OREGON CAVES NATIONAL MONUMENT AND PRESERVE

Preserve Management Plan

Oregion Caves National Monument and Preserve
19000 Caves Hwy
Cave Junction, OR 97523
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Please refer to "How to Use This Document" to navigate through the chapters. To comment on this document, please refer to "How to Comment on This Document." These sections can be found on the following pages.

Marshall's Gooseberry, a regional endemic near Bigelow Lakes. Photo: NPS.

LETTER FROM THE SUPERINTENDENT

Greetings!

Oregon Caves National Monument and Preserve is inviting public comment on the management plan and environmental assessment for the recently designated national preserve, as well as a wild and scenic river study. The legislation that created the 4,070 acre preserve was signed into law on December 19, 2014. This plan addresses management of roads, trails, commercial activities, hunting, hiking, use of pack animals, and backcountry camping, among other things. The preserve contains a campground, nearly 20 miles of gravel roads and 17 miles of trails. There is a federally listed endangered species (spotted owl) and a species of concern (fisher). The area contains a number of rare plants as well as areas that have Port Orford Cedar root rot disease which will need to be kept contained.

The preserve planning process is happening at the same time as the wild and scenic river study authorized in the December 2014 legislation. The study examines whether five creek segments on the monument and preserve should be included in the national wild and scenic rivers system.

In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the Wild and Scenic Rivers Act, the NPS is announcing a 90-day public review period to solicit public comments on this planning project and study. We look forward to your involvement in our planning for the preserve and will ensure that your concerns and ideas are adequately considered and evaluated. During this review period, the public is invited to identify any issues or concerns they might have with the preferred alternative, environmental analysis, and wild and scenic river study so that the NPS can appropriately consider them.

Sincerely,

Vicki Snitzler, Superintendent

Lake creek view from Highway 46. Photo: NPS.

HOW TO USE THIS DOCUMENT

The **Executive Summary** at the beginning of the document provides a condensed version of the preserve plan.

Chapter 1: Introduction sets the stage for the preserve planby describing Oregon Caves National Monument and Preserve, the purpose and need for the preserve plan, the issues that are addressed in the plan, and the planning process.

Chapter 2: Foundation for Planning and Management includes the "foundation document," which describes the monument and preserve's purpose, significance, interpretive themes, and fundamental resources and values. It also describes the special mandates, administrative commitments, and designations.

Chapter 3: Alternatives describes management alternatives, including the National Park Service's preferred alternative. The alternatives represent reasonable sets of management directions consistent with National Park Service policy and applicable laws and planning requirements.

The **Appendices** provide more detailed information related to the plan, pertinent legislation, a selected bibliography, and a list of the preparers and consultants for the plan.

All maps are placed within the text of the applicable chapters. In many cases, decisions or other discussions contained in this plan refer directly to maps and tables. In fact, many decisions themselves are map-based. The reader should rely on the text, maps, and tables taken together to fully understand the proposed decisions described in this plan.

Mount Elijah. NPS photo.

HOW TO COMMENT ON THIS DOCUMENT

This preserve plan has been distributed to agencies, interested organizations, and individuals for their review and comment. The public comment period for this document will extend for 90 days.

This document is available online at the NPS Planning, Environment, and Public Comment website at **http://parkplanning.nps.gov/orca**. We prefer that readers submit comments using this website, which provides an online public comment form.

Comments may also be made in person at one of the public meetings that will be conducted during the public review period. The specific dates and times for these meetings will be announced in local newspapers, in the preserve plan newsletter, and online at the above site.

Additional written correspondence may be addressed to:

Superintendent
Oregon Caves National Monument and Preserve
19000 Caves Hwy
Cave Junction, OR 97523

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Mites on a maple leaf. NPS photo.

EXECUTIVE SUMMARY

On December 19, 2014 by an act of Congress, 4,070-acres of national preserve were added to the existing Oregon Caves National Monument footprint. This included the surrounding watershed and forest previously managed by the U.S. Forest Service (USFS). Addition of these lands to the monument has added new visitor opportunities to the park unit, as well as cultural and natural resources. The new preserve surrounds the existing monument and includes a variety of facilities including a campground, roads, water lines, and trails. There are also new management responsibilities, including management of hunting.

This draft preserve management plan presents two alternatives for management of the preserve (continuation of current management and a preferred action alternative) based on information about the preserve's resources, visitor use, and visitor preferences gathered from National Park Service information, the public, government agencies, and stakeholder groups. Each of these alternatives would support the purpose and significance of the preserve and monument. The concepts and subsequent actions for each alternative comply with NPS park planning requirements and were evaluated to ensure consistency with current laws, regulations, and policies.

The approved preserve management plan will guide the long-term management of the preserve. It will provide a framework for managers to use when making decisions about resource protection, visitor uses and experiences, and facility development. The preserve management plan provides an analysis of environmental impacts to the preserve's resources. Impact topics to be considered include:

- Natural resources
  - Hydrologic resources and processes, including wetlands and floodplains
  - Geological resources and processes
  - Vegetation
  - Wildlife and wildlife habitat, including special status species
- Cultural resources
- Visitor opportunities and access
- Preserve operations
- Socioeconomics

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

Alternative A is the "no action" alternative and assumes that existing management, programming, facilities, staffing, and funding would generally continue at their current levels. A no action alternative is required by the National Environmental Policy Act and serves as a baseline for comparison in evaluating the changes and impacts of other alternatives. The emphasis of alternative A would be to protect the values of the preserve without any increases in staff, programs, funding support, or facilities. Resource preservation and protection would continue to be a high priority for the management of the preserve. Staff would continue to work on preserve-related projects as funding allows. Management of visitor use and facilities would generally continue under existing levels and types of services and regulations. No new facilities would be constructed. Existing visitor facilities, such as buildings, structures, roads, parking areas, camping areas, and trails, would be maintained to the extent possible.

ALTERNATIVE B: PREFERRED ALTERNATIVE

Alternative B is the alternative preferred by the National Park Service for management of the national preserve. For reasons of economic feasibility and the desire to maintain time-honored traditional experiences on the preserve lands, the preferred alternative has much in common with alternative A, with some exceptions. Alternative B

proposes some improvements to existing facilities, additional camping opportunities and guidance, expanded outreach and partnership opportunities, some area-specific hunting guidance for public safety reasons, and additional resource protection measures to mitigate adverse effects from increased visitor use.

Under alternative B, site-specific management of some areas would be enhanced compared to current management. For a full description of site-specific management, see Chapter 3: Alternatives. Below are a few examples of the management approach under alternative B.

Cave Creek Campground

The NPS would institute a reservation system for campsites, if feasible. Accessibility would be enhanced, with improvements to pathways, parking, and individual camp sites. The NPS would strive to maintain the aesthetic qualities and secluded atmosphere unique to Cave Creek Campground, with no additional expansion or modifications that would degrade such qualities.

Subject to evaluation of the campground for its historical significance, the NPS would explore alternatives for the best use of the adjacent day use area. Group camping, amphitheater, and/or space for partner-based educational programming are potential uses to be explored. Finally, the NPS would explore the use of yurts and tent platforms at a few existing sites.

Bigelow Lakes Trailhead and Basin

Signage and trails would be improved to provide better navigation, information, and resource protection. The Bigelow Lakes trailhead on Bigelow Lakes Road (4611070) would be widened to increase space for parking and keep the turnaround clear. The existing vehicle barriers would be maintained, as needed. An automatic system to record vehicular traffic would be installed on the last segment of the road to Bigelow Lakes in order to determine visitation patterns that have management implications, such as installing boardwalks to protect sensitive sites if visitation exceeds a certain threshold.

The Limestone Trail would be maintained, with appropriate screening at the Elijah Trail intersection to protect resources. At Bigelow Lakes, a hardened trail and/or boardwalk, along with interpretive signage, would be installed to protect resources and block and reduce the number of user-created trails. The trail to Lake Mountain would be reestablished. Efforts to engage partners in the maintenance of trails would be increased.

Preserve Road System

The NPS would explore designation of up to five primitive drive-in campsites on Buck Road (4613031), including sites designed for accessibility. These sites would be available through the camping permit system to hunters and others during the times when the preserve road system is open.

Tankia Road (4613066 & 4613057) would be maintained as an administrative road. As such, it would be closed to public vehicle traffic, but open to cyclists, equestrian use, and hikers. Those who wished could use it to complete a loop with Buck Peak Road (4613000). Directional and interpretive signage would be provided. In addition, a potential trail connection between Tankia Road and Buck Road (4613031) would be explored for feasibility.

A portion (approximately 0.10 miles) of Ark Road (4611964) would be upgraded for administrative use and to preserve eligibility for historic nomination by maintaining the original footprint.

Biking would be permitted on paved and unpaved park and administrative roads unless posted.

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Bushy-tailed woodrat. NPS photo.

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Fog at Mt. Elijah. NPS Photo.

INTRODUCTION 1

Previous page: Chateau through rock formation.
This page: View of Bigelow Lakes from Lake Mountain. Photos: NPS.

CHAPTER 1: INTRODUCTION

BACKGROUND ON OREGON CAVES NATIONAL MONUMENT AND PRESERVE

Located in southwestern Oregon in the Siskiyou Mountains at 4,000 to 4,360 feet in elevation, a dynamic system of marble caves with limestone formations started forming over a million and a half years ago. In 1909, by presidential executive order, Oregon Caves and its surrounding environment were identified as nationally significant and designated as a national monument for the enjoyment of future generations.

The original designation was 480 acres. This small size almost immediately led to legislative proposals and plans for monument expansion so that the entire watershed that supports the caves, including old-growth mixed coniferous and deciduous forests, would be preserved. The addition of the 4,070-acre national preserve by an act of Congress, and signed into law on December 19, 2014, included the surrounding watershed and forest, adding new visitor opportunities and cultural and natural resources to the park unit.

LOCATION AND ACCESS

The monument and preserve are located in the Siskiyou Mountains in southern Oregon's Josephine County and are surrounded by the Rogue River-Siskiyou National Forest. The preserve is about 45 miles east of the Pacific Ocean, 20 miles south of Grants Pass, Oregon, and 7 miles north of the California/Oregon border (Map 1). The primary access point is via Highway 46, from Cave Junction, Oregon. The drive from Cave Junction to the monument typically takes about 35 minutes but can take up to an hour due to the narrow, steep and winding road. Travel trailers and large recreational vehicles are not recommended. The highway enters the preserve near Cave Creek Campground and continues through the preserve for approximately 3.5 miles to the monument boundary. Primary access to the gravel road system in the northern portion of the preserve is on Lake Creek Road (4611960) from inside the monument or Buck Creek Road (4613000) from outside of the preserve. Access to the gravel roads in the southern portion is from Cave Creek Road (4614000), originating outside of the preserve on Highway 46. Several trails access the preserve, including some trails originating within the monument, the Cave Creek Trail, which connects the monument to Cave Creek Campground, and trails connecting the Bigelow Lakes basin to roads within the preserve and trail systems on the surrounding forest. Preserve roads accessible from Highway 46 access points are gated and closed during rain and snow seasons while access to other preserve roads is limited due to snow and/or additional gates.

DESCRIPTION OF THE PRESERVE

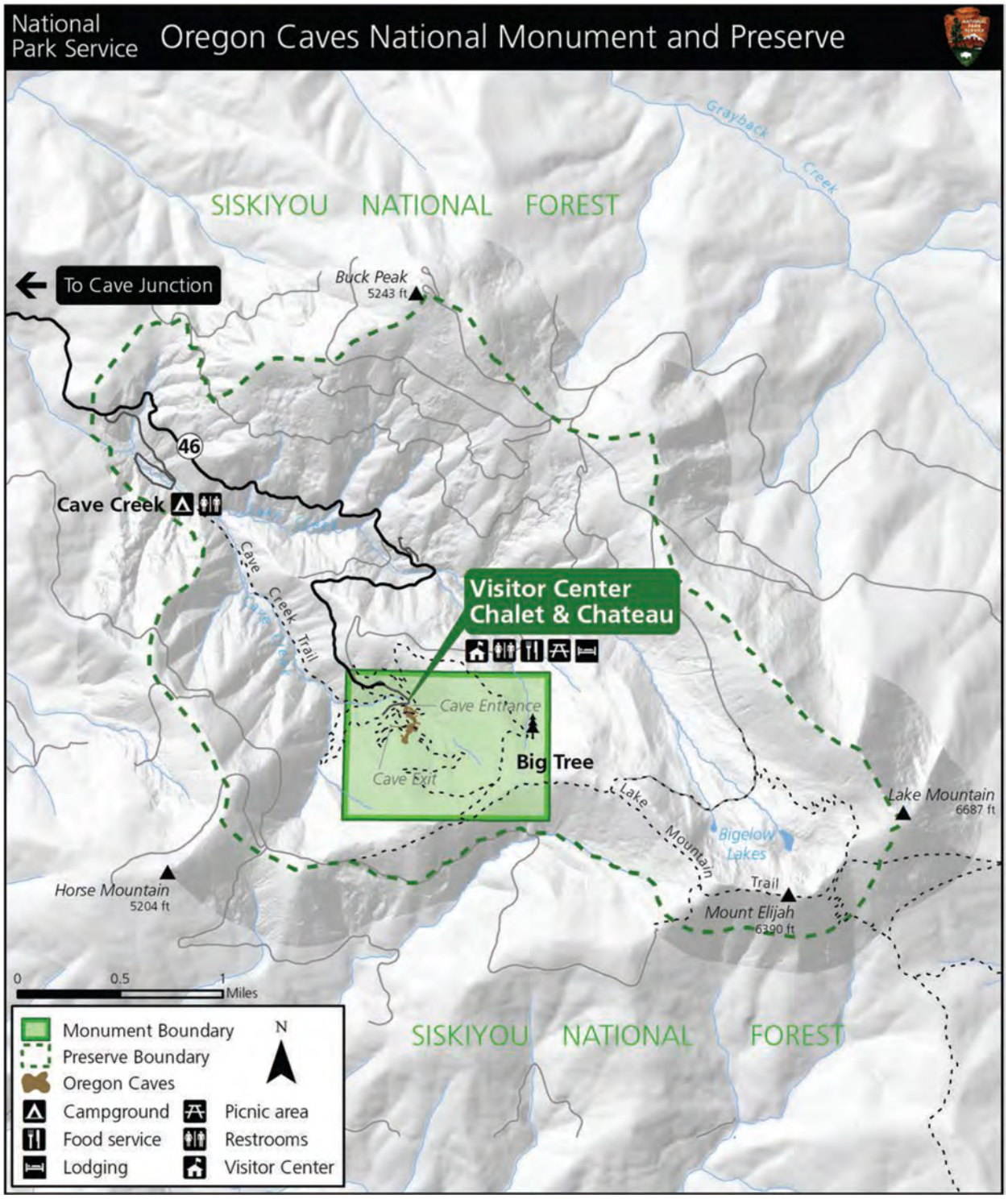
The 4,070 acre national preserve surrounds the national monument and encompasses the watershed upstream of Cave Creek near the Cave Creek Campground (Map 2). The preserve is itself surrounded by the Rogue River-Siskiyou National Forest. At its higher elevations, to the east, the preserve contains the Bigelow Lakes basin and its scenic glacial cirque setting. From the 6,390 foot summit of Mt. Elijah, overlooking the Bigelow Lakes, the boundary follows the ridgelines to contain the watersheds of Lake Creek, Panther Creek, No Name Creek, and Cave Creek.

Visitors to the preserve experience natural waterfalls and mountain meadows, as well as subalpine meadows, alpine rock gardens, dozens of vegetation communities, glacial cirque lakes, and vistas of Mount Shasta.

The area is one of the most concentrated examples of geodiversity in this hemisphere due to the presence of tilted rock slabs from back-arc and forearc basins, mid-ocean ridges, island arcs, and rifting volcanism from sinking seafloors, all stacked by massive tectonic

Map 1: Regional Context

Map 2: Oregon Caves National Monument and Preserve



forces against the continent and soldered by granitic welding.

PURPOSE AND NEED FOR THE PRESERVE MANAGEMENT PLAN

Purpose of the Plan

The approved preserve management plan will guide the long-term management of the preserve. The preserve management plan will provide a framework for managers to use when making decisions about how to best protect the preserve's resources, how to provide quality visitor uses and experiences, how to manage visitor use, and what kinds of facilities, if any, to develop in the preserve. The preserve management plan will also provide park management, park stakeholders, and the general public with a logical and trackable process from which various management prescriptions are formed and implemented. It will ensure that management direction is developed in consultation with interested stakeholders and adopted by the NPS leadership after an analysis of the benefits, impacts, and economic costs of alternative courses of action.

This Preserve Management Plan and Environmental Assessment presents and analyzes two alternative future directions for the management and use of the preserve. The potential environmental impacts of each alternative have been identified and assessed (see Chapter 4, Environmental Consequences).

Actions directed by this planning effort or in subsequent implementation plans are accomplished over time. Budget restrictions, requirements for additional data or regulatory compliance, and competing priorities may delay implementation of many actions. Major or especially costly actions could be implemented 10 or more years into the future.

The plan does not describe how particular programs or projects should be prioritized or implemented. Those decisions will be addressed in future, more detailed planning efforts.

Need for the Plan

The addition of the 4,070-acre national preserve by an act of Congress, signed into law on December 19, 2014 by an act of Congress, included the surrounding watershed and forest previously managed by the U.S. Forest Service (USFS). The transfer added new visitor opportunities and cultural and natural resources to the park unit, including natural waterfalls, mountain and subalpine meadows, glacial features, alpine rock gardens, dozens of vegetation communities, and vistas of Mount Shasta. The new preserve surrounds the existing monument and includes a variety of facilities including a campground, roads, water lines, and trails. There are also new management responsibilities, including management of hunting.

The preserve's gateway communities view the designation of the preserve as an opportunity to provide expanded recreation opportunities and interpretive programs to visitors. For example, new opportunities could include guided hiking and camping, education programs at the Bigelow Lakes Botanical Area, and photography workshops, etc.

SCOPE OF THE PRESERVE MANAGEMENT PLAN

Introduction

The following topics describe some of the preliminary needs and challenges the preserve management plan addresses for the park to preserve resources while providing for public use and enjoyment. The general public, NPS staff, and representatives from county, state, and federal agencies, and various organizations identified issues and concerns about preserve management during the scoping phase (early information gathering) for this plan. An issue is defined as an opportunity, conflict, or problem regarding the use or management of public lands. Comments were solicited at public meetings, through planning newsletters, and at meetings with community stakeholders and the public. Comments were received in written form online, on-site, or through the mail (see

Chapter 5, Consultation and Coordination for more information about the scoping efforts).

Comments received during scoping demonstrated that the public values the preserve's diverse resources, viewsheds, solitude, visitor opportunities, and facilities. Issues and concerns raised during public scoping generally involved suggestions for the types and levels of services, access, and activities offered at the preserve while ensuring a high degree of protection of the preserve's resources. The preserve management plan alternatives provide strategies for addressing these issues within the context of the purpose, significance, and special mandates presented below under Foundation for Planning and Management.

ISSUES

Natural Resources

Long-term protection of the watershed is important to ensure enduring conservation of the park unit's fundamental resources and values and water for drinking, fire protection, and sanitation. Natural resources issues specific to the expansion area include identification and protection of native plants and wildlife (such as the spotted owl – a federally listed threatened species) and wildlife habitat. Port Orford cedar, an important species in watershed management for shading streams while alive and making diverse slope gradients (plunge pools, etc.) for aquatic life when they fall, is threatened by a root disease caused by a water mold which can be carried between watersheds by vehicles, equipment, and hikers. The plan will address ways to control the spread of the root disease on the Preserve. Additional cave resources exist in the expansion area and their management will be considered.

Bistort and mallow flowers at Bigelow lakes meadow. NPS photo.

Ecological Sustainability

Observed and anticipated increases in atmospheric carbon have the potential to impact sensitive monument, preserve and cave ecosystems and contribute to changes in ecological communities and fire patterns. Due to climate-induced changes in the seasonal, and decadal variation in snow, rainfall, and water quality, the adequacy of the public water supply distribution and disposal systems to meet an increase in demand and survive flood damage will be considered in the plan. The plan will address mechanisms to consider climate and ecological change through interpretation and education, ongoing monitoring, adaptation and instituting energy conservation practices.

Fire and Fuels Management

There is no existing guidance for fire management concerns within the newly-added lands of the Preserve. Guidance is needed on fire management issues including managing wildland fire to protect the public, park communities, and infrastructure; conserving natural and cultural resources; defining emergency exits from the monument through the preserve; and maintaining and restoring natural ecosystems and processes. Separate fire management plans would be developed for the monument and the preserve. The preserve plan will reference the effort and outline factors to be considered in the fire management planning effort. The highest priority under all circumstances is firefighter and public safety.

Cultural Resources

Preservation and protection of sensitive cultural and historical resources is an important concern of the plan. In the expansion area, there is a need to better document the state and extent of cultural resources through archeological surveys and Section 106 eligibility survey/determinations. It will help define priorities and management direction for cultural resources protection, research, and monitoring. This includes appropriate visitor use, protection of sensitive sites, and opportunities to coordinate with neighboring land managers, state agencies, the public, tribal representatives, and other

Visitors catch the view at Bigelow Lakes Overlook. NPS Photo.

stakeholders to inventory and protect cultural landscapes and artifacts and address stakeholder and tribal concerns.

Visitor Uses

The monument provides many personal and non-personal interpretive services throughout the monument, such as cave tours, Chateau tours, education programs, visitor center exhibits, and bulletin boards, wayside displays, and trail guides. This plan will explore opportunities to provide additional, relevant personal and non-personal interpretive services in the preserve. The plan will address changing patterns in visitor use trends and demographics and identify appropriate visitor access and experiences, opportunities for interpretation and education, and desired conditions for visitor safety.

Commercial Services

Several local partners and business entities are interested in exploring potential commercial services in the expansion area. These potentially include guided and group camping tours, education programs at the Bigelow Lakes, workshops, horseback riding, and guided hunting. In addition, the plan will explore whether the campground can be operated by a concessioner or other partner. Other activities permitted through commercial use authorizations (for example, collecting/selling firewood) and special use permits will be considered.

Mulching to reduce tree disease in campground. Photo by Mark Donahue.

Education and Interpretation

Oregon Caves National Monument & Preserve is an exceptional place for visitors and other stakeholders to learn about local and regional geology, biology, climate, and cultural history. The plan will evaluate the need to look at additional interpretive themes given the boundary expansion and for increased visitor interpretation and education programs. The plan will explore new educational opportunities within the monument and preserve and with partner agencies, schools, and gateway communities. Opportunities for enhanced interpretation of significant resources through exhibits, programs, interpretive trails, and new media will also be considered in the plan.

Hunting

Hunting and fishing are allowed within the preserve in accordance with applicable state and federal laws. The park may, in consultation with the Oregon Department of Fish and Wildlife, designate zones and periods where hunting is regulated, with the goal of ensuring public safety. The plan will consider management of these activities.

Facilities

The land added to the monument and preserve through the boundary expansion is relatively undeveloped. The potential for additional facilities, including expanding the campground, more restrooms and an improved water supply system, will be considered. Radio and cell phone communications capability is lacking through much of the preserve, which creates problems for administrative communications. The plan will also look at what existing infrastructure will be needed in the future.

Campground

As part of the boundary expansion, NPS inherited a campground previously established and managed by the U.S Forest Service. The campground consists of 17 sites (plus one host site), three vault toilets, a water system and electrical

system. Use of the site threatens Port Orford cedars through the spread of root rot disease by hikers and vehicles. Desired conditions for the campground, including resource protection, visitor experience, and special uses, that maintain ecosystem services and protect cultural values, need to be established. Currently, most of the campground is not accessible for those visitors with reduced mobility abilities, nor is it designed for large RVs.

Roads

The boundary expansion added 19.11 miles of gravel roads to the park. Many of the roads are in poor shape and are candidates for decommissioning. One segment (Road 46960) is a priority for the NPS as a secondary and emergency access to/from the park if Highway 46 is unavailable. Decisions must be made on which roads to maintain and which to decommission, as well as determining the method to decommission them. A recent U.S. Forest Service Environmental assessment evaluated road conditions in the preserve areas and NPS will explore using these results to inform decisions. The plan will also consider potential opportunities for mountain biking and cross-country skiing on some roads.

Trails

16.75 miles of trails were added to NPS management. The trails are in variable condition and many require extensive restoration and maintenance. The planning effort will evaluate the condition of existing trails and the potential need for new ones.

Stronger Ties with Governmental Partners

The plan will seek new and better ways in which the preserve could coordinate efforts with federal, state, tribal, and local agencies and other governmental organizations. Oregon Caves National Monument & Preserve staff has identified that the most important need in this regard is to encourage stronger cooperative ties with the adjoining

Hiker resting at Mount Elijah. NPS Photo.

land managers of the Wild Rivers Ranger District, Rogue-Siskiyou National Forest. Communication between the two federal agencies will continue on a variety of resource, administrative and visitor use issues. Other governmental partners in which cooperation can be further enhanced include the Bureau of Land Management (BLM) Medford District, state agencies involved with wildlife or water management, the US Fish and Wildlife Service, and fellow parks within the Klamath Network, including Crater Lake and Lassen Volcanic National Parks, Redwood State and National Parks, Whiskeytown National Recreation, Lava Beds National Monument and the Tule Lake Unit of WWII Valor in the Pacific National Monument. Coordination has occurred in the past on natural and cultural resource, recreation and visitor use issues. Existing agreements should be examined for their effectiveness and new agreements should be considered, including for road management.

Regional Cooperation and Partnerships

Cooperation and partnerships with local and regional organizations are important for studying and managing significant resources, as well as educating and informing visitors, local residents, researchers, and students about the preserve's significance.

Staffing

The boundary expansion represents a nearly ten-fold increase in the land area of the monument and preserve. Significant new maintenance, protection, interpretation and resource requirements have been added. The plan will contemplate new staffing requirements, within realistic fiscal constraints, to take in the additional workload associated with the expansion.

ISSUES AND CONCERNS NOT ADDRESSED

Not all of the issues or concerns raised by the public will be addressed in this plan. Some issues raised by the public were not considered because they are already prescribed by law, regulation, or policy; would be in violation of laws, regulations, or policies; or were at a level that was too detailed for this plan and are more appropriately addressed in subsequent planning documents. For example, during public scoping, some commenters provided detailed suggestions for interpretive programming or maintenance of specific trails. While this preserve management plan does not address this level of detail, such comments will be considered by the park staff in implementing the plan.

A number of revisions in existing park plans or new plans will deal with a specific group of preserve resources in more detail. Further cultural resource planning will help prioritize the timing of projects and their evaluation as to their eligibility for being listed in the National Register of Historic Places so as to best protect cultural resources. A long range interpretive plan will address recreational and educational opportunities in the preserve. Specific fire management strategies will be addressed in a separate fire management plan.

IMPACT TOPICS: RESOURCES AND VALUES THAT COULD BE AFFECTED BY THE ALTERNATIVES

Impact Topics to be Considered

- Natural resources
- Hydrologic resources and processes, including wetlands and floodplains
- Geological resources and processes
- Vegetation
- Wildlife and wildlife habitat, including special status species
- Cultural resources
- Visitor opportunities and access
- Preserve operations
- Socioeconomics

Impact Topics Dismissed from Further Consideration

The following impact topics were considered and determined not relevant to the development of this preserve management plan because either they would have no effect or a negligible effect on the topic or resource, or the resource does not occur in the preserve. The topics dismissed from further analysis are as follows.

ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL

Alternatives in the preserve management plan would result in no new facilities with inherent energy needs. In the proposed alternatives, any future new facilities would be designed with long-term sustainability in mind. The National Park Service has adopted the concept of sustainable design as a guiding principle of facility planning and development. The objectives of sustainability are to design facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting, and to require the least amount of nonrenewable fuels/energy.

The alternatives would not likely result in an increased energy need. Any potential increase is expected to be negligible when seen in a regional context. Thus, this topic is dismissed from further analysis.

ENVIRONMENTAL JUSTICE

The Environmental Protection Agency's Office of Environmental Justice defines environmental justice as "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 group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. The goal of this "fair treatment" is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

On February 11, 1994, President William J. Clinton signed Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This order requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs/policies on minorities and low-income populations and communities. The Secretary of the Interior established Department of the Interior policy under this order in an August 17, 1994, memorandum. This memorandum directs all bureau and office heads to consider the impacts of their actions and inactions on minority and low-income populations and communities; to consider the equity of the distribution of benefits and risks of those decisions; and to ensure meaningful participation by minority and low-income populations in the department's wide range of activities where health and safety are involved.

In responding to this executive order two questions are asked and answered as the major part of the analysis:

- Does the potentially affected community include minority and/or low-income populations?
- Are the environmental impacts likely to fall disproportionately on minority and/or low-income members of the community and/or tribal resources?

The potentially affected community does contain some minority and low-income populations; however, environmental justice is dismissed as an impact topic for the following reasons:

- NPS staff and the planning team actively solicited public participation as part of the planning process and gave

equal consideration to all input from persons regardless of age, race, income status, or other socioeconomic or demographic factors.

- Implementation of the proposed alternative would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse human health effects on any minority or low-income population.
- The impacts associated with the preferred alternative would not result in any identified effects that would be specific to any minority, low-income, or tribal population communities, or tribal resources.

Based on the above information and the requirements of Executive Order 12898, environmental justice was ruled out as an impact topic to be further evaluated in this document.

INDIAN TRUST LANDS

The National Park Service does not manage or administer Indian trust assets. The overriding mandate for the National Park Service is to manage the park units in the National Park System consistent with park laws and regulations. No lands comprising Oregon Caves National Monument and Preserve are held in trust by the Secretary of the Interior solely for the benefit of American Indians. Therefore, this topic was dismissed from further analysis.

NATURAL OR DEPLETABLE RESOURCES REQUIREMENTS AND CONSERVATION POTENTIAL

Resources that will be permanently and continually consumed by implementation of the plan include evaporation of water in the public water supply of Cave Creek Campground, and fossil fuels and water evaporated in dams used to generate electricity and/or to power internal combustion engines within the park; however, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources. Both alternatives reduce the use of fossil fuels through implementation of regional sustainability initiatives.

Construction activities related to implementation of the alternatives would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline in construction equipment. With respect to operational activities, compliance with all applicable building codes, as well as project mitigation measures, would ensure that all natural resources are conserved or recycled to the maximum extent feasible.

Consideration of these topics is required by 40 Code of Federal Regulations (CFR) 1502.16. The National Park Service has adopted the concept of sustainable design as a guiding principle of facility planning and development (NPS Management Policies 9.1.1.7). Through sustainable design concepts and other resource management principles, the alternatives analyzed in this document would attempt to conserve natural resources, especially depletable resources. Therefore, this topic has been dismissed from further analysis.

PRIME OR UNIQUE FARMLANDS

In 1980 the Council on Environmental Quality directed federal agencies to assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resource Conservation Service as prime or unique. Prime farmland is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland soils produce specialty crops such as specific fruits, vegetables, and nuts.

There are no prime or unique farmlands in Oregon Caves National Monument and Preserve. Private agriculture does not exist within the preserve, so this type of land use would not be affected by this plan. Therefore, there would be no impacts on prime or unique

farmlands and the topic is being dismissed from further analysis in the plan.

URBAN QUALITY AND DESIGN OF THE BUILT ENVIRONMENT

Consideration of this topic is required by the Code of Federal Regulations (CFR) 1502.16. The quality of urban areas is not a concern in this planning project. The alternatives do not propose new structures. Existing structures are confined to the administrative area. In the administrative area, vernacular architecture and compatible design would be taken into consideration for any needed improvements. The emphasis in this area would continue to be placed on designs, materials, and colors that blend in and do not detract from the natural and built environment. Therefore adverse impacts are anticipated to be negligible and no further consideration of this topic is necessary.

CONFORMITY WITH LOCAL LAND USE PLANS

The basic land use of the preserve as a recreation and resource management area is in conformance with local land use plans. The creation of additional recreation and visitor service opportunities in the preserve, as proposed in the alternatives, would be compatible with the existing land uses in the monument and on surrounding U.S. Forest Service lands. Therefore this topic is dismissed from further consideration.

PUBLIC HEALTH AND SAFETY

Actions and developments proposed in the alternatives would not result in any identifiable adverse impacts to human health or safety. Therefore, this topic is dismissed from further consideration.

AIR QUALITY

Clean air, free from excessive human-caused pollution, is critical for health for both humans and ecosystems. In order to protect this value, the US Congress passed the Federal Clean Air Act in 1970 (expanded in 1977 and 1990) which identifies dangerous air pollutants and also establishes concentration thresholds for these pollutants. The National Park Service's Air Quality Division collects summary air quality information for park units and publishes this data annually. The 2015 Air Quality Summary for Oregon Caves National Monument and Preserve documents moderate to good conditions for five pollutant categories. Those categories deemed in good condition include vegetation health risk from ground-level ozone and wet sulfur deposition. Human health risk from ground-level ozone, visibility (haze index), and wet nitrogen deposition were deemed to warrant moderate concern. Ecosystems in the park were rated as having very low sensitivity to nutrient-enrichment and acidification effects relative to monitoring at all other park units (Sullivan et al. 2011a; Sullivan et al. 2011b). While there are ongoing effects to air quality originating from external sources, no actions proposed in the alternatives in this plan would measurably impact air quality on the preserve except for gravel road vehicular dust that is very local and of short duration. More lasting changes in air quality from burn piles will be addressed in the parks new fire plan. Therefore, the impact topic of air quality is dismissed from further analysis.

RELATIONSHIP OF OTHER PLANNING EFFORTS TO THIS PLAN

National Park Service Plans

WILD AND SCENIC RIVERS ELIGIBILITY STUDY AND SUITABILITY ASSESSMENT (IN PROGRESS)

Congress has directed the park to study five creek segments for possible inclusion into the Wild and Scenic Rivers system. The study is being prepared simultaneously with the Preserve Management Plan and will include analyses of eligibility and suitability for these segments. If any segments are found eligible, their outstandingly remarkable values will be described. Because the areas to be studied comprise more than half of the Preserve, collaboration with the Preserve Management Plan process is ongoing.

OREGON CAVES NATIONAL MONUMENT GENERAL MANAGEMENT PLAN (1999)

The general management plan is a long-term decision-making tool, providing National Park Service managers with guidance on the protection and public use of Oregon Caves National Monument. While the general management plan addressed ongoing regional cooperation and protection of the watershed through a variety of means, it did not foresee designation of the surrounding watershed lands as a national preserve, anticipating an expanded national monument instead. The preserve management plan amends and complements the monument's general management plan by providing guidance specific to the national preserve designation and to natural and cultural resources or other assets not present in the monument.

FOUNDATION DOCUMENT (2015)

The foundation document provides basic guidance for planning and management decisions. The core components of a foundation document include a park unit's purpose, significance, fundamental resources and values, and interpretive themes. These core components, as described in the 2015 Oregon Caves National Monument and Preserve foundation document, are listed in chapter two of this plan and form the foundation for planning and management on both the monument and preserve.

FIRE MANAGEMENT PLAN (2005, UPDATED 2016)

The monument's fire management plan outlines fire management objectives and ways that the monument can enhance firefighter and public safety while meeting resource objectives. This plan is a specific implementation plan for the monument, updated annually and meant to be used in cooperation with broader guidance such as the general management plan and this preserve management plan. The fire management plan does not address management of different vegetation types, fire fuels, and other conditions not present in the monument. The current monument fire management plan does not provide coordinated hazardous fuel management guidance, which is an important need for both the national monument and preserve.

SUBSURFACE MANAGEMENT PLAN (2009)

The subsurface management plan addresses management of cave and karst resources. Originally written for the national monument lands, the plan is adopted by incorporation into the preserve management plan in order to provide consistent management of cave and karst resources on both units.

PORT ORFORD CEDAR DISEASE AND MANAGEMENT PROTOCOL (2015)

Oregon Caves National Monument and Preserve has identified maintenance of Port Orford cedar as a primary management objective due to its limited geographic extent and ecologic significance in streamside areas. The protocol guides NPS staff as well as external partners such as the US Forest Service or contracted wildland fire-fighters on the preserve. Prevention measures to limit the spread of the disease are listed and staff travel on preserve roads during wet weather is addressed. These protocols will continue to guide NPS activities on the preserve and align with U.S. Forest Service and Bureau of Land Management protocols.

Other Plans

SUCKER CREEK LEGACY ROADS AND TRAILS ENVIRONMENTAL ASSESSMENT (USFS, 2014)

In 2014, the US Forest Service prepared the Sucker Creek Legacy Roads and Trails Project to reduce the risk of sediment delivery to streams in the Sucker Creek watershed from National Forest System roads that could not be maintained because of the lack of maintenance funding, while retaining roads needed for management, special uses, recreation, fire suppression, and other needs. The project identified appropriate treatments and disposition of roads throughout the

watershed with watershed health, fisheries, and wildlife habitat restoration as guiding principles. A portion of this project area became the national preserve in December of 2014. This preserve management plan incorporates by reference the analysis of the Sucker Creek Legacy Roads and Trails Environmental Assessment and uses the decisions made in that document as part of the basis for both the no action and preferred alternatives.

NEXT STEPS IN THE PLANNING PROCESS

After the distribution of the Preserve Management Plan and Environmental Assessment there will be a 90-day public review and comment period, after which the NPS planning team will evaluate comments from other agencies, organizations, businesses, Indian tribes, and individuals regarding the draft plan. If no significant environmental impacts are identified, then a Finding of No Significant Impact (FONSI) and final decision can be made and approved by the Pacific West Regional Director.

IMPLEMENTATION OF THE PLAN

Implementation of the approved plan will depend on funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. The amount of implementation and the timing for implementing parts of the approved plan or its entirety could also be affected by other factors, such as changes in NPS staffing, visitor use patterns, and unanticipated environmental changes. Full implementation of the actions in the approved preserve management plan could be many years in the future.

Once the plan has been approved, additional feasibility studies and more detailed planning, environmental documentation, and consultations may or will need to be completed, as appropriate, before certain preferred alternative actions can be carried out. For example:

- additional environmental documentation may need to be completed,
- appropriate permits may need to be obtained before implementing actions,
- appropriate federal and state agencies may need to be consulted concerning actions that could affect listed or other species,
- The State Historic Preservation Officer would need to be consulted, as appropriate, on actions that could affect historic properties potentially eligible for listing, or listed in, the National Register of Historic Places, including those cultural sites listed in U.S. Forest Service and State Historic Preservation Office databases.
- Consultation with American Indian tribes and groups would continue throughout the implementation process, and as part of any effort to identify, document and manage historic properties with religious and cultural significance to traditionally associated American Indian peoples.

Future program and implementation plans, describing specific actions that managers intend to undertake and accomplish in the preserve, will be guided by the desired conditions and long-term goals set forth in this preserve management plan.

FOUNDATION FOR PLANNING AND MANAGEMENT

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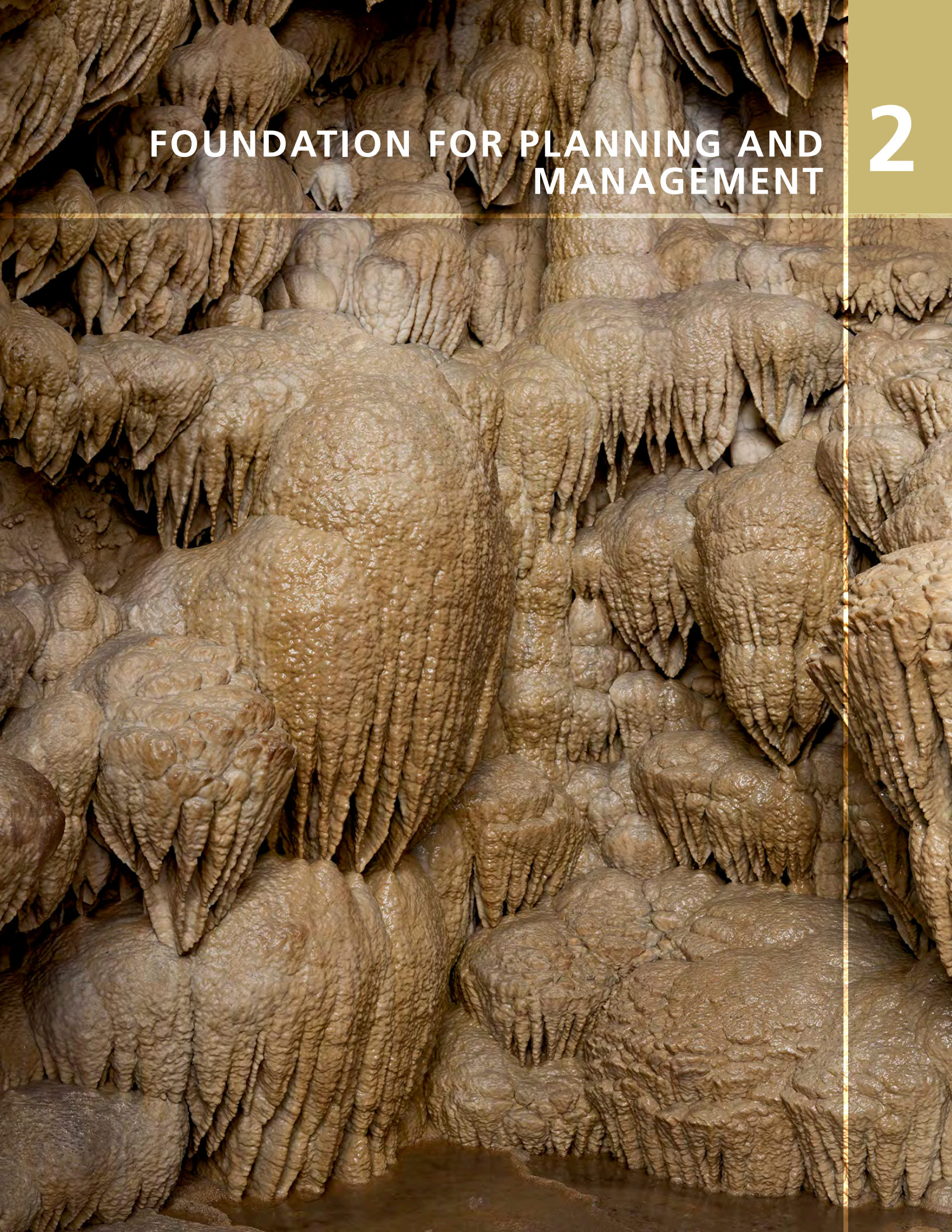


Previous page: Speleothems, or rock "drapery" at Paradise Lost.
This page: Waterfall at Lower Pond. Photos: NPS.

CHAPTER 2: FOUNDATION FOR PLANNING AND MANAGEMENT

INTRODUCTION

Every unit of the national park system has a foundational document to provide basic guidance for planning and management decisions – a foundation for planning and management. The core components of a foundation document include a brief description of the park as well as the park's purpose, significance, fundamental resources and values, other important resources and values, and interpretive themes. A primary benefit of developing a foundation document is the opportunity to integrate and coordinate all kinds and levels of planning from a single, shared understanding of what is most important about the park.

Oregon Caves National Monument and Preserve developed a foundation document in August 2015 that contains the core elements described below.

PARK PURPOSE

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for Oregon Caves National Monument and Preserve was drafted through a careful analysis of the presidential proclamation for the monument signed into law on July 12, 1909, and legislation that created the preserve expansion on December 19, 2014, along with history that influenced the development of this park unit. The purpose statement lays the foundation for understanding what is most important about the park.

Oregon Caves National Monument and Preserve Park Purpose

Oregon Caves National Monument and Preserve protects and preserves the scientific interest and the unusually diverse and concentrated biology and geology of an important solution cave system and watershed within the Siskiyou Mountains for the benefit, understanding, and enjoyment of the public.

SIGNIFICANCE

Significance statements express why a park's resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of Oregon Caves National Monument and Preserve, and are supported by data, research, and consensus. Statements of significance describe the distinctive nature of the park and why an area is important within a global, national, regional, and systemwide context. They focus on the most important resources and values that will assist in park planning and management.

The following significance statements have been identified for Oregon Caves National Monument and Preserve. (Please note that the sequence of the statements does not reflect the level of significance.)

- **Complex Geology.** Oregon Caves National Monument and Preserve is an outstanding place to view one of the world's most complete and complex arrays of geology. Visitors can see beautiful glacial features, along with marble cave passages that were transformed deep within the earth.
- **Solution Cave Access.** Oregon Caves is an excellent example of solution cave geology in the Pacific Northwest region and is easily reachable by the public.
- **Fossils.** The cave possesses a significant collection of well-preserved fossils, including one of the oldest American grizzly bear bones, the remains of a jaguar, and a bone tentatively identified as being from a short-faced bear. There also is a unique assemblage of trace

fossils and subfossils that record much older and more recent habitat change.

- **Historic Resources.** The Oregon Caves Chateau, a national historic landmark, and the Oregon Caves Historic District are outstanding examples of public and private efforts to develop, manage, and protect the monument's natural and recreational resources. The Chateau and designed landscape of the historic district exemplify the rustic– romantic architectural style of developed national park tourist facilities built in the early 20th century.
- **Genetic Biodiversity.** Oregon Caves National Monument and Preserve contains a rich variety of habitat types that support unusually high genetic diversity, including one of the highest concentrations of endemics in North America and more single-cave endemics than any other cave in the western United States.
- **Climate History.** Oregon Caves National Monument and Preserve protects dripstone chemistry and fossil deposits that record half a million years of detailed and accurate climate history and drastic climate change a quarter of a billion years ago. These caves thus provide an opportunity for scientific research and education about climate and habitat change.
- **Wild and Scenic Rivers.** Oregon Caves is home to the first subterranean National Wild and Scenic River, the River Styx. The River Styx and the other rivers in this watershed are critical to the sustained health of the cave and karst features.

FUNDAMENTAL RESOURCE AND VALUES

Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are more specific than significance statements.

Fundamental resources and values help focus planning and management efforts on what is truly significant about the park. One of the most important responsibilities of NPS managers is to ensure the conservation and public enjoyment of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. If fundamental resources and values are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

The following fundamental resources and values have been identified for Oregon Caves National Monument and Preserve:

- **Fossils and Diversity of Features.** Oregon Caves National Monument and Preserve contains a nationally significant collection of fossils that were preserved in the undisturbed confines of the cave environment for thousands of years. The past record of life at Oregon Caves consists of fossils, fossil traces, and subfossils. Fossils include one of the oldest American grizzly bear bones, dating back more than 50,000 years; jaguar remains dating back approximately 38,000 years; and a bone

Jaguar Jaw. NPS Photo.

tentatively identified as being from a short-faced bear, the largest American land carnivore since the dinosaurs. There also is a unique assemblage of trace fossils and subfossils that record much older and more recent habitat change. Fossil traces, which date back approximately 250,000 years, include claw marks, paw prints, and carbon from microbes. Subfossils are less than 10,700 years old and include diverse assemblages of amphibians and the remains of half a dozen vertebrates no longer living at Oregon Caves.

- **Endemic Species.** The five scientifically described species endemic to Oregon Caves National Monument and Preserve are part of one of the largest assemblages of single cave endemics in the United States. A high habitat diversity largely results from a high climate and soil diversity due to the region being next to oceans and geologically active plate margins for more than half a billion years. The habitat integrity of the area also contributes to habitat diversity and health of various species and wildlife populations. Whereas the cave reduces surface fluctuations that cause extinctions, a trout lily hybrid, an entire millipede family, and a grylloblattid insect on the surface also appear to be endemic to the park unit. A high habitat diversity on the surface ensures the successful establishment of migrants (some of which become cave endemics) and offers places to move to and survive climate change.
- **Geologic Features and Processes.** Oregon Caves National Monument and Preserve features a concentrated variety of rock types, which provide visitors with opportunities to see and understand the geologic record from the inside out and in four dimensions. The cave features all three major rock types and their main subdivisions (volcanic, plutonic, chemical, clastic, contact, and regional). At least three ophiolites (seafloors on land) and other terranes (displaced rock formations with shared history) also illustrate the concentrated complexity of the park unit.
- **Biodiversity from Surface and Subterranean Interaction, Including Cave and Surface Endemics.** The caves provide refuge for a vast diversity of species that are supported by the natural processes that occur between the caves and the surface. These processes include airflow, water flow, and migration of species. Biodiversity and healthy habitats are also supported by minimal disturbances within areas of the caves, such as lack of artificial light, noise,

Chlorophyll-free spotted coralroot is fed by fungi. NPS Photo.

Cave and surface grylloblattid endemic to the park. NPS Photo.

and habitat fragmentation. Accelerated climate change has been recorded as affecting or predicted to affect cave/surface biotic interactions, including the effects of reduced seasonal waterflow from less snowpack, more floods and droughts, migrations changes, and a greater metabolic need in certain species for food and water.

- **The Chateau and the Historic District.** The Chateau and the historic district strongly support the significance of the park unit. The architecturally significant Chateau includes the largest publicly owned collection of Monterey furniture, one of two styles that are purely American. The naturalistic design of the historic district (built waterfall, ponds, and a stream in the Chateau) helps augment the visitor experience. This district has 14 individual features that comprise a historic landscape in terms of form and function. They include
  - — buildings and structures – Chateau, Chalet, Ranger Residence, Guide Dormitory, rock walls of local stone, and Kiosk
  - — circulation features – road system, walkways, trail system, parking areas
  - — small-scale structural features – rock-lined Cave Creek diversion pool system, four drywall benches on Big Tree Trail, peeled log pole roadway lighting standards
- Opportunity to Explore and Access the Complex Geology of the Cave System and Its Relationship to the Mountain Watershed. Visitors to the park have opportunities to explore the complex geologic beauty of the caves and to observe how water shapes lands from above and below the surface. The tight twisting and turning cave route provides visitors with opportunities to connect

A historic beehive-like patio surface. NPS Photo.

with a sense of discovery, adventure, and wonder. Trails lead visitors to scenic mountain vistas, glacial lakes, meadows, and waterfalls.

- Free-Flowing Water and Dependent Systems. Oregon Caves National Monument and Preserve protects the first subterranean National Wild and Scenic River, the River Styx, as well as 15 miles of free-flowing and undeveloped watercourses, the surrounding area of Bigelow Lakes, and other wetlands. These rivers, streams, and mountain meadow wetlands have a large number of significant species that support habitats for unique communities of aquatic, riparian, terrestrial, and cave species. This pristine watershed is part of the headwater tributaries of the Illinois River, one of the last major undammed rivers in the Pacific Northwest. The complex, dynamic cave ecosystem is dependent on the pristine waters in the park unit for its continued existence and integrity.

OTHER IMPORTANT RESOURCES AND VALUES

Oregon Caves National Monument and Preserve contains other resources and values that are not fundamental to the purpose of the park and may be unrelated to its significance, but are important to consider in planning processes. These are referred to as "other important resources and values" (OIRV). These resources and values have been selected because they are important in the operation and management of the park and warrant special consideration in park planning.

The following other important resources and values have been identified for Oregon Caves National Monument and Preserve:

- Partnerships. Support from public and private organizations has been essential in the creation or sustainability of Oregon Caves National Monument and Preserve. With long-term connections to the local community and a passion for the park unit, these partnerships are crucial for the protection of important resources such as the Chateau and allow expanded opportunities for visitors to understand and connect with the monument and preserve.

SPECIAL MANDATES AND ADMINISTRATIVE COMMITMENTS

Special mandates are legal requirements specific to a national park unit that must be fulfilled, along with the park's purpose, even if they do not relate to that purpose. Special mandates provide direction for park planning and management. Mandates can include the designation of an area in the park as wilderness or may also commit park managers to specific actions and limit their ability to modify land use in a park unit, such as long term cooperative agreements, or easements. All easements and rights-of-way are managed under the terms of federal law and NPS regulations. Based on NPS Management Policies (2006), all easements must be formal, legal titles or they will be extinguished. Oregon Caves National Monument and Preserve is currently working to identify the status of any existing easements on the preserve.

Administrative commitments are agreements that have been reached through formal, documented processes. Examples include a memorandum of agreement to abide by the policies of an interagency management commission, or to manage fishing in cooperation with the state department of fish and game. Although agreements also identify park commitments they are not legally binding and are revocable by the superintendent.

Table 1: Special Mandates

Hunting and Fishing	
Public Law 113-291; sec 3041 (c)5	Hunting and fishing will be allowed on land and waters within the national preserve in accordance with applicable federal and state laws. The unit may, in consultation with the Oregon Department of Fish and Wildlife, designate zones and periods where no hunting or fishing is permitted for reasons of public safety, administration, or compliance by the Secretary of the Interior with any applicable law (including regulations).
Fire Management	
Public Law 113-291; sec 3041 (c)(2)(B)	In accordance with a revised fire management plan, the park unit will carry out hazardous fuel management activities within the boundaries of the national monument and preserve.

Table 2: Administrative Commitments

Agreement Name	Agreement Type	Start Date / Expiration Date	Stakeholders	Purpose
Memorandum of Understanding for Illinois Valley Visitor Center	Memorandum of Understanding	2018-2023	BLM, USFS, City of Cave Junction, Illinois Valley Development Organization, Illinois Valley Chamber of Commerce	Visitor center operations
Friends of Oregon Caves and Chateau	General Agreement	2018-2023	Friends of Oregon Caves and Chateau	Fundraising
Illinois Valley Volunteer Fire Department	Cooperative Agreement	2018-2023	Illinois Valley Volunteer Fire Department	Structural fire
USFS: Rogue River-Siskiyou National Forest	Interagency	Annual	USFS, NPS	Wildland fire suppression
USFS: Rogue River-Siskiyou National Forest	Interagency	2017-2022	NPS and USFS	Road maintenance
USFS: Rogue River-Siskiyou National Forest and Bureau of Land Management	Interagency	2016-2021	USFS: Rogue River-Siskiyou National Forest , NPS and BLM	Boundary Survey
Oregon Caves Natural History Association	Cooperative Agreement	2016-2021/Annual	Oregon Caves Natural History Association, NPS	Fee collection, interpretive services
Siskiyou Field Institute	Cooperative Agreement		SFI, SOU, Klamath Siskiyou Wild	Environmental Education

Rangers look out at views of the monument. NPS Photo.

DESIRED CONDITIONS FROM LAW AND POLICY

To understand the implications of the actions described in the alternatives, it is important to describe the laws and policies that underlie the proposed management actions. Many management directives are required based on law and/or policy and are therefore not subject to alternative approaches. A plan is not needed to decide, for instance, that it is appropriate to protect endangered species, control certain invasive species, protect archeological sites, conserve artifacts, or provide for universal access — laws and policies already require the NPS to fulfill these mandates. The NPS would continue to implement these requirements with or without the preserve management plan.

The National Park System General Authorities Act affirms that while all National Park System units remain "distinct in character," they are "united through their interrelated purposes and resources into one National Park System as cumulative expressions of a single national heritage." The act makes it clear that the NPS Organic Act and other protective mandates apply equally to all units of the system. Further, the Redwood Act of 1978 states that NPS management of park units should not "derogat[e]… the purposes and values for which these various areas have been established." The NPS has established policies for all units under its stewardship that are explained in a guidance manual – NPS Management Policies 2006.

Below are the desired conditions that provide the broadest level of direction for management of the preserve and are based on federal laws, executive orders, and NPS Management Policies. For each topic there are a series of desired conditions required by law and policy that Oregon Caves National Monument and Preserve would continue to work toward under all of the alternatives presented in this preserve management plan. Many of the potential strategies outlined below are dependent on staffing and funding levels and may or may not be implemented.

Air quality

Policy Guidance/ sources

- Clean Air Act, 1970 NPS
- Management Policies 2006
- Natural Resources Management Guidelines (NPS-77)

Desired Conditions

- Air quality in the preserve meets national ambient air quality standards (NAAQS) for specified pollutants. The preserve's air quality is maintained or enhanced with no significant deterioration.
- Nearly unimpaired views of the landscape both within and outside the park are present. Scenic views are substantially unimpaired (as meant by the Clean Air Act).

Potential Management Strategies

- Continue to cooperate with Oregon's Department of Environmental Quality and the U.S. Environmental Protection Agency to monitor air quality and ensure that park actions do not impair air quality. (Note: The NPS has very little direct control over air quality in the airshed encompassing the national preserve.)
- Inventory the air quality-related values (AQRVs) associated with the national preserve. Monitor and document the condition of air quality and related values.
- Evaluate air pollution impacts and identify causes.
- Minimize air pollution emissions associated with national preserve operations, including the use of prescribed fire, management practices, and visitor use activities.
- Conduct air quality monitoring in conjunction with other government agencies.
- Conduct national preserve operations in compliance with federal, state, and local air quality regulations.
- Ensure healthful indoor air quality at NPS facilities.
- Participate in federal, regional, and local air pollution control plans and drafting of regulations and review permit applications for major new air pollution sources
- Work to reduce emissions associated with administrative and visitor uses.
- Develop educational programs to inform visitors and regional residents about the threats of air pollution.
- Encourage research on air quality and effects of air pollution.
- Research effects of atmospheric deposition on plants, soils, and wetlands in the national preserve.

Archeological Resources

Policy Guidance/ Sources

- National Historic Preservation Act of 1966 (16 USC 470)
- Archaeological Resources Protection Act of 1979 (16 USC470aa-mm)
- The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation
- DO 28 "Cultural Resource Management Guideline"
- NPS Management Policies 2006
- 36 CFR 800 "Protection of Historic Properties"36CFR79 "Curation of Archeological Collections
- DOI Secretarial Order 3289,"Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources

Desired Conditions

- Archeological sites are identified and inventoried, their significance is evaluated and documented, and they are in good condition.

- Significant archeological sites are nominated for listing in the National Register of Historic Places either individually or in districts.
- Archeological sites are protected in an undisturbed condition unless it is determined through formal processes that disturbance is unavoidable or that ground disturbing research or stabilization is desirable.

Potential Management Strategies

- Continue the process of parkwide archeological survey and inventory until all archeological resources have been identified, documented and evaluated.
- Conduct archeological fieldwork and research in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, by qualified individuals and organizations.
- Curate archeological collections in accordance with federal standards.
- Record all archeological sites including new discoveries in the Archeological Resources Management Information System (ASMIS).
- Monitor all archeological sites on a regular basis and their current conditions recorded in ASMIS.
- Develop, prioritize, and implement management strategies to preserve climate-sensitive cultural resources.
- Regularly update archeological baseline documents including but not limited to GIS base maps and the archeological overview and assessment.
- Protect archeological site locations and other sensitive archeological information and keep confidential under the law.
- Partner with colleges, universities, and other appropriate organizations to encourage preservation and appropriate research for the public benefit.

Geologic Resources

Policy Guidance/ Sources

- NPS Management Policies 2006
- NPS-77, "Natural Resources Management Guidelines"

Desired Conditions

- The national preserve's geologic resources are preserved and protected as integral components of the natural systems. Natural geological processes are unimpeded.

Potential Management Strategies

- Assess the impacts of natural processes and human-related events on geologic resources.
- Integrate geologic resource management into NPS operations and planning to maintain and restore the integrity of existing geologic resources.
- Interpret geologic resources for visitors.
- Collect baseline information on surficial geology.
- Partner with the U.S. Geological Survey and others to identify, address, and monitor geologic hazards.

Lightscape Management/Dark Night Sky

Policy Guidance/ Sources

- NPS Management Policies 2006

Desired Conditions

- Excellent opportunities to see the night sky are available. Artificial light sources both within and outside the national preserve does not unacceptably adversely affect opportunities to see the night sky.

Potential Management Strategies

- Cooperate with visitors, neighbors, and local government agencies to find ways to prevent or minimize the intrusion of artificial light into the night scene.
- Limit artificial outdoor lighting in the preserve to basic safety requirements and shield it when possible.
- Evaluate impacts on the night sky caused by park facilities. If light sources within the monument or preserve are affecting night skies, alternatives such as shielding lights, changing lamp types, or eliminating unnecessary light sources would be used.

Museum Resources

Policy Guidance/ Sources

- National Historic Preservation Act
- Archeological and Historic Preservation Act
- Archeological Resources Protection Act
- Native American Graves Protection and Repatriation Act
- Curation of Federally-Owned and Administered Archeological Collections (36 CFR 79)
- Management of Museum Properties Act
- NPS Management Policies 2006
- DO 28 "Cultural Resource Management Guidelines"
- DO 24 "NPS Museum Collections Management"
- NPS Museum Handbook
- Programmatic Agreement among the National Park Service, the National Conference of State Historic Preservation Officers, and the Advisory Council on Historic Preservation (2008)

Desired Conditions

- The NPS would collect, protect, preserve, provide access to, and use objects, specimens, and archival, and manuscript collections. These collections may contribute to advancing knowledge in the humanities and sciences in many disciplines, including but not limited to archeology, ethnography, history, biology, geology, and paleontology to improve understanding by park visitors.

Potential Management Strategies

- Continue to ensure adequate conditions for the climate control of collections and means for fire detection and suppression, integrated pest management, and research and interpretation access are maintained.
- Inventory and catalog all preserve museum collections in accordance with standards in the NPS Museum Handbook.
- Develop and implement a collection management program according to NPS standards to guide the protection, conservation, and use of museum objects.
- Develop documentation for all specimens in the natural and cultural resource collections.
- Ensure that the qualities that contribute to the significance of collections are protected and preserved in accordance with established NPS museum curation and storage standards.

Natural Resources: Ecological Communities

Policy Guidance/ Sources

- Endangered Species Act of 1973
- National Invasive Species Act
- Lacey Act
- Federal Noxious Weed Act of 1974
- Executive Order on Invasive Species, #13112
- NPS Management Policies 2006
- NPS-77 "Natural Resources Management Guideline"
- DOI Secretarial Order 3226, "Evaluating Climate Change Impacts in Management Planning;"
- DOI Secretarial Order 3289,"Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources
- NPS Climate Change Response Strategy 2010

Desired Conditions

- Adverse ecological and evolutionary impacts to ecosystems as a whole are prevented, using appropriate tools such as restoration and mitigation.
- Natural abundances, diversities, dynamics, distributions, habitats, and behaviors of native plant and animal populations are preserved and restored.
- Populations of native plant and animal species function in as natural a condition as possible except where special considerations are warranted (such as with rare species management).
- Native species populations that have been severely reduced or extirpated from the preserve are restored where feasible and sustainable.
- Potential threats to the preserve's native plants and wildlife are identified early and proactively addressed through inventory and monitoring.
- Sources of air, water, and noise pollution and visitor uses adversely affecting plants and animals are limited to the greatest degree possible.
- NPS staff uses the best available scientific information and technology to manage these resources.
- Federally- and state- listed threatened and endangered species and their habitats are protected and sustained. NPS staff prevents the introduction of nonnative species and provides for their control to minimize the economic, ecological, and human health impacts that these species cause.
- The NPS would work together with other federal, state, tribal and local governments, and private landowner partners to develop strategies at multiple scales, including landscape-level strategies, for understanding and responding to climate change impacts.
- The NPS would consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, and/or when making major decisions affecting resources.
- The NPS would engage in partnerships to implement projects and activities that contribute to the conservation of species, natural communities, and lands and waters placed at risk by changing climate conditions.
- The NPS would continue to provide and foster state-of-the art science to better understand the impacts of climate change and to develop science-based adaptive management strategies for resource managers.

Potential Management Strategies

- Strive to prevent adverse ecological and evolutionary impacts to ecosystems as a whole, using appropriate tools such as restoration and mitigation.
- Complete a baseline inventory of the plants and animals in the park and regularly monitor the distribution and condition of selected species that are indicators of ecosystem condition and diversity.
- Develop methods to restore native biological communities.

- Participate in regional ecosystem efforts to restore native species and ecosystem processes.
- Support research that contributes to management of native species.
- Minimize negative human impacts on native plants, animals, populations, communities and ecosystems and the processes that sustain them.
- Restore native plant and animals populations in the preserve that have been extirpated by past human-caused action, where feasible.
- Rely upon natural processes whenever possible, to maintain native plant and animal species, and to influence natural fluctuations in populations of these species.
- Promote biological carbon sequestration as a function of healthy ecosystems.
- Protect a full range of genetic types (genotypes) of native plant and animals populations in the preserve by perpetuating natural evolutionary processes and minimizing human interference with evolving genetic diversity.
- Manage populations of exotic plant and animal species, up to and including eradication, when control is prudent and feasible.
- Use best available scientific information and technology to manage the preserve's natural resources.
- Use best available science to evaluate and manage the preserve's greenhouse gas storage and emissions.
- Collaborate with partners to develop, test, and distribute the best results from climate change models.
- Incorporate climate change considerations and responses in all levels of planning.
- Implement adaptation strategies that promote ecosystem resilience and enhance restoration, conservation, and preservation of park resources.
- Work with other public and private land managers, including the state of Oregon, the USFS, the USFWS, the BLM, and others to encourage the conservation of populations and habitats of species that share common areas or migrate into and out of the preserve whenever possible.
- Continue inventory and monitoring of the plants and animals in the preserve. Collected data will be used as a baseline to regularly monitor the distribution and condition of selected species, including indicators of ecosystem condition and diversity, rare and protected species, and nonnative species. Management plans will be modified to be more effective, based on the results of monitoring.
- Inventory and monitor key attributes of the natural resources, cultural resources, and visitor experiences likely to be impacted by climate change.
- Provide interpretive and educational programs on the preservation of native species for visitors.
- Avoid, minimize, or otherwise mitigate any potential impacts on state or federally listed species. Should it be determined through informal consultation that an action might adversely affect a federally listed or proposed species; the NPS staff would initiate formal consultation with the USFWS under Section 7 of the Endangered Species Act.
- Prepare a fire management plan, and update when necessary, consistent with federal law and departmental management policies.

Natural Sounds

An important component of NPS management is to preserve or restore the natural sounds associated with National Park System units. The sounds of nature are among the intrinsic elements that combine to form the environment of our national park system units.

Policy Guidance/ Sources

- NPS Management Policies 2006
- DO 47, "Sound Preservation and Noise Management"
- Executive memorandum signed by President Clinton on April 22, 1996

Desired Conditions

- The NPS preserves the natural ambient soundscapes, restores degraded soundscapes to the natural ambient condition wherever possible, and protects natural soundscapes from degradation due to human-caused noise.
- Disruptions from recreational uses are managed to provide a high-quality visitor experience in an effort to preserve or restore the natural quiet and natural sounds.

Potential Management Strategies

- Take actions to monitor and minimize or prevent unnatural sounds that adversely affect preserve resources and values, including visitors' enjoyment.
- Minimize noise generated by NPS management activities by strictly regulating administrative functions such as the use of motorized equipment. Consider noise in the procurement and use of equipment within the national preserve.
- Encourage visitors to avoid unnecessary noise, such as through the use of generators, and maintaining quiet hours in the campgrounds.
- Manage activities or actions producing excessive noise in cave environments to protect cave resources.

Public Health and Safety

Policy Guidance/ Sources

- NPS Management Policies 2006
- Director's Order 51 and Reference Manual 51 "Emergency Medical Services"
- Director's Order 30 and Reference Manual 30 "Hazard and Solid Waste Management
- OSHA Regulations (29CFR)
- Executive Order 12873 "Federal Acquisition, Recycling, and Waste Prevention"
- Executive Order 12902 "Energy Efficiency and Water Conservation at Federal Facilities"
- NPS Management Policies 2006

Desired Conditions

- The preserve and its partners, contractors, and cooperators work cooperatively to provide a safe and healthful environment for visitors and employees while applying nationally accepted standards and while recognizing that there are limitations on the NPS's capability to eliminate all hazards.
- Consistent with mandates and nonimpairment, the preserve would reduce or remove known hazards by applying appropriate mitigation measures, such as closures, guarding, gating, education, and other actions.

Potential Management Strategies

- Maintain a documented safety program to address health and safety concerns and to identify appropriate levels of action and activities to reduce or eliminate safety hazards.
- Ensure that all potable water systems and waste water systems continue to meet state and federal requirements.
- Provide interpretive signs and materials as appropriate to notify visitors of potential safety concerns, hazards and procedures; to help provide for a safe visit; and to ensure visitors are aware of the possible risks of certain activities.

Sustainable Facility Design

Policy Guidance/ Sources

- Executive Order 12873 "Federal Acquisition, Recycling, and Waste Prevention"
- Executive Order 12902 "Energy Efficiency and Water Conservation at Federal Facilities"
- NPS Management Policies 2006
- The Energy Independence and Security Act of 2007

Desired Conditions

- Administrative and visitor facilities are harmonious with preserve resources, compatible with natural processes, aesthetically pleasing, functional, as accessible as possible to all segments of the population, energy efficient, and cost-effective.
- Decisions regarding operations, facilities management, and development in the preserve—from the initial concept through design and construction—reflect principles of resource preservation.
- Developments and operations are sustainable to the maximum degree practicable.
- Integrate climate change mitigation into the park's business practices.
- New developments and existing facilities are located, built, and modified according to the Guiding Principles of Sustainable Design or other similar guidelines.
- Biodegradable, nontoxic, and durable materials are used whenever possible.
- The reduction, reuse, and recycling of materials is promoted, while use of materials that are nondurable, environmentally detrimental, or that require transportation from great distances are avoided whenever possible.
- The NPS would continue to implement strategies to improve sustainability and energy efficiency, and decrease the park's carbon footprint and consumption of resources.

Potential Management Strategies

- Remove or relocate structures and facilities that are no longer functional in their present locations or that have been determined to be inappropriately placed in important resource areas.
- Design, construct, and operate all buildings and facilities so they are accessible and useable by persons with disabilities to the greatest extent practicable.
- Provide NPS staff a comprehensive understanding of their relationship to environmental leadership and sustainability.
- Support and encourage the service of suppliers and contractors that follow sustainable practices.
- Monitor energy use and promote energy efficient practices and renewable energy sources would be promoted wherever possible.
- Identify sustainable and nonsustainable practices where appropriate in interpretive programs.
- Incorporate the principles of environmental leadership and sustainability in exhibits and other interpretive media as appropriate.
- Measure and track environmental compliance and performance.
- Document environmental compliance, identify best management practices, and educate employees at all levels about environmental management responsibilities through Environmental Management System audits.
- Model and communicate sustainable practices that lead by example.
- Engage in the Climate Friendly Parks program.

Visitor Experience

The NPS Organic Act, NPS General Authorities Act, and NPS Management Policies 2006 (§1.4, 8.1) all address the importance of national park units being available to all Americans to enjoy and experience. Current laws, regulations, and policies leave considerable room for judgment about the best mix of types and levels of visitor use activities, programs, and facilities. For this reason, most decisions related to visitor experience are addressed in the alternatives; however, all visitor use of the national park system must be consistent with the following guidelines.

Policy Guidance/ Sources

- NPS Organic Act
- Americans with Disabilities Act, P.L. 101-336, 104 Stat. 327, 42 USC §12101
- Architectural Barriers Act of 1968 (ABA)
- NPS Management Policies 2006
- NPS-42, "Accessibility for Visitors with pretation and Education"
- Reference Manual 9 "Law Enforcement"

Desired Conditions

- Preserve resources are conserved "unimpaired" for the enjoyment of future generations.
- Visitors have opportunities for forms of enjoyment that are uniquely suited and appropriate to the natural and cultural resources found in the preserve; opportunities continue to be provided for visitors to understand, appreciate, and enjoy the preserve.
- Visitors have opportunities to understand and appreciate the significance of the preserve and its resources, and to develop a personal stewardship ethic. Interpretive and educational programs build public understanding of, and support for, such decisions and initiatives, and for the NPS mission.
- Excellent communication between resource managers/ researchers and professional interpreters produce compelling and effective science communication to a wide audience.
- To the extent feasible, all programs, services, and facilities in the preserve are accessible to and usable by all people, including those with disabilities.

Potential Management Strategies

- Provide visitors with easy access to the information they need to have a safe and enjoyable experience through information and orientation programs.
- Provide both on and off-site interpretive programs that are designed to encourage visitors to form their own intellectual or emotional connections with the resource. Interpretive programs facilitate a connection between the interests of visitors and the meanings of the preserve.
- Design curriculum-based educational programs that link preserve themes to national standards and state curricula and involve educators in planning and development. These programs would include pre-visit and post visit materials, address different learning styles, include an evaluation mechanism, and provide learning experiences that are linked directly to clear objectives. Programs would develop a thorough understanding of the preserve's resources and its place within the national park system.
- Develop interpretive media that provide visitors with relevant information and facilitate more in depth understanding of—and personal connection with—preserve stories and resources. This media will be continually maintained for both quality of content and condition based upon established standards.
- Integrate resource issues and initiatives of local and national importance into the interpretive and educational programs.
- Provide outreach services as an active part of a balanced visitor services program.
- Coordinate and distribute climate change information throughout the preserve.
- Increase climate change knowledge and understanding within the monument and preserve.
- Provide external communications about the implications of climate change and the NPS response.
- Ensure that, to the extent possible, modifications for access benefit the greatest number of visitors, staff, and the public, and are integrated with, or in proximity to, the primary path of travel.

- Allow to the highest extent possible, for people with disabilities to participate in the same programs and activities available to everyone else.
- Give higher priority to methods of providing accessibility that offer programs and activities in the most integrated setting appropriate.

Water Resources

Policy Guidance/ Sources

- NPS Management Policies 2006 (§4.6.1, 4.6.2)
- "Natural Resource Management Reference Manual #77"
- The Clean Water Act
- Rivers and Harbors Act
- Executive Order 11514, "Protection and Enhancement of Environmental Quality"
- Executive Order 12088, "Federal Compliance with Pollution Control Standards"

Desired Conditions

- NPS Management policies call for the NPS to perpetuate surface and groundwater as integral components of park aquatic and terrestrial ecosystems.
- Surface water and groundwater are protected, and water quality meets or exceeds all applicable water quality standards.
- NPS and NPS-permitted programs and facilities are maintained and operated to avoid pollution of surface water and groundwater.
- Water resources meet or exceed all federal and state water quality standards for temperature, bacteria, dissolved oxygen, turbidity, toxic substances, pH, and nutrients.
- Pollution prevention and protection of water quality to meet the needs of aquatic organisms are priorities.

Potential Management Strategies

- For waters in the preserve, or affecting resources, work with appropriate agencies and partners to determine minimum flow needs and to attain the highest possible water quality standards available under the Clean Water Act.
- Develop and implement an environmental management plan, which includes pollution prevention and environmental best management practices.
- Promote water conservation by the National Park Service, partners, visitors, and park neighbors.
- Apply best management practices to all pollution-generating activities and facilities in the preserve. Take positive steps to reduce such activities.
- Minimize the use of pesticides, fertilizers, and other chemicals, and manage them in keeping with NPS policy and federal regulations.
- Monitor water flows and water quality in selected areas.
- Conduct water quality monitoring and research to target detection of change from atmospheric input.
- Manage stormwater runoff appropriately.
- Promote greater public understanding of water resource issues and encourage public support for and participation in protecting the watershed.

Wetlands

Policy Guidance/ Sources

- NPS Management Policies 2006 (§4.6.5).
- Clean Water Act
- Rivers and Harbors Act;
- Executive Order 11514, "Protection and Enhancement of Environmental Quality"
- Executive Order 11990, "Protection of Wetlands"
- NPS-77, "Natural Resource Management Guidelines;" NPS
- Director's Order 77-1, "Wetland Protection

Desired Conditions

- Natural and beneficial conditions of wetlands are preserved and enhanced.
- The NPS implements a "no net loss of wetlands" policy and strives to achieve a longer-term goal of net gain of wetlands across the National Park System through the restoration of previously degraded wetlands.
- To the extent possible, the NPS avoids long- and short-term adverse impacts associated with the destruction or modification of wetlands and avoids direct or indirect support of new construction in wetlands wherever there is a practicable alternative.
- Members of the public have the opportunity to learn about and understand the unique services and functions provided by wetlands.
- Wetlands remain unaffected by maintenance of park or concession facilities or management or recreational activities.
- Wetlands adversely affected by prior human activity are restored where feasible.

Potential Management Strategies

- Wetlands within the preserve are inventoried and their conditions monitored. The distinct functions they perform are identified.
- Locate any new facilities, or relocate existing facilities, to avoid or restore wetlands if feasible.
- Prepare a statement of findings if proposed actions would result in adverse impacts on wetlands, including an analysis of alternatives, delineation of the wetland, a wetland restoration plan, mitigation, and a functional analysis of the impact site and restoration sites.
- Conduct systematic surveys of watersheds within the preserve to complete wetland inventories and include this information in the planning, management, and protection of wetlands.
- Encourage the use of wetlands for educational and scientific purposes that do not disrupt natural wetland functions.
- Participate in collaborative planning efforts with adjacent land managers to protect and restore wetlands within and outside the boundaries through cooperative conservation strategies.

Rivers and Floodplains

Policy Guidance/ Sources

- The Wild and Scenic Rivers Act (Act) 1968
- Executive Order 11988, "Floodplain Management"
- NPS Director's Order 77-2 and its accompanying procedural manual.
- NPS Director's Order 46.
- NPS Management Policies 2006 (§4.6.4).

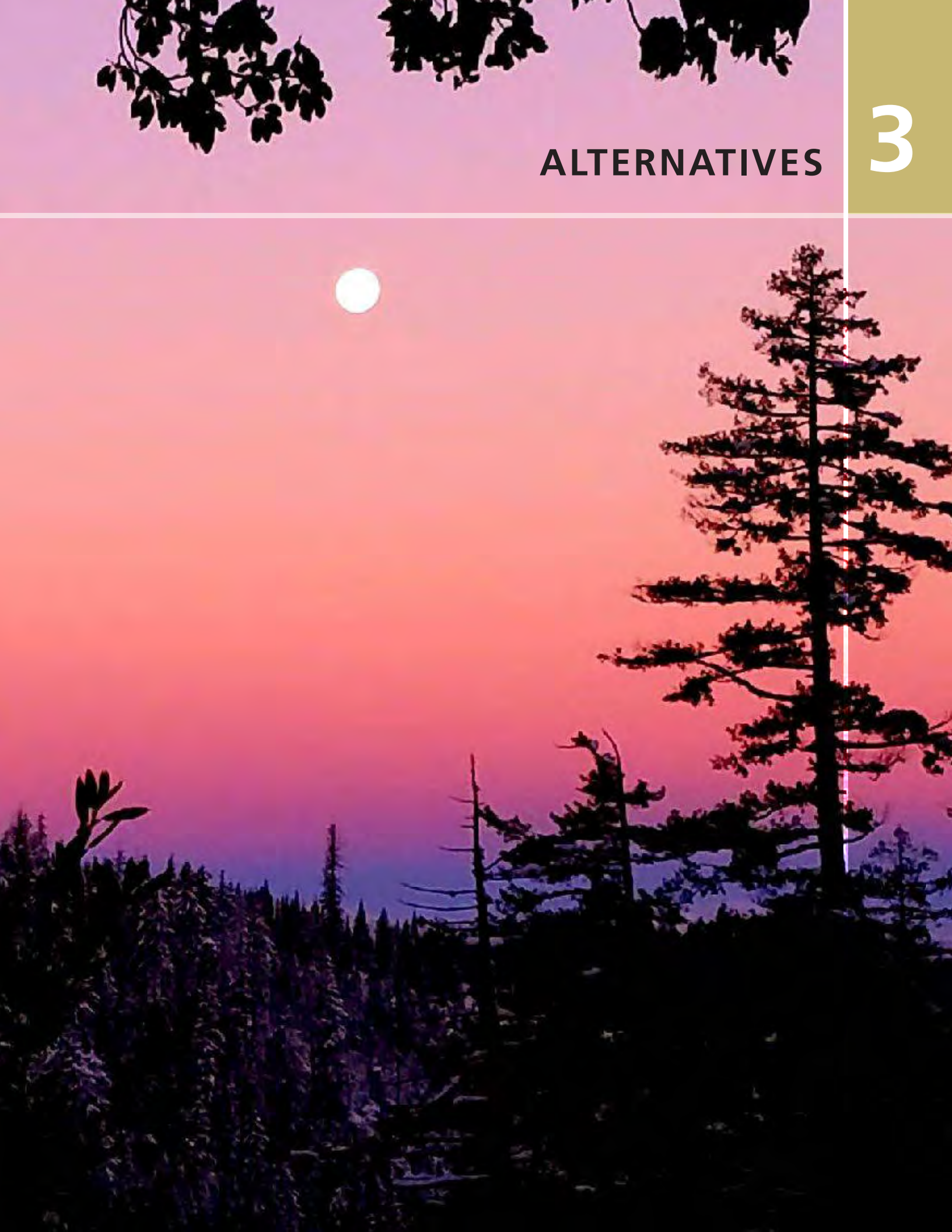
Desired Conditions

- Natural floodplain conditions are preserved or restored.
- Long-term and short-term environmental effects associated with the occupancy and modification of floodplains is avoided when practicable.
- When it is not practicable to locate or relocate development or inappropriate human activities to a site outside the floodplain, the National Park Service prepares and approves a statement of findings in accordance with Director's Order #77-2
- Uses nonstructural measures as much as practicable to reduce hazards to human life and property while minimizing impacts on the natural resources of floodplains
- Ensures that structures and facilities are designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 CFR 60)
- The most current engineering methods and techniques that minimize adverse effects on natural river processes are used to protect roads and facilities located in floodplains.
- Visitors understand the dynamic nature of the preserve and monument's creek systems, and the variability and cycles of river flow, flooding, etc.
- River values of designated and eligible/suitable wild and scenic rivers are protected and enhanced.

Potential Management Strategies

- Identify 100-year and 500-year floodplains and any administrative, maintenance, operational, or visitor facilities located within them.
- Inventory flood-prone areas near facilities and roads, and develop a program to protect these using the most current techniques that minimize adverse effects on aquatic and riparian habitats and fluvial processes.
- Work with area partners, including tribes, federal, state, and county agencies, and others, to develop restoration plans for at risk river systems.
- Use current technologies, over time, to restore or improve floodplain and riparian functions altered in the past by bank-hardening techniques.
- If facilities are damaged or destroyed by a hazardous or catastrophic natural event, thoroughly evaluate options for relocation or replacement by new construction at a different location. If a decision is made to relocate or replace a severely damaged or destroyed facility, it will be placed, if practicable, in an area believed to be free from natural hazards.
- Prepare evacuation plans for facilities in flood hazard areas.
- Provide information to visitors regarding river processes and natural flooding regimes.

ALTERNATIVES 3



Previous page: Sunset in the preserve. This page: Visitors exploring Cave Creek. Photos: NPS.

CHAPTER 3: ALTERNATIVES

INTRODUCTION

Development of these alternatives for management of the preserve was based on information about the preserve's resources, visitor use, and visitor preferences gathered from National Park Service information, the public, government agencies, and stakeholder groups. Each of these alternatives would support the purpose and significance of the preserve and monument. The concepts and subsequent actions for each alternative comply with NPS park planning requirements and were evaluated to ensure consistency with current laws, regulations, and policies.

This chapter contains several parts:

- description of the alternatives, including:
  - alternative concept
  - desired conditions
  - estimated costs
- mitigation measures
- other actions and alternatives considered
- environmentally preferred alternative

In many cases, decisions or other discussions contained in this plan refer directly to maps and figures; many decisions themselves are "map based." The reader must rely on the text, maps, and figures taken together to fully understand the range of alternatives described in this environmental assessment. Two alternatives are described in this plan. The two alternatives are characterized as follows:

Alternative A (Continue Current Management) assumes that existing management, programming, facilities, staffing, and funding would generally continue at their current levels.

Alternative B (NPS Preferred Alternative) proposes a greater emphasis on managing and promoting visitor understanding and recreational use of the preserve. Toward this end, much of the current level of visitor services in the preserve would continue, but some changes would be made, particularly in interpretation, education, and visitor opportunities.

RANGE OF ALTERNATIVES

This section presents the two alternatives that are being considered for the preserve. For each alternative, there are desired conditions for resources and visitor use as a whole and for specific areas within the preserve.

The reader must rely on the text, maps, and figures taken together to fully understand the range of alternatives described in this draft plan.

Visitors participate in a candlelight cave tour. NPS Photo.

ACTIONS COMMON TO ALL ALTERNATIVES

The following management guidance, desired conditions, and actions would apply to both alternatives.

Natural and Cultural Resources

- Strive to prevent adverse ecological impacts to sensitive species and ecosystems as a whole, using appropriate tools such as restoration and mitigation.
- Strive to maintain a high level of biodiversity and associated processes, such as resilience, on the preserve.
- Complete a separate fire management plan. The plan would consider the full range of strategies for fire management, including fire suppression by a variety of means. Any methods used to suppress wildland fires would minimize adverse impacts of the suppression action and the fire, commensurate with effective control and resource values to be protected.
- Work collaboratively among all stakeholders to make progress towards maintaining biodiversity, ecological resiliency to fire-related disturbances, and safe, effective, efficient risk-based response to wildfires.
- Limit and minimize the spread of non-natives, especially invasives in native ecosystems, to avoid adverse ecological impacts.
- Continue to support and encourage scientific research and study consistent with NPS policies and use the best available science in decision-making.
- Complete a natural resource condition assessment of the preserve.
- Complete a climate change assessment of sub-alpine areas in the preserve.
- Monitor and mitigate, where possible, the pressures of climate change and other stressors on native vegetation and wildlife. Develop adaptation strategies to address climate change.
- Enhance restoration of riparian areas and wetland habitats to the greatest extent possible.
- Inventory and evaluate facilities that could discharge into water sources, mitigate threats to water resources and hydrologic processes, and remove or upgrade facilities that do not meet water quality standards. Emphasis will be on those streams already designated or eligibile to be part of the Wild and Scenic River System
- Continue to work to maintain high quality viewsheds including vista points diminished by fire suppression..
- Increase interagency coordination for cultural resource preservation strategies and treatment.
- Continue to work to improve communication and collaboration with interested tribes.
- Actively pursue special studies to determine National Register eligibility of cultural resources, such as trails, roads, campground, campsites, and sites important to the history of ecology and climate change. Manage designated and eligible/suitable wild and scenic rivers to protect and enhance their water quality, free flow condition, and outstandingly remarkable values.
- Continue to manage the preserve to prevent the spread of Port Orford cedar disease, including through implementation of the Port Orford cedar Disease and Management Protocol.

Sustainability

- Continue to reduce carbon emissions and increase energy and fuel efficiency whenever and wherever possible.

- Continue to implement the actions identified in the Oregon Caves National Monument Climate Friendly Action Plan.
- Emphasize and prioritize sustainable or green facility design for any new construction, retrofitting, and upgrading of facilities to the greatest extent possible.
- Integrate the principles, goals, and objectives of the NPS Climate Change Response Strategy into management and operations.

Visitor Experiences

- Continue to provide a range of traditional visitor experiences, including hiking, hunting, camping, picnicking, wildlife viewing, bicycling, and equestrian use in appropriate areas.
- All areas would be open to hiking, except for the administrative area. Temporary safety zones would be established in certain cases such as during heavy smoke, tree felling, trail rehabilitation, or extreme winds, or for resource protection measures, such as Port Orford cedar disease control.
- Bicycles would be allowed on roads, when open, throughout the preserve.
- A permit system would be instituted for backcountry camping. Permits would identify sensitive areas closed to camping, as needed. The NPS would explore designating a few vehicle campsites on Buck Road (4613031), including sites designed for accessibility.
- No vehicle dispersed camping or camping in the telecommunications and administrative sites would be allowed.
- Off-road vehicle use would continue to be prohibited.
- Leashed pets would be permitted in Cave Creek Campground on campsites and paved surfaces. Leashed pets would also be permitted on public and administrative roads, unless otherwise posted.
- Snowmobiles would continue to be prohibited within the preserve.
- All areas would be open to skiing and snowshoeing, except at the telecommunications and administrative areas. Except for administrative emergency search and rescue operations, snowmobiling would continue to be prohibited. Unpaved roads on the preserve would not be plowed.
- The NPS would continue to work on an interagency basis to ensure impacts from ongoing winter use are minimized and mitigated and that such use conforms to the respective agency regulations and policies.
- Hunting would continue to be allowed under state regulations. The NPS would pursue safety zones for areas surrounding the Cave Creek Campground, the Big Tree Trail, the administrative area, and No Name Trail. These areas receive relatively high concentrations of visitors. Many of these trails originate from the monument, where hunting is not permitted, and briefly enter the preserve for a short distance. The NPS would increase education for both visitors and hunters related to safety on the preserve during hunting season(s).
- Improve public education and signage related to boundary awareness, hunting, and visitor safety to reduce conflicts.
- Private stock use would be allowed if under permit and on trails and other designated routes. No grazing would be permitted. Weed free feed would be required. Use would be seasonal. Group size limits and proper waste management guidelines would be established and applied to the permit process. Overnight stock use would not be permitted and no additional facilities would be constructed on preserve lands to accommodate trailers.

Facilities and Operations

- The NPS would collaborate with the USFS on road improvements and maintenance needs to ensure visitor and shared administrative access on roads.
- Roads would continue to provide safe visitor access and emphasize opportunities for protecting and viewing scenery and wildlife and promoting high quality visitor experiences.
- The NPS would analyze administrative radio coverage throughout the preserve and investigate methods to provide adequate and cost-effective staff communication infrastructure throughout the preserve, especially in Cave Creek Campground.
- All special events and commercial services would continue to be subject to commercial use authorizations or special use permits.

Partnerships and Collaboration

- The NPS would pursue using Service First authority to formalize and expand the partnership with the Rogue-Siskiyou National Forest to institutionalize strong interagency collaboration and coordination in cross-boundary natural resource, fire, roads, visitor protection, search and rescue, and recreational management.
- Due to a shared interest in public and administrative access, the NPS would formalize a road maintenance agreement with the Rogue-Siskiyou National Forest for the sections of Cave Creek Road (4614000) and Buck Creek Road (4613000) that lie within the preserve.
- The NPS would continue to work with other entities to manage non-native species.
- The preserve would continue to rely on other NPS parks and programs for fire management expertise.
- The preserve would pursue written agreements and joint training with the county for search and rescue, emergency medical services, law enforcement, and dispatch services.
- The preserve would continue to engage with the Oregon Department of Fish and Wildlife and hunter organizations to share information, resource concerns, and stewardship.
- The preserve would continue to partner with Siskiyou Field Institute and Klamath-Siskiyou Wildlands Center on projects and educational opportunities on and about the preserve.
- The preserve would continue to work with the Friends of the Oregon Caves and Chateau to pursue alternative funding for preserve projects and assistance with natural history activities.

Commercial Services

- No concessions operations would be added within the newly added preserve lands.
- Commercial services within the monument would remain the same as current conditions.
- The NPS would continue to allow commercial groups with appropriate uses to access the preserve under commercial use authorization permits. Appropriate special events and commercial services could include guided hiking, biking, horseback riding, skiing, snowshoeing, educational programs, filming, photography, wildlife observations, organized runs and walks, shuttle services, and catered picnicking.

FORMULATION OF THE ALTERNATIVES

A comprehensive interdisciplinary planning team composed of NPS staff from Oregon Caves National Monument and Preserve and the Pacific West Regional Office, along with assistance from Crater Lake and Redwood National Parks, developed management alternatives for the preserve using concerns and ideas generated by the public, USFS, and NPS staff.

IMPLEMENTATION OF THE PRESERVE MANAGEMENT PLAN

Once the planning process is completed, the selected alternative would become the new management plan for the preserve and would be implemented as funding allows. Implementation of the actions and developments proposed within this management plan is dependent upon funding available at the time of need. The approval of this management plan does not guarantee that the funding and staffing needed to implement the plan would be forthcoming. Instead, the plan establishes a vision of the future that will guide future management of the preserve. In addition to funding, the implementation of the preferred alternative could be affected by other factors. More detailed planning, environmental documentation, and studies could be required before most conditions proposed in the alternatives are achieved. Additionally, all of the alternatives were developed on the assumption that certain mitigating actions would be incorporated into the proposed actions in order to reduce the degree of adverse impacts.

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

Alternative A is the "no action" alternative and assumes that existing management, programming, facilities, staffing, and funding would generally continue at their current levels. A no action alternative is required by the National Environmental Policy Act and serves as a baseline for comparison in evaluating the changes and impacts of other alternatives. The emphasis of alternative A would be to protect the values of the preserve without any increases in staff, programs, funding support, or facilities. Resource preservation and protection would continue to be a high priority for the management of the preserve. Staff would continue to work on preserve-related projects as funding allows. Management of visitor use and facilities would generally continue under existing levels and types of services and regulations. No new facilities would be constructed. Existing visitor facilities, such as buildings, structures, roads, parking areas, camping areas, and trails, would be maintained to the extent possible.

Site Specific Management

CAVE CREEK CAMPGROUND

The preserve would maintain its overnight campground in its current configuration, with minimal improvements over time. The campground would continue to provide drive-up camping opportunities for tent campers and campers with small recreational vehicles.

ADMINISTRATIVE AREA

Under alternative A, the preserve would maintain the existing headquarters, maintenance, and housing in its current location. These facilities would continue to serve both monument and preserve functions. An overnight and year-round staff presence would be maintained here. Public use of the area would continue to be disallowed in this area.

BIGELOW LAKES TRAILHEAD AND BASIN

Signage and trails would remain relatively unchanged, with minimal maintenance. Basic signage and vehicle barriers exist at the trailhead. The Limestone and Lake Mountain trails are poorly maintained and difficult to follow at points.

CAVE CREEK TRAIL

Cave Creek Trail would continue to be managed to protect Port Orford cedar from the spread of disease, including through resource protection measures such as cedar chips, drainage improvements, and temporary closures when wet.

PRESERVE ROAD SYSTEM

This preserve management plan incorporates by reference the analysis of the Sucker Creek Legacy Roads and Trails Environmental Assessment (USFS, 2014) and uses the decisions made in that document as the basis for alternative A. Table 3 lists the preserve roads and their disposition under the environmental assessment. Roads listed as decommissioned would be closed to vehicle traffic. Decommissioned roads would be managed to restore the integrity of associated hillslopes, channels, and reduce erosion. The primary goal would be to restore natural drainage patterns and infiltration capacity. Restorative actions could range from unmaintained closure to road removal, excavation of stream crossing fill material, restoration of channels to their original configuration, and placing excavated fill in stable locations to best mimic pre-disturbance topography and drainage patterns. Restorative actions would be based on site-specific evaluations and recommendations of resource specialists. In particular, evaluation of roads for eligibility as historic properties under the National Historic Preservation Act would occur before any project proposing a change from current condition.

Roads maintained for vehicle access will be managed to reduce the risk of sediment delivery to stream channels during storm events (stormproofing). Roads placed in storage would be closed and unmaintained.

Visitors take a break on rocks near Bigelow Lakes. NPS Photo.

Table 3: Preserve Road Treatments

Road No.	Name	Miles	Treatment	Use
4600150	Cave Creek Campground	1.2	Stormproof	Public
4600180	Heirloom	0.68	Stormproof	Administrative
4611070	Bigelow Lakes	1.39	Stormproof	Public
4611960	Lake Creek	2.87	Stormproof	Public
4613000	Buck Peak	1.42	Stormproof	Public
4613031	Buck	1.38	Stormproof	Public
4613067	Buck Peak LO	0.62	Stormproof	Public
4614000	Cave Creek	1.44	Stormproof	Public
4611962	Arrow	0.2	Decommission	Closed to vehicle access
4611965	Black Pepper	0.5	Decommission	Closed to vehicle access
4611969	Arena	0.7	Decommission	Closed to vehicle access
4613057		0.22	Decommission	Closed to vehicle access
4613066	Tankia	1.34	Decommission	Closed to vehicle access
4613406	Dickiwich	0.38	Decommission	Closed to vehicle access
4614040		0.28	Decommission	Closed to vehicle access
4611964	Ark	0.4	Storage	Closed to vehicle access
4613059	Buck Snort	0.31	Storage	Closed to vehicle access
4614024		1.02	Storage	Closed to vehicle access

Program Management Guidance

NATURAL RESOURCES

Natural resources would continue to be protected to a high degree (*See Common to All Alternatives for more details on natural resource management*). The NPS would continue to strive to prevent adverse ecological and evolutionary impacts to ecosystems as a whole, using appropriate tools such as restoration and mitigation. A minimal amount of inventorying and monitoring of ecological processes would continue to occur, as funding allows. Minimal ecological and evolutionary studies would occur. The preserve would continue to limit and minimize the spread of non-natives, especially invasives in native ecosystems, but would be hampered by a lack of inventorying, monitoring, and planning.

Through the development of a separate fire management plan, the NPS would strive to create fire-adapted communities where human populations and infrastructure can withstand a wildfire without loss of life and property. The full range of strategies for fire management would be considered, including suppression by a variety of means. Any methods used to suppress wildland fires would be designed to minimize adverse impacts of the suppression action and the fire, commensurate with effective control and resource values to be protected. In the development of the plan, the NPS would work collaboratively among all stakeholders to make progress towards maintaining biodiversity, ecological resiliency to fire-related disturbances, and safe, effective, efficient risk-based response to wildfires.

A natural resource condition assessment would be prepared for the preserve and monument. In addition, the preserve would continue to lack sufficient survey and inventory information on wetlands.

CULTURAL RESOURCES

The protection of cultural resources would continue. Documentation of cultural resources would also continue as funding

allows. At the present, little information exists for potential archeological, historic, and ethnographic resources. The NPS would continue to depend on others within the National Park Service to assist with cultural resource management and compliance. The current level of cultural resources education, interpretation, and research would continue. Interpretation of cultural resources would likely remain limited because cultural resources staff would not be available to support the programming.

ECOLOGICAL SUSTAINABILITY

The preserve would continue to participate in NPS, interagency and regional efforts to understand the effects of climate change on resources, assets, and visitor opportunities and develop adaptation strategies for the NPS to address anticipated changes to resources and infrastructure. The NPS would also continue to implement the goals of a current Climate Action Plan to help improve energy efficiency and reduce carbon emissions. A climate change assessment of sub-alpine areas in the preserve would be conducted.

SOUNDSCAPES AND VISUAL RESOURCES

The preserve would continue to maintain high quality viewsheds through consultation with adjacent agencies and would sensitively design and site new facilities or infrastructure in order to limit impacts on scenic views and preserve natural darkness by minimizing light pollution. Sounds that adversely affect the preserve's resources and values would continue to be minimized.

VISITOR EXPERIENCE

Visitors would continue to enjoy the current range of recreational experiences available within the preserve. Traditional recreation such as hunting, backcountry camping, day-hiking, backpacking, private stock use, and sightseeing will continue to be available to the same degree that they are currently. Stock use is defined as equestrian (horse and mule) trail access. In this document, the terms "equestrian use" and "stock use" are used interchangeably. *See Common to All Alternatives for actions that will be taken in both Alternative A and B.*

INTERPRETATION, EDUCATION, AND INFORMATION

Interpretation, education, and information would continue to be limited. A minimal amount of education programming and community outreach would continue to occur. The park's website would continue to be a primary source of information on preserve resources and opportunities, with very limited personal services in the preserve itself.

TRANSPORTATION AND FACILITIES

Level and Character of Development

No new facilities would be constructed in the preserve, aside from replacement facilities due to damage or loss, or small, sensitively designed improvements.

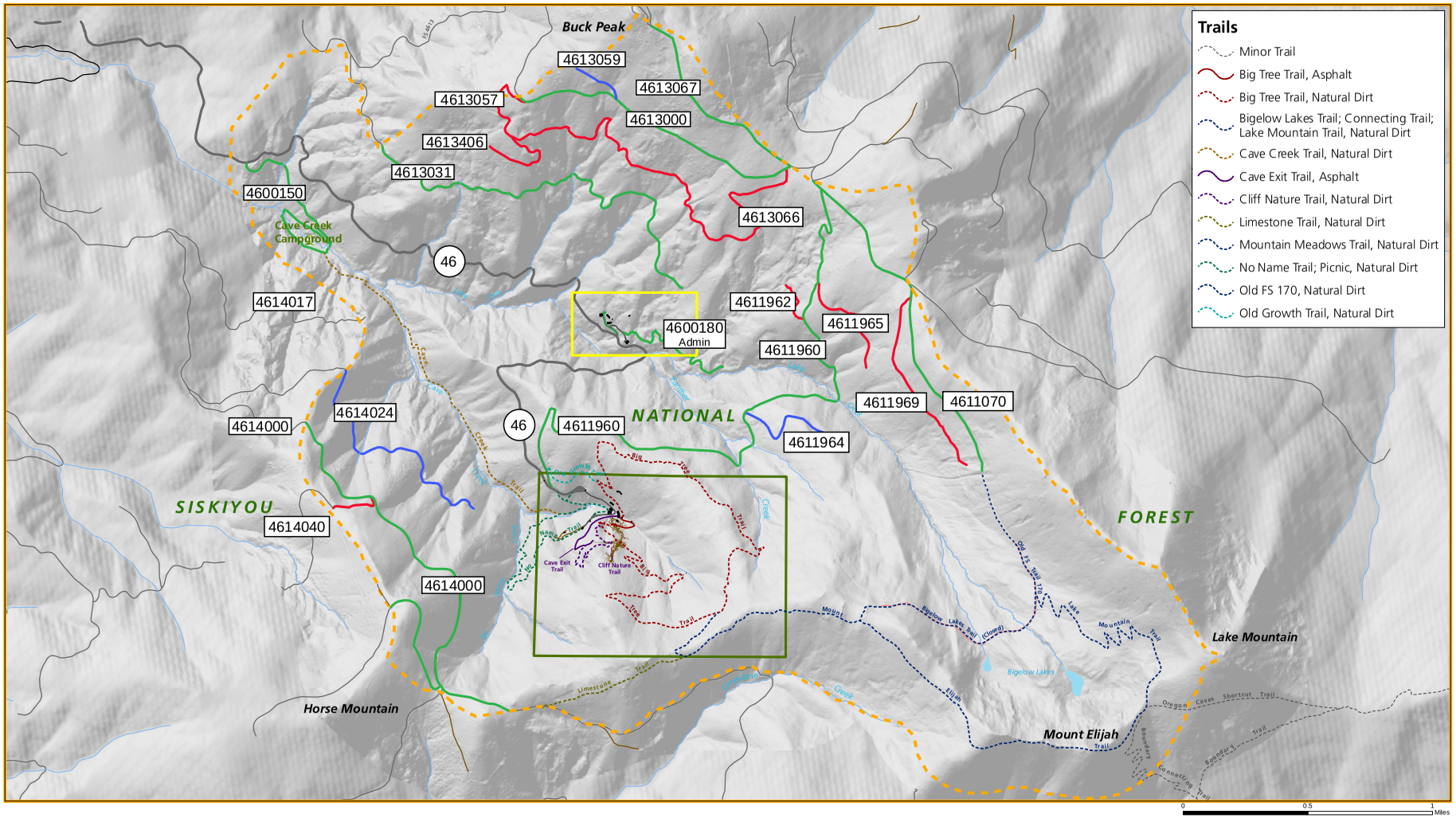
Transportation and Access

See Common to All Alternatives for descriptions of the ongoing and continuing efforts to invest in maintenance and collaborate with the USFS on current roads.

OUTREACH AND PARTNERSHIP PROGRAMS

The preserve would continue to partner, when possible, with tribes, organizations, and local communities to improve resource management and visitor experiences. The NPS would pursue using Service First authority to formalize and expand the partnership with the Rogue-Siskiyou National Forest to institutionalize strong interagency collaboration and coordination in cross-boundary management, including roads, natural resources, fire, visitor protection, search and rescue, and recreation. The preserve would continue to place a high priority on facilitating excellent working partnerships with other NPS units in the region's Klamath Network to accomplish its management objectives. *See Common to All Alternatives for additional partnership priorities.*

Map 3: Alternative A: Continue Current Management



Alternative A: Continue Current Management
Oregon Caves National Monument and Preserve

Legend

- Monument Boundary
- Preserve Boundary
- Administration Area
- Oregon Caves
- Stream

Roads

- Stormproof (Vehicle Access)
- Decomissioned
- Storage (No Vehicle Access)

Estimated Costs

Cost estimates for alternative A are identified in Tables 4 and 5. The costs shown here are not provided for budgeting purposes; rather, they are only intended to show a relative comparison of costs between the alternatives.

ONE-TIME IMPROVEMENT COSTS

The estimated costs for alternative A reflect the continuation of current management. One-time costs for alternative A include projects that are currently approved and have been funded, and projects that are considered "common to all alternatives," such as the development of a Resource Stewardship Strategy.

OPERATIONAL COSTS

Alternative A assumes that current authorized staffing levels (2017) would remain. Preserve management is currently accomplished through base- and project-funded monument staff. Oregon Caves National Monument has an operating budget of $1,668,000. The monument received a $190,000 base increase for preserve management, which is used both for operational expenses and shared staff time from monument staff.

Table 5: Oregon Caves Preserve Plan Alternative A Operational Costs (Preserve Budget)

Trail Maintenance	$ 15,000
Road Maintenance	$ 17,270
Campground Operations	$ 20,000
Shared staff time	$ 60,000
Other operational costs	$ 77,730
Total	**$ 190,000**

A construction crew works to repair the roof on the historic Chalet. NPS Photo.

Table 4: Oregon Caves Preserve Plan Alternative A Improvement Costs (Preserve Budget)

Common to All (Alternatives A and B)				
Project Description	**Facility Repair/ Rehabilitation**	**New Construction**	**Other**	**Total**
Resource Stewardship Strategy			$ 50,000	
Fire Management Plan			$ 60,000	
Archeological inventory			$ 60,000	
Study National Register eligibility of cultural resources, such as trails.			$ 50,000	
Natural resource condition assessment			$ 60,000	
Climate change assessment of sub-alpine areas			$ 40,000	
Wetland survey			$ 40,000	
Rehabilitate Cave Creek Campground	$ 44,000			
Replace the Public Water Supply Lines and Rehabilitate Surface Intake	$ 505,500			
Subtotal "Common to All Alternatives" Costs	**$ 549,500**	**$ 0**	**$ 360,000**	**$ 909,500**
Alternative A Only				
Project Description	**Facility Repair/ Rehabilitation**	**New Construction**	**Other**	**Total**
Improving Maintained Roads (signage, grading)	$ 986,000			
Maintenance for Decommissioned USFS Road Segments			$ 75,000	
Safety Measures to Prevent Degradation of Unmaintained Roads			$ 52,000	
Subtotal "Alternative A Only"	**$ 986,000**	**$ 0**	**$ 127,000**	**$ 1,130,000**
Total Alternative A costs ("Common to All" plus "Alternative A Only")	**$ 1,535,500**	**$ 0**	**$ 487,000**	**$ 2,022,500**

Note: Costs are in 2017 dollars

ALTERNATIVE B: PREFERRED ALTERNATIVE

Description of Alternative/ Management Concept

Alternative B is the alternative preferred by the National Park Service for management of the national preserve. For reasons of economic feasibility and the desire to maintain time-honored traditional experiences on the preserve lands, the preferred alternative has much in common with alternative A with some exceptions. Alternative B proposes some improvements to existing facilities, additional camping opportunities and guidance, expanded outreach and partnership opportunities, some area-specific hunting guidance for public safety reasons, and additional resource protection measures to mitigate adverse effects from increased visitor use.

Site Specific Management

CAVE CREEK CAMPGROUND

Similar to alternative A, the preserve would maintain its overnight campground in its current configuration, with minimal improvements over time, to provide a traditional tent and intimate camping experience. The current footprint, alignments, number of sites, aesthetics, and host site would be retained. The NPS would continue to protect sensitive resources through a variety of management actions, including temporary and seasonal closures of the trail and camp sites. The campground would continue to be open on a seasonal basis and could be closed for special events. Fees would continue to be charged for camping.

The NPS would institute a reservation system for campsites, if feasible. Accessibility would be enhanced, with improvements to pathways, parking, and individual camp sites. The NPS would strive to maintain the aesthetic qualities and secluded atmosphere unique to Cave Creek Campground, with no additional expansion or modifications that would degrade such qualities.

Subject to evaluation of the campground for its historical significance, the NPS would explore alternatives for the best use of the attached day use area. Group camping, amphitheater, and/or space for partner-based educational programming are potential uses to be explored. Finally, the NPS would explore the use of yurts and tent platforms at a few existing sites.

ADMINISTRATIVE AREA

As with alternative A, the preserve would maintain the existing headquarters, maintenance, and housing in their current locations. These facilities would continue to serve both monument and preserve functions. In addition, the old trailer court would be rehabilitated to accommodate a small number of staff camping trailers and a restroom. Utility systems (200 feet of electrical, sewer, and water), trailer pads, fire rings, picnic tables, and bear boxes will be included in the original footprint. An overnight and year-round staff presence would be maintained here. Camping and hiking would continue to be disallowed in this area. In addition, hunting would be prohibited in the administrative area for safety reasons.

BIGELOW LAKES TRAILHEAD AND BASIN

Signage and trails would be improved to provide better navigation, information, and resource protection. The Bigelow Lakes trailhead on Bigelow Lakes Road (4611070) would be widened to increase space for parking and keep the turnaround clear. The existing vehicle barriers would be maintained, as needed. An automatic system to record vehicular traffic would be installed on the last segment of the road to Bigelow Lakes in order to determine visitation patterns that have management implications, such as installing boardwalks to protect sensitive sites if visitation exceeds a certain threshold.

The Limestone Trail would be maintained, with appropriate screening at the Elijah Trail intersection to protect resources. At Bigelow Lakes, a hardened trail and/or boardwalk, along with interpretive signage, would be

installed to protect resources and block and reduce the number of user-created trails. The trail to Lake Mountain would be reestablished. Efforts to engage partners in the maintenance of trails would be increased.

CAVE CREEK TRAIL

As with alternative A, Cave Creek Trail would continue to be managed to protect Port Orford cedar from the spread of disease, including through resource protection measures such as cedar chips, drainage improvements, interpretive signs, temporary closures when wet, and continuing closure to stock use.

PRESERVE ROAD SYSTEM

With respect to the road system, the preferred alternative is the same as alternative A, with the following exceptions.

The NPS would explore designation of no more than five primitive drive-in campsites on Buck Road (4613031), including sites designed for accessibility. These sites would be available through the camping permit system to hunters and others during the times when the preserve road system is open.

Tankia Road (4613066 & 4613057) would be maintained as an administrative road. As such, it would be closed to public vehicle traffic, but open to cyclists, equestrian use, and hikers. Those who wished could use it to complete a loop with Buck Peak Road (4613000). Directional and interpretive signage would be provided. In addition, a potential trail connection between Tankia Road and Buck Road (4613031) would be explored for feasibility.

A portion (approximately 0.10 miles) of Ark Road (4611964) would be upgraded for administrative use and to preserve eligibility for historic nomination by maintaining the original footprint.

Program Management Guidance

NATURAL RESOURCES

Natural resources would continue to be protected to a high degree (*See Common to All Alternatives for more details on natural resource management*). The NPS would continue to strive to prevent or reduce adverse ecological and evolutionary impacts to ecosystems as a whole, using appropriate tools such as restoration and mitigation. Inventorying and monitoring of ecological processes and human effects on those processes would be increased. The NPS would encourage increased ecological and evolutionary studies. The preserve would increase its efforts to minimize the spread of non-natives, especially invasives in native ecosystems. A resource stewardship strategy would be prepared to prioritize and guide resource management objectives throughout the preserve. Old growth habitat would be protected, using a variety of tools such as fuel reduction.

As described in alternative A, a separate fire management plan would be developed in collaboration with all stakeholders to maintain biodiversity, increase ecological resiliency to fire-related disturbances, and plan safe, effective, efficient risk-based responses to wildfires.

A natural resource condition assessment would be prepared for the preserve and monument. Preserve wetlands would be re-surveyed in order to assess current conditions and compare to past conditions. The NPS would increase surveys and inventories for early detection of invasive species to effectively manage them before they reduce native biodiversity.

CULTURAL RESOURCES

The protection of cultural resources would continue. Documentation of cultural resources would also continue as funding allows. At the present, little information exists for potential archeological, historic, and ethnographic resources. The NPS would continue to depend on NPS regional and other park cultural resource and museum staff

to assist with cultural resource management and compliance. The current level of cultural resources education, interpretation, and research would continue. Interpretation of cultural resources would likely remain limited because cultural resources staff would not be available to support the programming.

ECOLOGICAL SUSTAINABILITY

The preserve would continue to participate in NPS, interagency and regional efforts to understand the effects of climate change on resources, assets, and visitor opportunities and develop adaptation strategies for the NPS to address anticipated changes to resources and infrastructure. As with alternative A, the NPS would also continue to implement the goals of a current Climate Action Plan to help improve energy efficiency and reduce carbon emissions. A climate change assessment of sub-alpine areas in the preserve would be conducted. Based on the results of the assessment, the NPS would mitigate the effects on both surface and subsurface hydrology and adapt with changing hydrological conditions to preserve habitat diversity, especially wetlands.

SOUNDSCAPES AND VISUAL RESOURCES

As with alternative A, the preserve would continue to work to maintain high quality viewsheds, maintain natural darkness, and minimize or prevent sounds that adversely affect the preserve's resources or visitor enjoyment. The preserve would develop and implement a soundscape management policy that includes an emphasis on preserve natural soundscapes. Viewshed management guidelines would be prepared, relying in part on historic images of viewsheds.

VISITOR EXPERIENCE

Visitors would continue to enjoy the current range of recreational experiences available within the preserve. Traditional recreation such as hunting, backcountry camping, day-hiking, backpacking, private stock use, and sightseeing will continue to be available.

Biking

A new loop for bicycling would be made available on Tankia Road (4613066 & 4613057). Biking would be permitted on paved and unpaved park and administrative roads unless posted.

INTERPRETATION, EDUCATION, AND INFORMATION

While the focus would be on electronic media and outreach, some formal education programs could be provided at Cave Creek Campground. Nature walks would occur on the Big Tree Trail, as feasible. Road access challenges make formal ranger-led educational programs impractical in the broader preserve. Educational programming would focus on classroom services (where rangers provide programs at schools), curriculum development, and electronic lesson plans in order to reach more diverse audiences. Ranger-led educational field trip programs in the monument would continue to use themes shared with the preserve. Expanded opportunities for partner-provided education on the preserve would be explored and promoted.

Limited personal interpretive services and interpretive waysides would be provided on preserve lands. Outreach, using community venues and the monument, for interpretive programs would be increased. Outreach, print, and electronic media would be emphasized.

The NPS would provide improved directional signage throughout the preserve and update electronic and print maps, focusing on trail intersections and boundaries. Primary locations to learn about conditions, opportunities and resources on the preserve would be at existing visitor centers and on electronic media.

TRANSPORTATION AND FACILITIES

Level and Character of Development

No new facilities would be constructed in the preserve, aside from replacement facilities due to damage or loss, or small, sensitively designed improvements such as

those described above under *Preserve Road System and Camping*.

Transportation and Access

See Common to All Alternatives for descriptions of the ongoing and continuing efforts to collaborate with the USFS on road maintenance where the objectives of both agencies are served.

OUTREACH AND PARTNERSHIP PROGRAMS

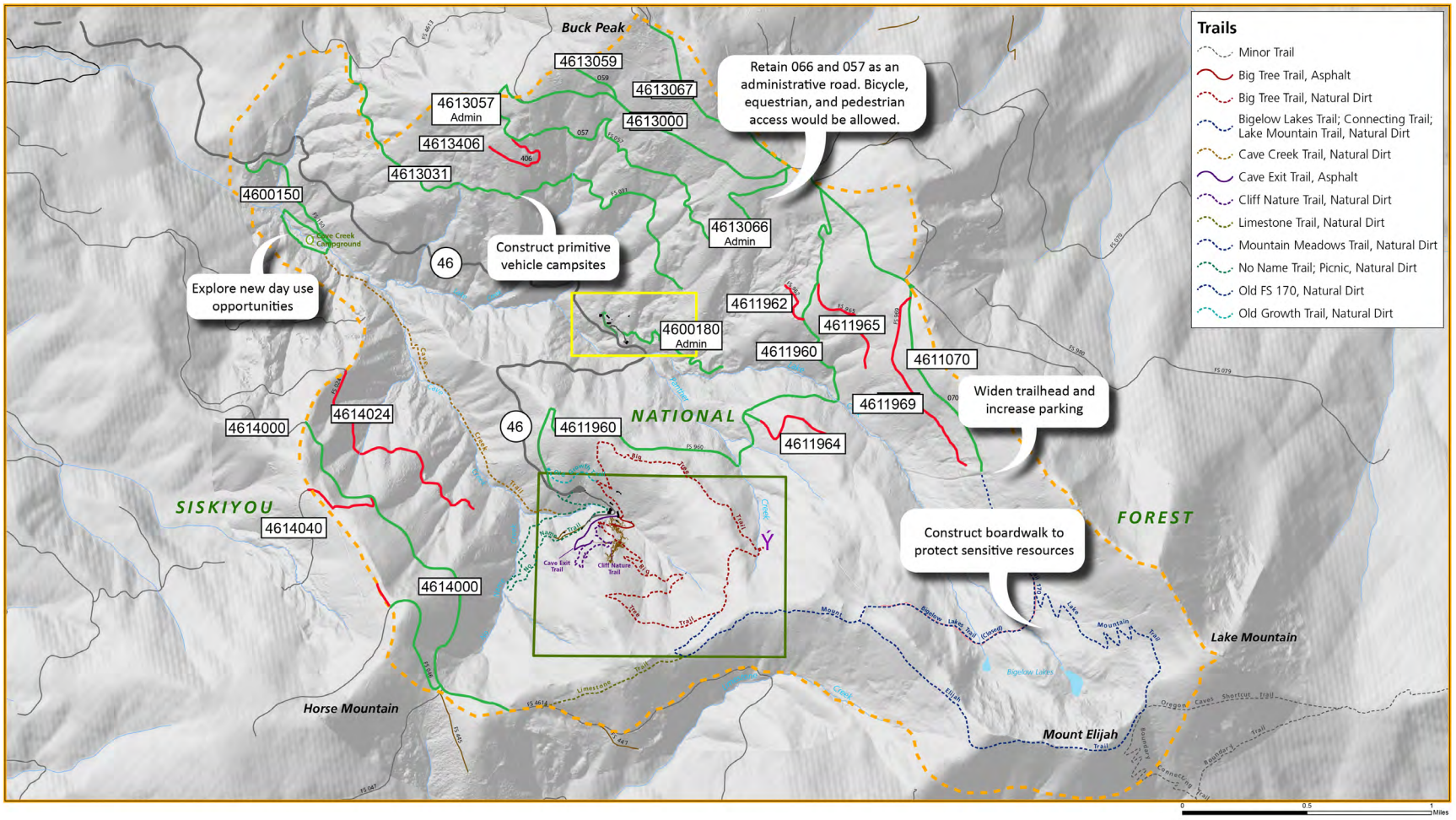
As with alternative A, the preserve would continue to partner, when possible, with tribes, organizations, and local communities to improve resource management and visitor experiences. The NPS would pursue using Service First authority to formalize and expand the partnership with the Rogue-Siskiyou National Forest to institutionalize strong interagency collaboration and coordination in cross-boundary management, including roads, natural resources, fire, visitor protection, search and rescue, and recreation. The preserve would continue to place a high priority on facilitating excellent working partnerships with other NPS units in the region's Klamath Network to accomplish its management objectives. *See Common to All Alternatives for additional partnership priorities*.

In addition, under alternative B, the preserve would:

- Review and potentially expand the structural fire responsibility with Illinois Fire District related to the headquarters and the campground.
- Foster relationships with Oregon universities on mutually beneficial resource and interpretive opportunities.
- Expand relationships with Southern Oregon Visitors Association, Travel Oregon, Grants Pass Active Club, and local chambers of commerce to highlight recreational opportunities in the preserve.
- Maintain and expand relationship with the Oregon Caves Natural History Association (NHA) to support preserve projects. Explore facilitation of a more autonomous Oregon Caves NHA from the Crater Lake NHA.
- Pursue expanded relationships with local youth organizations in order to introduce youth to resources and opportunities on the preserve.
- As with alternative A, the NPS would continue to partner with Siskiyou Field Institute and Klamath-Siskiyou Wildlands Center on projects and educational opportunities on and about the preserve. Alternative B would expand this partnership to include the preserve as well as the monument.

Oregon Caves Chalet in autumn. NPS Photo.

Map 4: Alternative B: NPS Preferred Alternative



Alternative B: Preferred Alternative
Oregon Caves National Monument and Preserve

Legend

- Monument Boundary
- Preserve Boundary
- Administration Area
- Campground
- Oregon Caves
- Stream

Roads

- Vehicle Access (Public unless noted as Admin)
- Decomissioned
- Storage (No Vehicle Access)

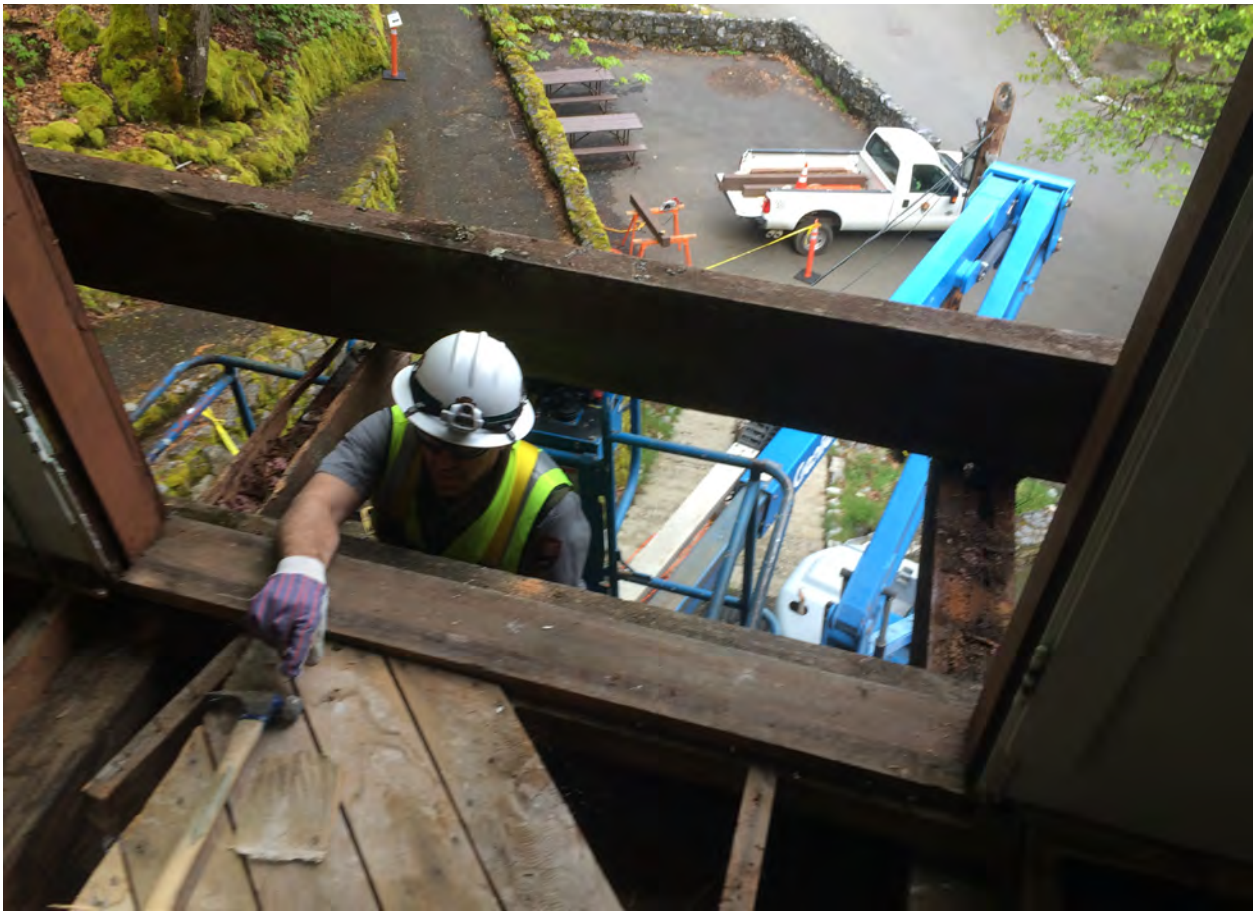
Estimated Costs

Cost estimates for alternative B are identified in Tables 6 and 7. The costs shown here are not provided for budgeting purposes; rather, they are only intended to show a relative comparison of costs between the alternatives.

Implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan would be forthcoming. Funding will be spread over time, with each project prioritized according to funding opportunities and other factors at any given time. Full implementation of the actions in the approved plan would likely take many years. The costs identified here would likely increase for projects completed in the future.

ONE-TIME IMPROVEMENT COSTS

One-time costs for alternative B include projects that are currently approved and have been funded, projects that are considered "common to all alternatives," and proposed projects identified in the preferred alternative.



A construction crewman works on a balcony repair project. NPS Photo.

Table 6: Oregon Caves Preserve Plan Alternative B Improvement Costs (Preserve Budget)

Common to All (Alternatives A and B)				
Project Description	**Facility Repair/ Rehabilitation**	**New Construction**	**Other**	**Total**
Resource Stewardship Strategy			$ 50,000	
Fire Management Plan			$ 60,000	
Archeological inventory			$ 60,000	
Study National Register eligibility of cultural resources, such as trails.			$ 50,000	
Natural resource condition assessment			$ 60,000	
Climate change assessment of sub-alpine areas			$ 40,000	
Wetland survey			$ 40,000	
Rehabilitate Cave Creek Campground	$44,000			
Replace the Public Water Supply Lines and Rehabilitate Surface Intake	$505,500			
Subtotal "Common to All Alternatives" Costs	**$ 549,500**	**$ 0**	**$ 360,000**	**$ 909,500**
Alternative B Only				
Project Description	**Facility Repair/ Rehabilitation**	**New Construction**	**Other**	**Total**
Cave Creek Campground (Accessibility improvements)	$179,000			
Trail Improvements (includes parking and boardwalk improvements at Bigelow Lakes trail)	$166,000			
Install primitive campsites		$111,000		
Biological inventories			$ 51,000	
Increase use of digital media for interpretation, education, and information			$ 50,000	
Rehabilitate Trailer Court	$ 64,000			
Improving Maintained Roads (Stormproofing, directional signage)	$1,220,000			
Restoring Decommissioned Roads			$ 64,000	
Subtotal "Alternative B Only"	**$ 1,629,000**	**$ 111,000**	**$165,000**	**$ 1,905,000**
Total Alternative B costs ("Common to All" plus "Alternative B Only")	**$ 2,178,500**	**$ 111,000**	**$ 525,000**	**$2,814,500**

Note: Costs are in 2017 dollars

OPERATIONAL COSTS

Total annual operation costs for preserve operations would be $315,000 for full implementation of this alternative. This includes the preserve's existing annual operating budget of $190,000, plus $125,000 for additional NPS staff. Funding allocations within the existing $190,000 base budget would be slightly altered from Alternative A, to include additional funds for trail and road maintenance. Operational costs include campground operations costs (approximately $20,000 annually).

Oregon Caves National Monument has a total operating budget of $1,668,000. This base budget would remain the same under both Alternatives A and B.

The monument also uses base funding to provide for an ongoing boundary study. The boundary study will ultimately have a total cost of approximately $150,000 and is anticipated to be complete in 2022. To date, approximately $55,000 have been dedicated to this effort.

The estimated costs for Alternative B would also include two new full-time (subject to furlough) staff positions: one motor vehicle operator and one biological science technician. These two positions would address the increased needs for road maintenance and natural resource monitoring related to the expanded Preserve area. Additional interpretive, maintenance, and resource monitoring needs would be met as feasible through seasonal or short-term positions, or through partnerships.

Table 7: Oregon Caves Preserve Plan Alternative B Annual Operational Costs (Preserve Budget)

Cost Category	Alternative A	Alternative B
Trail Maintenance	$15,000	$17,000
Road Maintenance	$17,270	$20,363
Campground Operations	$20,000	$20,000
Shared staff time	$60,000	$60,000
Other Operational costs	$77,730	$72,637
Subtotal (current operating budget)	**$190,000**	**$190,000**
Motor Vehicle Operator	-	$64,000
Biological Science Technician	-	$61,000
Total for Additional Staffing under Alternative B	**-**	**$125,000**
Total operating cost (current budget plus new staff)	**$190,000**	**$315,000**

Snowplant. NPS Photo.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferable alternative is defined as "the alternative that will promote national environmental policy as expressed in Section 101 of the National Environmental Policy Act." Section 101 states that it is the continuing responsibility of the federal government to . . .

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

2. assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;

3. attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

4. preserve important historic, cultural, and natural aspects of our national heritage; and maintain, wherever possible, an environment which supports diversity, and a variety of individual choices;

5. achieve a balance between population and resource use which would permit high standards of living and a wide sharing of life's amenities; and

6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The Council of Environmental Quality states that the environmentally preferable alternative is "the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources (46 FR 18026 – 46 FR 18038)." According to the NPS NEPA Handbook (DO-12), through identification of the environmentally preferred alternative, the NPS decision-makers and the public are clearly faced with the relative merits of choices and must clearly state through the decision-making process the values and policies used in reaching final decisions.

The environmentally preferable alternative for the preserve management plan is alternative B, the NPS preferred alternative. This alternative best satisfies the national environmental goals by providing the highest level of protection of natural and cultural resources while concurrently providing for a wide range of neutral and beneficial uses of the environment. This alternative maintains an environment that supports a diversity and variety of individual choices, and it integrates resource protection with an appropriate range of visitor uses and understanding. The preferred alternative would provide the greatest educational and partnership opportunities to foster better understanding of the preserve's resources, therefore better equipping the preserve in fulfilling NEPA criteria 3, 4, and 5.

ACTIONS AND CONCEPTS CONSIDERED BUT ELIMINATED FROM DETAILED CONSIDERATION

The Council on Environmental Quality guidelines for implementing the National Environmental Policy Act (NEPA) requires federal agencies to analyze all "reasonable" alternatives that substantially meet the purpose and need for the proposed action. Under NEPA, an alternative may be eliminated from detailed study for the following reasons [40 CFR 1504.14 (a)]:

- technical or economic infeasibility; the inability to meet project objectives or resolve need for the project
- duplication of other less environmentally damaging alternatives
- conflicts with an up-to-date valid plan, statement of purpose and significance, or other policy; therefore would require a major change in that plan or policy to implement
- environmental impacts too great

The following section describes the alternatives and actions that were considered but eliminated from detailed consideration in the DGMP/EIS.

Natural Selection Alternative

During the public scoping process, several commenters suggested that the planning team look at an alternative developed for the Medford District Bureau of Land Management South Deer Landscape Management Project (2005) called the Natural Selection Alternative. The alternative is based on a perspective "that natural communities of species should be preserved as they are . . . and that the total natural ecosystem must remain intact, with human activities in harmony with nature." The planning team considered this alternative and determined that much of the proposed alternative did not apply to the current planning effort since most of it dealt with extractive uses which are not planned in the preserve and are already controlled by law and policy. The portions of the proposed alternative that dealt more with restoration of natural areas, biodiversity, habitat connectivity, and science-based management were recognized as important objectives already woven into National Park Service management and both the no-action and preferred alternative. Because many of the ideas presented in the Natural Selection Alternative are found in the proposed preserve management plan, as well as existing law and policy, the planning team dismissed it from further consideration as a stand-alone alternative.

Major Expansion of the Road or Trail System

Major expansion of either the road or trail systems was considered by the planning team and dismissed for economic infeasibility and the potential for adverse resource impacts. The team determined that existing road and trail networks were adequate for superlative visitor experiences and access, while still protecting resources. While roads often provide important access and transportation, their presence can also influence the habitat quality, hydrology, geomorphology, and ecosystem processes of watersheds. The Sucker Creek Legacy Roads and Trails Project and Environmental Assessment (2014), prepared by the US Forest Service, provide a well-reasoned analysis for treatment of existing roads in the preserve as described in the no-action and preferred alternatives. After analysis by the planning team, the 2014 environmental assessment was adopted and used as the basis for the preserve management plan's alternatives. In addition, expanded use of the system by opening up preserve roads to public use in the winter was dismissed due to ongoing concerns about the spread of Port Orford cedar disease and potential erosion.

New Visitor Service Facilities in the Preserve

The planning team considered the possibility of a new structure on preserve lands to serve visitors. This was found to be infeasible due to cost and impractical due to location. The existing visitor facilities at the monument are adequate to provide information and visitor contact for preserve visitors. In most cases, visitors come to the monument to visit the caves or Chateau first. Visitation to the preserve is relatively light. Utilities such as electricity and water already exist at the monument and would be prohibitively expensive to provide elsewhere on the preserve. The preferred alternative recommends using the existing facilities at the monument to facilitate new opportunities for visitors and preserve-related exhibits, as well as increasing educational outreach and electronic efforts to disseminate information.

Alternative Cave Management Strategies

Several commenters proposed alternative cave management strategies to those previously identified in the monument's subsurface management plan. The subsurface management plan places restrictions, in accordance with the Federal Cave Resources Protection Act and NPS policy, on certain activities in monument caves by visitors, such as digging. Cave resources on the preserve are

located within the same watershed and share many commonalities with the caves previously identified in the monument. Based on this and no indication in the legislation that cave resources on preserve lands were to be treated differently from resources in the monument, the planning team concluded that the proposed alternative strategies would conflict with an up-to-date valid plan. Changes to cave management strategies could be addressed in the future in an update to the subsurface management plan.

Boundary Expansion

The 1999 general management plan for the monument focused on expansion to protect the monument and its cave system from adverse effects from adjacent land uses. With the addition of the preserve and its watershed-encompassing boundary, this concern for edge effects and adjacent land uses no longer exists. Early in the alternatives development process the planning team discussed potential boundary adjustments as is required by the National Parks and Recreation Act of 1978. It was determined that monument and preserve boundary resources, including scenic vistas, subsurface resources, and vegetation are adequately protected by the ridge to ridge boundary of the preserve. It is not necessary to include additional lands to adequately protect significant resources and enhance public enjoyment.

A boundary survey was initiated in 2017 under agreement with the BLM and USFS. The boundary will be surveyed by a USFS survey crew, beginning from Buck Peak, and will take multiple years to complete.

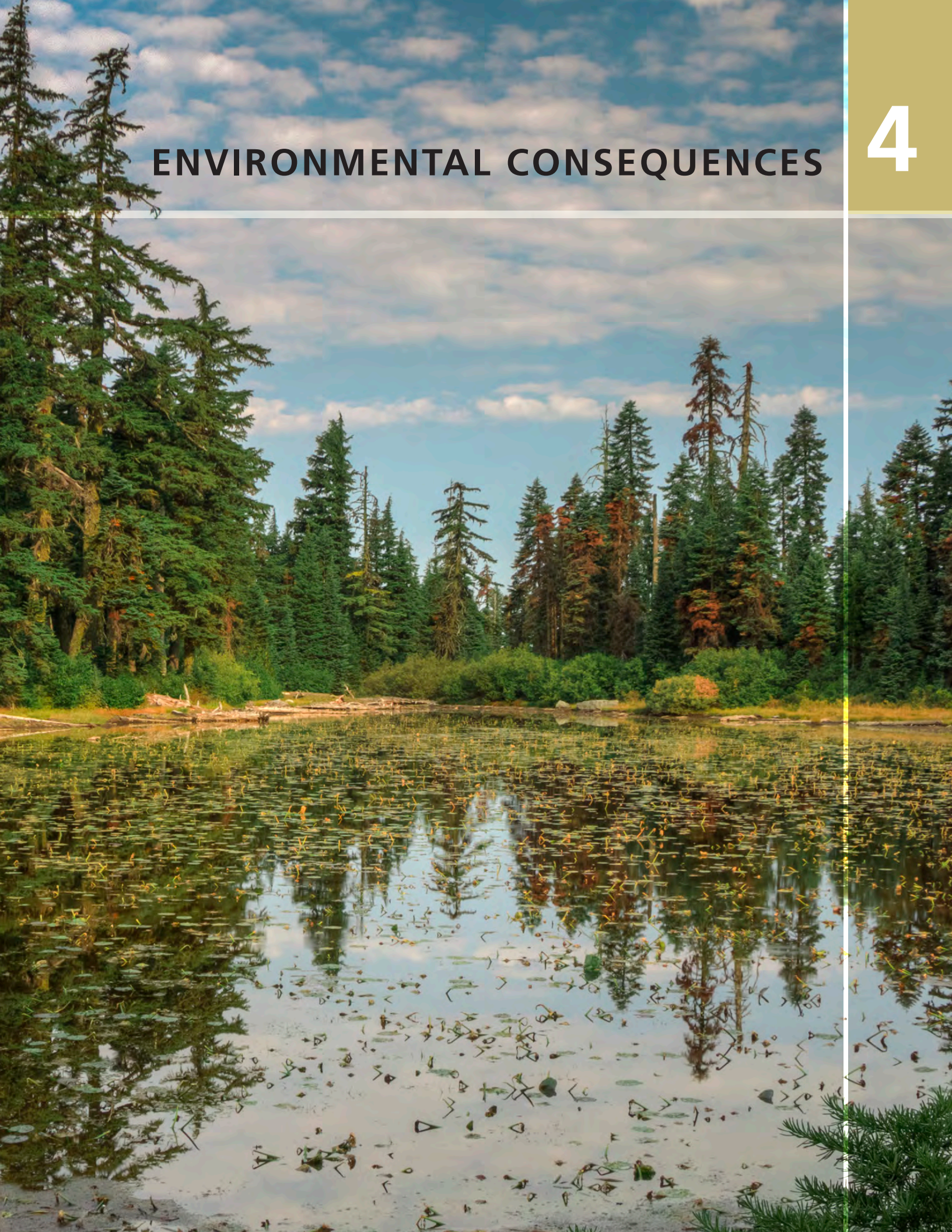
Hikers on Mt. Elijah. NPS Photo.

Redhead mushroom. NPS Photo.

Marbled wild ginger. NPS Photo.

ENVIRONMENTAL CONSEQUENCES

4



Previous page: Upper Bigelow Lake.
This page: Red fir on Mt. Elijah. Photos: NPS.

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

This chapter analyzes both beneficial and adverse impacts that would result from implementing any of the alternatives considered in this planning effort. This chapter also includes methods used to analyze direct, indirect, and cumulative impacts.

GENERAL METHODOLOGY FOR ANALYZING IMPACTS

In accordance with Council on Environmental Quality (CEQ) regulations, direct, indirect, and cumulative impacts are described (40 CFR 1502.16) and the impacts are assessed in terms of context and intensity (40 CFR 1508.27). Where appropriate, mitigating measures for adverse impacts are also described and incorporated into the evaluation of impacts. The specific methods used to assess impacts for each resource may vary; therefore, these methodologies are described under each impact topic.

TYPE OF IMPACT

Impacts are discussed by type, as follows (the terms "impact" and "effect" are used interchangeably throughout this document):

> **Direct:** Impacts that would occur as a result of the proposed action at the same time and place of implementation (40 CFR 1508.8).
>
> **Indirect:** Impacts that would occur as a result of the proposed action but later in time or farther in distance from the action (40 CFR 1508.8).
>
> **Adverse:** An impact that causes an unfavorable result to the resource when compared to the existing conditions.
>
> **Beneficial:** An impact that would result in a positive change to the resource when compared to the existing conditions.

CUMULATIVE IMPACT ANALYSIS METHODOLOGY

Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions" (40 CFR 1508.7). As stated in the CEQ handbook, Considering Cumulative Effects under the National Environmental Policy Act (CEQ 1997), cumulative impacts need to be analyzed in terms of the specific resource, ecosystem, and human community being affected and should focus on impacts that are truly meaningful. Cumulative impacts are considered for all alternatives, including alternative A, the no-action alternative.

Cumulative impacts were determined for each affected resource by combining the impacts of the alternative being analyzed and other past, present, and reasonably foreseeable actions that would also result in beneficial or adverse impacts. Because some of these actions are in the early planning stages, the evaluation of the cumulative impact is based on a general description of the projects. These actions were identified through the internal and external project scoping processes.

Past, Present, and Reasonably Foreseeable Actions

In defining the contribution of each alternative to cumulative impacts, the following terminology is used:

> **Imperceptible:** The incremental effect contributed by the alternative to the overall cumulative impact is such a small increment that it is impossible or extremely difficult to discern.
>
> **Noticeable:** The incremental effect contributed by the alternative, while evident and observable, is still relatively

small in proportion to the overall cumulative impact.

Appreciable: The incremental effect contributed by the alternative constitutes a large portion of the overall cumulative impact.

Assessing Impacts using CEQ Criteria

The impacts of the alternatives are assessed using the CEQ definition of "significantly" (1508.27), which requires consideration of both context and intensity:

(a) Context —This means that the significance of an action must be analyzed in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity—This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect would be beneficial.

(2) The degree to which the proposed action affects public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, parklands, prime farmlands, wetland, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

(10) Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

For each impact topic analyzed, an assessment of the potential significance of the impacts according to context and intensity is provided in the "Conclusion" section that follows the discussion of the impacts under each alternative. Resource-specific context, if

needed, is presented in the "Methodologies" section under each resource topic and applies across all alternatives. Intensity of the impacts is presented using the relevant factors from the list in (b) above. Intensity factors that do not apply to a given resource topic and/or alternative are not discussed.

MITIGATION MEASURES

Mitigation measures are the practicable and appropriate methods that would be used to avoid and/or minimize harm to the unit's natural, cultural, visitor, and socioeconomic resources. These mitigation measures have been developed based on existing laws and regulations, best management practices, conservation measures, and other known techniques from past and present work.

This management plan provides a management framework for the preserve. Within this broad context, the following measures will be used to minimize potential impacts from the implementation of the selected alternative. These measures will be applied subject to funding and staffing levels. Additional mitigation measures will be identified as part of implementation planning and for individual projects to further minimize resource impacts.

Management and Protection of Natural Resources

AIR QUALITY

- Minimize NPS vehicle use and emissions and employ the best available control technology.
- Encourage employee carpooling and strive to accommodate employee work schedules to maximize carpooling ability.
- Implement a no idling policy for all government vehicles.
- Coordinate and consolidate NPS vehicle trips to accomplish multiple tasks and carpooling, when possible.
- Implement sustainable practices in unit operations and building designs that minimize energy demands, thus minimizing air pollution emissions.

NATURAL SOUNDS

- Implement standard noise abatement measures during unit operations, including: scheduling to minimize impacts in noise-sensitive areas, using the best available noise control techniques, using hydraulically or electrically powered impact tools when feasible, and locating stationary noise sources as far from sensitive habitat and concentrated visitor use areas as possible.
- Locate and design facilities to minimize above-ambient noise.
- Avoid idling motors when power tools, equipment, and vehicles are not in use.

DARK NIGHT SKIES (LIGHTSCAPES)

- When outdoor lighting is needed, install energy-efficient lights equipped with timers and/or motion detectors so that light would only be provided when it is needed to move safely between locations.
- Use low-impact lighting, such as diffused light bulbs, and techniques such as downlighting to prevent light spill and to preserve the natural lightscape.

HYDROLOGIC SYSTEMS AND WATER QUALITY

- For projects requiring ground disturbance, implement erosion control measures as appropriate, including mitigating unnatural discharge into water bodies. Regularly inspect construction equipment and vehicles for leaks of petroleum and other chemicals to prevent water pollution.
- Use bio-lubricants (such as biodiesel and hydraulic fluid) in construction equipment.
- Develop and implement a spill prevention and response plan and acquire supporting equipment.

- Integrate runoff management and mitigation systems into the designs of parking areas near water resources.
- Develop sediment control and prevention plans and implement best management practices for projects that could impact water quality.
- Reduce and reuse wastewater.

SOILS

- Locate new facilities on soils suitable for the type and scale of development proposed.
- Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion control measures, such as erosion matting, silt fencing, and temporary sedimentation basins in construction areas to reduce erosion, surface scouring, and discharge to water bodies.
- Require all project managers to implement the unit's invasive plant management prevention and treatment program.
- Once work is completed, revegetate construction areas with appropriate native plants in a timely period according to revegetation plans.
- Vegetation
- Monitor areas used by visitors for signs of native vegetation disturbance. Use public education, revegetation of disturbed areas with native plants, erosion control measures, and barriers to control potential impacts on plants from erosion, trampling, or social trails.
- Minimize size and number of staging areas, overflow parking, and operational impacts to vegetation by delineating these areas and revegetating if necessary.
- Develop revegetation plans for disturbed areas and require the use of genetically appropriate native species. Revegetation plans will specify species to be used, seed/plant source, seed/plant mixes, site-specific restoration conditions, soil preparation, erosion control, ongoing maintenance and monitoring requirements, etc. Salvaged vegetation will be used to the greatest extent possible.
- Implement an invasive plant prevention, treatment, and management plan focusing on prevention and rapid response. Standard measures could include the following elements: use only weed-seed-free materials for road and trail construction, repair, and maintenance; ensure equipment arrives on site free of mud or seed-bearing material; identify areas of invasive or nonnative plants pre-project and treat any populations or infested topsoil before construction (e.g., topsoil segregation, storage, herbicide treatment); when depositing ditch spoils along the roads, limit the movement of material to as close as possible to the excavation site; scrupulously and regularly inspect areas that serve as introduction points for invasive or nonnative plants; revegetate with genetically appropriate native species; inspect rock and gravel sources to ensure these areas are free of invasive and nonnative plant species; and monitor locations of ground-disturbing operations for at least three years following the completion of projects.

WILDLIFE

- Employ techniques to reduce direct human impacts to wildlife, including visitor education programs, restrictions on visitor and park activities when warranted, development and use of best management practices for management activities (including construction), permit conditions, temporary and/or permanent closures of sensitive sites, and law enforcement patrols.
- Implement measures to reduce adverse effects of nonnative plants and wildlife on native species.
- Protect and preserve critical habitat features, such as rock outcrops, swales, nesting sites, roosting

sites, and migration corridors, whenever possible.

SPECIAL STATUS SPECIES

- Mitigation actions will occur during normal park operations as well as before, during, and after projects to minimize immediate and long-term impacts on rare, threatened, and endangered species. These actions will vary by project area, and additional mitigation measures may be added depending on the action and location. Many of the measures listed for vegetation and wildlife resources will also benefit species that are rare, threatened, endangered and/or of management concern by helping to preserve or minimize impacts on habitat.
- Conduct surveys and monitoring for special status species as warranted.
- Locate and design facilities/actions/operations to avoid or minimize impacts on special status species habitat. If avoidance is infeasible, minimize and mitigate for adverse effects as appropriate and in consultation with technical experts.
- Minimize disturbance to special status species, nesting, and migratory bird habitat through spatial and temporal planning.
- Develop and implement restoration and/or monitoring plans as warranted. Plans should include methods for implementation, performance standards, monitoring criteria, and adaptive management techniques.

MANAGEMENT AND PROTECTION OF CULTURAL RESOURCES

- Pursue strategies to protect cultural resources, including museum collections and archeological, historic, ethnographic, and archival resources, while encouraging visitors and employees to recognize and understand their value.
- Avoid adverse impacts to properties determined eligible for listing in the National Register of Historic Places. If adverse impacts cannot be avoided, mitigation will be developed in consultation with the SHPO, tribes, and other consulting parties pursuant to 36 CFR Part 800, the implementing regulations for the National Historic Preservation Act.

ARCHEOLOGICAL RESOURCES

- Known archeological sites will be periodically monitored to track their condition, identify any new or emerging threats, and identify any treatment measures necessary for their preservation and protection.
- Consultation with traditionally associated American Indian tribes and groups will help inform managers of the traditional cultural and religious significance of these resources.
- Archeological surveys will precede ground-disturbance required for new construction or other management activities. Known archeological resources will be avoided to the greatest extent possible.
- If previously unknown archeological resources are discovered during any project work, work in the immediate vicinity of the discovery will be halted until the resources could be identified, evaluated, and documented and an appropriate mitigation strategy could be developed, if necessary, in consultation with the state historic preservation office and associated American Indian tribes and groups.
- If previously unknown archeological resources are discovered as a result of natural processes, these resources will be documented, added to the unit's inventory, stabilized where feasible and appropriate, and included in the periodic monitoring program.

VALUES, TRADITIONS, AND PRACTICES OF TRADITIONALLY ASSOCIATED PEOPLES

- Maintain an active tribal consultation program for identification and evaluation of natural and cultural resources with cultural and religious significance to traditionally associated American Indian tribes and groups, as well as recommendations for management.

- Consult with tribes and tribal groups regarding unit undertakings with the potential to affect resources of cultural and religious significance to ensure tribal perspectives are understood, and adverse effects are avoided or minimized.

HISTORIC RESOURCES

- Documented historic sites, structures, buildings, and landscapes will be periodically monitored to track their condition, identify any new or emerging threats, and identify any treatment measures necessary for their preservation and protection.

- Cyclic maintenance, periodic repair, and rehabilitation of historic buildings, structures, and landscapes will be undertaken in keeping with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* in order to protect and maintain the integrity and significance of the resources.

SCENIC RESOURCES

- Design, site, and construct facilities to minimize adverse effects on natural and cultural resources and visual intrusion.

- Provide vegetative screening, where appropriate.

SOCIOECONOMIC ENVIRONMENT

- During the future planning and implementation of the approved management plan for the preserve, National Park Service staff will pursue partnerships with tribes, local communities, and county governments to further identify potential impacts and mitigating measures that will best serve the interests and concerns of both the National Park Service and the local communities.

SUSTAINABLE DESIGN

- Sustainable practices will be used in the selection of building materials and sources and building location and siting. Design standards specific to the unit will be developed in all historic preservation and construction projects.

- Projects will use sustainable practices and resources whenever practicable by recycling, reusing, and minimizing materials, minimizing energy consumption during construction, and reducing energy needs throughout the lifespan of the project.

HYDROLOGIC RESOURCES AND PROCESSES, INCLUDING WETLANDS AND FLOODPLAINS

Affected Environment

The preserve is situated within the Middle Sucker Creek 6th field hydrologic unit subwatershed within the Sucker Creek watershed, which in turn, makes up 10 percent of the 628,000 acre Illinois River subbasin of the Rogue River Basin. The preserve is within the transient snow zone with narrow stream valleys and steep side slopes. The Sucker Creek watershed was a prime location for timber harvest after World War II and has a history of placer gold mining. Mining, agriculture, timber harvest and recreation have had a dramatic impact on the watershed since the mid-1800s.

Environmental Consequences

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

The primary sources of impacts on hydrologic systems in the preserve arise from modifications to streams and wetlands or changes to the flow, amount and/or timing of water and/or debris flowing into them. Modifications to streams and wetlands include structures in stream channels such as bridges and culverts or structures on floodplains such as elevated roads or trails. The amount and/or timing of water or debris flowing into these areas is affected by the amount of vegetation or hardened surfaces in the watershed. Additionally, damage to native plant cover from stream-bank trampling and social trailing in wetlands can cause long-term degradation of these systems and reduce their ecological function by altering surface water flow direction and duration. This is occurring in the Bigelow Lakes area, due to social trailing.

Many braided, user-created trails exist around Bigelow Lakes. These social trails and some user-created campsites are often located in wet areas. This creates disproportionate adverse impacts because such areas constitute less than .1% of the preserve's entire areal extent.

Potential impacts due to road treatments are detailed in the *2014 Sucker Creek Legacy Roads and Trails Environmental Assessment* (USFS) and are incorporated by reference here. Generally, implementation would improve infiltration, hillslope hydrology, stream health, and water quality.

ALTERNATIVE B: PREFERRED ALTERNATIVE

Impacts under alternative B would largely be the same as those under alternative A, with some additional beneficial effects owing to increased efforts to assess wetland conditions and mitigate changes in climate. In addition, a hardened trail and/or boardwalk, along with interpretive signage, would be installed to improve ecological function by reducing social trailing in the Bigelow Lakes area. Increased partnerships may also help NPS staff leverage additional resources to manage hydrologic resources.

CUMULATIVE EFFECTS

Many of the existing structures in the preserve, including roads, trails, parking lots, bridges, and culverts contribute cumulatively to some level of degraded hydrologic function. Most development and visitor activity occurs near streams and wetlands due to the steep terrain and the proximity of primary attractions to water. Runoff from hardened surfaces, including trails, parking areas, and the campground, may adversely affect water quality due to sedimentation, introduction of contaminants, and increases in water temperature. These structures have led to localized, long-term adverse impacts where these facilities occur. The adverse impacts described in the alternatives would not add appreciably to these cumulative impacts, largely because development is small-scale and the beneficial actions in these alternatives are designed to promote system resilience.

The potential designation of Lake Creek and Upper Cave Creek as wild and scenic rivers in addition to the designated River Styx would benefit hydrologic management on the preserve. Management of the river corridors specifically for their geological and ecological values, as well as their free-flowing nature, would ensure the integrity and quality of the hydrologic system by requiring the NPS to consider these values in all management actions. In addition, Section 7 of the WSR Act, requires a review of federally assisted water resource development projects that would have a "direct and adverse impact" to free-flow, water quality and identified ORVs. If the Lake Creek and Upper Cave Creek segments are designated, Section 7 protections would be in place, providing permanent and maximum protection to the free-flowing character from potentially adverse federally assisted water resource development projects. This policy already applies to the River Styx as a designated wild and scenic river. Nothing proposed in the preserve plan would detract from the ability of the NPS to enhance river

values through further river management planning.

GEOLOGIC RESOURCES AND PROCESSES

Affected Environment

There is a high concentration of visible geologic diversity within the preserve, as compared to other areas in the United States. The diversity of soluble and harder geologic contacts contribute to a large number of waterfalls. Glacial features in the preserve include cirques, tarns, erratics, windblown loess deposits, hanging valleys, faceted boulders, and moraines. Karstic springs and caves exist in unusually large marble masses for the region.

Much of the soil underlying the preserve is gravelly loam and is classified as Althouse very gravelly silt loam on 35 to 75% slopes, Beekman-Colestine complex on 50 to 80% slopes, and Jayar very gravelly loam on 20 to 70% slopes. The main management concern noted for soils within the preserve is the hazard of slope failure, especially fillslope failures in areas of infilled glacial lakes in granitic terrain and initiation of debris torrents where roads exist on steep slopes.

Environmental Consequences

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

Management of the preserve under alternative A would not include new development. Geologic and soil resources would not be affected, except with regard to road treatments. Potential impacts due to road treatments are detailed in the *2014 Sucker Creek Legacy Roads and Trails Environmental Assessment* (USFS) and are incorporated by reference here. Generally, implementation of the treatments would greatly reduce or eliminate the risk of future road-related failures and downslope debris torrents.

With continued visitor access and maintenance of roads and trails, soil resources would be impacted in localized areas, exposing soils to erosion by wind and water. Such adverse impacts would be slight and short-term due to the few small areas disturbed at any given time. In addition, wherever excavation and distinct soil disturbance would occur, best management practices, such as those listed under the mitigating measures section earlier in this chapter, would be implemented.

ALTERNATIVE B: PREFERRED ALTERNATIVE

Some soils would be lost to degradation or substantially altered in local areas where ground disturbance occurs due to construction of a trailhead and boardwalk at Bigelow Lakes. Although these disturbances could disrupt soil structure in very localized areas and expose soils to erosion by wind and water, such adverse impacts would be slight and short-term because little additional soil disturbance would be required for these projects. In addition, wherever excavation and distinct soil disturbance would occur, best management practices would be implemented. Long term benefits in minimized soil erosion can be expected.

An increase in visitor use due to higher regional visibility could result in additional pedestrian, equestrian, and bicycle traffic throughout the preserve. Experience at other NPS sites has shown that, over time, foot traffic causes soil compaction and the formation of social trails. However, such impacts would be minimized under the preferred alternative by establishing a boardwalk at Bigelow Lakes to accommodate the additional foot traffic and improve pedestrian circulation, as well as through outreach and education of visitors.

CUMULATIVE EFFECTS

Soils throughout the preserve have been adversely impacted in the past due to mining, agriculture, and timber harvesting uses. Compaction due to use by people and vehicles, infrastructure development, and other human activities have also impacted soils in some areas. The actions in the alternatives would add an imperceptible amount to these impacts

or, where measurable, in an area of extremely limited extent.

The potential designation of Lake Creek and Upper Cave Creek as wild and scenic rivers would not adversely affect soils. On the contrary, management of the river corridors specifically for their geological and ecological values would benefit soils by protecting natural geologic processes and the hydrologic and ecological processes, such as the health of streambank vegetation, which contribute to the stability of soil and geologic resources. Nothing proposed in the preserve plan would detract from the ability of the NPS to enhance river values through further river management planning.

No other specific past, present, or reasonably foreseeable projects were identified that would affect geologic resources or soils at the unit.

VEGETATION

Affected Environment

A mixed, primarily coniferous forest of Douglas-fir, white fir, sugar pine, canyon oak, tan oak, big-leafed maple and Port Orford cedar (POC) is found on the preserve. Port-Orford cedar requires high daytime humidity and is associated with stream channels or other areas that meet the humidity criteria. It is impacted by *Phytopthora lateralis* (P. l), a root disease caused by a non-native water mold that spread through most of natural range of the tree during the 1950s to 1970s. With the exception of the Cave Creek Campground zone, the preserve's groves remain uninfected but are surrounded by significantly infected POC drainages in USFS lands to the west, north and east and which are connected to the preserve by both trails and road systems. For several species, historic fire suppression and human-caused changes in snowpack is greatly affecting the development of new stand structures and species composition on the preserve.

Environmental Consequences

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

Ongoing vegetation impacts would include damage to or loss of native vegetation due to maintenance activities, minor modifications to developed areas, recreational use, including trampling and soil compaction, and the spread of non-native species. Ongoing implementation of NPS natural resource laws and policies through treatment and restoration efforts would provide beneficial effects. In addition, continued access to management areas on the preserve road system allows the NPS to implement restoration and non-native species management actions. Continued implementation of the preserve's Port Orford cedar disease management protocol reduces the potential spread of Port Orford cedar disease and other potential invasives. Potential impacts due to road disposition are detailed in the *2014 Sucker Creek Legacy Roads and Trails Environmental Assessment* (USFS) and are incorporated by reference here. Generally, implementation of the treatments would be beneficial as a result of maintaining administrative access to potential treatment areas.

ALTERNATIVE B: PREFERRED ALTERNATIVE

As with alternative A, the preferred alternative would largely benefit vegetation by the continuation of National Park Service law and policy to management of the preserve's natural resources, as well as continued implementation of the Port Orford cedar disease management protocol. A few small-scale projects, like the boardwalk and trailhead at Bigelow Lakes, as well as the establishment of drive-in campsites on Buck Road, could temporarily effect vegetation in certain areas during construction. Given the mitigations described at the beginning of this chapter and controlling law and policy, any adverse impacts to biological resources are expected to be short-term and of low intensity. Long term benefits in minimized vegetation impacts can be expected

CUMULATIVE EFFECTS

Vegetation has been adversely impacted in the past, most notably due to past grazing and timber harvesting practices. The actions in alternatives A and B would add an imperceptible or extremely limited areal amount of adverse effects to these historical impacts and, in many cases, would provide beneficial effects.

The potential designation of Lake Creek and Upper Cave Creek as wild and scenic rivers would not adversely affect vegetation. On the contrary, management of the river corridors specifically for their ecological values would benefit vegetation, especially river-dependent species like Port Orford cedar. Nothing proposed in the preserve plan would detract from the ability of the NPS to enhance river values through further river management planning.

No other specific past, present, or reasonably foreseeable projects were identified that would affect vegetation at the preserve.

WILDLIFE AND WILDLIFE HABITAT

Affected Environment

No systematic inventory of wildlife species within the preserve has been conducted; however, a general understanding of the preserve's wildlife resources can be extrapolated from knowledge of habitat, information about wildlife populations on surrounding lands, and incidental wildlife observations.

Columbian black-tailed deer (*Odocoileus hemionus columbianus*) occur throughout the area. Small mammals are common including skunks (*Mephitis mephitis occidentalis* and *Spilogale gracilis latifrons*), squirrels (*Citellus beecheyi douglasi, Citellus lateralis trinitatus, Glaucomys sabrinus fuliginosus, Sciurus griseus griseus, Spermophilus beecheyi, Spermophilus lateralis,* and *Tamiasciurus douglasii*), as well as several species of shrews and voles. Predators such as mountain lions (*Felis concolor californica*), bobcats (*Lynx rufus facsiatus*), fishers (*Pekania pennant*) and foxes (*Urocyon cineroargenteus* and *Vulpes vulpes*) are also found here, along with black bear (*Ursus americanus*).

The preserve is also home to a variety of forest birds and birds of prey. These areas contain suitable habitat for species ranging from Steller's jay (*Cyanocitta stelleri*) and quail (*Callipepla californica* and *Oreortyx pictus*) to red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and northern goshawk (*Accipiter gentilis*). Spotted owls (*Strix occidentalis*) - a federally listed threatened species - have been sighted within the preserve.

Environmental Consequences

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

Under both alternatives, management of wildlife species would continue as it does today. The NPS protects species and their habitat in accordance with federal laws and regulations. Management decisions would continue to be science-based. However, adverse impacts to wildlife are still possible. Potential impacts due to road disposition are detailed in the *2014 Sucker Creek Legacy Roads and Trails Environmental Assessment* (USFS) and are incorporated by reference here. Generally, implementation of the treatments would be beneficial as a result of reducing road-related effects to late-successional habitat while retaining adequate access for future habitat enhancement and protection from wildland fire.

Most maintenance and visitor activities would continue to occur in previously disturbed areas along existing trails, roads, and in the developed areas. There would be no new development under this alternative. Subject to funding, NPS actions to manage and protect special status species would continue to be employed, such as monitoring and ecological restoration programs. Consequently, there would be no change in the habitat or disturbance to special status species within the preserve as a result of the no action alternative.

ALTERNATIVE B: PREFERRED ALTERNATIVE

As with alternative A, the preferred alternative would largely benefit wildlife and wildlife habitat by applying National Park Service law and policy to management of the preserve's natural resources. A few small-scale projects, like the boardwalk and trailhead at Bigelow Lakes, as well as the establishment of drive-in campsites on Buck Road, could potentially effect wildlife and wildlife habitat. Given the mitigations described at the beginning of this chapter and controlling law and policy, any adverse impacts to biological resources are expected to be short-term and of low intensity. Increased partnerships may also help NPS staff leverage additional resources to manage wildlife resources. In addition, an enhanced visitor education program would help promote stewardship among visitors.

CUMULATIVE EFFECTS

Wildlife habitat has been adversely impacted in the past, most notably due to past grazing and timber harvesting practices. The actions in alternatives A and B would add an imperceptible amount of adverse effects to these historical impacts and, in many cases, would provide beneficial effects.

The potential designation of Lake Creek and Upper Cave Creek as wild and scenic rivers would not adversely affect wildlife and wildlife habitat. On the contrary, management of the river corridors specifically for their ecological values would benefit wildlife, especially river-dependent species. Nothing proposed in the preserve plan would detract from the ability of the NPS to enhance river values through further river management planning.

No other specific past, present, or reasonably foreseeable projects were identified that would affect wildlife at the preserve.

CULTURAL RESOURCES

Under the regulations of the Advisory Council on Historic Preservation, a determination must be made for the collection of actions identified within the preserve plan and must identify whether or not these actions would result in an adverse effect to the historic properties of the unit. A determination of adverse effect or no adverse effect must be made for affected national register-listed or national register-eligible cultural resources. The following definitions are provided:

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

No adverse effect: There would be an effect on the historic property by the undertaking, but the effect does not meet the criteria in 36 CFR Part 800.5(a)(1) and would not alter characteristics that make it eligible for listing in the national register. The undertaking is modified or conditions are imposed to avoid or minimize adverse effects. This category of effects is encumbered with effects that may be considered beneficial under NEPA, such as restoration, stabilization, rehabilitation, and preservation projects.

Adverse effect: The undertaking would alter, directly or indirectly, the characteristics of the property making it ineligible for listing in the national register. An adverse effect may be resolved by developing a memorandum of agreement in consultation with the SHPO, ACHP, tribes, other consulting parties, and the public to avoid, minimize, or mitigate the adverse effects (36 CFR Part 800.6(a)).

The determination of effect for the preserve plan will be completed in a separate process parallel to the NEPA process. To date, except for short segments of the Big Tree and No Name Trails, no resources within the preserve have been listed or found eligible for listing in the National Register of Historic Places (NRHP), but evaluations are needed. The preserve plan incorporates the cultural resource guidance of the Oregon Caves National Monument General Management Plan, including the proper treatment of historic properties and adherence to the Secretary of the Interior's Standards for Archaeology and Historic Preservation (48 FR 44716). Project-level compliance will be required to implement actions proposed

in the preserve plan that could potentially impact eligibility of resources that have not yet been evaluated. The evaluation of Cave Creek Campground, which may have been developed in conjunction with the USFS Operations Outdoors program that started in 1957 and paralleled the Mission 66 program of the National Park Service is underway. Trails and roads with the potential for national register eligibility will also be assessed, including Cave Creek Trail. In addition, there are several sites in the preserve that were part of a pioneering ecologic study in the early 1950s of the influence of soils and other factors on vegetation communities by Robert Whittaker, the innovator of biodiversity metrics still used today.

Affected Environment

The preserve lies within the claimed aboriginal territory of the Confederated Tribes of the Grand Ronde Community of Oregon, including the Cow Creek Band of Umpqua Tribe of Indians. These tribal entities were notified of the proposed action during the public scoping period and of the NPS preferred alternative prior to the release of this draft. No concerns were raised, and no traditional cultural properties were identified that would be affected by the preferred alternative.

To date, very little of the preserve has been surveyed for archeological resources. A records search by the previous managing agency, the U.S. Forest Service, found no National Register cultural sites in the area (USFS 2014). A search of the Oregon State Historic Preservation Office found a record of a former campsite that was used for at least several decades prior to fifty years ago. It thus will have to be evaluated for eligibility to the National Register by a certified archeologist. Ridges and other areas where erosion dominates over deposition will be prioritized for surveys. Future surveys undertaken by the NPS may lead to discovery of undocumented sites related to American Indians, recreational use, or mining activities.

Based on an artifact found at the headwaters of Lake Creek, American Indians may have used the area for summer hunting camps. A possible archeologic site at the Cave Creek Campground suggests that these streams may have served as corridors to these hunting camps and also as trading routes between the Shasta to the south and the Athabaskan and Takelma to the North (Deur). Janet Joyer, a Rogue-Siskiyou National Forest archaeologist now retired has verbally suggested that a certain location in the preserve may have potential for evidence of a trading route between the coast and inland areas (Steve Mark, personal communication).

Except for short trail segments adjacent to the monument, no resources within the preserve have been listed or found eligible for listing in the National Register of Historic Places (NRHP). Evaluation is yet to be completed in accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800, Protection of Historic Properties).

Environmental Consequences

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

Under this alternative, protection and management of cultural resources would continue as it does today. The NPS would protect cultural resources and mitigate adverse effects in accordance with laws and regulations such as the National Historic Preservation Act and Archeological Resource Protection Act.

Archeological sites are important in several ways: 1) American Indian archeological sites are important to today's traditionally associated American Indian tribes, groups and individuals. They form tangible links to their cultural heritage, and demonstrate the long history and traditional associations to their ancestral homelands. 2) American Indian and Euro-American archeological sites provide tangible links to the broad patterns of our collective, multicultural history and are therefore valuable to the larger public; 3) Sites can hold material remains that embody distinct cultural adaptations or characteristics

of a particular time period; 4) Some types of sites are important for their high artistic value (such as those that contain rock art, tree carvings, etc.); and 5). Most archeological sites are significant for the scientific information they can provide regarding prehistoric and historic lifeways.

Archeological resources are finite, nonrenewable resources. Impacts on these resources have the potential to cause irretrievable loss. Ground-disturbing activities have the potential to disturb archeological resources. This can be caused by any action that breaks the soil surface – vegetation management (planting, etc.), grading, excavation, structure removal, or trenching – or as a result of natural factors such as storms. The potential to affect buried, intact archeological resources is dependent on the natural processes that have shaped the area as well as the history of land use of the area.

The ground-disturbing actions planned in alternative A would primarily occur in the already heavily impacted existing road prisms and campground. In addition, archeological surveys will precede ground-disturbance required for new construction or other management activities. Thus, the potential for direct or indirect effects impacting cultural resources is low. However, should any previously unknown sites be found during ground disturbing activities, activity near the find would be suspended and an appropriate mitigation strategy would be developed (*see Mitigation Measures).*

As funding permits and subject to outside assistance from the regional office or other NPS units, baseline documentation and data gathering on resource conditions would occur, but the backlog of condition assessment documentation would generally continue. Trails would be surveyed for potential national register eligibility, especially Cave Creek Trail and surviving portions of the original trail up the Cave Creek drainage. An archeological survey would be completed for the preserve with a focus on areas with high potential for archeological finds. Active archeological work would occur in response to projects that require compliance, such as construction or maintenance that involves ground disturbance. These actions would contribute to long-term preservation and enhanced understanding of archeological resources and human use in the unit, resulting in beneficial impacts. However, these actions would continue to be limited by the availability of staff. Resources adjacent to or easily accessible from parking areas or trails would continue to be vulnerable to surface disturbance, inadvertent damage, and vandalism. Loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence could result in loss of site integrity.

Known archeological resources would be avoided to the greatest extent possible whenever ground-disturbing activities such as road and trail maintenance or construction of new facilities was needed. Archeological surveys would precede any ground disturbance for construction or removal of facilities, as required by the mitigation identified in this plan. As additional detailed plans for each undertaking are developed, the unit would ensure that archeological resources would be minimally affected by surveying the proposed sites, consulting with traditionally associated tribes and groups, and monitoring actions so that resources can be protected to the greatest extent feasible. Any unavoidable impacts to archeological sites would be addressed through project-specific compliance with Section 106 of the NHPA, in consultation with the SHPO and tribes.

ALTERNATIVE B: PREFERRED ALTERNATIVE

Impacts under alternative B are similar to those described under alternative A. In addition, new construction proposed under alternative B has the potential to disturb archeological sites through construction related impacts and inadvertent damage by concentrated visitation. However, new visitor facilities would be sited and designed with the mitigation measures identified in this plan, including surveys in previously undisturbed areas. The siting and design of these trails would be subject to further environmental

review to ensure impacts are avoided on a site-specific basis.

Archeological and historic resources would be interpreted through a variety of means, including interpretive programs and exhibits at the monument, as well as digital media. Increased education and awareness of the unit's cultural resources will help protect those resources by elevating their importance to visitors; a beneficial effect.

CUMULATIVE IMPACTS

When considering past, present, and reasonably foreseeable future actions, impacts from this project would cause an imperceptible cumulative effect. The current condition and trend would continue, which protects historic properties through inventory and project design so no historic properties are adversely impacted by project implementation. The potential designation of Lake Creek and Upper Cave Creek as wild and scenic rivers would not be expected to affect management of cultural resources, except where roads are found to be eligible for the National Register. In these cases, where road culverts or other structures would be affected by management actions to protect wild and scenic river values, full NHPA compliance would be conducted to ensure that both river and cultural values were addressed appropriately.

VISITOR OPPORTUNITIES AND ACCESS

Affected Environment

Visitors to the preserve have a variety of opportunities including hunting, camping, hiking, and private equestrian use. Natural waterfalls, mountain and subalpine meadows, alpine rock gardens, dozens of vegetation communities, glacial features, and expansive vistas provide the backdrop. One developed campground (Cave Creek Campground) is found within the preserve, providing vehicle access, parking, 17 tent pads, fire pits, and toilet facilities. The campground serves as an overnight facility for visitors to the national monument, as well as the preserve and adjacent forest lands. Approximately 19.11 miles of gravel roads provide access to the preserve. Many of the roads are in poor shape and are candidates for decommissioning. Access to these roads is restricted during wet seasons and winter to prevent the spread of Port Orford cedar disease. 16.75 miles of trails are found in the preserve. The trails are in variable condition and many require extensive restoration or maintenance. Popular hiking destinations on the preserve include Bigelow Lakes, Mount Elijah, and the Cave Creek Trail. Most visitors enter the preserve along Highway 46 and continue on to the monument to take a cave tour or visit the historic Chateau, a national historic landmark. A variety of visitor services such as information, lodging, and food service can be obtained at the monument. A visitor center at the monument provides opportunities for interpretation and exhibits related to the preserve lands.

Environmental Consequences

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

All current recreational opportunities would continue to be offered. No access to developed or dispersed recreation destinations and sites would be eliminated by implementation of the proposed road treatments. Hiking, sightseeing, hunting, private equestrian use, wildlife viewing, and camping are common activities and would continue to be available under alternative A. Support for the continuation of these traditional activities was strongly voiced in the public comments received early in the planning process. Visitor use opportunities are greatly enhanced by the continuation of these activities.

Visitor use trends and characteristics would likely remain consistent, with a continued slight increase in visitation since the site's 2014 designation.

A variety of educational and interpretive programs and tours would continue to be offered by the NPS and its partners. With few staff to implement them, onsite field trips, in-class visits to local schools, education

kits, teacher training, digital resources, and visitor tours would continue in a severely limited fashion.

Due to a lack of sufficient informational signage and preserve-wide orientation and promotional information, visitors and potential visitors would remain under-informed about the resources and opportunities found on the preserve.

Due to low levels of funding and staff dedicated to management of the preserve, opportunities for personal interaction with rangers in the preserve would continue to be limited. Despite these limitations, the continuing educational and interpretive program at the monument would have a long-term beneficial impact on visitor education, interpretation, and understanding of the preserve.

ALTERNATIVE B: PREFERRED ALTERNATIVE

Direct impacts related to construction of a widened turnaround and parking area at the Bigelow Lakes trailhead would be beneficial to visitors. This trail system is an important loop system that connects to Mount Elijah, Oregon Caves, and the Boundary Trail. Increased maintenance of the broader trail system would likewise benefit trail users.

Maintenance of Tankia Road (4613066 & 4613057) as an administrative road would provide a new opportunity for bicyclists, who could use the road to complete a loop with surrounding public roads. Construction of primitive vehicle campsites on Buck Road would also provide beneficial effects to those seeking a different experience than the developed campground. Construction of a boardwalk at Bigelow Lakes would improve access for many at one of the preserve's most popular destinations.

Under the preferred alternative, the NPS would greatly increase outreach to a variety of partners in the region, potentially raising the profile of the preserve regionally and increasing promotion of its recreational opportunities. This alternative would use improved signage, increased use of technology and education, as well as new guided trip concession opportunities, to better support safe access to the sites and help connect visitors with the information and support services they need to plan and enjoy their visit to the preserve. This could make the unit more welcoming and provide new recreation opportunities, resulting in long-term beneficial impacts on visitor experiences at the unit.

Some long-term adverse impacts to visitor use could occur if hunting is limited around localized, high-use areas such as the campground and popular monument trails. These adverse effects are balanced by the benefits to visitor and hunter safety in these areas. Most of the preserve would remain open to hunting and visitors to the broader preserve would be better educated about recreational safety during hunting season.

CUMULATIVE IMPACTS

The potential designation of Lake Creek and Upper Cave Creek as wild and scenic rivers would not adversely affect visitor opportunities. Current and proposed recreational activities at the preserve are compatible with wild and scenic river status and with protection of the outstandingly remarkable values identified in the wild and scenic river study. Although no outstandingly remarkable values related to recreation are identified in the wild and scenic river study, the NPS would continue to emphasize its mandate to provide visitor enjoyment of these areas and would focus management on enhancing river values in tandem with protecting visitor access and experience. No other past, present, or reasonably foreseeable projects were identified that would affect the visitor experience at the unit.

MANAGEMENT AND OPERATIONS

Affected Environment

Operations refers to the current management structure of the monument and preserve to provide direction for the protection, public use, and appreciation of the preserve, and the ability of the current staff to adequately protect and preserve vital resources and provide for an effective visitor experience. The discussion of impacts on management, operations, and staffing focuses on the type of management structure, the adequacy of facilities to achieve management objectives, the amount of staff available to ensure public safety, and the ability of the staff to protect and preserve resources given current funding and staffing levels.

Existing administration and operations for the preserve are managed by Oregon Caves National Monument and Preserve staff, headquartered within the preserve. Staff provide support to the preserve for administration and operations, planning efforts, road maintenance, and limited interpretive activities.

Few structures exist on the preserve with the exception of the headquarters complex, which includes maintenance, administrative, and housing facilities. Other facilities include a water intake system for the monument water supply and restroom facilities at Cave Creek Campground.

The current road system within the preserve consists primarily of gravel roads previously built and maintained by the U.S. Forest Service. Other than Highway 46, the only paved roads are at the administrative area and Cave Creek Campground. Public parking is limited to spaces for a few vehicles at Cave Creek Campground and the Bigelow Lakes trailhead.

Environmental Consequences

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

Under both alternatives, administrative offices and operational facilities would remain in their current location on the preserve. Cooperative efforts with partners and universities would continue on an as-needed basis as staffing and funding allows. The current organizational structure is generally centralized and did not change significantly with the addition of the preserve. Although some staff could be added over time, staff capacity would continue to be stretched thin to manage the monument at previous service levels and simultaneously manage the preserve.

The NPS currently partners with several agencies and organizations. Although these effective partnerships have yielded beneficial effects on visitors and resources, a lack of staff capacity has limited the preserve's ability to take advantage of more robust partnership opportunities with these and other entities.

ALTERNATIVE B: PREFERRED ALTERNATIVE

Under alternative B, administrative, maintenance, and other operational capacity would be enhanced at the preserve through a combination of increased staff and greater use of partnerships to accomplish preserve objectives. The partnerships described under alternative A would continue and the monument would expand and focus its partnership efforts in areas related to interpretation and education, research, public safety, project funding and stewardship.

CUMULATIVE IMPACTS

Wild and scenic river designation of Lake Creek and Upper Cave Creek would not adversely affect administration, maintenance, or other operations at the preserve. If anything, designation would provide management focus to protection of stream values and assist the NPS, through river management planning, to better address management issues related to those values. No other past, present, or reasonably foreseeable projects were identified that would affect operations at the preserve.

SOCIOECONOMICS

Affected Environment

The largest town in close proximity to the preserve, Cave Junction (population 1,915) sits in Josephine County on U.S. Highway 199 and provides limited services. To the north, Grants Pass serves as a larger gateway community, with many more food and lodging options. Grants Pass has a population of 37,088 (U.S. Census Bureau 2015) and is about 30 miles from Cave Junction. Josephine County is predominantly rural, with an estimated population of 84,745 in 2016.

U.S. Highway 199 is a major route in southwestern Oregon and connects the towns of Grants Pass and Cave Junction to Crescent City in northern California. Oregon Caves National Monument and Preserve is a recreational draw for visitors on this route, including hunters, birders, and outdoor enthusiasts who are attracted to these opportunities and contribute to

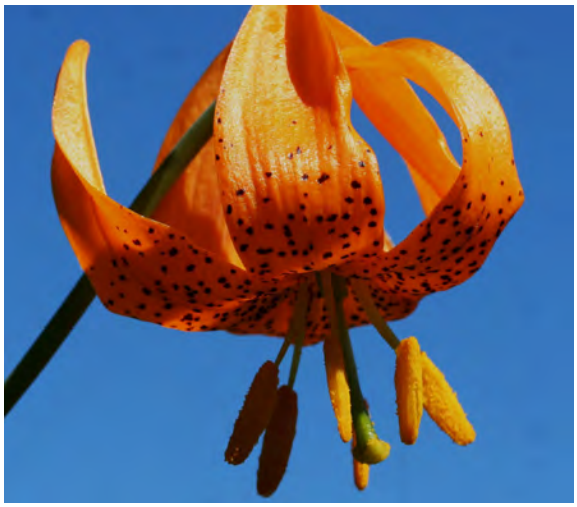
TABLE 8: Population

	Year 2010	Year 2016	% Change 2010 to 2016
Josephine County	82,713	85,904	3.9%
Grants Pass	34,533	37,088	3.4%
Oregon	3,831,074	4,093,465	6.8%
Source: U.S. Census Bureau, 2017			

TABLE 9: Population Projections through 2030

	Year 2010	Year 2020	Year 2030	% Change 2010 to 2030
Josephine County	82,775	90,776	101,596	22.7%
Oregon	3,837,300	4,252,100	4,768,000	24.2%
Source: State of Oregon, Department of Administrative Services, Office of Economic Analysis, 2013				

Prickly currant. NPS Photo.



Wiggin's Lily. NPS Photo.

the local economy by purchasing food, lodging, and supplies.

In future years, the population of Josephine County is expected to continue its growth, at a slightly lower rate than the state as a whole, as shown in table 9.

ETHNICITY

The single largest U.S. Census-identified race in Josephine County was White (93.3%) in 2015. American Indian/Alaskan Native comprised 1.6% of the population. Hispanic/Latino ethnicities comprised 7.3% of all residents in the county. The proportion of White residents in Josephine County is higher than that of the state of Oregon (87.6%) and the United States (77.1%). Hispanic/Latino ethnicities are notably lower in Josephine County than throughout the state on average (12.7%), and significantly lower than the national average (17.6%). African Americans are very underrepresented in the county at 0.6%, compared to 2.1% statewide and 13.3% in the United States.

TABLE 10: Median Household Income (in 2015 dollars)

	Income	Persons in Poverty
Josephine County	$37,665 (69.8% of State Average)	21.9%
Oregon	$53,889	15.4%
United States	$51,243	13.5%
Source: U.S. Census Bureau, 2017		

MEDIAN HOUSEHOLD INCOME AND VISITOR SPENDING

In 2015, Oregon's median household income was $53,889. With a median household income of $37,665, Josephine County ranks 32nd out of 36 counties in Oregon. The unemployment rate in 2015 was 7.9% (U.S. Bureau of Labor Statistics). According to the U.S. Censure Bureau, 21.9% of Josephine County residents live in poverty.

REGIONAL TOURISM

In 2016, park visitors spent an estimated $5.8 million in local gateway regions while visiting Oregon Caves National Monument. These expenditures supported a total of 94 jobs, $2.5 million in labor income, $4 million in value added, and $7.4 million in economic output in local gateway economies surrounding Oregon Caves National Monument (2016 NPS Visitor Spending Effects Report, 2017). The total visitor spending for Josephine County in 2015 was $112.8 million (Dean Runyan Associates, 2016).

Environmental Consequences

ALTERNATIVE A: CONTINUE CURRENT MANAGEMENT

In terms of the regional economy, unit visitors generate travel-related spending and create additional demand for travel-related services within the region. Such demands help support the maintenance of jobs dispersed throughout the region in a wide variety of visitor support services such as hotels, restaurants, auto service stations, and in services that would support increased business at these facilities. Because visitation to the preserve is limited, these beneficial effects would remain quite small in relation to other economic drivers in the region. The current level of NPS employment would continue to have a small beneficial effect on the local economy. No adverse effects were identified.

ALTERNATIVE B: PREFERRED ALTERNATIVE

As in alternative A, no adverse impacts would occur. Visitation under alternative B may increase with improved outreach and interpretive efforts. Many visitors would purchase lodging, food, and other services in the communities surrounding the unit. Accordingly, travel-related spending in local businesses would increase and additional private-sector jobs could be created, providing beneficial impacts to the regional economy.

With full implementation of the preferred alternative, NPS employment could be slightly increased locally. At full implementation, NPS spending would be greater than under alternative A, providing some benefit to regional economy.

Wild and scenic river designation of Lake Creek and Upper Cave Creek would not adversely affect visitor opportunities and thus not negatively impact the socioeconomic benefits of visitor access to the preserve. Current and proposed recreational activities at the preserve are compatible with wild and scenic river status and with protection of the outstandingly remarkable values identified in the wild and scenic river study. Designation may slightly benefit the local economy by attracting some visitors who wish to visit these streams

CUMULATIVE IMPACTS

The preserve draws some visitors from around Oregon and beyond. The numbers, however, are small. When considered in concert with the socioeconomic effects of other recreation and tourism sites in the region, the actions described in the alternatives add an imperceptible amount to the existing cumulative beneficial effects. Local and regional economies, while benefitting to some degree from the management of the preserve, are not tied to its existence except as part of a larger package of recreational and educational opportunities available in the region.

The potential designation of Lake Creek and Upper Cave Creek as wild and scenic rivers would not adversely affect visitor opportunities and thus not negatively impact the socioeconomic benefits of visitor access to the preserve. Current and proposed recreational activities at the preserve are compatible with wild and scenic river status and with protection of the outstandingly remarkable values identified in the wild and scenic river study. Designation may slightly benefit the local economy by attracting some visitors who wish to visit these streams.

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Debarking cedar to restore the chateau. NPS Photo.

CONSULTATION AND COORDINATION

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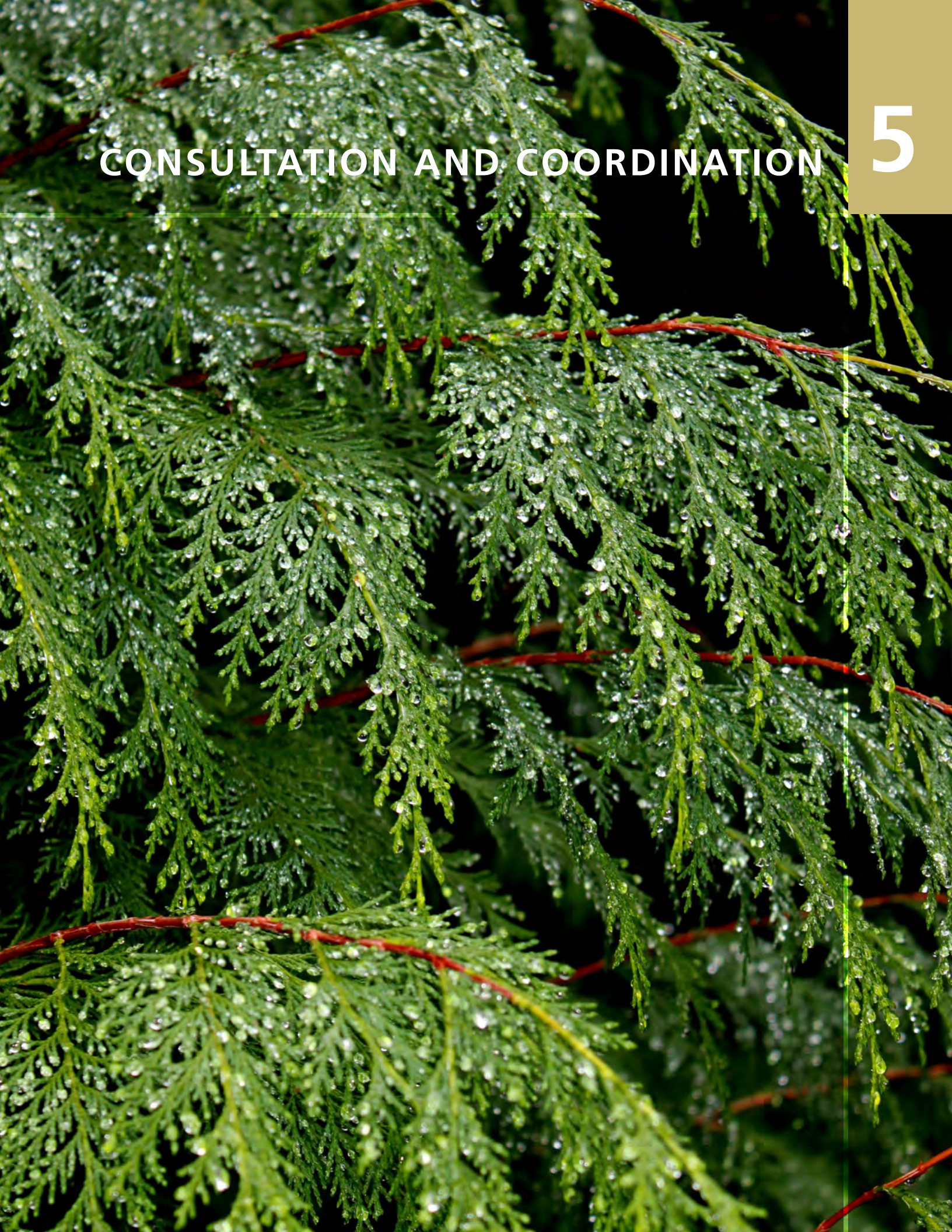

Previous page: Port Orford cedar. This page: Mycena purpureofusca. Photos: NPS.

CHAPTER 5: CONSULTATION AND COORDINATION

Public involvement and consultation efforts were ongoing throughout the process of preparing this draft management plan and environmental assessment. Public involvement methods included news releases, public meetings and workshops, newsletter mailings, and website postings. This chapter provides information about each public involvement period and summarizes public comments received by the NPS during each phase.

PUBLIC SCOPING

In spring of 2016, the National Park Service (NPS) began the "scoping" portion of the planning process to learn what the public believes are the most important issues facing the Tule Lake Unit and present the park staff's proposed action for management of the preserve. The NPS announced the public scoping period and invited public comment through newsletters, correspondence, press releases, public workshops, and the NPS Planning, Environment, and Public Comment (PEPC) website: http://parkplanning.nps.gov/preserveplan. NPS staff produced and mailed Newsletter #1—Public Scoping to approximately 400 individuals, organizations, and agencies on the NPS mailing list. Press releases were distributed to local and regional news media. The public was invited to submit comments by mail, e-mail, fax, online, at public workshops, and during virtual meetings.

Public Workshops and Written Comments

In spring of 2016, the NPS released a summary newsletter and held two public meetings on the Preserve Management Plan and Wild and Scenic River Study. Approximately 400 newsletters were mailed or emailed to organizations and individuals on the park mailing list. A comment form was included in the newsletter so that members of the public could provide feedback to the planning team. The public comment period began April 15, 2016 and ran through June 10, 2016. Press releases asking for public comments and announcing the public meetings were distributed to local newspapers. The newsletter was also published and made available for electronic comment on Planning, Environment and Public Comment (PEPC) website. A link to the newsletter was provided on the Oregon Caves National Monument and Preserve's website.

In May 2016, the planning team held two public open houses in Oregon, including one in Cave Junction and one in Grant Pass. Displays and stations were set up at the start of the meetings so that attendees could have one-on-one conversations with members of the planning team. Planning team members recorded comments on flipcharts and comment forms were also made available.

The NPS received written responses in the form of letters, emails, newsletter forms, and web comments from 19 organizations and individuals. Comments, both through public workshops or written correspondence, were received from the following organizations, affiliates, and elected officials:

AGENCIES AND ORGANIZATIONS SUBMITTING OFFICIAL COMMENTS

- Klamath-Siskiyou Wildlands Center
- Back Country Horsemen of America
- American Rivers
- Friends of the Kalmiopsis
- American Whitewater
- Wild and Scenic Rivers
- Western Environmental Law Center

AFFILIATIONS/ASSOCIATIONS NOTED BY PUBLIC MEETING ATTENDEES OR COMMENTERS

- Oregon Hunters Association

- Burke Museum, University of Washington
- Oregon Wild
- Klamath Mountains Conservation Task Force, National Speleological Society
- Willamette Valley Grotto, National Speleological Society
- Ecostry Institute
- California Office of Historic Preservation

Summary of Public Scoping Comments

This section contains a summary of comments received during the public scoping period for the Oregon Caves National Monument Preserve Management Plan and Wild and Scenic River Study. The following topics received the most comments: natural resource issues, recreation, roads, equestrian use, trails, camping, fire, hunting, and wild and scenic river designation. The Draft Wild and Scenic River Study is being published concurrently with this Draft Preserve Plan as a separate document; the coment summary below reflects scoping comments on the Preserve Plan. The full list of comments is available upon request.

NATURAL RESOURCE ISSUES

Several commenters advocated protection of natural resources, particularly the integrity of natural ecosystems. Invasive species, clean water, fire, and climate change were cited as primary natural resource issues. Commenters suggested involving local expertise in resource management work. Active restoration of ecological processes, thinning of uniform Douglas fir stands, and a reduction of sediment sources into waterways were encouraged by several commenters. Some commenters envisioned opportunities to provide living laboratory demonstrations of natural selection relationships through restoration work.

RECREATION

Commenters advocated for a wide variety of recreational activities and suggested ways to limit the impacts of visitors on natural resources and recreational experiences. Equestrian use, hiking, hunting, mountain biking, nature-based tourism, and camping were all supported. New infrastructure, including signage, picnic areas, scenic overlooks, wheelchair-accessible amenities, and rest areas, were suggested. One commenter suggested allowing leashed dogs on selected trails.

ROADS

Several commenters opposed decommissioning any roads, stating that it would reduce access and increase costs. Improved signs and maps were widely desired. Some commenters asked that off-road, cross-country motorized travel be prohibited, citing vegetation, wildlife and other impacts. Some commenters asked that previously planned sediment abatement work continue under NPS management. Conversion of some roads to trails, especially for stock, mountain bikes, and accessibility was supported by several commenters.

EQUESTRIAN USE

Commenters encouraged continuation or expansion of equestrian opportunities on the preserve. Analysis of horse trailer parking, turnaround needs, and camping at trailheads was requested. Conversion of some roads to trails allowing equestrian use was supported, especially when such trails could be turned into connected loops. Commenters were interested in retaining equestrian access to Bigelow Lakes and on the Limestone Trail, as well as on former Forest Service roads. Specific research regarding the relationship of equestrian use to natural resource protection and visitor experience was shared. While some commenters cautioned the NPS to closely monitor impacts, no commenters were opposed to retaining some level of stock use on preserve lands.

TRAILS

Many commenters suggested improved trail maintenance as a priority, including reestablishment of routes, rerouting for resource protection and the use of volunteer groups for maintenance work and consulting.

Potential new opportunities for equestrian users and mountain bikers were described. Maintenance of all existing trails was emphasized by several commenters, including all those depicted on the Wild River District Map. Improved signage, both for directional purposes and to indicate allowed uses, was requested.

CAMPING

One commenter felt that additional campgrounds were needed on the preserve. Several suggested improved management of the Bigelow Lakes camping to reduce and monitor natural resource impacts, while another expressed a desire that no permit system would be used to manage camping.

FIRE

Some commenters encouraged the NPS to consider controlled burning to remove fuel. Natural processes to restore late successional and fire resilient natural community ecosystems were encouraged. Some commenters suggested that fire suppression should be minimized and fuel reduction limited to areas immediately surrounding infrastructure or along roads. Immediacy of response was mentioned as having a greater impact on fire safety than wildland fuel treatment. Active management of California Globe Mallow, which is fire dependent, and white oak, which is vulnerable to fire impacts, was also requested. The Crater Lake National Park fire plan was suggested as a model for the preserve.

HUNTING

Several commenters requested that hunting continue to be allowed. Most comments regarding hunting were also related to access issues, including roads and trails. No commenter was opposed to hunting on the preserve, but several requested restrictions related to congested areas and off-road motorized retrieval of game - an activity supported by others. Another commenter was opposed to any restrictions at all.

AGENCY CONSULTATION AND COORDINATION

The following sections document the consultation and coordination efforts undertaken by the NPS during the preparation of this EA. Consultation is an ongoing effort throughout the entire environmental and Section 106 compliance process. Copies of letters exchanged with partners and agencies are in the administrative file.

Section 106 Consultation

Federal agencies that have direct or indirect jurisdiction over historic properties are required by Section 106 of the National Historic Preservation Act (NHPA), as amended (54 U.S.C. 300101 et seq.), to take into account the effect of their undertakings on properties either listed in or eligible for listing in the National Register of Historic Places. To this end, the NPS instituted early scoping with agencies, stakeholders, and the interested public, coordinated planning milestones in consideration of both the NEPA and NHPA processes, and included historic preservation issues in the alternatives development and impact analysis. The determination of effect for the preserve plan will be completed in a separate process parallel with the NEPA process. The NPS invites all comments related to cultural resources and historic properties during the comment period for this environmental assessment. This comment period will be used to satisfy consultation requirements under the NHPA.

CONSULTATION WITH THE OREGON STATE HISTORIC PRESERVATION OFFICE

Under the terms of stipulation IV of the 2008 Programmatic Agreement Among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act, the National Park Service will follow the standard review process in accordance with 36 CFR 800 for the preserve management plan.

In April of 2016, the NPS sent the Oregon SHPO a newsletter describing the park's intent to prepare a preserve management plan, inviting representatives of the SHPO to participate in the scoping process. In June of 2017, the NPS formally requested consultation on the project. During the public review period for this EA, the NPS will continue to consult with the SHPO to meet the remaining requirements of 36 CFR 800.

CONSULTATION WITH AMERICAN INDIAN TRIBES

The National Park Service recognizes that indigenous peoples have traditional and contemporary interests and ongoing rights in lands now under National Park Service management, as well as concerns and contributions to make for the future via the scoping and alternatives development process for general management plans and other projects. Related to tribal sovereignty, the need for government-to-government American Indian consultations stems from the historic power of Congress to make treaties with American Indian tribes as sovereign nations. Consultations with American Indians and other American Indians, such as Alaska Natives and Native Hawaiians, are required by various federal laws, executive orders, regulations, and policies. For example, such consultations are needed to comply with Section 106 of the National Historic Preservation Act of 1966, as amended. Implementing regulations of the Council on Environmental Quality (CEQ) for the National Environmental Policy Act of 1969, as amended, also call for American Indian consultations.

The NPS consulted with traditionally associated American Indian tribes and groups in developing this plan. During the public scoping period NPS staff invited the Confederated Tribes of Grand Ronde and the Cow Creek Band of Umpqua Tribe of Indians to discuss the general management planning process underway and any concerns they might have about protecting, preserving, and managing the preserve's resources. The NPS will continue to consult with these traditionally associated tribes and groups during the public review period for this EA and throughout implementation of the plan pursuant to requirements of 36 CFR 800, federal executive orders and agency management policies.

Section 7 Consultation

CONSULTATION WITH THE U.S. FISH AND WILDLIFE SERVICE

The Endangered Species Act of 1963, as amended, authorizes federal agencies to enter into early consultation with the U.S. Fish and Wildlife Service (USFWS) to ensure that any federal action would not jeopardize the existence of any listed species or destroy or adversely modify its habitat. During the public review period for this EA, consultation with the USFWS will occur to affirm concurrence with the determinations of effect on listed or proposed species.

FUTURE COMPLIANCE REQUIREMENTS

The NPS will conduct additional site-specific environmental analysis as individual projects or actions included in the selected alternative are implemented. Some of the specific future compliance requirements of the selected alternative are described in the Alternatives and Environmental Consequences chapters. Included are the NPS determinations of how those individual requirements relate to the National Environmental Policy Act, the Endangered Species Act (Section 7 requirements), and requirements for compliance with Section 106 of the National Historic Preservation Act regarding historic properties (2008 Programmatic Agreement and 36 CFR 800).

LIST OF PRESERVE MANAGEMENT PLAN RECIPIENTS

Federal Agencies and Officials

- Bureau of Land Management, Medford District Office
- Honorable Peter DeFazio, United States House of Representatives
- Honorable Jeff Merkley, United States Senate
- Honorable Greg Walden, United States House of Representatives
- Honorable Ron Wyden, United States Senate
- Josephine Soil & Water Conservation District
- National Oceanic and Atmospheric Administration (NOAA) Fisheries
- National Park Service, Crater Lake National Park
- National Park Service, Redwood National Park
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Southwest Oregon Resource Conservation and Development Council
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Oregon State Office
- United States Department of Agriculture (USDA), Noxious Weed Control Program
- United States Fish and Wildlife Service
- United States Forest Service, Fremont-Winema National Forest
- United States Forest Service, Klamath National Forest
- United States Forest Service, Rogue River-Siskiyou National Forest
- United States Forest Service, Six Rivers National Forest
- United States Forest Service, Umpqua National Forest
- United States Forest Service, Wild Rivers Ranger District

State and Local Agencies and Officials

- Honorable Peter Buckley, Oregon House of Representatives
- Honorable Duane Stark, Oregon House of Representatives
- Honorable Wayne Krieger, Oregon House of Representatives
- Honorable Sal Esquivel, Oregon House of Representatives
- Honorable Carl Wilson, Oregon House of Representatives
- Honorable Alan Bates, Oregon State Senate
- Honorable Doug Whitsett, Oregon State Senate
- Honorable Jeff Kruse, Oregon State Senate
- Honorable Herman Baertschiger Jr., Oregon State Senate
- City of Cave Junction
- City of Grants Pass
- Grants Pass & Josephine County Chamber of Commerce
- Illinois Valley Soil & Water Conservation District
- Josephine County Commissioners
- Josephine County Planning Office
- Oregon Department of Environmental Quality
- Oregon Department of Fish & Wildlife
- Oregon Department of Forestry
- Oregon Department of Geology and Mineral Industries
- Oregon Department of Transportation
- Oregon Governor's Office

- Oregon State Historic Preservation Office
- Oregon Parks & Recreation Department, Planning and Design Division
- Oregon State Department of Water Resources

Tribes

- Confederated Tribes of Grand Ronde
- Cow Creek Band of Umpqua Tribe of Indians

Businesses, Institutions, and Organizations

- American Forest Resource Council
- American Forests
- American Hiking Society
- American Recreation Coalition
- American Rivers
- American Rivers, Northwest Office
- American Whitewater
- Applegate Partnership and Watershed Council
- Applegate Valley Community Forum
- Ashland Public Library
- Associated Oregon Loggers
- Back Country Horsemen of Oregon, High Desert Chapter
- Back Country Horsemen of Oregon, Sourdough Chapter
- Bear Creek Watershed Council
- Big Wildlife
- California Native Plant Society
- Cascadia Wildlands
- Central Point Library
- Clackamas Co. Riding Clubs
- Coos Bay Public Library
- Curry Citizens Public Lands Access
- Curry County Library
- Curry Watersheds Partnership
- Deer Creek Grange #371
- Del Norte County Library
- Easy Gaited Horse Association
- Environmental Defense Fund
- Forestry Action Committee
- Friends of the Kalmiopsis
- Friends of the Oregon Caves and Chateau
- Grants Pass Towne Center Association
- Historic Preservation League of Oregon
- HOPE Equestrian Center
- Illinois Valley Chamber of Commerce
- Illinois Valley Community Development Organization
- Illinois Valley Watershed Council
- Jackson County Horseman's Association
- Jackson County Library
- Josephine Community Library
- Josephine County Historical Society
- Kalmiopsis Audubon Society
- Kerbyville Museum
- Klamath Bird Observatory
- Klamath Conservation Task Force
- Klamath Forest Alliance
- Klamath-Siskiyou Wildlands Center
- Lomakatsi Restoration Project
- Motorcycle Riders Association
- MPF Conservation
- National Parks & Conservation Association, Northwest Regional Office
- Native Plant Society of Oregon
- Natural Resources Defense Council
- Natural Resources Council of America
- Nature Conservancy, California Field Office
- Northcoast Environmental Center
- Northwest Environmental Defense Center
- Oregon Biodiversity Information Center
- Oregon Caves Natural History Association

Businesses, Institutions, and Organizations (continued)

- Oregon Chapter of the Sierra Club
- Oregon Council of Trout Unlimited
- Oregon Equestrian Trails, Rogue Valley Chapter
- Oregon Grotto, National Speological Society
- Oregon High Desert Grotto, National Speological Society
- Oregon Historical Society
- Oregon Hunters Association
- Oregon State Univ. Forestry Dept.
- Oregon Wild
- Pacific Northwest Books Company
- Planet Drum Foundation
- Rainforest Action Group
- Rocky Mountain Elk Foundation
- Rogue Basin Partnership
- Rogue Community College
- Rogue Valley Audubon Society
- Rough and Ready Lumber
- Ruch Public Library
- Sierra Club, Rouge Group
- Sierra Club, Shasta Group
- Siskiyou Audubon Society
- Siskiyou Chapter of the Native Plant Society
- Siskiyou Field Institute
- Siskiyou Mountain Club
- Siskiyou Velo Biking Club
- Snowy Butte Timberlands, LLC
- Soda Mountain Wilderness Council
- Southern Oregon Blacktails
- Southern Oregon Forest Restoration Collaborative
- Southern Oregon Historical Society
- Southern Oregon Outfitters
- Southern Oregon Timber Industries Association
- Southern Oregon University, Hannon Library
- Southern Oregon Visitors Association
- Spiral Living Center
- The Nature Conservancy
- The Xerces Society
- Travel Oregon Headquarters
- Trout Unlimited
- Umpqua Watersheds
- Upper Rogue Watershed Council
- Watershed Protection Association
- Western Environmental Law Center
- Wilderness Society, Northern Cascades Office
- Wildlife Images
- Willamette Valley Grotto, National Speological Society
- Williams Watershed Council

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Snowqueen. NPS Photo.

APPENDICES

Previous page: Water drop on a lupine leaf.
This page: Lake creek from the Highway 46 bridge. Photos: NPS.

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SEC. 3041. OREGON CAVES NATIONAL MONUMENT AND PRESERVE. 16 USC 410vvv.

(a) DEFINITIONS.—In this section:

(1) MAP.—The term "map" means the map entitled "Oregon Caves National Monument and Preserve", numbered 150/80,023, and dated May 2010.

(2) MONUMENT.—The term "Monument" means the Oregon Caves National Monument established by Presidential Proclamation Number 876 (36 Stat. 2497), dated July 12, 1909.

(3) NATIONAL MONUMENT AND PRESERVE.—The term "National Monument and Preserve" means the Oregon Caves National Monument and Preserve designated by subsection (b)(1)(A).

(4) NATIONAL PRESERVE.—The term "National Preserve" means the National Preserve designated by subsection (b)(1)(B).

(5) SECRETARY.—The term "Secretary" means the Secretary of the Interior.

(6) SECRETARY CONCERNED.—The term "Secretary concerned" means—

(A) the Secretary of Agriculture (acting through the Chief of the Forest Service), with respect to National Forest System land; and

(B) the Secretary of the Interior, with respect to land managed by the Bureau of Land Management.

(7) STATE.—The term "State" means the State of Oregon.

(b) DESIGNATIONS; LAND TRANSFER; BOUNDARY ADJUSTMENT.—

(1) DESIGNATIONS.—

(A) IN GENERAL.—The Monument and the National Preserve shall be administered as a single unit of the National Park System and collectively known and designated as the "Oregon Caves National Monument and Preserve".

(B) NATIONAL PRESERVE.—The approximately 4,070 acres of land identified on the map as "Proposed Addition Lands" shall be designated as a National Preserve.

(2) TRANSFER OF ADMINISTRATIVE JURISDICTION.—

(A) IN GENERAL.—Administrative jurisdiction over the land designated as a National Preserve under paragraph (1)(B) is transferred from the Secretary of Agriculture to the Secretary, to be administered as part of the National Monument and Preserve.

(B) EXCLUSION OF LAND.—The boundaries of the Rogue River-Siskiyou National Forest are adjusted to exclude the land transferred under subparagraph (A).

(3) BOUNDARY ADJUSTMENT.—The boundary of the National Monument and Preserve is modified to exclude approximately 4 acres of land—

(A) located in the City of Cave Junction; and

(B) identified on the map as the "Cave Junction Unit".

(4) AVAILABILITY OF MAP.—The map shall be on file and available for public inspection in the appropriate offices of the National Park Service.

(5) REFERENCES.—Any reference in a law, map, regulation, document, paper, or other record of the United States to the Monument shall be considered to be a reference to the "Oregon Caves National Monument and Preserve".

(c) ADMINISTRATION.—

(1) IN GENERAL.—The Secretary shall administer the National Monument and Preserve in accordance with—

(A) this section;

(B) Presidential Proclamation Number 876 (36 Stat. 2497), dated July 12, 1909; and

(C) any law (including regulations) generally applicable to units of the National Park System, including the National Park Service Organic Act (16 U.S.C. 1 et seq.).

(2) FIRE MANAGEMENT.—As soon as practicable after the date of enactment of this Act, in accordance with paragraph (1), the Secretary shall—

(A) revise the fire management plan for the Monument to include the land transferred under subsection (b)(2)(A); and

(B) in accordance with the revised plan, carry out hazardous fuel management activities within the boundaries of the National Monument and Preserve.

(3) EXISTING FOREST SERVICE CONTRACTS.—

(A) IN GENERAL.—The Secretary shall—

(i) allow for the completion of any Forest Service stewardship or service contract executed as of the date of enactment of this Act with respect to the National Preserve; and

(ii) recognize the authority of the Secretary of Agriculture for the purpose of administering a contract described in clause (i) through the completion of the contract.

(B) TERMS AND CONDITIONS.—All terms and conditions of a contract described in subparagraph (A)(i) shall remain in place for the duration of the contract.

(C) LIABILITY.—The Forest Service shall be responsible for any liabilities relating to a contract described in subparagraph (A)(i).

(4) GRAZING.—

(A) IN GENERAL.—Subject to subparagraph (B), the Secretary may allow the grazing of livestock within the National Preserve to continue as authorized under permits or leases in existence as of the date of enactment of this Act.

(B) APPLICABLE LAW.—Grazing under subparagraph (A) shall be—

(i) at a level not greater than the level at which the grazing exists as of the date of enactment of this Act, as measured in Animal Unit Months; and

(ii) in accordance with each applicable law (including National Park Service regulations).

(5) FISH AND WILDLIFE.—The Secretary shall permit hunting and fishing on land and waters within the National Preserve in accordance with applicable Federal and State laws, except that the Secretary may, in consultation with the Oregon Department of Fish and Wildlife, designate zones in which, and establish periods during which, no hunting or fishing shall be permitted for reasons of public safety, administration, or compliance by the Secretary with any applicable law (including regulations).

(d) VOLUNTARY GRAZING LEASE OR PERMIT DONATION PROGRAM.—

(1) DONATION OF LEASE OR PERMIT.—

(A) ACCEPTANCE BY SECRETARY CONCERNED.—The Secretary concerned shall accept a grazing lease or permit that is donated by a lessee or permittee for—

(i) the Big Grayback Grazing Allotment located in the Rogue River-Siskiyou National Forest; and

(ii) the Billy Mountain Grazing Allotment located on a parcel of land that is managed by the Secretary (acting through the Director of the Bureau of Land Management).

(B) TERMINATION.—With respect to each grazing permit or lease donated under subparagraph (A), the Secretary shall—

(i) terminate the grazing permit or lease; and

(ii) ensure a permanent end to grazing on the land covered by the grazing permit or lease.

(2) EFFECT OF DONATION.—A lessee or permittee that donates a grazing lease or grazing permit (or a portion of a grazing lease or grazing permit) under this section shall be considered to have waived any claim to any range improvement on the associated grazing allotment or portion of the associated grazing allotment, as applicable.

(e) WILD AND SCENIC RIVER DESIGNATIONS.—

(1) DESIGNATION.—Section 3(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1274(a)) is amended by adding at the end the following:

"(208) RIVER STYX, OREGON.—The subterranean segment of Cave Creek, known as the River Styx, to be administered by the Secretary of the Interior as a scenic river.".

(2) POTENTIAL ADDITIONS.—

(A) IN GENERAL.—Section 5(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1276(a)) is amended by adding at the end the following:

"(141) OREGON CAVES NATIONAL MONUMENT AND PRESERVE, OREGON.—

"(A) CAVE CREEK, OREGON.—The 2.6-mile segment of Cave Creek from the headwaters at the River Styx to the boundary of the Rogue River Siskiyou National Forest.

"(B) LAKE CREEK, OREGON.—The 3.6-mile segment of Lake Creek from the headwaters at Bigelow Lakes to the confluence with Cave Creek.

"(C) NO NAME CREEK, OREGON.—The 0.6-mile segment of No Name Creek from the headwaters to the confluence with Cave Creek.

"(D) PANTHER CREEK.—The 0.8-mile segment of Panther Creek from the headwaters to the confluence with Lake Creek.

"(E) UPPER CAVE CREEK.—The segment of Upper Cave Creek from the headwaters to the confluence with River Styx.".

(B) STUDY; REPORT.—Section 5(b) of the Wild and Scenic Rivers Act (16 U.S.C. 1276(b)) is amended by adding at the end the following:

"(20) OREGON CAVES NATIONAL MONUMENT AND PRESERVE, OREGON.—Not later than 3 years after the date on which funds are made available to carry out this paragraph, the Secretary shall—

"(A) complete the study of the Oregon Caves National Monument and Preserve segments described in subsection (a)(141); and

"(B) submit to Congress a report containing the results of the study.".

SEC. 3042. SAN ANTONIO MISSIONS NATIONAL HISTORICAL PARK.

Section 201 of Public Law 95–629 (16 U.S.C. 410ee) is amended—

(1) by striking "SEC. 201. (a) In order" and inserting the following:

"SEC. 201. SAN ANTONIO MISSIONS NATIONAL HISTORICAL PARK.

"(a) ESTABLISHMENT.—

"(1) IN GENERAL.—In order"; and

(2) in subsection (a)—

(A) in the second sentence, by striking "The park shall also" and inserting the following:

"(2) ADDITIONAL LAND.—The park shall also";

(B) in the third sentence, by striking "After advising the" and inserting the following:

"(4) REVISIONS.—After advising the"; and

(C) by inserting after paragraph (2) (as designated by subparagraph (A)) the following:

"(3) BOUNDARY MODIFICATION.—

"(A) IN GENERAL.—The boundary of the park is modified to include approximately 137 acres, as depicted on the map entitled 'San Antonio Missions National Historical Park Proposed Boundary Addition', numbered 472/113,006A, and dated June 2012.

"(B) AVAILABILITY OF MAP.—The map described in subparagraph (A) shall be on file and available for inspection in the appropriate offices of the National Park Service.

"(C) ACQUISITION OF LAND.—The Secretary of the Interior may acquire the land or any interest in the land described in subparagraph (A) only by donation or exchange.".

16 USC 698v–11.

SEC. 3043. VALLES CALDERA NATIONAL PRESERVE, NEW MEXICO.

(a) DEFINITIONS.—In this section:

(1) ELIGIBLE EMPLOYEE.—The term "eligible employee" means a person who was a full-time or part-time employee of the Trust during the 180-day period immediately preceding the date of enactment of this Act.

(2) FUND.—The term "Fund" means the Valles Caldera Fund established by section 106(h)(2) of the Valles Caldera Preservation Act (16 U.S.C. 698v–4(h)(2)).

(3) PRESERVE.—The term "Preserve" means the Valles Caldera National Preserve in the State.

(4) SECRETARY.—The term "Secretary" means the Secretary of the Interior.

(5) STATE.—The term "State" means the State of New Mexico.

(6) TRUST.—The term "Trust" means the Valles Caldera Trust established by section 106(a) of the Valles Caldera Preservation Act (16 U.S.C. 698v–4(a)).

(b) DESIGNATION OF VALLES CALDERA NATIONAL PRESERVE AS A UNIT OF THE NATIONAL PARK SYSTEM.—

APPENDIX C – ACRONYMS

BLM	Bureau of Land Management
NHPA	National Historic Preservation Act
NEPA	National Environmental Policy Act
NPS	National Park Service
PEPC	Planning, Environment and Public Comment
SHPO	State Historic Preservation Officer
USFS	United States Forest Service

Flat bark beetle. NPS Photo.