new partnerships.
- Diversify and strengthen interpretive program.
- Develop stronger connections to local K-12 education systems to promote life-long learning.
- Effectively reach and engage youth.
- Effectively reach and engage local communities.
- Identify and experiment with innovative ways to integrate digital and social interpretive media and technology.
- Strengthen tribal relations and interpretive connections with the Shoshone-Bannock.
- Integrate and apply audience-centered experiences (ACE) and 21st century interpretive techniques.
- Develop a cadre of volunteers and interns.

Loop Road and view down the Great Rift *Image Courtesy: Doug Owen*

Desired Visitor Experiences

Desired visitor experiences describe what physical, intellectual, and emotional experiences should be available for visitors to Craters of the Moon National Monument and Preserve. These experiences will be available to the degree possible to visitors of all abilities, including those with visual, auditory, mobility, or cognitive impairments.

Before they arrive, visitors will have an opportunity to:

- Use a comprehensive website and downloadable mobile applications to receive helpful trip planning information.

During their visit, visitors will be able to:

- View compelling and inspiring visitor center exhibits and orientation films.
- Self-guide themselves through the site using a well-designed system of waysides with tactile elements enhanced by appropriate technology such as enhanced mobile websites and mobile applications.
- Have authentic, thoughtful interactions with staff, partners, and others or enjoy the park on their own.
- Participate in guided walks and talks that facilitate resource immersion.
- Have access to a variety of site-specific publications both hard copy and downloadable.
- Purchase appropriate books and sales items.

After their visit, visitors will be able to continue their connection to the park by:

- Joining the cooperating association.
- Visiting nearby, related sites.
- Obtaining information about other related sites in the area so that they can extend their visit.
- Participating in social media offerings.
- Becoming a volunteer.
- Participating in distance learning programs.

Evening presentation *Image Courtesy: Jake Frank*

Audiences

In order to design the most effective interpretive and educational programming as well as employ the most effective techniques, parks must identify intended audiences, both existing audiences who actively visit the park (onsite and virtually) and potential new audiences that well-planned services may attract. Because different audiences have varied needs and expectations, specific interpretive and educational strategies and methods should be developed to meet the needs of each particular audience.

Current Audiences

Since the mid-1960s, overall park visitation has remained about 200,000-250,000 visitors per year. The 2004 Visitor Study provides the most current visitor demographics, and indicates that most visitors are over the age of 45. Many are traveling on family summer vacations and most were visiting for the first time. Education groups are primarily elementary school students and college geology students participating in field camps.

Visitors may spend three to four hours visiting the park stopping at the visitor center and driving the tour road. They are often traveling through the area between stops at other parks or destination locations.

Potential Future Audiences

All audiences are welcome and invited to participate in park programs and services; some techniques are better adapted or appeal to particular audiences. Parks seek to appeal to a wide range of visitors of varied backgrounds and ages with different motivations and expectations for visiting.

Potential new audiences will receive focused attention because they are either inadequately served by existing interpretation, need different strategies for engagement, or require specific methods to open or sustain communications and relationships. Factors to consider when developing interpretive and educational programs and services include the life experiences of the individual or group, level of education, learning styles, language, cultural traditions, and time available for interaction.

Visitors on North Crater Flow Trail
Image Courtesy: National Park Service

Youth
Current studies indicate that youth, including millennials, are disconnected from parks. This disconnect may be a result of competition for time, family history/diversity/ethnicity, and lack of access. Exploring ways to effectively engage youth through social media, service-learning projects, organized groups, and within family units will ultimately create opportunities for them to become future employees, stewards, advocates, voters, and decision makers.

Lunar Rangers *Image Courtesy: National Park Service*

Local and Regional Visitors including Hispanic Communities
Anecdotal evidence suggests that many local residents living nearby (five counties) may not even know that they live near the park. Many local and regional residents do not know about Craters of the Moon National Monument and Preserve. Staff will need to utilize outreach to schools and community organizations to effectively engage and promote stewardship with these local and regional residents. Large extended families may speak multiple languages and have different cultural and spiritual needs that will need to be addressed to ensure that they have a meaningful and safe visit.

Virtual Audiences
Virtual audiences will visit on-site and off-site using a variety of electronic devices. They are looking for conversation, community, trip planning, current conditions, and emergency alerts using a variety of social and digital media. Since this trend is likely to accelerate, the site will need to develop strategies to use emerging technologies to reach these audiences in cost effective and sustainable ways.

Education Groups
Education groups may include students from pre-school to Road Scholars (formerly known as Elderhostel) and seniors. Life-long learning opportunities should be offered in addition to elementary and secondary school models to introduce adults as well as children to park stories. Transportation and time constraints may make it challenging for students to travel to the site. Distance learning opportunities may be an option to expand the site's educational outreach. Public schools in the area represent economically disadvantaged and ethnically diverse communities that may also be potential new audiences.

Daytrippers from Sun Valley and Scenic Byways
Craters of the Moon National Monument and Preserve has the potential to attract visitors who have come to visit Sun Valley and are exploring the scenic byways that form a loop between that resort area and the park *(Peaks to Craters and Sawtooth Scenic Byways)*.

Challenges and Opportunities Affecting Interpretation

Craters of the Moon National Monument and Preserve has many assets upon which to build an effective interpretive program, including evocative and compelling stories, outstanding natural and cultural resources, ongoing research, and engaged, enthusiastic partners. It also faces a number of challenges. Well-designed programs can build on interpretive strengths to help overcome these challenges.

Craters of the Moon National Monument and Preserve is subject to the same budget and staffing constraints and benefits as any similar type of resource. This lack of staff and funding limits the site's ability to provide interpretive and educational services and programming. These limitations also make managing local citizen and partner expectations difficult, since site development often takes longer than the public expects.

Visitor motivations for spending their leisure time are changing. As more demands are being placed on free time there is a limited amount of time available to participate in interpretive and educational activities and programs. Offering a range of options as well as consolidating events may need to be considered.

Due to budget shortfalls and curriculum mandates, schools may not be able to come to the park so educational alternatives will need to be identified. For example, the park may provide the resources so that the teachers can develop lessons and present them to the students; or they may be able to utilize distance learning opportunities.

Future audiences may have different expectations and needs for media and technology to better understand area stories and to make connections with area resources. The park does not have the infrastructure or capacity to handle some types of technology.

As fiscal budgets tighten, park staff, and partners will need to develop business strategies and consider new, different, perhaps entrepreneurial fee-based ways to provide interpretive and educational services. The park team will also need to collect defensible data related to visitation use and patterns and visitor preferences for services so that they can effectively evaluate the return on investment of current and future interpretive programs and services. A recently developed agreement with the Northwest Youth Corps will help provide funding for internships; and a new agreement with the Craters of the Moon Natural History Association will provide new opportunities to fund educational programs.

The 2017 designation of the NPS Monument as an International Dark Sky Park will provide additional opportunities to highlight the park's exceptional starry skies through interpretive and educational offerings. In addition, an upcoming designation of the "Craters of the Moon Mission 66 Historic District" may provide new opportunities to highlight the history and historic resources of the park.

Existing Conditions

Park entrance sign and visitor center *Image Courtesy: Dawn Kish*

The following is a brief and generalized description of visitor experiences and interpretive services that existed in FY2017. The purpose of this section is to provide a baseline assessment.

Arrival and Orientation

Highway and directional signs near park entrances are well placed and help visitors easily find the park visitor center. However, additional signs would be useful for directing visitors to the park from the I-15 and I-84 corridors. Following a digital navigation system, visitors may have problems and often end up in Laidlaw Park, an undeveloped area within the BLM Monument. There are few signs and reference points within the BLM Monument making it difficult for visitors to determine which way to go or how to get back to the main highway.

Visitor Center

The visitor center lobby has the information desk and a bookstore/sales area. Bulletin board cases and exhibits outside the building provide some information to the public, especially after hours.

Interpretive museum exhibits offer visitors an opportunity to learn about the main park resources including geology, ecology, and cultural history. A large scale interactive map places Craters of the Moon within a regional geologic context. A small theater area features a short introduction to the volcanic geology of Craters of the Moon. A variety of temporary exhibits featuring current research and tools to generate visitor-created content are set up in the breezeway.

Trails

Along the 7-mile loop road, there are trails offering visitors a variety of opportunities to experience the resource. There are paved, short loop trails that are easy and accessible as well as backcountry trails that require planning and endurance. These trails are for walking and hiking only.

Wayside Exhibits

Since 2007, almost every wayside exhibit panel and based has been replaced. Ten new wayside exhibits were installed at highway overlooks in 2013 providing an interpretive experience for visitors as they travel through the Preserve and into the Monument. These panels provide an introduction to the park and the landscape for those visitors passing through the area who do not have the time to stop and explore the NPS Monument.

Wayside exhibit at Spatter Cones
Image Courtesy: National Park Service

Website and Social Media

The park website (www.nps.gov/crmo) is maintained by park staff and features information about the park, future programs, educational resources, and natural and cultural history. The park has verified accounts on Facebook and Flickr. Orientation videos for educators and videos that highlight park resources and special events are available through the park's YouTube channel. Social media is used to provide real-time responses and alerts.

Exhibits

Several improvements have been made to the museum including a Resource Management exhibit and animal models now replace taxidermy specimens. New exhibits, bulletin boards, and art work are displayed in the breezeway and the multi-purpose room extending interpretive opportunities beyond the museum.

Museum *Image Courtesy: Chad Chase*

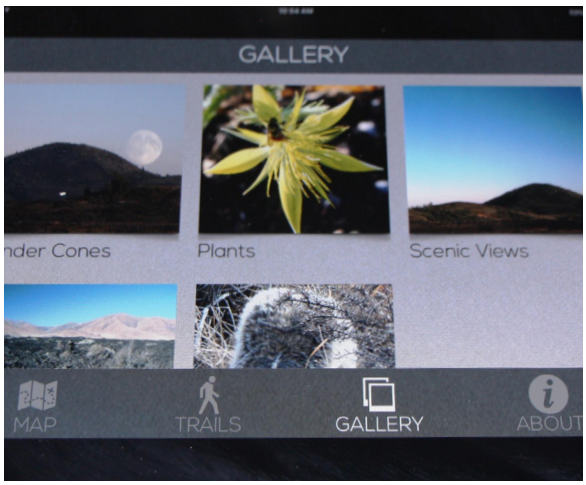
Publications

The park unigrid brochure is available to all visitors at the visitor center. The park had a newspaper in the past, and currently offers a rack card with summer schedules and park regulations. In addition, a variety of site bulletins and resource checklists are available at the visitor center desk and on the park website. Interpretive trail guides are available for the Broken Top and the Caves Area Trails. A Junior Ranger booklet is available at the visitor center.

Digital Media

A new introductory geology film premiered in the museum in 2012. In addition, two longer films have been shown on a rotating basis in the visitor center theater/multi-purpose room since 2008. A new park orientation film is scheduled to be completed in 2017 and state of the art audio visual components were recently installed in the theater/multi-purpose room.

Two different free mobile applications (apps) have been developed to provide additional ways for visitors to learn about wildflowers and geology in the park.



"Craters Rocks" app *Image Courtesy: National Park Service*

Educational Programs

The park is effectively using the 2014 Education Plan to guide the program. A half-time education specialist was hired in 2010, resulting in increased quality and reach of the curriculum-based education programs and community outreach. In 2015/16, over 6,500 students from 44 counties across 3 states were contacted.

All programs are curriculum-based and consist of rangers in the classroom, guided field trips, distance learning, and school/community events such as career days and science fairs. Demand for programs annually outweighs staff availability. The park web site provides information on programs and links to additional content.

Snow School *Image Courtesy: Dawn Kish*

Interpretive Programs

Interpretive programs are offered at the visitor center, campground amphitheater, and on trails. Beyond staffing the information desk and bookstore sales area, personal services are often staffing dependent and primarily offered during the peak season.

Youth Programs

During the summer season, the park offers ranger-led Junior Ranger programs. A Junior Ranger booklet, Lunar Rangers, is available year-round and upon completion, a badge is earned. Through a special grant, an outreach program was initiated with a local Hispanic community. The program ended when the funding expired.

Community and Special Events:

Park staff participate in a variety of special events held in local communities including parades and other outreach events. Special events are also held in the park including commemorative anniversaries, fun runs, BioBlitz events, and bike rides along Goodale's Cutoff. Since 2014, through a partnership with NASA and Idaho State University, NASA Media and Community Day events have been offered in the park and in Arco. The 2017 NASA Media and Community Day event featured the total solar eclipse that passed through the region. The park also hosted in 2017 a meeting of the National Association of Geoscience Teachers and a naturalization event.

Staffing

Currently, the park has a Chief of Interpretation, an education specialist (base-funded for 6 months), seasonals, interns, and volunteers. In addition, the division has received permission to fill a lead interpreter position which will also be base-funded for up to 6 months. Inadequate staffing makes it difficult to offer a variety of interpretive and educational programs, host special events, update and maintain the website and social media outlets, and keep the visitor centers open year-round. Natural History Association staff and volunteers support interpretive operations through assistance at the visitor center so that interpretive staff can conduct programs and rove park roads and trails.

Star Party *Image Courtesy: Jake Frank*

Partnerships

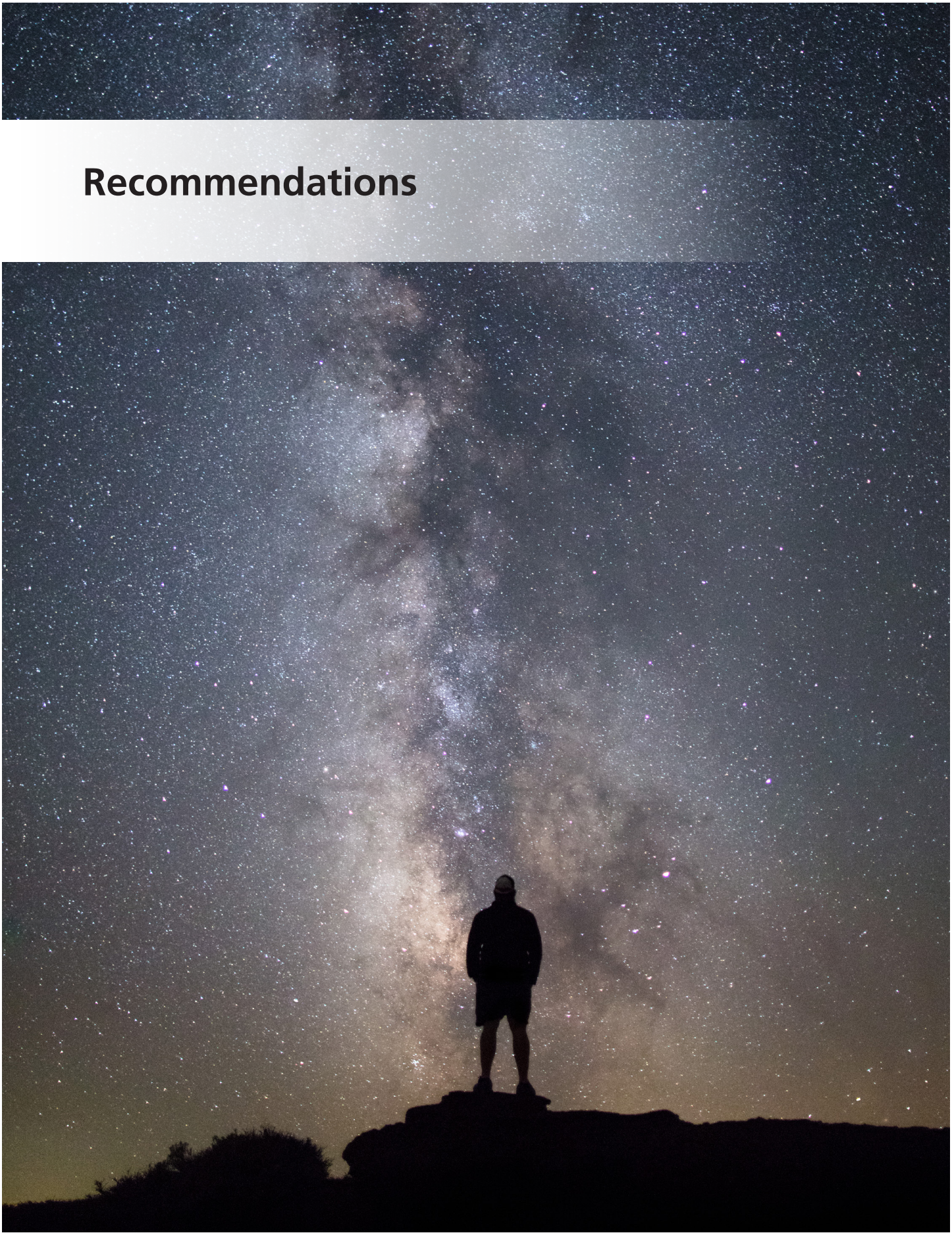
Partnerships will be the backbone for implementing this interpretive plan. The Craters of the Moon Natural History Association (NHA) provide indispensable financial as well as staffing support. The NHA staff help to cover visitor center operations and provide support for special events. A cooperative agreement signed in 2017 between the NPS and the NHA will be an increasingly important tool to support future education endeavors.

The Bureau of Land Management-Shoshone Field Office (BLM) works collaboratively with the park's interpretive and educational staff on programs such as Every Kid in a Park and community outreach events.

Partnerships with Sun Valley Center for the Arts, NASA, Pioneer Alliance and Idaho Falls Astronomical Society have allowed the park to expand its interpretive program and offer new programs including an art exhibition and on-going artist-in-residence program, NASA Media and Community Days events promoting space science research, bicycle rides along the edge of the Pioneer Mountains, and Star Parties. Both local citizens and first time visitors have been able to participate in these programs.

The partnership with the Twin Falls Idaho visitor center has improved the visibility of the park as a destination. Park staff worked together with Southern Idaho Tourism to produce new exhibits that were installed at this new facility in 2015.

Recommendations



Visitor enjoying our dark sky *Image Courtesy: Jake Frank*

Interpretive planning assesses current conditions and formulates recommendations that will provide direction and focus to achieve the desired future interpretive program. A long-range interpretive plan analyzes all needs and recommends a wide array of interpretive services, facilities, programs, and opportunities for partnerships to communicate the park's purpose and significance in the most efficient and effective way.

The Goals for Interpretive Programming are designed to realize the vision, objectives, themes, and visitor experiences described in the Foundation for Planning section. The following principles will apply to all interpretation at Craters of the Moon National Monument and Preserve:

- All interpretation will address physical and programmatic accessibility.
- Where possible, interpretation will use reproduction objects, documented personal stories, and other interpretive methods to bring the story alive for visitors.
- Where possible, the park will partner with neighboring institutions to develop programs, media, and share research.
- The park will follow the standards of the National Park Service Graphic Identity Program as signs and interpretive media are upgraded.
- Interpretation will include examples and perspectives from diverse points of view. It will respond to diverse audiences, varying levels of interest, and different visit lengths.
- Where possible, "virtual visitors" will have opportunities to view key park vistas and access to new research, studies, management plans, and historical information.

Goals for Interpretive Programming

Workshop participants identified goals to enhance the effectiveness of interpretive services at Craters of the Moon National Monument and Preserve. These goals and associated actions are representative of many ideas generated during the workshop. Action items are listed below each goal, and were used to create the Implementation Plan located in the next section of this document. Over the next five to seven years Craters of the Moon National Monument and Preserve will focus on the following goals:

Integrate Science, History and Current Research into Interpretation and Education Programs and Services

Enhancing integration of science, history, and current research into the interpretive program will help visitors become more familiar with and perhaps more concerned about the preservation and protection of park natural and cultural resources. Continuing to provide opportunities for interpretation and education staff to accompany resource management staff and other researchers into the field will broaden their understanding of park resources and current research, and foster inter-divisional communication. Interpretation and education staff will also be encouraged to participate in resource-based events such as the BioBlitz and the Christmas Bird Count. Continuing to also offer the Lunar Ranger and Citizen Scientist activities will also help youth become more familiar with and perhaps offer solutions to resource management issues.

The 2017 designation of the NPS Monument as an International Dark Sky Park may provide additional opportunities to highlight and preserve our exceptional starry skies through interpretive and educational offerings. The recent donation of a large telescope and acquisition of a trailer for transport may provide additional opportunities to share the night sky with our partners and visitors. As an affiliated organization of the Idaho Space Grant Consortium (ISGC), Craters of the Moon has access to a variety of institutions and potential sources of funding that may enhance these efforts in the future. For example, at a recent ISGC meeting several affiliated groups expressed interest in partnering to develop a permanent observatory at the park.

Bioblitz Dance *Image Courtesy: National Park Service*

In addition, an upcoming designation of the "Craters of the Moon Mission 66 Historic District" may provide opportunities to highlight the history and historic resources of the park. A "history trail" beginning in the campground and leading to the historic log shed building could highlight the historic heart of the park.

Working with USGS staff at the Idaho National Laboratory to set up a freestanding kiosk in the breezeway will allow visitors to access real-time seismic information. This data will help reveal the geologic changes that are happening now.

Strengthen Existing and Develop New Partnerships

Substantial work must be invested in maintaining existing partner relationships. One of the first actions is to assess all existing partnerships including the NHA, BLM, NASA, Sun Valley Center for the Arts (SV Center) and the Twin Falls Visitor Center, and identify opportunities to formalize, strengthen or expand them. The core partners will help identify other partners in the area including park neighbors, nearby communities, government agencies, and local organizations.

Now that Craters of the Moon has been designated an International Dark Sky Park, the NPS should seek to expand and institutionalize night sky programming. Beginning in 2018 funding will be utilized to hire a non-permanent employee to assist with developing dark sky interpretive programs and assist with the development of an annual "Space Science Festival." The park worked with NASA and the Idaho Falls Astronomical Society to feature the night sky and space science research in 2016 and 2017 with each year focusing on a special feature. A tour of the NASA Mission Command Center in Arco was featured in 2016 and the total solar eclipse was featured in 2017. In 2018, the park will be a venue for a nationwide solar vehicle event. Each year park staff will work with partners to highlight the night sky and continuing space science research at Craters of the Moon.

Eclipse 2017 *Image Courtesy: National Park Service*

The Sun Valley Center for the Arts (SV Center) continues to provide valuable support for the park's Artist-in-Residence (AiR) program. One of the recent AiR's created a report with suggestions regarding the adaptive re-use of "The Shed" into a multi-purpose facility including an artist studio space. There may be opportunities to further engage the SV Center in supporting the development of this space.

Future partnerships should be established based on matching interests and abilities with mutual needs. Working and training together, the park and partners will learn and share historically and scientifically accurate stories and build the trust necessary to share available resources. The park should host a meeting of potential partners to identify more specific needs and expectations. The group should explore budget and staffing needed to accomplish shared goals.

Some potential opportunities may be to create a sense of relevance within gateway communities; provide interpretive services that are cost effective in meeting the greatest public needs with reduced revenue; increase partnerships with businesses, schools local governments and non-profits to increase stewardship and relevance.

The strong interagency relationship with BLM will continue to guide the development of future interpretive and educational opportunities within the Preserve. With the existing efforts to develop a driving tour and mobile tour, visitors will have a seamless experience exploring the backcountry administered by the NPS and BLM. There also may be additional opportunities to strengthen the partnership and to work together on community engagement as well as interpretive and educational programming.

The role of the Craters of the Moon Natural History Association within the park's interpretive and educational program will need to be discussed and perhaps expanded. In addition, to selling items at the visitor center and providing financial support, the NHA also may be required to take the lead in operating the visitor center. This will allow interpretive staff greater flexibility to connect to visitors within the park and within the nearby communities. The recently signed cooperative agreement will provide a strong foundation for future educational programming.

The Shed and Artist-in-Residence Rebecca Lowry *Image Courtesy: National Park Service*

Diversify and Strengthen Interpretive Program

Wayside and outdoor interpretive exhibits need to be updated in some areas of the park. Discussion is already underway about how to update the Devil's Orchard trail. The park may consider traditional two-dimensional waysides as well as clusters of outdoor exhibits that include tactile, digital/social media, and audio components. An emphasis on current resource issues such as climate change, air quality, or dark sky will continue the provocative approach that was initiated in this area.

The breezeway windows in the visitor center offer an untested interpretive opportunity. Using transparencies at different locations, visitors may be able to "see" the Great Rift Zone, identify cinder cones, and view displays of other interpretive information.

Hikers on Devil's Orchard Trail
Image Courtesy: National Park Service

The park may consider changing the park newspaper into a pocket guide similar to the one developed at Santa Monica Mountains National Recreation Area and Lowell National Historical Park. The guide would offer many of the elements of the newspaper in an easier to use less expensive format. This new guide would also be a cooperative venture between all of the Southern Idaho national park units and perhaps BLM.

The Natural History Association will be experimenting in the future with a fee-based step-on guide bus service. An NPS-approved guide will conduct motorcoach bus tours through the park. This is a pilot program for a service that is continually being requested, and for which the NPS is unable to meet the demand.

Because of the park's limited resources for interpretation and education projects, initial efforts must have maximum impact and involve partners as much as possible. The site should make use of donations and submit additional requests for FLREA 80% funding to develop and offer these programs.

Develop Stronger Connections to Local K-12 Educational Systems to Promote Life-Long Learning

An effective, sustainable education program requires adequate staff for planning, development, implementation, and assessment. The resources and themes of Craters of the Moon National Monument and Preserve offer great potential for the development of dynamic and relevant education programs in partnership with area schools, homeschool cooperatives, and nearby universities.

The park will work to ensure that all students, regardless of age, have access to innovative educational programs that instill a sense of appreciation and pride for the historic and natural areas in which they live.

While research confirms that place-based and resource immersive experiences may create the strongest connections, web-based and distance learning opportunities should be considered to connect to regional and global audiences. The park may consider pilot testing some distance learning programs that integrate the use of a traveling trunk to encourage citizen science activities in the classroom.

Following the goals and actions outlined in the 2014 Education Plan, development and growth of future curriculum-based educational programs should be based on appropriate state and national education standards. When linked directly to these curriculum standards, more schools will recognize the value of using the park resources. Offering college credits for teacher workshops provides a critical incentive for educators to participate. With the distances between southern Idaho parks, BLM offices, and schools, consideration should be given to establishing an education team to build relationships, distribute the workload, and increase outreach.

Volunteers and Teacher-Ranger-Teachers may be the key to program sustainability and longevity. Utilizing retired teachers as volunteers will be an effective way to continue offering education programs. The Teacher-Ranger-Teacher (TRT) program helps develop educational thematic units. After pilot testing the units with his/her class, the TRT conducts workshops so that others teachers can present the units to their classes.

Life in the Extreme STEM program
Image Courtesy: National Park Service

Effectively Reach and Engage Youth
The park must identify and meet the needs of young people and provide them with opportunities to discover the significance of our nation's resources. Establishing a youth internship program tentatively titled "CRMO Climbers" will create a potential career ladder for recruiting and hiring from the local community. Partnering with locally and regionally-based youth organizations including Scouts and 4-H will increase opportunities for local young people to experience the natural and cultural history of the area and to also become leaders in the community. In recent years, the park has been successful at engaging diverse youth by offering internships sponsored by Mosaics in Science and the Latino Heritage Internship Program.

Much of the current youth programming within the park is associated with junior ranger activities, special events, and special projects. Future consideration should be given to offering a more diverse range of age-appropriate, engaging, interactive experiences.

Effectively Reach and Engage Local Communities
Offering activities specifically designed for the local and surrounding communities is an opportunity to create goodwill with site neighbors and local residents. Research will help uncover stories that will resonate with local people and encourage them to frequently visit. Continuing to participate in area special events create incentives for future visits and promotes stewardship.

Identify and Experiment With Innovative Ways to Integrate Digital and Social Interpretive Media and Technology
Strategic implementation of well-produced digital media, like "One Minute on the Moon" videos and apps, may be the most cost effective short term solution for thematic programming. BLM has produced a driving tour of the Laidlaw Park area and geo-referenced map which may be downloaded from the BLM Monument website. It will be an effective tool to guide visitors around the backcountry areas of the Preserve. Digital media is well-suited to the presentation of contextual material, and can capture realism, create a mood or atmosphere, and provide emotional or intellectual impact in ways that other forms of interpretive media cannot accomplish. Once produced, digital media can be repurposed and provided through a variety of channels to reach visitors who now use a range of technologies for learning, information gathering, planning, and entertainment. Digital media products have the potential to expand the capabilities of the partners to provide consistent information, orientation, and interpretation for a reasonable cost.

Using appropriate, relevant social media should continue and be expanded when possible to specifically reach millennials as well as other digitally savvy audiences. This interactive experience has a high potential for visitors to discover and form personal connections with the stories of Craters of the Moon. Social media also can support development of volunteer groups and promote partnerships.

To allow greater access to both digital and social media, the park will need to improve and increase the areas featuring WIFI capability. Initial venues include the bookstore, front parking lot and picnic area. Expanding this access into the campground or along the highway will allow more visitors to receive, download, and respond to this media.

Given the park's limited resources for interpretation and education projects, a southern Idaho parks shared graphics/media technology position should be considered. Joint funding provided by the group of parks will provide benefit to visitors through greater access to park stories.

Strengthen Tribal Relations and Interpretive Connections with the Shoshone-Bannock Tribes

Park managers and leaders must be invested in fostering tribal collaboration and continued support for interpretive and educational collaboration with the tribes.

Working and training together, the park and the tribes will build the trust necessary to share available resources. Developing a strong cross-cultural attachment to the park resources and stories would be the goal. Attendance at and/or co-sponsorship of special events and outreach opportunities needs to be expanded, so that both the tribes and the park can develop stronger relationships with each other and with local communities and park neighbors.

Many elders and members possess traditional ecological knowledge and cultural traditions including skills, songs, and gardening techniques that could be shared with the park. Oral histories and recordings could be produced to gather this knowledge and allow future generations to hear their voices. There also may be opportunities to feature Shoshone-Bannock crafts at the NHA bookstore.

Shoshone-Bannock students at Craters of the Moon *Image Courtesy: National Park Service*

Integrate and Apply Audience-Centered Experiences (ACE) and 21st Century Interpretive Techniques

The park has already been actively engaged in using participatory spaces to generate visitor-content and feedback. The most recently created temporary exhibits feature elements that allow visitors to share the ideas and responses to questions posed within the exhibit text. The "pop-up" placed outside of the visitor center during the summer season could be turned into a participatory program space.

To ensure consistent application and understanding of 21st century interpretive techniques, time and funding will need to be invested in staff training. Consideration should be made to become a regional hub for training the southern Idaho parks.

Beyond traditional personal services programs that are offered at a specific date, time, and location, park staff needs to look at new interpretive methods and techniques. To achieve some of the goals outlined in this plan, the park may need to change the visitor center hours of operation to be more consistent with demand and human/fiscal resource capacity. Programs and experiences that take place in the park and parking lots, along park roads and overlooks, offered in areas most frequented by visitors, and at a variety of times during each day would better meet visitor expectations and increase their understanding and appreciation of Craters of the Moon.

By engaging multi-generational families with interactive activities, the site not only offers a fun experience, it also creates future park stewards and volunteers. The park may consider if there are specific areas that could be designated for large family group activities. Family outreach could easily be expanded into the Wood River Valley.

Develop a Cadre of Volunteers and Interns

A cohesive, consistent volunteer group is required and should be built on the success of the existing program. Interns from various programs are an integral part of the interpretive and educational program. Volunteers will be needed to fully implement the vision outlined in this Long-Range Interpretive Plan. Additional support in the form of internships for interpretation or research will assist the achievement of management goals.

Before taking action to recruit volunteers, the park must determine how this program will be different and/or gain support from other local volunteer organizations, community service agencies, and university-based programs. Establishing a skills or "talent" database that aligns with needed support and/or positions will help the park identify who might best be able to help work on a specific project or event. Many people may be interested in volunteering or accepting an internship; however, they may not know what opportunities are available.

Implementation Plan

The measure of success of any plan is the extent to which it is implemented. Initial implementation of strategies needs to be both realistic and flexible. Because funding opportunities and priorities often change, management may need to adjust the implementation strategies to adapt to changing conditions. The interpretive staff and key partners should meet each year to draft an Annual Implementation Plan for each new fiscal year based on funding opportunities and coordination with other projects. Flexibility is extremely important to allow staff and partners the opportunity to try new and different interpretive ideas and make adjustments as necessary.

During the planning workshops, the participants agreed to divide the actions necessary to implement the recommendations into on-going, one to two years, three to four years, and five+ year time range. Actions within each time range are also numbered in priority order. Some recommended actions for curriculum-based education programs and personal services are dependent on the hiring of staff. Other action items can be implemented immediately, within existing funding and staffing levels.
Please see Table I: Implementation Plan.

Sun Valley Center lava tube sculpture *Image Courtesy: Sun Valley Center*

TABLE I: Implementation Plan

Craters of the Moon National Monument & Preserve Recommended Goals and Actions	Support Needed	On-Going	1-2 years	3-4 years	5+ years
Integrate Science, History and Current Research into Interpretation and Education Programs and Services					
Provide opportunities for interp staff to go out into the field and learn about current research and science projects.	RM, BLM, NASA	**1**			
Develop a dark sky interpretive program.	NASA, Idaho Space Grant Consortium, Idaho Astronomical Society		**1**		
Set up a free-standing kiosk in the Breezeway that shows real-time seismic and other scientific data being collected within the park.	USGS at the Idaho National Laboratory, RM			**1**	
Assist with resource-based events including future BioBlitz events.	NHA			**2**	
Develop an interpretive trail (campground to Shed) highlighting the human history of CRMO including management changes/transitions. Use insights from Rebecca Lowry study.	Management Team, NHA				**1**
Strengthen Existing and Develop New Partnerships					
Maintain cooperative agreement to support education program.	NHA	**1**			
Continue Artist-in-Residence program and host annual events to highlight AiR works.	SV Center for the Arts	**2**			
Continue I&E relationship with BLM to work together on community engagement and special events as well as interp and ed programs.	NHA	**3**			
Continue partnership with Twin Falls, ID visitor center.	HAFO, MIIN, CIRO	**4**			
Identify potential opportunities to expand NHA activities and daily operational support	NHA	**5**			
Continue to offer mountain biking program in cooperation with Pioneer Alliance.	Pioneer Alliance	**6**			
Expand NASA partnership by developing and sustaining Media and Community Day events.	NASA, Idaho Space Grant Consortium, ISU, NHA, IFAS			**1**	
Adaptively reuse the historic maintenance “Shed” as a multi-purpose facility.	Management Team, SV Center, NHA				**1**
Diversify and Strengthen Interpretive Program					
Operate VC 7 days/week 8-4:30, except on designated holidays.	NHA	**1**			
Continue summer program schedule including cave walks and evening campground activities.		**2**			
Continue winter snowshoe and ski activities.		**3**			
Pilot a for-fee, step-on guide service for motor coach tours.	NHA (Lead) with park providing quality control.		**1**		
Design interpretive transparencies for visitor center windows – could include orientation/arrival information; identify cones along rift; emphasize safety; show seasonal change.			**2**		
Develop a pocket guide/publication for Southern Idaho Parks. Consider SAMO/LOWE examples that use interpretive connections to highlight experiences based on audience behaviors and speaks the language of the visitor.	HAFO, MIIN, CIRO, BLM, NHA			**1**	
Revise and update Devil’s Orchard waysides. Continue to be provocative and consider developing an Arc of Dialogue to provide focus on possible resource issues such as climate change, dark sky, and air quality.	RM, HFC				**1**

Craters of the Moon National Monument & Preserve Recommended Goals and Actions	Support Needed	On-Going	1-2 years	3-4 years	5+ years
Revise and update Devil's Orchard waysides. Continue to be provocative and consider developing an Arc of Dialogue to provide focus on possible resource issues such as climate change, dark sky, and air quality.	RM, HFC				1
Develop Stronger Connections to Local K-12 Educational Systems to Promote Life-Long Learning					
Cooperate with partners to present K-12 education programs at nearby schools and in the field.		1			
Continue to pursue transportation funding.	NHA	2			
Continue to facilitate "Life in the Extreme" program.		3			
Leverage "Every Kid in a Park" funding opportunities through 4th grade programming ($15,000 grants).	NHA	4			
Continue to cultivate relationships with school administrators.		5			
Incorporate STEM elements into Snow School program.	Snow School (Winter Wildlands Alliance)		1		
Work with local teachers to update and resume offering existing (Geology, Winter Ecology, Cultural Resources) and develop new (Public Lands Management) K-12 teacher's workshops to help teachers meet newest curriculum requirements through CRMO resources.	Local School Systems, BLM, Local colleges (to provide teacher CEUs)		2		
Develop and offer a new STEM-based student science education program.			3		
Explore need for Southern ID (BLM/NPS) education team – build relationships	BLM, HAFO, MIIN, CIRO		4		
Develop pre- and post-visit activities to create a seamless three-touch education experience.				1	
Develop a distance learning education program.	NHA				1
Work with local Native and Latino communities to incorporate culturally relevant material into education programs to reach more diverse classrooms and communities.	Sho-Ban Tribes				2
Build a ladder of engagement with multiple experiences beginning with elementary ed programming and service-learning that becomes a feeder for the Climbers youth program.	Management Team				3
Effectively Reach and Engage Youth					
Continue Lunar Ranger and Citizen Scientist activities.		1			
Establish CRMO Climbers program.	Park Management Team				1
Effectively Reach and Engage Local Communities					
Continue to participate in local community events.	NHA	1			
Coordinate participation in local events with BLM and Southern ID parks.	BLM, NHA, HAFO, MIIN, CIRO	2			
Increase local community engagement beyond Carey and Arco. Build sustainable partnerships via a community assessment model.	BLM, NHA, HAFO, MIIN, CIRO			1	

Craters of the Moon National Monument & Preserve Recommended Goals and Actions	Support Needed	On-Going	1-2 years	3-4 years	5+ years
Identify and Experiment with Innovative Ways to Integrate Digital and Social Interpretive Media and Technology					
Continue to develop "One Minute on the Moon" programs and expand content on CRMO YouTube Channel.		**1**			
Complete, premier, show new park orientation film.			**1**		
Improve WIFI/Connectivity at VC to increase the ability to download and use park apps.	NHA		**2**		
Develop digital driving tour that focuses on the geology of the expanded monument.	BLM GeoCorps Project (Lead)		**3**		
Evaluate apps and set goals for next versions.	NHA Funding			**1**	
Work with Southern ID parks to develop and support a shared graphics/media position.					**1**
Strengthen Tribal Relations and Interpretive Connections with the Shoshone-Bannock					
Increase communication with the Sho-Ban Tribe. Foster closer relationships – regularly scheduled meetings, go to them – make visits, work as a team (NPS) on outreach.	Sho-Ban Tribe, PWR Tribal Liaison, NHA		**1**		
Integrate and Apply Audience-Centered Experiences (ACE) and 21st-Century Interpretive Techniques					
Provide Audience-Centered Experience and techniques training for all front-line NPS interpreters, interns, volunteers and VUAs, BLM interpreter and interns, NHA staff. Tap into regional staff who have attended the Train-the-Trainer course.	STMA I&E, PWR Interp, GOGA, MUWO, SAMO, NHA		**1**		
Co-create relevancy standards among staff and incorporate ACE teniques into all personal interpretive programming.			**2**		
Identify Essential Questions that align with the primary interpretive themes and further engage audiences in dialogue about past and present social, economic, and/or environmental issues linked to the resource.			**3**		
Continue to create a “Pop-Up” program space near the VC. Expand the pop-up experiences to include activities that will facilitate active visitor participation.			**4**		
Host ACE Train-the-Trainer course.	PWR Interp, WASO I&E, STMA I&E, NHA			**1**	
Offer pop-up type of activities at different areas along the tour route/trail heads. Increase roving/stationed interp within the park and be prepared to use ACE techniques to engage visitors.				**2**	
Develop ACE "pop-up" kits for interpreters to easily (grab and go) create more informal opportunities with visitors and community (go to where the people are).	NHA			**3**	
Develop a Cadre of Volunteers and Interns					
Continue to utilize various youth service programs to provide interns to support I&E offerings.	NWYC, WASO, GIP	**1**			
Analyze data and prepare report on volunteer needs assessment.				**1**	
Determine best ways to meet the demand for service learning. Incorporate service learning into high school education and youth programs.				**2**	
Establish trailer pads to generate more interest and increase volunteer hours.					**1**
Work with local youth and senior organizations to recruit additional volunteers to assist with education and interpretive programming.					**2**
Complete and get management approval for volunteer program management manual.					**3**

Appendices

View from Big Sink Overlook *Image Courtesy: National Park Service*

Appendix A: The Planning Team

Craters of the Moon National Monument and Preserve

Wade Vagias, Superintendent
Ted Stout, Chief of Interpretation and Education
Matt Daniel, Education Specialist
Karl Pearson, Chief Ranger

National Park Service

Toni Dufficy, Interpretive Planner, Harpers Ferry Center
Kerry Olson, Chief of Interpretation, Santa Monica Mountains National Recreation Area
Emily Levine, Supervisory Park Ranger, Golden Gate National Recreation Area

Partners

Rhonda Morris, Executive Director, Craters of the Moon Natural History Association
Holly Crawford, Monument Manager, BLM
David Freiberg, Outdoor Recreation Planner, BLM
Karey Hanks, Legislator, State of Idaho
Nolan Brown, Office of Original Territories and Historic Research, Shoshone-Bannock Tribes
Bobette Haskett, Language and Culture Department, Shoshone-Bannock Tribes
Monica Hampton, Economic Development Agency, Butte County, Idaho
Rose Bernal, Commissioner, Butte County, Idaho

Appendix B: Accessibility Guidelines

Every attempt will be made to provide full access to interpretive media and programs to ensure people with physical and mental disabilities have access to the same information necessary for safe and meaningful visits to national parks. This is in compliance with the National Park Service policy:

" . . .To provide the highest level of accessibility possible and feasible for persons with visual, hearing, mobility, and mental impairments, consistent with the obligation to conserve park resources and preserve the qualities of the park experience for everyone." NPS Special Directive 83-3, Accessibility for Disabled Persons

All interpretation will follow general standards for accessibility as described in the Harpers Ferry Center Programmatic Accessibility Guidelines for Interpretive Media http://www.nps.gov/hfc/accessibility/accessibilityGuideVersion2.1.pdf

Wheelchair users on Devil's Orchard Trail *Image Courtesy: National Park Service*

Appendix C: Interpretive Theme Matrix

The theme matrix in this Long-Range Interpretive Plan identifies stories associated with the significance of Craters of the Moon National Monument and Preserve. Each theme is described by a title, theme statement, examples of concepts/ideas appropriate to the theme, and examples of topics and stories that fit within each theme. These four sections in the matrix allow readers with different learning styles and interests to get a broader picture of what may be encompassed in each theme.

The theme statements adhere to accepted tenets of interpretive theme construction. That is, primary interpretive themes:

- Derive from the significance and universal values
- Capture and convey the meaning of a place not solely facts.
- Open minds to new ideas and introduce multiple points of view.
- Suggest connections, meanings, and relevance.
- Link universal concepts and experiences with tangible resources.
- Provide a foundation for more specific programs, presentations, and exhibits.
- Are expressed in single sentences.

Concepts and ideas are written as objectives to help managers and interpreters align personal services, exhibits, or other media with area significance. Although interpretive themes should be relatively timeless, both the concepts/ideas and the topics/stories can be added to or changed when new information comes to light.

Because the objectives can be used for programs, exhibits, and media, they can save effort and eliminate the stress that comes with the pressure to develop brand-new, original themes for every interpretive program or product.

These concepts, ideas, and topics are a representative, partial list. They are examples that could illustrate the concepts. They are not all-inclusive, in fact, they never could be, nor are they intended to exclude any topic. An interpretive theme is successful only if other topics and stories can be included within it.

Craters of the Moon National Monument and Preserve
Interpretive Theme Matrix

Volcanology

Craters of the Moon provides opportunities for people to experience a remarkably well preserved volcanic landscape.

- Short of travelling to Hawaii, Craters of the Moon provides one of the finest, most accessible and awe inspiring venues in the United States for people to experience and study volcanism in many different forms.
- Research continues to unravel the many mysteries of this landscape, and new knowledge acquired here helps scientists to better understand volcanic events that have occurred elsewhere.

Concepts and Ideas Examples that may be explored within each theme. These are written as objectives.	**Topics and Stories** Examples that could be included in this theme.
• Explain the change over time that occurred to create this volcanic landscape. • The dry high desert climate and the sponge-like qualities of the lava rock help to preserve the lava landscape. • Ongoing research helps us to understand how this landscape was created and may help us to understand volcanic events elsewhere on our planet and beyond…	• Volcanism • Erosion/porosity • High Desert Climate • Geologic Research • Space Science

Great Rift

The Great Rift and its associated features are the most recent reminders of an awesome series of geologic events that began to shape the Snake River Plain 16 million years ago.

- The seemingly tranquil Snake River Plain conceals a violent geologic past in which mountain ranges were swallowed by unimaginably huge caldera forming eruptions as the North American plate moved over the Yellowstone hotspot. The most recent event created the Yellowstone caldera 640,000 years ago.
- Beginning 15,000 years ago, a great tear in the earth opened up and magma poured through to the surface during repeated episodes leaving behind a legacy of lava flows and other volcanic features. These features can be clearly viewed on many different scales: up close on trails or from distant images from space.
- Ongoing, but subtle, changes continue to affect the geology of Craters of the Moon as gravity, weather, and natural and human activities gradually alter this volcanic landscape.
- Continued stretching of the North American plate in this region combined with high levels of heat in the subsurface and a record of repeated eruptions indicate that there will likely be more volcanic events in the future.

Concepts and Ideas	**Topics and Stories**
• The Snake River Plain was created by the Yellowstone Hotspot and subsequent rifting. • The Great Rift is currently a dormant volcanic fissure but it has erupted approximately every 2000 years and will likely do so again in the future.	• Volcanism • Yellowstone Hotspot • Volcanic fissures

Kipukas

Searing lava flows that initially destroyed everything in their path today protect some of the last islands of intact sagebrush steppe communities on the Snake River Plain.

- Because many of the smaller kipukas in the Monument have been isolated from human activities, they provide important examples of what is "natural."
- The relatively pristine Kipukas also provide important information to scientists about how disturbed plant and animal communities elsewhere may be restored to natural conditions.

Concepts and Ideas	Topics and Stories
• Describe how plants and animals of the Snake River Plain have evolved unique adaptations to allow them to survive and thrive in this environment. • The relatively natural assemblages of plants on kipukas provide important information about how disturbed plant communities may be restored elsewhere.	• Community • Habitat • Natural/disturbed • Restoration

Ecosystem

The geology of Craters of the Moon has created unique and unexpected habitats that provide for the survival of a surprising diversity of plant and animal species. This vast lava plain also provides for critical human needs throughout this high desert region.

- Plants and wildlife have found ingenious ways to survive and thrive through the extreme seasonal and more gradual long term climatic changes in this desert region. Many plants and animals utilize the relatively cool and moist cracks and lava tube caves in order to survive.
- Due to habitat degradation elsewhere, populations of sage-grouse, and other sagebrush obligate species, are increasingly isolated in areas with relatively healthy sagebrush steppe plant communities, like Craters of the Moon.
- The vast quantities of water stored by the lava rock aquifer below the Snake River Plain provides for human livelihood and survival throughout southern Idaho.

Concepts and Ideas	Topics and Stories
• Describe some adaptations designed to withstand high desert extreme temperatures and conditions. • Define the term "adaptation". • Study how a climate record has been assembled, and continues to grow based on multiple kinds of evidence. • Discuss climate change factors such as biotic processes, variations in solar radiation received by Earth, plate tectonics, volcanic eruptions and human activities, and their effects over decades or millennia. • Discussion of increased visitation – impact on trails, campgrounds, roads, and wilderness areas. Ask visitors how they can reduce their impact. Importance of leave no trace concepts and practices (take only photos and memories; leave only footprints) and different management activities. • Discussion of human-wildlife interactions and changes in wild animal behavior, food preferences, and habitat with increased visitation. • Describe how activities and development on lands adjacent to the park affect conditions within park boundaries.	• Adaptation • Climate change • Species presence and distribution • Human-nature interface • Aquifer

Wilderness

Craters of the Moon contains vast areas managed to preserve wilderness characteristics.

- As one of the first areas in the National Park System to be designated a federal wilderness, Craters of the Moon established a precedent of preservation that has been imitated in many other areas since 1970.
- Most of Craters of the Moon is already designated as Wilderness or has been recommended to Congress for Wilderness designation (Wilderness Study Areas). Natural quiet, dark skies, and an immense relatively undisturbed natural landscape are a few of the important qualities of these areas.
- Effective preservation of the wilderness character of Craters of the Moon requires thoughtful decision making by agency staff that is informed by good science, interagency cooperation, public involvement and support.

Concepts and Ideas	Topics and Stories
• Craters of the Moon was the first designated wilderness area in the National Park System (1970). This offers an opportunity to explore questions about the ecological integrity of designated Wilderness and discover what wildness and wilderness teaches. • Help people access and explore primitive values found within a created (designated) wilderness and provide a range of visitor backcountry experiences in a place without apparent evidence of the dominance of humans. • Ask visitors to define wilderness – what does it mean to you?	• Wild places and connection to one's soul Wilderness Act • Wilderness values • Leave No Trace

Scenic Landscape

Clean air and natural darkness enhance opportunities for visitors to experience the immensity of the landscape in every season and through the star-filled skies at night.

- Far from cities and other impacts of civilization, Craters of the Moon retains relatively clean air and low levels of light pollution which optimize opportunities to view the immense lava landscape and the stars above.

Concepts and Ideas	Topics and Stories
• Describe differences in dark night sky in various areas around CRMO. • Discuss how light pollution affects night sky viewing, and where pollution is coming from. Include concept of how activities and development on lands adjacent to our park affect conditions within park boundaries. • Describe how NPS protects dark night skies in addition to other natural and cultural resources. • Discuss how individuals can help reduce light pollution by taking a few simple steps (e.g. update bulbs/fixtures, use light shields on outdoor lights, turn off lights, motion sensors). • Encourage visitors to take a night hike, and discuss nocturnal plants and animals. • Help visitors make a "sound map." Close eyes for 30 seconds - 1 minute and keep track of all of the sounds they hear. After time is up, discuss what sounds they heard, which were man-made and which were natural, and think about how this sound map would have been different depending on time (e.g. thousands or hundreds of years ago vs. now), time of day/night, or other conditions. Encourage them to make a sound map at home or in other locations and compare them.	• Natural sounds • Light pollution • Air quality

Human Connections

For thousands of years, people have avoided, endured, and pondered this "weird and scenic" landscape.

- Ancient stone structures, well-worn trails across the lava, and oral traditions indicate that Native Americans traveled extensively through this lava landscape. Members of the Shoshone-Bannock tribes continue an enduring relationship with this area.
- Oregon-bound pioneers followed Goodale's Cutoff along the northern edge of the lava flows in the mid-1800's. Based on journal entries, the area left an indelible, but mostly negative, impression on these early visitors.
- Geologist Harold Stearns, who described the area as appearing like the "surface of the moon as seen through a telescope," explored and studied the area and became an outspoken advocate for its preservation.
- Robert Limbert, Idaho taxidermist and explorer, hiked the length of the Great Rift in 1920. His efforts drew national attention to the fascinating volcanic formations here--and the need to protect them.
- Since 1924 the National Park Service has cared for Craters of the Moon and welcomed visitors. In 2000 Craters of the Moon entered a new era when the NPS and BLM began to cooperatively manage a greatly expanded monument.
- Notable modern-day visitors include the Apollo Astronauts who came to learn basic volcanic geology in preparation for their moon missions. Recent geologic investigations that have found similarities between the geology of the Snake River Plain and the surface of Mars indicate that.
- Craters of the Moon will continue to be an important place to further develop our understanding of the earth…and beyond.

Concepts and Ideas	Topics and Stories
• Examine a parallel between the relevance of life's history and the relevance of our cultural history. Address each as if it were reduced to a list of things that once happened. • Explain Traditional Ecological Knowledge and how it is the same and how it is different from scientific knowledge • Describe tribes that moved through the park seasonally following food availability and climate. • Relate stories of recreational use and the impact on the landscape. • Identify and discuss what inspires so many people about this landscape. • Ask visitors to share how/why this landscape inspires them. • Describe periods of history from early Shoshone-Bannock travelers to Apollo astronauts.	• Spirituality • Life in the desert • Inspiration • Fear • Beauty

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Students on Cave Trail *Image Courtesy: National Park Service*