



# Correct Life Safety and Other Deficiencies in the Oregon Caves Chateau

*ENVIRONMENTAL ASSESSMENT*



OREGON CAVES NATIONAL MONUMENT AND PRESERVE

June 2016



# **PROJECT OVERVIEW**

## **INTRODUCTION**

The National Park Service (NPS) is proposing a project to implement life and fire safety improvements to the existing Chateau at the Oregon Caves National Monument and Preserve (the park) to better meet safety and accessibility code requirements. The improvements are needed to provide improved egress and other fire safety enhancements, properly address critical life-safety requirements, and improve the physical accessibility of the building to accommodate individuals with mobility impairments. The improvements are needed to prevent the deterioration and possible closure of a National Historic Landmark (NHL).

This document complies with the National Environmental Policy Act of 1969, as amended.

## **PURPOSE OF AND NEED FOR THE ACTION**

The purpose of the project is to improve visitor and employee safety by implementing improvements to bring the Chateau into closer compliance with contemporary building, fire protection, and accessibility standards in a way that minimally affects the distinguishing qualities and character-defining features of this NHL.

The actions proposed are needed to ensure code-compliant emergency egress and fire protection that would protect occupants and ensure the safety and longevity of the building. Completed in 1934, the architecturally complex Chateau has significant barriers to accessibility. This project would also provide accessibility to the lobby, restrooms, dining areas, and five guest rooms in accordance with federal laws and regulations and NPS accessibility policy. Additionally, repairs to basic infrastructure would occur at the Chateau.

## **OVERVIEW OF THE ALTERNATIVES**

Three alternatives are addressed in this environmental assessment:

- Alternative 1: No Action
- Alternative 2: Proposed Action – Rehabilitation of the Chateau (Preferred Alternative)
- Alternative 3: Conversion of the Chateau to a Day Use Facility

## **HOW TO COMMENT**

We encourage agencies, non-governmental organizations, and the public to review and comment on the contents of this environmental assessment during a 30-day public review and comment period. We invite you to comment on this plan, and you may do so using any one of several methods. The preferred method of providing comments is on the National Park Service planning website:

<http://parkplanning.nps.gov/ORCA>. You may also submit written comments to:

Vicki Snitzler, Superintendent  
Oregon Caves National Monument and Preserve  
Attn: NHL Oregon Caves Chateau Draft Environmental Assessment  
19000 Caves Hwy.  
Cave Junction, OR 97523

Only written comments will be accepted. Please make sure that your written comments are transmitted or postmarked within 30 days of the posting of the notice of availability on the Planning, Environment, and Public Comment website. Please be aware that your entire comment will become part of the public record. 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.

## TABLE OF CONTENTS

<b>Project Overview.....</b>	<b>i</b>
Introduction.....	i
Purpose of and Need for the Action.....	i
Overview of the Alternatives .....	i
How to Comment.....	i
<b>Chapter 1: Purpose and Need.....</b>	<b>1</b>
Introduction.....	1
Purpose of and Need for Action.....	2
Background of the National Monument.....	3
Purpose and Significance of the Park.....	3
Issues and Impact Topics .....	4
Impact Topics Analyzed in this Environmental Assessment.....	4
Impact Topics Dismissed from Further Analysis.....	5
<b>Chapter 2: Alternatives .....</b>	<b>11</b>
Alternative 1: No Action.....	11
Elements Common to All Action Alternatives .....	15
Alternative 2: Proposed Action – Rehabilitation of the Chateau (Preferred Alternative).....	21
Alternative 3: Conversion of Chateau to a Day Use Facility .....	22
Mitigation Measures of the Action Alternatives.....	22
Alternatives Considered but Dismissed .....	23
<b>Chapter 3: Affected Environment.....</b>	<b>27</b>
Cultural Resources – Historic Structures and Districts.....	27
Socioeconomics .....	35
Visitor Use and Experience.....	39
Human Health and Safety .....	39
<b>Chapter 4: Environmental Consequences .....</b>	<b>43</b>
General Methodology for Establishing Impacts .....	43
Cultural Resources – Historic Structures and Districts.....	44
Socioeconomics .....	51
Visitor Use and Experience.....	55
Human Health and Safety .....	58
<b>Chapter 5: Consultation and Coordination.....</b>	<b>63</b>
Planning and Public Involvement .....	63

Agency Consultation..... 64

List of Preparers ..... 65

**Chapter 6: Glossary and Acronyms ..... 67**

    Glossary of Terms ..... 67

    Acronyms ..... 69

**Chapter 7: Bibliography..... 71**

## LIST OF FIGURES

Figure 1. Project Vicinity.....	1
Figure 2. Chateau Location.....	2
Figure 3. Existing View of Chateau Entrance.....	12
Figure 4. Existing View of Lobby from Entry.....	12
Figure 5. Existing View of Lobby End Showing Stairwells to Second Floor and Basement and Stairs to First Floor Guestrooms.....	13
Figure 6. Chateau Function by Floor.....	14
Figure 7. Northeast Wooden Facade Fire Escape To Road.....	16
Figure 8. First Floor Stairwell with Safety and Accessibility Improvements, Including Elevator.....	16
Figure 9. Historic 1946 Façade, Northwest Aspect.....	17
Figure 10. Chateau Entrance with Accessible Ramp.....	18
Figure 11. Lobby Showing Lowered Front Desk and Elevator Room.....	19
Figure 12. Existing Coffee Shop (Top) and Coffee Shop with Accessibility Improvements (bottom).....	20
Figure 13. First Floor Lobby Showing Proposed Ramp (Arrow Points to Ramp Location).....	21
Figure 14. The Chateau ca. 1934, Illustrating the Original West Balconies.....	28
Figure 15. West Elevation, After the Removal of the Original Balconies.....	30
Figure 16. First Floor Historically Significant Areas.....	33
Figure 17. First Basement Historically Significant Areas.....	34

## LIST OF TABLES

Table 1. Population Characteristics, 2010–2014.....	36
Table 2. Income and Poverty Characteristics, 2010–2014.....	37
Table 3. 2010–2014 Housing Supply.....	38
Table 4. Actions that Contribute to Cumulative Impacts.....	44

This page intentionally left blank.

# CHAPTER 1: PURPOSE AND NEED

## INTRODUCTION

The National Park Service (NPS) proposes to implement life and fire safety improvements to the existing Chateau, a designated National Historic Landmark (NHL) property at the Oregon Caves National Monument and Preserve (or park) to meet safety and accessibility requirements. The park consists of approximately 4,000 acres of land located 15 miles from the city of Cave Junction, in southwestern Oregon. The park vicinity and the location of the Chateau are shown in figures 1 and 2.

The Chateau currently operates from May through October and serves approximately 6,500 to 7,000 overnight visitors annually. In addition, roughly half of the 70,000 annual visitors to the park use the Chateau’s day use facilities, such as public restrooms, dining, and gift shop services. The building is currently not compliant with contemporary fire and safety codes for new construction, and is for the most part inaccessible to visitors and employees with disabilities—particularly those with limited mobility. NPS has determined that the proposed improvements are necessary to resolve critical life and fire safety issues, provide a more inclusive visitor environment for park users, and avoid the closure and possible accelerated deterioration of an NHL.

This environmental assessment (EA) analyzes a No Action Alternative and proposed action alternatives, and their impacts on the environment. It has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended; regulations of the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1500–1508 [CEQ 1978]); and NPS Director’s Order 12, *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2011a), and its accompanying NPS NEPA Handbook (NPS 2015a).

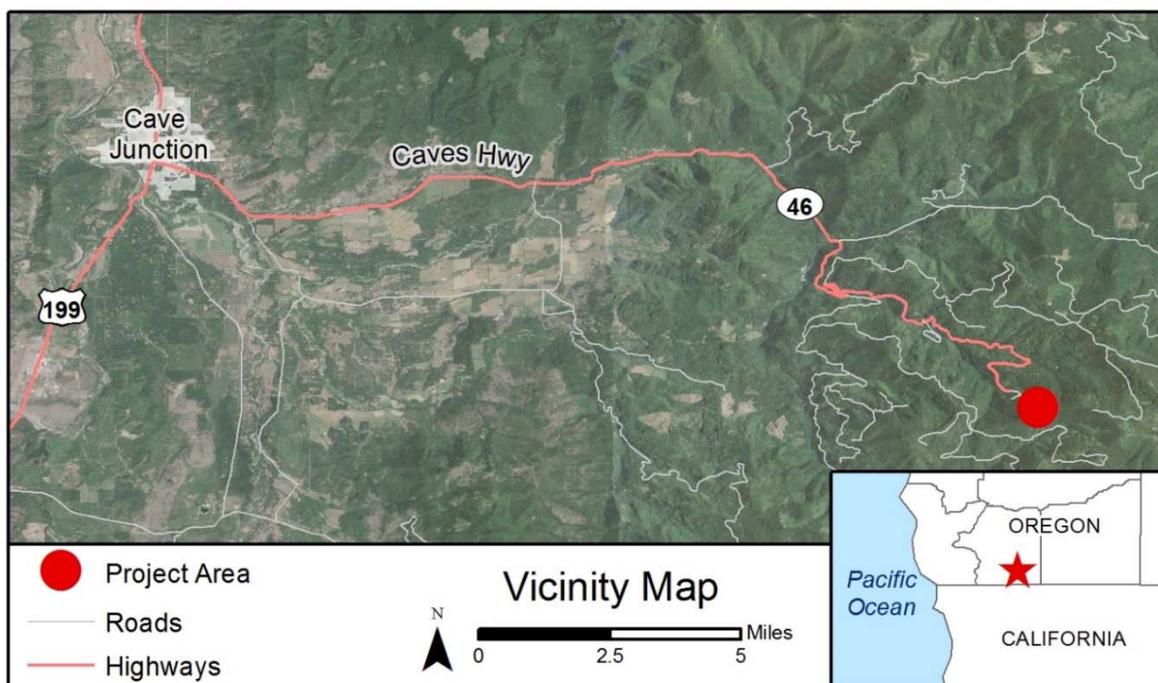


FIGURE 1. PROJECT VICINITY

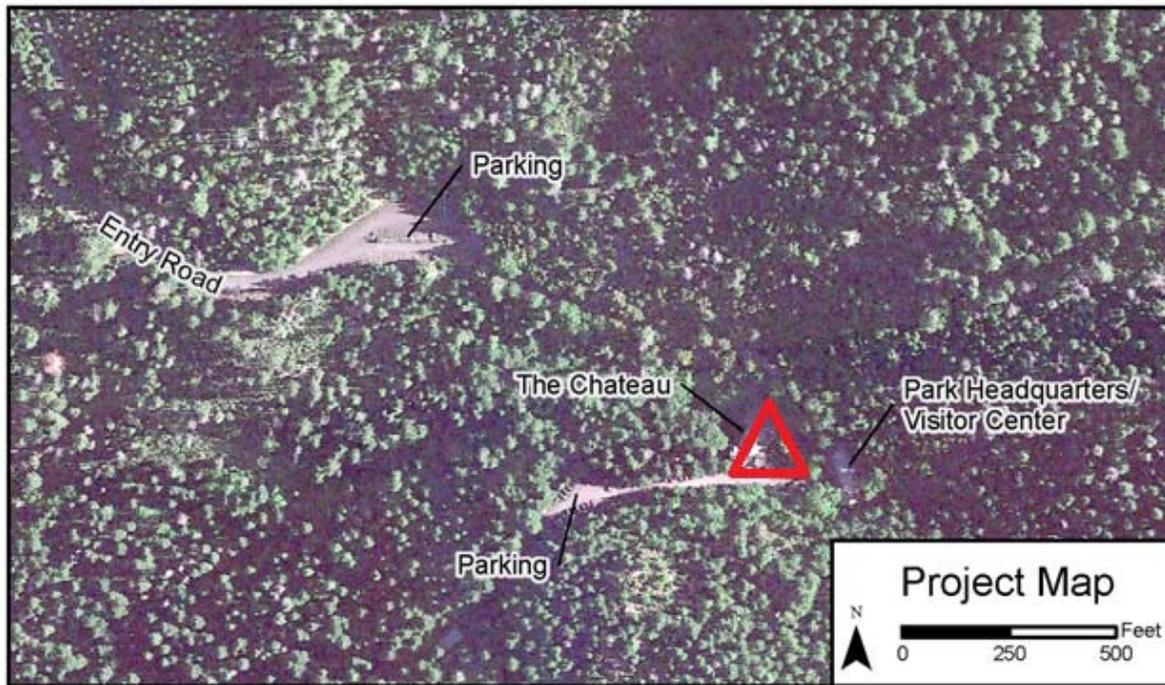


FIGURE 2. CHATEAU LOCATION

## PURPOSE OF AND NEED FOR ACTION

The purpose of the project is to improve visitor and employee safety by implementing improvements that bring the Chateau into compliance with current building, fire protection, and accessibility standards in a way that minimally affects the distinguishing qualities and character-defining features of the NHL.

The actions proposed are needed to ensure code-compliant emergency egress and fire protection that would protect occupants and ensure the safety and longevity of the building. Completed in 1934, the architecturally complex NHL Chateau has significant barriers to accessibility. This project would also provide accessibility to the lobby, restrooms, dining areas, and five guest rooms in accordance with federal laws and regulations and NPS accessibility policy. Additionally, basic infrastructure at the Chateau is aging and in need of repair.

Currently, the Chateau is equipped with an interior fire detection and sprinkler system; however, fire detection is limited. Both the interior and exterior of the building are constructed of flammable materials, and the building is outfitted with an electrical system that includes “knob and tube” wiring that does not meet contemporary fire codes for new construction. Historic structures commonly do not meet contemporary building codes; however, when renovations occur, buildings are modified to incorporate modern-equivalent fire and safety measures that provide fire protection without destroying the historic fabric of the building. The retrofitted, exterior fire escapes also do not meet contemporary fire codes for new construction. Fire originating from ignition sources inside the structure and adjacent wildland fire outside of the structure present a potential for injury to visitors and staff because the means of ingress and egress from the building do not meet current life safety requirements. Few of the public and private spaces within the building meet Architectural Barriers Act Accessibility Standards (ABAAS); therefore, a majority of the building is not accessible to individuals with mobility limitations. Plumbing and sewage

systems have reached the end of their useful service lives and have the potential to fail, posing a risk of damage to the structure and historic fabric from leakage of water and sewage within the building. Plumbing failures that occur in food preparation, storage, or service areas present a risk of serious food-borne illness to the public and employees.

## **BACKGROUND OF THE NATIONAL MONUMENT**

The monument portion of Oregon Caves National Monument and Preserve is located in southwestern Oregon, approximately 23 miles south-southwest of the city of Grants Pass, 7 miles north of the California border. The preserve surrounds the monument, which is then surrounded by the Rogue-River Siskiyou National Forest. The park was originally called Oregon Caves National Monument and comprised 488 acres as of 2013. In 2014, the National Defense Authorization Act expanded the park by 4,000 acres and renamed the park unit Oregon Caves National Monument and Preserve. The main feature of the park is an extensive network of marble caves sustained by a network of drainages. A portion of this network is the nation's first underground National Wild and Scenic River. The Chateau is located in an isolated, developed area at the terminus of a dead-end road located 20 miles from the nearest fire department, whose fire protection district encompasses the park. Visitors and staff access the Chateau using Oregon Route 46, a paved two-lane state roadway that originates in the city of Cave Junction. Oregon Route 46 has physical constraints, including slope and sharp turns that can make it difficult for larger vehicles, including fire trucks, to navigate. Travel time from the interagency visitor center, located in a 4-acre unit of the park in Cave Junction, to the Chateau is approximately 45 minutes.

The Chateau is a historic, seasonal hotel that was constructed from 1931 to 1934. It became the property of NPS in 2003. The building is a six-story structure (three stories with three basement levels) with a reinforced concrete foundation and a superstructure of wood frame construction with post and beam interior supports. Exterior walls are shiplap siding sheathed with Port-Orford-cedar bark, giving the building a shaggy, rustic appearance, which is one of its main character-defining features listed in the nomination for NHL status. The main gable roofs are steeply pitched and are pierced by shed-roof dormers with the roof outline further broken by gabled-roof dormers. The building spans a small gorge containing a stream, and a portion of the stream passes through the first basement (dining level) of the building. The Chateau was part of a larger development constructed between 1923 and 1941 that included a chalet (currently used as a dormitory/Natural History Association outlet/NPS work space/visitor center), several employee and rental buildings (now removed, unusable, or turned into work space), a visitor contact station (in the main parking lot), and an entrance sign. The Chateau was designated as an NHL in 1987. The Oregon Caves Historic District, which includes the Chateau, was designated in 1992.

## **PURPOSE AND SIGNIFICANCE OF THE PARK**

The Oregon Caves National Monument was established by Presidential proclamation in 1909 to protect the caves as a resource of "unusual scientific interest and importance." In 2014, the park was expanded to about 4,000 acres with the addition of a congressionally mandated preserve, renaming the park Oregon Caves National Monument and Preserve. Most visitor use of the park is oriented toward the caves. Park visitation in the past decade ranged from 70,000 to 75,000 visitors per year, with 50,000 to 55,000 visitors touring the caves. Approximately one-half of annual visitors use the public areas (restrooms, dining area, or gift shop services) in the Chateau, while roughly 6,500 to 7,000 overnight guests visit the Chateau per year (NPS 2015b).

## **ISSUES AND IMPACT TOPICS**

Issues describe problems or concerns associated with current impacts from environmental conditions or current operations as well as problems that may arise from the implementation of any of the alternatives. NPS staff identified potential issues associated with the proposed accessibility and life and fire safety improvements during internal and public scoping and agency consultation. The issues and concerns identified during scoping were grouped into impact topics that are discussed in Chapter 3: Affected Environment and are analyzed in Chapter 4: Environmental Consequences.

## **IMPACT TOPICS ANALYZED IN THIS ENVIRONMENTAL ASSESSMENT**

### **CULTURAL RESOURCES**

#### *Historic Structures and Districts*

The National Historic Preservation Act (NHPA) (16 United States Code [USC] 470 et seq.), NEPA, the Organic Act, NPS *Management Policies 2006* (NPS 2006), Director's Order 12 (NPS 2011a), and Director's Order 28: *Cultural Resources Management Guidelines* (NPS 1998b) require NPS to consider impacts on any cultural resources that might be affected. NHPA, in particular, requires an agency to consider impacts on cultural resources listed in, or eligible for, the National Register of Historic Places (National Register). The Chateau is a designated NHL and is the main contributing structure in the Oregon Caves Historic District. Because of the nature of the project, there would be no impact on the caves themselves or alterations to any of the other structures within the park. The proposed action includes elements of repair, rehabilitation, and restoration and must be carried out in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (NPS 2005) and NPS Technical Preservation Briefs (NPS undated), which provide guidance on preserving, rehabilitating, and restoring historic buildings. The project also constitutes an undertaking with regard to section 106 of NHPA; however, section 106 consultation is being conducted separately from the NEPA process. As a result, historic structures are analyzed as an impact topic in this EA.

### **SOCIOECONOMICS**

NEPA requires an analysis of impacts on the human environment, which includes economic, social, and demographic elements in the affected area. Repair and rehabilitation activities associated with the proposed action may bring a short-term need for additional personnel at the site, but this addition would be minimal and would not affect the surrounding community's overall population, income, and employment base. There would also be impacts on employment during any period when the Chateau would be closed. Implementation of the proposed action could affect the economies of nearby areas. Therefore, socioeconomics is analyzed as an impact topic in this EA.

### **VISITOR USE AND EXPERIENCE**

The implementation of life and fire safety and accessibility improvements would affect visitor use and experience. The addition of more accessible routes into the building and in key interior visitor use areas could improve visitor accessibility and circulation throughout the seasonally operated Chateau. The closure of the seasonally operated Chateau during the construction period could affect overall visitor use and experience at the park. Non-implementation of the project could result in continued safety and

accessibility deficiencies. As a result, visitor use and experience is addressed as an impact topic in this EA.

### **HUMAN HEALTH AND SAFETY**

The addition of life and fire safety and accessibility improvements to the Chateau would include the replacement of wall and ceiling finishes with code-compliant, fire-resistant materials; replacement and/or upgrade of electrical, fire alarm, and sprinkler systems; and the provision of emergency egress upgrades that best meet current safety and accessibility requirements. All of these actions could impact public health and safety. As a result, impacts on human health and safety are addressed as an impact topic in this EA.

## **IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS**

According to NPS Director's Order 12 (revised September 2015), analysis in an EA should focus on significant issues (i.e., pivotal issues or issues of critical importance) and only discuss insignificant issues briefly. As a general rule, issues should be retained for consideration and discussed in detail if

- the environmental impacts associated with the issue are central to the proposal or of critical importance;
- a detailed analysis of environmental impacts related to the issue is necessary to make a reasoned choice between alternatives;
- the environmental impacts associated with the issue are a big point of contention among the public or other agencies; or
- there are potentially significant impacts to resources associated with the issue.

The following issues and topics did not meet the above criteria because they are not potentially significant, not critical to choosing between alternatives, and are not controversial. Therefore, they were eliminated from further analysis in this EA. A brief rationale for dismissal is provided for each topic.

### **CAVES**

The caves are an important defining feature of the park. Construction of the proposed improvements would occur entirely within and directly adjacent to the Chateau, which is situated across a paved road and 90 feet from the entrance to the caves. The improvements would not have any direct physical impacts on the caves and would not be expected to impact visitor use of the caves, although overall visitor use of the park, including the caves, could be reduced during the construction period. Therefore, this impact topic is dismissed from further analysis.

### **WATER QUALITY**

The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters; enhance the quality of water resources; and prevent, control, and abate water pollution. NPS *Management Policies 2006* (NPS 2006) provide direction for the preservation, use, and quality of water originating, flowing through, or adjacent to park boundaries. Although a stream diversion flows directly through the first basement of the Chateau, the diversion flows through a pipe and can be turned off. The stream diversion would be protected during construction (drained, covered with thick plastic to prevent dust or

mat dirt, and overlaid with thick rubber mats and then plywood if needed to prevent scratching or dislocation of stream pebbles embedded in the cement). Construction would disturb only a small area of soil, and any minimal erosion would be addressed by proper erosion and sediment control measures during construction. As a result, water quality is dismissed from further analysis.

### **WILDLIFE AND WILDLIFE HABITAT, INCLUDING SPECIAL-STATUS SPECIES**

A variety of wildlife habitats are present in the general vicinity of the park. Special-status species known to occur in and around the park include spotted owl (*Strix occidentalis*), fisher (*Martes pennanti*), and Townsend's big-eared bat (*Corynorhinus townsendii*). The proposed action would occur almost entirely within the Chateau; therefore, it is not expected that any rare, threatened, or endangered wildlife species or known habitat would be impacted. During the minimal exterior work, there could be short-term impacts on adjacent wildlife from construction noise and from additional pest management activities during the construction period. These impacts would be mitigated through informal consultation with the US Fish and Wildlife Service (USFWS). A discussion of informal consultation and proposed mitigation measures is provided in chapter 5. Therefore, this impact topic is dismissed from consideration.

### **VISUAL RESOURCES (AESTHETICS AND VIEWSHEDS)**

Impacts on visual resources can result from a change in aesthetic values or an obstruction of views. Implementation of the proposed alternatives would not result in the elimination of open space; obstruction of a scenic view or vista; or introduce a visual element that is incompatible, out of scale, in great contrast, or out of character with the Chateau and its environs. The scale and visual relationship among landscape patterns and features in the historic district would be unchanged. Therefore, visual resources are dismissed as an impact topic.

### **LIGHTSCAPE MANAGEMENT**

In accordance with NPS *Management Policies 2006* (NPS 2006), NPS strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human-caused light. Because of the developed setting of the Chateau, the preservation of natural ambient landscapes would not be a project objective. The park would continue to strive to limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements, is compatible with the historic adaptive use of such lighting in the district, and to ensure that all outdoor lighting is shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. More unobstructed horizons and less lit parts of the park have been used during interpretive sky programs and would continue to be available to visitors. Therefore, lightscape management is dismissed as an impact topic.

### **ECOLOGICALLY CRITICAL AREAS**

The park does not include any designated ecologically critical areas or other unique natural resources, as referenced in the NPS *Management Policies 2006* (NPS 2006), 40 CFR 1508.27, or the 62 criteria for designating national natural landmarks. However, the park has a newly designated National Wild and Scenic River—a section of the underground Wild and Scenic River Styx that flows through the caves. The proposed action would not increase sedimentation, and would not be expected to impact the wild and scenic River Styx. Therefore, this impact topic is dismissed from further consideration.

## ENVIRONMENTAL JUSTICE

Presidential Executive Order 12898, *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the Environmental Protection Agency, environmental justice is 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 a 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 (EPA 1998).

The goal of “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.

Communities in the vicinity of the park contain both minority and low-income populations; however, environmental justice is dismissed as an impact topic for the following reasons:

- Park staff and planning team members 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 action would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population.
- The impacts associated with implementation of the preferred alternative would not disproportionately affect any minority or low-income population or community.
- Implementation of the preferred alternative would not result in any identified effects that would be specific to any minority or low-income community.

## SOUNDSCAPE MANAGEMENT

In accordance with NPS *Management Policies 2006* (NPS 2006) and Director’s Order 47: *Soundscape Preservation and Noise Management* (NPS 2000a), an important part of the NPS mission is preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human-caused sound considered acceptable varies among NPS units, as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

During construction, human-caused sounds likely would increase as a result of construction activities, equipment, vehicular traffic, and construction crews. Any sounds generated from construction would be temporary, lasting only as long as the construction activity is generating the sounds. It is not expected that

impacts on soundscapes would be sufficient to warrant detailed consideration; therefore, soundscape management is dismissed from further analysis in this document.

## **CULTURAL RESOURCES**

### *Archaeological Resources*

There is the potential for minor ground-disturbing activity in the immediate vicinity of the Chateau during construction. Based on a previous archeological report at the park, steep slopes in this area contribute to the erosion of soils from the park, greatly minimizing the possibility of buried cultural material. If previously undiscovered archeological resources were uncovered during construction, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed in consultation with the state historic preservation officer (SHPO). Therefore, archeological resources are dismissed as an impact topic.

### *Cultural Landscapes*

The Chateau is part of a cultural landscape that includes the area immediately surrounding the Chateau and associated driveways, walkways, trailheads, ponds, stream diversions, and rock walls that the Civilian Conservation Corps (CCC) constructed in the 1930s. Landscape architect Arthur L. Peck and architect Gust Lium set the tone for the rustic development at Oregon Caves, and NPS landscape architects Thomas Vint and Francis Lange continued to shape the park landscape. Historic drawings, photographs, monthly project completion reports, and interviews with Lange provide detailed information about park development and application of the non-intrusive design tenets known as the Rustic Style. Landscape foremen Armin Doerner and Howard Buford managed landscape design implementation at the park using CCC crews. Their contributions provided the design finish that distinguished CCC construction; the work also was consistent with design work undertaken at Crater Lake National Park and at state and US Forest Service developments in the then Siskiyou National Forest (now the Rogue River-Siskiyou National Forest). Monument development at Oregon Caves by 1942 had achieved a high degree of design cohesiveness under a public and private partnership. The structures and related landscape design embody the philosophies, themes, materials, and rustic architectural character practiced between 1922 and 1942 in western national parks, monuments, and forests. Primary characteristics of the Oregon Caves designed landscape are the sympathetic use of native materials to define circulation, blend structures into the natural environment, and augment visitor experience. The Oregon Caves Historic District, designed and built between 1927–1942, is significant as a historic designed landscape under National Register criterion A for its association with events that made significant contributions to the broad patterns of history; under criterion B for its association with the lives of persons significant in our past; and under criterion C for distinctive characteristics of a type, period, or method of design.

The preponderance of work associated with the action alternatives would occur on the interior of the Chateau. Potential impacts on the exterior of the Chateau, including changes to the character of the main entrance as a result of the construction of an accessible entry ramp, would minimally affect the exterior appearance and visual character of the building. Implementation of the proposed alternatives would have no discernable effect on other significant landscape patterns and features (natural systems and features, spatial organization, land use, cultural traditions, topography, vegetation, wild or domestic fauna, cluster arrangements, views and vistas, and archeological sites). Construction activities associated with rehabilitation of the Chateau would temporarily introduce non-historic visual, audible, and atmospheric

elements into the setting of the cultural landscape; however, such intrusions would be short-term, lasting only as long as construction. Therefore, cultural landscapes are dismissed as an impact topic.

#### *Ethnographic Resources*

NPS defines ethnographic resources as any “site, structure, object, landscape, or natural resource feature assigned traditional, legendary, religious, subsistence or other significance in the cultural system of a group traditionally associated with it” (NPS 1998b). In this analysis, the term *ethnographic resource* is equivalent to the term Traditional Cultural Property (TCP), which is more widely used in cultural resource management. Guidance for the identification of ethnographic resources is found in National Register Bulletin 38, *Guidelines for Evaluating and Documenting Traditional Cultural Properties* (NPS 1998b). The key considerations in identifying TCPs are their association with cultural practices or beliefs of a living community that are rooted in the community’s history and are important in maintaining the continuing cultural identity of the community (Parker and King 1998). No properties that meet the definition of a TCP are within the area of potential effects; therefore, this impact is dismissed from further consideration.

#### *Indian Trust Resources*

Indian Trust Resources are natural resources, either on or off Indian lands, retained by or reserved by or for Indian Tribes through treaties, statutes, judicial decisions, and executive orders, which are protected by a fiduciary obligation on the part of the United States. Three Tribes (Umpqua, Cow Creek, and Grand Ronde) have made overlapping territorial claims on broad geographic ranges that have included the park, although no tribes consulted during a cultural affiliations study mentioned the park specifically (Deur 2007). Any modifications to the Chateau would not be expected to impact these tribes; therefore, this impact topic was dismissed. However, once this EA is released to the public, several members of each of these tribes will be contacted for their input, and consultation will be completed if they request it.

### **CLIMATE CHANGE**

Climate change refers to any significant changes in average climatic conditions (i.e., mean temperature, precipitation, or wind) or variability (i.e., amplitudes, frequencies, regularity, and/or duration) lasting for an extended period (decades or longer). Recent reports by the US Climate Change Science Program, the National Academy of Sciences, and the United Nations Intergovernmental Panel on Climate Change provide evidence that climate change is occurring largely as a result of rising greenhouse gas (GHG) emissions and associated positive feedback processes, such as more sunlight warming from melted ice, and is likely to accelerate in the coming decades. While climate change is a global phenomenon, it manifests differently depending on regional and local factors. General changes that are expected to occur as a result of climate change include hotter, drier summers; warmer winters; warmer water; higher ocean levels; more severe wildfires; degraded air quality; more heavy downpours and flooding; and increased drought. Climate change is a far-reaching, long-term issue that will affect the park, its resources, visitors, and management. Although some effects of climate change are considered known or likely to occur, many potential impacts are unknown and the intensity and periodicity of other impacts are unknown. Much depends on the rate at which the temperature would continue to rise and whether global GHG emissions can be reduced or mitigated. Climate change science is a rapidly advancing field and new information is being collected and released continually.

Construction activities associated with implementation of the proposed action would contribute marginally to increased GHG emissions, but such emissions would be short term, ending with the cessation of construction. Effects of construction-related GHG emissions and the longer term offsets on energy use by a better insulated building would neither increase the park's carbon footprint nor be discernible at a regional scale because it is not possible to meaningfully link the GHG emissions of such limited, individual project actions to quantitative effects on regional or global climatic patterns. Additionally, a long-term value of the project is to improve fire suppression during a fire event. Because fire events are anticipated to increase with climate change, improved fire suppression systems would protect the Chateau against these events. Therefore, climate change is dismissed from further evaluation.

## CHAPTER 2: ALTERNATIVES

NEPA requires federal agencies to explore a range of reasonable alternatives aimed at addressing the purpose of and need for the project. The initial NPS idea of how to address the purpose and need is referred to as the proposed action and is usually considered one of the project alternatives.

Updated guidance in the NPS NEPA handbook (NPS 2015) encourages NPS to describe a proposed action during public scoping and requires that an updated description of the proposed action be included in the EA. During scoping, the public was presented with some options to correct life safety and accessibility deficiencies at the Chateau, including replacing flammable wall finishes, constructing accessible ramps, improving accessibility for first floor rooms, upgrading emergency exits and staircases, and installing an elevator to the dining room, café, and public restrooms. These critical project components have been included as activities that are common to both action alternatives and are described in more detail on page 15 of this document. Therefore, the initial proposed action has been expanded and is included as part of the preferred alternative.

This EA explores and objectively evaluates three reasonable, technically feasible alternatives in depth:

- Alternative 1: No Action
- Alternative 2: Proposed Action – Rehabilitation of the Chateau (Preferred Alternative)
- Alternative 3: Conversion of Chateau to a Day Use Facility

The descriptions of Alternatives 2 and 3 are based on preliminary designs and information available at the time of this writing. Specific distances, areas, and layouts used to describe the alternatives are estimated based on good engineering practice and may change during the actual design. If substantive changes that deviate from the final approved designs are not consistent with the intent and effects of the selected alternative, additional compliance may be required prior to project implementation to ensure that NEPA guidelines are met.

Alternatives that were considered but ultimately would not achieve the goals of the proposed action are described in *Alternatives Considered but Dismissed*. The alternatives under consideration must include a no-action alternative as prescribed by CEQ regulations for implementing NEPA (40 CFR 1502.14).

### ALTERNATIVE 1: NO ACTION

Alternative 1, the No Action Alternative, is the continuation of current management. Under Alternative 1, life and fire safety improvements to the Chateau to provide for visitor safety and accessibility would not occur. The existing level of accessibility of the building for persons with disabilities would remain unchanged. Current operation and maintenance practices would continue at the Chateau. The Chateau would continue to be open from May to October, and staffing levels at peak visitation time would be expected to continue at the current level of 41 employees. The Chateau would continue to operate 24 overnight guest bedrooms.

The current circulation pattern of the building would continue with most visitors entering from the front stairs on the south side of the building (see figure 3). Once in the building, visitors would enter into a

lobby with stairs leading up to the second and third floor guest rooms, down to the guest dining area in the first basement, and up a short distance to the first floor guest rooms and public restrooms (see figures 4 and 5).



**FIGURE 3. EXISTING VIEW OF CHATEAU ENTRANCE**



**FIGURE 4. EXISTING VIEW OF LOBBY FROM ENTRY**



**FIGURE 5. EXISTING VIEW OF LOBBY END SHOWING STAIRWELLS TO SECOND FLOOR AND BASEMENT AND STAIRS TO FIRST FLOOR GUESTROOMS**

Currently, the Chateau does not comply with contemporary fire and safety codes for new construction, which is common for older, historic structures. Under the No Action Alternative, the Chateau would remain non-compliant with contemporary fire and safety codes. The Chateau would continue to be inspected annually to ensure proper safety measures are in place in order to achieve and maintain equivalencies with contemporary fire and safety codes to the greatest extent feasible. The building is currently equipped with both fire detection and suppression systems; however, coverage is limited. The building materials are flammable (both interior and exterior materials), including fiberboard wall finishes, and the means of egress from the building do not meet current life safety requirements.

Annual fire protection inspections and sprinkler certifications would continue to be conducted as required for occupancy, and the park would continue to maintain the existing sprinkler system as necessary.

The Chateau would continue to be out of compliance with NPS policies for accessibility. Visitors with disabilities who are unable to enter the Chateau via the front stairs from the parking lot on the south side of the building would be unable to visit the first floor and upper levels of the Chateau. Some visitors with disabilities who are able to access the first floor (main level) of the building may be unable to access the guest dining, coffee shop, and gift shop areas in the first basement level because these areas are only accessible via the existing long flight of stairs or by descending a very steep asphalt walkway on the eastern side of the building. Accessible lodging rooms would continue to be unavailable. Public restrooms would continue to be unavailable to those with limited mobility. Figure 6 displays the current function of each level of the Chateau.

The No Action Alternative would not meet the purpose and need of the proposed action.

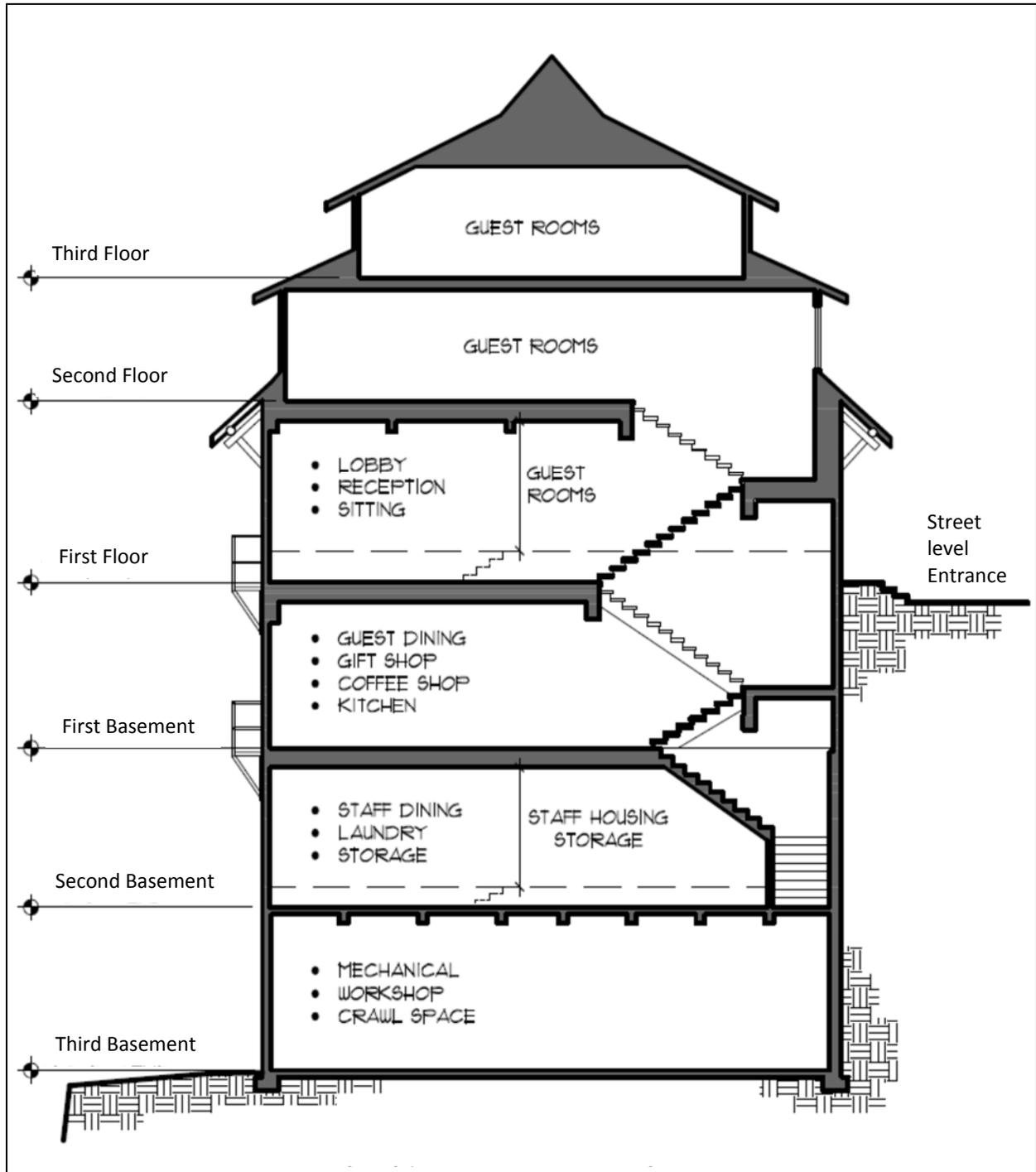


FIGURE 6. CHATEAU FUNCTION BY FLOOR

## **ELEMENTS COMMON TO ALL ACTION ALTERNATIVES**

Under both Alternatives 2 and 3, a number of life safety, public and staff accessibility, and structural deficiency corrections, as well as construction efficiency and historic preservation upgrades would be made to the Chateau, as described below. Life safety projects include a range of fire safety improvements (e.g., updating the sprinkler system, fire detection system, and accessible means of building entry and egress).

Under both action alternatives, it is anticipated that construction projects would be completed in two phases. The phases are not analyzed separately in this EA, but instead as one cohesive action. In general, NPS would address critical life safety and main floor/dining level accessibility issues during phase I, to the extent practical. For all action alternatives, construction staging would occur in the parking lot adjacent to the Chateau, and the Chateau would be fenced off during construction.

### **CORRECT LIFE AND FIRE SAFETY DEFICIENCIES**

To correct life and fire safety deficiencies, flammable materials, such as existing fiberboard finishes, would be removed from all floors of the building. These finishes would be replaced with fire-resistant wall finishes similar in appearance to existing finishes in the first basement and public areas of the first floor. A one-hour fire wall would also be installed in the attic and laundry, refrigeration equipment, and waste/linen storage areas. Ignition hazards would be reduced by improving the exhaust and ventilation systems in the kitchen and staff dining room and by upgrading the building's electrical system. Wiring would be replaced throughout, additional outlets would be installed, and light fixtures would be rehabilitated. Multiple service panels would be consolidated into a single panel.

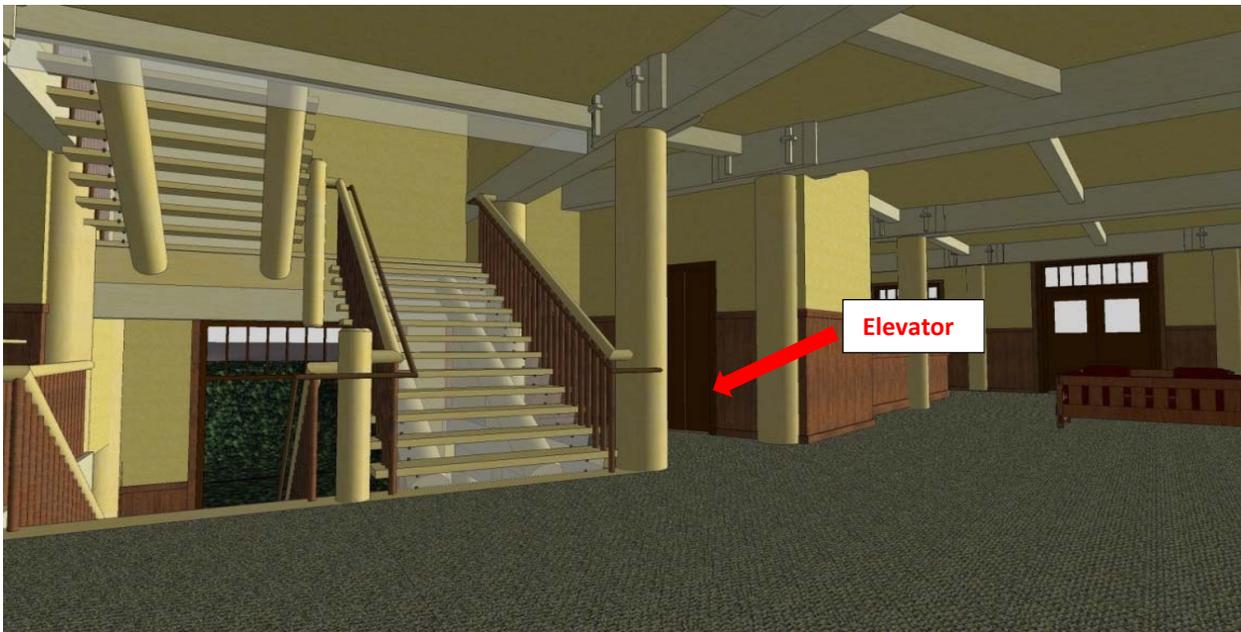
An improved fire alarm and sprinkler system would be installed. Improvements would include electrical upgrades to the overall fire system, an automatic dialer to the fire department, notification speakers and horn/strobe devices in occupied areas, manual pull stations at exit doors, and smoke sensors in heated portions of the building. Sprinkler system upgrades would include installation of updated sprinkler heads and valves along with a fire department connection to the sprinkler system.

Emergency fire egress would be improved through the installation of exit signs, emergency lighting, and new fire doors with magnetic holds wired to the alarm system that allow visitors and employees to exit the building more easily during an emergency. Glass draft curtains and additional sprinkler heads would provide added protection to stairwell areas. New emergency exit doors would be installed in the first basement and in each staff bedroom, and upgrades would be made to existing egress doors in the first, second, and third basements. Exterior landings, rails, staircases, and other external egress improvements would be installed as applicable, and fire escapes would be replaced with ones that would be compatible with the building's historic appearance (see figure 7).

Interior staircases would also receive safety upgrades, including handrails and glass stair enclosures (see figure 8), and a new staircase between the top two floors would be added.



**FIGURE 7. NORTHEAST WOODEN FACADE FIRE ESCAPE TO ROAD**



**FIGURE 8. FIRST FLOOR STAIRWELL WITH SAFETY AND ACCESSIBILITY IMPROVEMENTS, INCLUDING ELEVATOR**

## IMPLEMENT CONSTRUCTION AND UTILITY IMPROVEMENTS

Upgrades to the building would include overall construction and utility improvements. Bolted rods would be used to tie beams and columns together to provide added structural support. During removal and replacement of wall and ceiling finishes, shear walls and insulation would be installed, and the plumbing, sprinkler, and heating systems would be upgraded. The three-level balcony structure on the building's west elevation could be reconstructed to be compatible with the building's original historic structure (figure 9) and reinforced with a new steel superstructure located behind and under the wood framing. It is possible that the balcony reconstruction may take place as a separate, stand-alone project; however, the installation of the balconies is included as part of the overall proposed action to improve the Chateau.



**FIGURE 9. HISTORIC 1946 FAÇADE, NORTHWEST ASPECT**

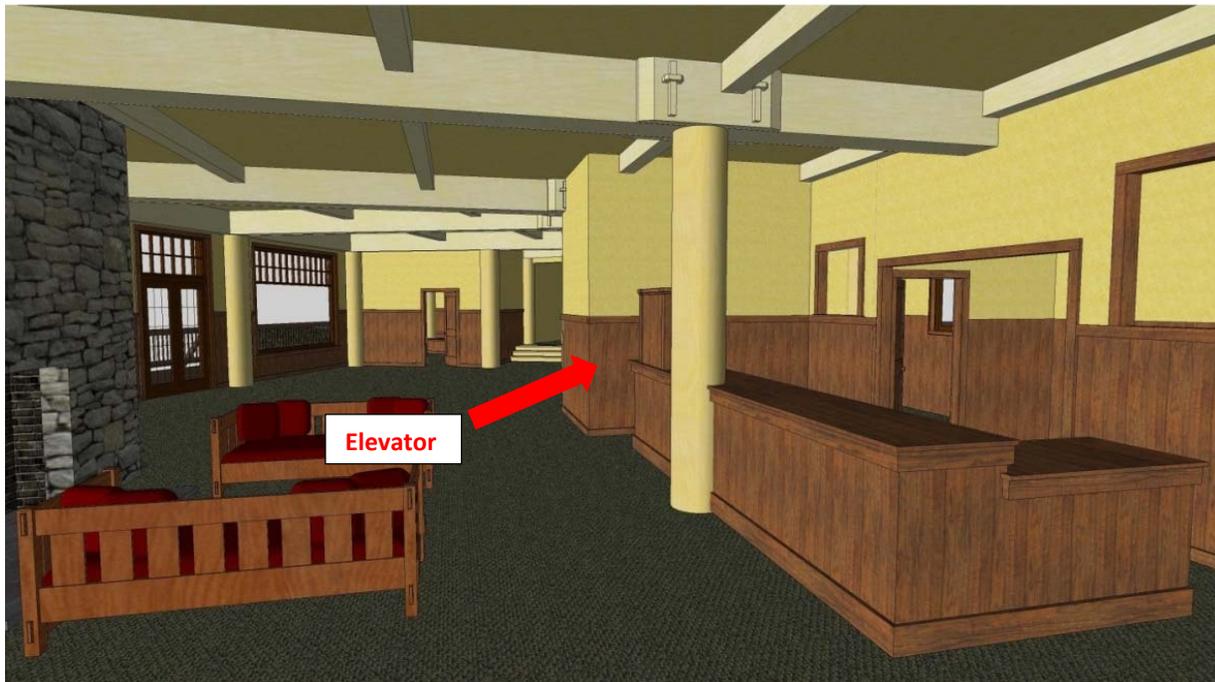
### **CORRECT VISITOR AND STAFF ACCESSIBILITY DEFICIENCIES**

Visitor and employee accessibility improvements would be made to comply to the fullest possible extent with the Architectural Barriers Act (ABA) (42 USC 4151 et seq.). Paths, ramps, railings, and entry landings would provide ease of entry to the interior of the building (see figure 10) and would enable visitors with disabilities to enter the lobby area of the Chateau from the parking lot. Doors and door hardware would be retrofitted as necessary. A full-size elevator shaft and elevator would be installed between the first floor to the first basement (dining room and gift shop) level (see figures 8 and 10). The elevator would extend to the second basement, providing access to these areas for individuals with disabilities. Accessibility improvements would be made in the first basement, allowing individuals with disabilities access to the restaurant and gift shop areas. Accessible public restrooms would be provided on the first basement (dining room) level and on the second basement level for staff use.

Accessibility improvements also would be made to the lobby registration desk, improving the registration process for individuals with disabilities (see figure 11). Accessibility improvements would also be made in the coffee shop, including removal of seats in the coffee shop to provide for accessible seating at the counter (figure 12). Similar to the public areas of the building, accessibility improvements would be made to the employee areas of the building, including providing accessible ramps where applicable in the second basement employee areas, providing separate accessible restrooms for both genders, and upgrading doors and hardware as necessary.



**FIGURE 10. CHATEAU ENTRANCE WITH ACCESSIBLE RAMP**



**FIGURE 11. LOBBY SHOWING LOWERED FRONT DESK AND ELEVATOR ROOM**



**FIGURE 12. EXISTING COFFEE SHOP (TOP) AND COFFEE SHOP WITH ACCESSIBILITY IMPROVEMENTS (BOTTOM)**

## ALTERNATIVE 2: PROPOSED ACTION – REHABILITATION OF THE CHATEAU (PREFERRED ALTERNATIVE)

In addition to correcting life and fire safety deficiencies described under *Elements Common to All Action Alternatives*, Alternative 2 would include repairs to the second and third floors so that the Chateau could continue to serve overnight guests. Alternative 2 would extend many of the improvements, similar to those described under *Elements Common to All Action Alternatives*, to the second and third floors, including the removal and replacement of wall finishes. In addition, door and window frame and hardware improvements would be incorporated as applicable. Additional accessibility improvements would include the conversion of all five first floor guest rooms to accessible rooms and the addition of a ramp from the first floor lobby to the first floor guest rooms (see figure 13).



**FIGURE 13. FIRST FLOOR LOBBY SHOWING PROPOSED RAMP (ARROW POINTS TO RAMP LOCATION)**

Two new guest rooms could be available for overnight use, increasing the Chateau capacity from 24 to 26 guest rooms.

As described under *Elements Common to All Action Alternatives*, Alternative 2 would be completed in two phases; however, the exact phasing would be based on available budget approval and construction options. Therefore, the entire rehabilitation is analyzed as one action. To analyze the impacts appropriately, it is assumed that critical life safety and accessibility projects would occur first. The construction period could last up to 18 months, and it is anticipated that up to a maximum of two full visitor seasons could be affected. During that period, employment for the current 41 staff members would be discontinued. During construction, the park would provide restroom facilities and limited food service on the first floor of the nearby chalet or in the lower parking lot. Once construction is complete, the current level of staffing is expected to return at the pre-construction level. The improvement of the insulation at the Chateau may also improve the viability of a longer visitor season once construction is complete, allowing the Chateau to operate for a longer period each year.

Alternative 2 fully meets the purpose and need of the proposed action. Alternative 2 provides universal access for visitors and staff to multiple locations within the Chateau, expanding the usable area of the building for visitors and staff with disabilities and brings the Chateau into closer compliance with modern-equivalent building, fire protection, and accessibility standards.

### **ALTERNATIVE 3: CONVERSION OF CHATEAU TO A DAY USE FACILITY**

Similar to Alternative 2, this alternative includes multiple improvements to provide for greater life and fire safety and to address accessibility deficiencies to repair and rehabilitate the Chateau. However, the emphasis of Alternative 3 is creating a day use facility with visitor accommodations limited to the lobby, dining area, and gift shop, located on the first floor and first basement levels. No overnight accommodations would be provided under Alternative 3.

Alternative 3 would address life safety and accessibility deficiencies in the lobby and first basement only, as described under *Elements Common to All Action Alternatives*. No public entry to the upper floors would be provided. No improvements would be made to the first floor guest rooms or the second and third floors, except improvements to the fire detection and suppression systems. During construction, the Chateau would be closed to overnight guests and possibly daily visitors. This closure would last up to 18 months and could affect up to two full visitation seasons. During that period, no or limited day use employment would be available for the current 41 staff members. During construction, the park would provide restroom facilities and limited food service in the nearby chalet or visitor's center. Once construction is complete, the level of staffing required to operate the Chateau would be reduced. Staff would be needed to operate the gift shop and dining facilities, but employee positions associated with the operation of the Chateau as an overnight facility would be eliminated. Similar to Alternative 2, the improvement of the insulation at the Chateau may also improve the viability of a longer visitor season once construction is complete, allowing the Chateau to operate for a longer period each year.

Alternative 3 partially meets the purpose and need of the proposed action. With a day use facility, the Chateau would comply with building and fire protection standards; however, universal accessibility for visitors and staff with disabilities would be limited to the lobby and no overnight accommodations would be provided on-site. For individuals with disabilities, the usable area of the building would be expanded and the ease of use would be enhanced; for visitors without disabilities, the usable area of the building would be reduced. Relative to Alternative 2, Alternative 3 would enable visitors with disabilities to use a smaller area of the building.

### **MITIGATION MEASURES OF THE ACTION ALTERNATIVES**

NPS places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the following protective measures would be implemented as part of the selected action alternative. NPS would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures are being properly implemented and are achieving their intended results. Consultation with the Oregon SHPO is underway. As part of this consultation, the SHPO and NPS will agree on appropriate measures to mitigate the adverse effects of the Chateaus rehabilitation. The final mitigation measures will be included in the Finding of No Significant Impact (FONSI).

## **HUMAN HEALTH AND SAFETY**

- NPS would require the construction contractor to follow NPS construction contract standards during construction, including implementation of an accident prevention program, installation of warning signs at the construction site and along the nearby parking lot, and installation and maintenance of construction fences around the construction sites to prevent non-contractors and the public from entering the construction areas.

## **HISTORIC STRUCTURES**

- NPS staff would oversee every stage of construction activities to ensure that the historic fabric is not unduly disrupted by the contractors.
- All NPS-wide and park-specific safety policies and procedures would be adhered to throughout the project.
- There would be no “down time” with regard to fire and security protection for the Chateau. Temporary fire detection and suppression systems would be in place during construction and would be the responsibility of the contractor.
- All work would be guided by the Secretary of the Interior’s *Standards for the Treatment of Historic Properties* (NPS 2005) and *NPS Management Policies 2006* (NPS 2006).

## **ALTERNATIVES CONSIDERED BUT DISMISSED**

Several alternatives or alternative elements/options were identified during the design process and internal and public scoping. Some of these were determined to be unreasonable or much less desirable than similar options included in the analysis, and were therefore not carried forward for analysis in this EA.

### **PROVIDE ELEVATOR ACCESS TO THE SECOND FLOOR**

The team evaluated various configurations to install an elevator to access guest rooms located above the first floor level; however, this option was eliminated because of the significant loss of historic fabric anticipated with the elevator installation, risks associated with providing a safe place of refuge for visitors with disabilities, and concern regarding the impact on the main structural system. Comparable dispersion of visitors with disabilities in available room type (configuration, view, and bed type) can be accommodated on the main floor under the preferred alternative.

### **INSTALL EXTERNAL ELEVATOR TO MINIMIZE RECONFIGURING OF INTERIOR SPACES**

Under this option, a three-level, full-sized exterior elevator would be provided between the first basement, lobby level, and second floor guest room level.

This option would have potential adverse effects on the NHL status of the Chateau as a result of the significant impacts on the exterior appearance because of the amount of exterior fabric and features that would be destroyed. The amount of exterior and interior fabric destroyed with the installation of an exterior elevator would be much greater than the changes required by the internal elevator. The external elevator could not be located near the existing internal staircase and, therefore, would create new and circuitous circulation patterns. Access for people with disabilities would be separated from existing stairs, a practice that is discouraged by accessibility guidelines. The surrounding landscape would also be

affected because there are no non-street level areas around the Chateau, and construction would require extensive earthwork. After consultation with the Oregon SHPO, this alternative element was dismissed.

### **PROVIDE ALL PROGRAM FUNCTIONS ON LOBBY LEVEL AND RAMPED ACCESS TO LOBBY LEVEL GUEST ROOMS**

Under this option, no elevator would be installed and space and service for dining would be provided in the lobby area. Food could be conveyed to the lobby by the extension of the existing dumb waiter to the lobby level to avoid wait staff having to carrying trays up and down the main staircase.

Extension of the dumb waiter to the lobby level would interrupt the historically significant character defining space (described in detail in chapter 3). The open character of the lobby, views through the many windows, and appearance of the massive fireplace would be interrupted by the dumb waiter.

Without the dumb waiter to the lobby level, concession wait staff would be required to carry all food up the main staircase used by guests, creating an unsafe, hazardous condition where staff and visitors could be injured. Without the elevator, people with disabilities would be unable to access the first basement (dining level). Therefore, this alternative was dismissed.

### **COMPLETE CLOSURE OF THE CHATEAU**

Under this option, the Chateau would completely close. No life safety or accessibility issues would be addressed, and visitors would no longer have access to the Chateau. Visitor services for cave visitors would be greatly affected. Limited restrooms would be available to members of the public visiting the park. Food service and lodging would no longer be offered within the park—the closest options with both food and lodging would be located more than 20 miles away in Cave Junction.

There would be a risk that both the exterior and the interior and of the historic Chateau would deteriorate through lack of use. Neither routine nor cyclic maintenance would be completed on the building, which would lead to failures of infrastructure and adversely impact the historic fabric of the Chateau. For example, leaking pipes could go undetected for longer periods. Exterior components, such as roofs and siding would not be maintained and would eventually fall into a state of disrepair and provide a source for water and pest intrusion into the building. An absence of environmental controls (such as heating and cooling) also would accelerate deterioration of the Chateau because changes in temperature would damage building materials as they expand and contract over time. As a result, NPS would be required to incur operations and maintenance costs as part of its responsibility under the Secretary of the Interior's order to maintain and preserve the NHL. In order to properly mothball the Chateau, operations and maintenance costs would be approximately \$400,000 annually.

While the Chateau would provide no visitor use or socioeconomic benefits within the park, the total cost of facility ownership burden on NPS would continue as a result of operations and maintenance, preventative, and emergency costs (e.g. roofing, water, and lighting). This alternative would not improve visitor and employee safety or bring the Chateau into compliance with modern-equivalent building, fire protection, and accessibility standards; and would have substantial, adverse effects on the distinguishing qualities and character-defining features of the NHL. As a result, this alternative would not meet the purpose of and need for the project and was therefore rejected.

**REPLACE NON-FIRE RESISTANT FIBERBOARD WITH THE SAME TYPE OF NON-FIRE RESISTANT FIBERBOARD TO RETAIN THE EXACT APPEARANCE OF THE WALL AND CEILING FINISH**

The same type of fiberboard material is no longer produced and is therefore not available. In addition, this fiberboard would not be code compliant. This element would not comply with the purpose of and need for the project and was dismissed. Alternative methods to simulate the appearance of the fiberboard or similar material over sheetrock that adequately provide the code-required fire resistance have been developed, tested, and would be used in the preferred alternative.

**RECONSTRUCT HISTORIC BALCONIES WITH SAME WOOD MATERIALS AS ORIGINALLY CONSTRUCTED**

The original balconies failed as a result of the deterioration of wood from exposure to rain and the weight of snow; therefore, reconstruction with the same materials would be historically accurate but would not be a good value for the government because of the extensive maintenance and periodic replacement that would be required. NPS must also consider the total cost of facility ownership, and this alternative is not sustainable because extensive maintenance would be required. This alternative element would not be consistent with the purpose of and need for the project and was dismissed.

This page intentionally left blank.

## **CHAPTER 3: AFFECTED ENVIRONMENT**

This chapter describes existing environmental conditions in the areas potentially affected by the alternatives evaluated, including historic structures, socioeconomics, visitor use and experience; human health and safety, and park operations and management. Potential impacts are discussed in Chapter 4: Environmental Consequences in the same order.

### **CULTURAL RESOURCES – HISTORIC STRUCTURES AND DISTRICTS**

#### **OREGON CAVES HISTORIC DISTRICT**

President William Howard Taft issued Proclamation 876 on July 12, 1909, establishing the 480-acre Oregon Caves National Monument. Located within the then Siskiyou National Forest (now the Rogue-Siskiyou National Forest), the park remained under US Forest Service management until it was transferred to NPS jurisdiction by Executive Order 6166 on June 10, 1933. Almost 60 years later, the Oregon Caves Historic District was listed in the National Register. The historic district was first listed in 1992, and a boundary expansion was adopted in 2012 to include most of the park's trail system (Glanville 2010). The period of significance for the district begins in 1922 and ends in 1942 (Glanville 2010).

The National Register nomination of the Oregon Caves Historic District outlines its historic significance under criterion A (events) for its association with the establishment of the park and recreational pursuits, and criterion C (architecture and landscape architecture), as an exemplary example of the Rustic Style.

Encompassing approximately 6 acres within the park, the Oregon Caves Historic District contains several structures within a designed landscape located near the cave entrance. Within the boundaries of the district are contributing buildings, structures, and landscape features that exemplify the rustic architectural aesthetic and compatible landscaping (such as placement of native plants) promoted by NPS during the first half of the 20th century (Mark 1991). The Chateau is the centerpiece of the Oregon Cave Historic District's contributing resources.

#### **OREGON CAVES CHATEAU**

The Chateau was designated an NHL in 1987 for its architectural significance and was concurrently listed in the National Register. According to the nomination form, the Chateau's primary significance "lies in its designer's extraordinarily creative use of the limited building site and how he allowed the site to dictate major architectural choices" (Harrison 1985). Use of the word "significant," used both in chapter 3 and 4, relates to the importance of the cultural resource, and it not intended to be defined in terms of NEPA impact significance.

Between the first recorded discovery of Oregon Caves in 1874 and the establishment of Oregon Caves National Monument in 1909, little development occurred at the site, most likely due to its remote location. The resort potential was not realized until the early 20th century when changes in US Forest Service regulations regarding leasing lands for hotel and recreation sites brought renewed interest. Following the construction of an 11.7-mile road to the Oregon Caves National Monument in 1922, local businessmen formed the Oregon Caves Company (OCC) in 1923 to provide food services, overnight accommodations, and tours of the cave.

Early development by the OCC included a chalet that contained a lunch room, registration offices, and other rooms for visitors and staff, guest cottages, and a guide dormitory. A rise in visitors prompted the

OCC to increase the capacity for overnight guests. The OCC announced plans for the Chateau, the new hotel, in 1929 at an estimated cost of \$50,000. Construction was underway by 1931 and completed in 1934 (see figure 14) (Harrison 1985).



**FIGURE 14. THE CHATEAU CA. 1934, ILLUSTRATING THE ORIGINAL WEST BALCONIES**

Gust Lium, a local architect and builder, designed the six-story, 28,000-square-foot structure in the Rustic Style. The site of the Chateau was a challenge for Lium because of its steep, mountainous terrain. Instead of siting the hotel on the mountain side of the roadway, Lium chose to span the hotel across a small gorge formed by Cave Creek (Harrison 1985). By doing so, Lium reduced the perceived mass of the Chateau by constructing the largest volume of the structure, or the bottom three stories, inside the gorge. From the main entrance and street level, guests approach what looks like an unassuming two- or three-story building that harmonizes with the scale and terrain of the surrounding landscape. Lium also brought the natural landscape into the building with large picture windows and balconies facing the gorge and by inventively channeling Cave Creek into the building's dining room. "Shaggy" cedar bark siding and wide, overhanging roof eaves covered in wood shingles and exposed rafter tails underscore the Rustic Style of the building. The rustic aesthetic of the Chateau and its integration into the site were further emphasized by stone retaining walls, two trout pools and two waterfalls, a campfire circle, and various walkways built by the CCC on the hotel grounds (Kaiser 2008).

The completed hotel received praise both locally and regionally at the time of its construction. In November 1934, the *Pacific Coast Record* acclaimed the new Chateau, saying: “Successful effort has been made in the construction of the Chateau, both without and within the building, to keep it in harmony with the rugged wildness of the section, and yet provide a comfort unexcelled by metropolitan hostelryes” (McMurry 1999).

Multiple concessionaires managed the Chateau for more than 65 years. As of 2001, the Chateau was transferred to public ownership under NPS jurisdiction. In 2002, Oregon Caves Outfitters, a group based in nearby Cave Junction, took over the maintenance and public services of the Chateau.

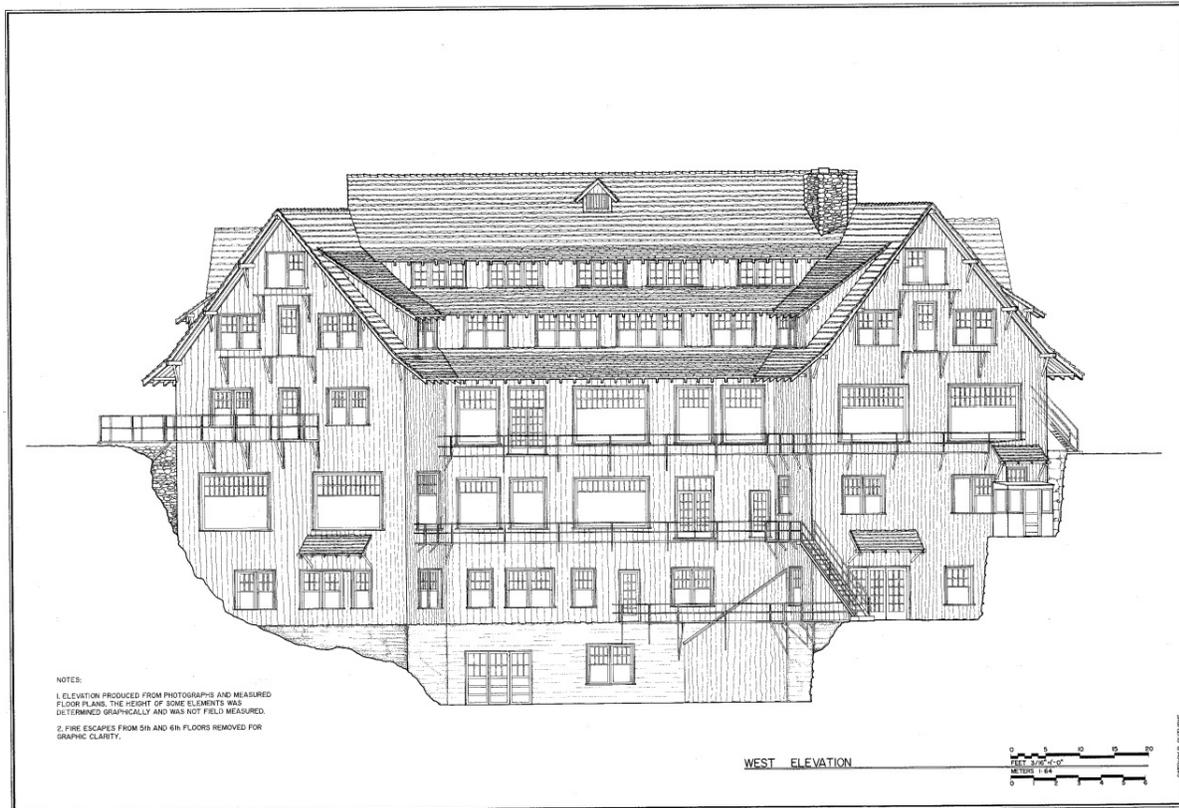
#### *Historic Integrity and Visual Character of the Oregon Caves Chateau*

This analysis of the contemporary historic integrity and visual quality of the Chateau is separated into exterior and interior elements because each possesses distinct visual characteristics.

*Exterior*—The Chateau is a six-story building with a central wedge-shaped wing and adjacent north and south wings that generally form a U-shaped footprint. The building sits on a reinforced concrete foundation and has a superstructure of wood frame construction with massive post and beam interior supports. Spanning a gorge carrying Cave Creek, the building’s first three floors are partially below grade and banked into the side of the gorge. Guests enter on the street level, the building’s fourth floor, on the south elevation.

Exterior walls of the building are shiplap siding clad in Port-Orford-cedar bark, giving the building a decidedly rustic appearance. The steeply pitched multi-gable roof is sheathed in wood shingles and features wide, overhanging eaves with exposed rafter tails, and large shed dormers pierced with gabled wall dormers. A stone chimney rises above the roofline on the west elevation. The Chateau’s wood windows vary with six-over-one double-hung sash, multi-light fixed sash, and multi-light casements.

In the past 65 years since the completion of the Chateau, the building has undergone minimal changes and alterations. The most substantial alteration to the exterior occurred in 1958. Historically, wooden balconies were located on the west elevation of the building and spanned from the north wing to the south wing on the second through fourth stories (second and first basement, first floor). These balconies allowed Chateau guests to take in views of the surrounding valley and were an integral part of the building’s original design. Snow overloading caused the balconies to become structurally unsound. Consequently, the concessionaire OCC removed the balconies and replaced the wooden structures with a series of steel catwalks (figure 15). Two door openings on the west elevation that historically provided access to the balconies were fitted with windows. Four years later in 1962, the original wooden fire escapes at the west end of the north and south wings were replaced. The original escapes were made from peeled logs with steel treads while the new fire escapes are all steel construction (McMurry 1999).



Source: Historic American Building Survey (1998)

**FIGURE 15. WEST ELEVATION, AFTER THE REMOVAL OF THE ORIGINAL BALCONIES**

*Interior*—The interior of the building is divided into six floors, three above-ground stories, and three stories embedded into the gorge. These three floors are treated as basements. The lowest floor of the building, the third basement, houses mechanical equipment and a workshop in the central wing with crawl space in the north and south wings. Above, the second basement holds laundry and storage areas, a staff sleeping area, and what was previously the employee dining room. The dining room, coffee shop, previous bar/lounge area, gift shop, and kitchen occupy the first basement. Guests enter the building on the first floor that contains the entrance lobby and several guest rooms. The two upper floors contain guest rooms and staff quarters.

The first and main floors of the hotel host the lobby, front desk, and five guest rooms. The lobby comprises almost the entire south and center wings of the building and the front desk stands at the south wing's eastern end. The lobby features a massive double fireplace constructed of local marble and peeled log posts that support exposed heavy wooden beams of Douglas fir. The post and beams feature applied wood decoration that simulates joinery. A rustic staircase of oak, madrone, and pine leads from the lobby to the downstairs dining room and coffee shop and to the rooms on the second floor. Around 1954, the front reception desk in the lobby was changed to allow for a display section and increased space at the desk.

Containing the dining room, coffee shop, kitchen, and gift shop, the first basement is the lowest public floor of the building. The dining room comprises the north wing and part of the central wing and is an

open space supported by a wooden post and beam structural system. The creek is channeled through the dining room and runs east to west. The coffee shop, which occupies the south wing, was completed in 1937, and the concessionaire OCC remodeled it in 1954 and in 1964 after a debris-flow damaged it. The space was enlarged by removing a kitchen restroom and relocating the stairs leading to the second basement, which were moved under the main stairway from the dining room to the lobby. A non-historic bar/lounge occupies the northwest corner of the dining room, the former location of a dance floor.

The most common interior wall and ceiling finish in the Chateau is wainscoting of California redwood with pressed fiberboard, known as “Nu-Wood,” above. The dining room and bar/lounge area, main lobby and office, main staircase, and all of the guest rooms have fiberboard wall and ceiling panels, many of which are now missing or have been damaged. Approximately 1-foot, 6-inches wide, the panels vary in length to form a pattern similar to ashlar masonry, an appearance that is reinforced by the beveled edges of the tongue and groove panels. The panels were not meant to be painted and originally were light beige with a matte finish. A fire retardant, intumescent coating, applied in 1989, altered the original matte finish and currently gives the walls a glossy appearance (ARG 2006; McMurry 1999).

One of the most significant alterations to the interior of the Chateau was the addition of a fire sprinkler system in 1950. The greatest impact of this alteration was the visual intrusion into public spaces and guest rooms with some rooms containing 4-inch mains and other feeder lines. The entire system received new sprinkler heads in 1999 and in 2012, as required by code. Around the same time as the sprinkler system installation, a series of fire doors were added to the first and second floors. On the first floor, the fire door is located in the hallway of the north wing off of the lobby at the top of a short flight of stairs. The second floor doors are located on each side of the main staircase, leading into hallways running to the north and south. The doors are steel, built into walls that span between the two original walls at each location. The new walls are clad with a fiberboard product that does not match the original panels (McMurry 1999).

#### *Character-Defining Features and Significant Areas*

*Character-Defining Features*—The National Register Nomination (Harrison 1985), the *Historic Structures Report* (McMurry 1999), and the *Accessibility and Safety Study* (ARG 2006) do not contain itemized comprehensive lists of the Chateau’s character-defining features of each significant space. However, based on these studies and the characteristics commonly associated with NPS Rustic architecture, the extant contributing character-defining exterior features include:

- Overall massing of building inside a gorge
- Cedar bark siding
- Multi-gable roof with steep angles, wood shingles, overhanging eaves, and exposed rafter tails
- Shed dormers and gabled wall dormers
- Wood doors, windows, and fenestration patterns (i.e., the arrangement and placement of windows)

Interior features include:

- Fiberboard wall and ceiling panels (walls and ceilings in the dining room, lobby, corridors and guest rooms and ceiling in coffee shop)
- Open configuration of the lobby/sitting room (first floor)

- Main staircase (first basement, first and second floors)
- Lobby/massive marble double fireplace (first floor)
- Stream channel in dining room (first basement)
- Knotty pine paneling and counters in 1930s coffee shop (first basement)
- Massive windows and large balconies for outside viewing
- Massive wood columns resembling Greco-Roman marble columns or limestone cave columns (first floor and first basement)
- High ceilings and roughhewn rafters

*Significant Interior Areas*—A 2006 *Chateau Accessibility and Safety Study* (ARG 2006) assessed each interior space within the Chateau for its historic significance. The significance of individual rooms, spaces, or elements of the building's interior were divided into three categories, as shown on figures 16 and 17.

Primary significance spaces are those that are the most historically significant spaces and are largely the public spaces of the Chateau. Typically, the architect/builder used high-grade materials in these spaces and may have increased the size and scale of the space and/or decorative features of the spaces to highlight their importance. Additionally, these spaces have not been substantially changed from their original design. They are the most significant character-defining elements of the building.

Areas of primary significance include:

- Lobby/sitting room (first floor)
- Coffee shop (first basement)
- Dining room/service area (first basement)
- Gift shop (first basement)
- Main stairs (first floor, second floor)
- Guest room corridors (first floor, second floor, and third floor)
- Suites in northeast and southeast corners (third floor)



Source: ARG (2006)

**FIGURE 16. FIRST FLOOR HISTORICALLY SIGNIFICANT AREAS**



Source: ARG (2006)

**FIGURE 17. FIRST BASEMENT HISTORICALLY SIGNIFICANT AREAS**

Secondary significance areas are mostly less public spaces that for the most part have retained their historic features. These spaces may have been changed for new uses or some historic features may have been modified or replaced. The construction materials and craftsmanship may not be as fine as those found in more important rooms. More leeway is allowed in modifying these spaces than spaces of primary significance; however, modifications of these spaces should still be restricted to minor changes as required to meet life-safety, disabled access, and important programmatic needs. It is essential to identify the remaining character-defining features of these spaces prior to undertaking modifications. The protection of those features is highly recommended. The less historic fabric that remains, the more important it is to preserve what still exists. Areas of secondary significance include:

- Guest rooms and baths (first floor, second floor, and third floor)
- Bar/lounge (first basement)
- Men's restroom (first basement)
- Guest dining room (first basement)

Least significance areas are those spaces that have retained little of their historic integrity and were either constructed as support spaces or were unoccupied. They house very few character-defining features and were constructed and finished using serviceable building materials. This designation might also apply to a space that has been so modified that no character-defining features remain. The lack of character defining features makes these spaces the most logical place to undertake significant modifications to the building (ARG 2006). Areas of least significance include:

- Kitchen (first basement)
- Office (first floor)
- Guest room closets (first floor)
- Storage areas and staff sleeping area (second basement)
- Mechanical room (third basement)

## **SOCIOECONOMICS**

The park is located within Josephine County, Oregon. The Chateau is located approximately 20 miles, or 45 minutes travel time, east of Cave Junction, Oregon and 45 miles, 1 hour 20 minutes travel time, from Grants Pass, Oregon. It is assumed that a majority of the NPS staff and contractor workforce for the park reside within Josephine County, either within the city of Cave Junction or the city of Grants Pass. Therefore, it is assumed that these areas would be the most directly economically impacted by the proposed action. Subsequently, Josephine County has been identified as the Region of Influence (ROI) for the socioeconomic analysis for this environmental assessment.

## **POPULATION AND DEMOGRAPHICS**

Population data provided by the US Census Bureau's American Community Survey include five-year estimates for 2010 to 2014 (table 2) On average, between 2010 and 2014, Josephine County had a population of 83,021, while the city of Grants Pass had an average population of 34,916, the city of Cave

Junction had an average population of 2,059, and the state of Oregon had an average population of 3,900,343 (US Census Bureau 2015a).

Those persons identifying themselves as Caucasian represented the majority of the population in both the ROI (93.4%) and the state (85.1%) on average, from 2010 to 2014. Approximately 4% of the population in the ROI identified themselves as some other race or a combination of races, while those identifying themselves as American Indian or Alaskan Native accounted for approximately 1.6% of the total population. In comparison, some other race or a combination of races and American Indian or Alaskan Native populations accounted for approximately 7.6% and 1.2% of the state's population, respectively. The US Census Bureau considers ethnicity (e.g., Hispanic) separately from race. Approximately 7% of the total population within the ROI and 12% of the state of Oregon identified themselves as ethnically Hispanic or Latino regardless of their race (e.g., Caucasian). These race and ethnicity figures are provided in table 1 below (US Census Bureau 2015a).

**TABLE 1. POPULATION CHARACTERISTICS, 2010–2014**

Location	Total Population	Ethnicity (% of Total Population)  Hispanic or Latino <sup>b</sup>	Race (% of Total Population) <sup>a</sup>					
			Caucasian	Afr. Am.	American Indian/ Alaska Nat.	Asian	Native Hawaiian/ Pacific Islander	Some Other Race/ Two Races or More
United States	314,107,084	16.9%	73.8%	12.6 %	0.8%	5%	0.2%	7.6%
Oregon	3,900,343	12.1%	85.1%	1.8%	1.2%	3.9%	0.4%	7.6%
Josephine County	83,021	6.7%	93.4%	0.3%	1.6%	0.6%	0.2%	3.9%
Cave Junction	2,059	5.4%	90%	5.1%	2.6%	1.5%	0%	0.8%
Grants Pass	34,916	9.8%	91.8%	0.3%	1.9%	0.7%	0.1%	5.3%

Source: US Census Bureau (2015a)

<sup>a</sup> Note: Totals may not add to 100% due to rounding.

<sup>b</sup> Note: Hispanic and Latino is considered an ethnicity, which is a separate classification from race. These percentages represent the percentage of the entire population of the geography that is Hispanic or Latino. Persons identified in this category must also have a race, such as Caucasian, African American, and Asian.

## INCOME

The US Census Bureau sets income thresholds that vary by family size to determine the level of poverty for a given area. The data presented on poverty and income was retrieved from American Community Survey five-year estimates. These data provide an average of these poverty and income statistics over the five years from 2010 to 2014. The percentage of individuals living below the poverty level in the ROI between 2010 and 2014 was higher than in the state of Oregon or the United States as a whole. In Josephine County, approximately 19.7% of the population lived below the poverty level between 2010 and 2014, which is higher than the state and national populations living below the poverty level of 16.7% and 15.6%, respectively. Table 2 details the percentage of the population living below the poverty level,

including the percentage of the total population below 18 years of age living in poverty. Most notable in this table is the percentage of individuals, and, more specifically, those under the age of 18 living below poverty in Cave Junction during this period, which was 24.0% and 41.9%, respectively. During this period, the median household income in the ROI was \$37,447, which was lower than the state of Oregon's median household income of \$50,521. Median income in the ROI was considerably lower than the nation's median household income of \$53,482 and significantly higher than the median income of Cave Junction, which was \$26,172 during this period (US Census Bureau 2015b).

**TABLE 2. INCOME AND POVERTY CHARACTERISTICS, 2010–2014**

Location	Median Household Income	Individuals Living Below Poverty (% of Total Population)	Individuals Living Below Poverty, Under the age of 18 (% of Total Population under the age of 18)
United States	\$53,482	15.6	21.9
Oregon	\$50,521	16.7	22.1
Josephine County	\$37,447	19.7	28.4
Cave Junction	\$26,172	24.0	41.9
Grants Pass	\$33,240	22.3	30.8

Source: US Census Bureau (2015b)

## LABOR FORCE AND EMPLOYMENT

In 2014, the latest year for which annual labor force data are available from the US Bureau of Labor Statistics, the total annual average labor force in the ROI was 32,963 persons, while the total annual average labor force in the state of Oregon was 1,942,024 persons. The ROI had an unemployment rate of approximately 9.6%, which was higher than the state of Oregon's unemployment rate of 8.0% in 2014. The unemployment rate in the ROI has decreased from 14.2% to 9.6% between 2010 and 2014, slightly reflecting the national economic recovery that has occurred during this time (the recovery started in June of 2009 [Federal Reserve Bank of Minneapolis 2013]). The state of Oregon's unemployment rate has increased from 7% to 8% during this period as well (US Bureau of Labor Statistics 2015).

The concessioner at the Chateau employs approximately 40 to 45 people. Of the 41 current concession employees, 21 work in food service, 15 in the hotel, 3 in the gift gallery, and 4 in management and the visitor center in Cave Junction. Almost all of the employees reside in the Illinois Valley. One employee lives in Grants Pass (NPS, Roth, pers. comm. 2013a). The largest concentration of employment in the ROI is located in Grants Pass, while the second largest concentration is located in Cave Junction, (US Department of Commerce 2013). Oregon Cave Outfitters currently operates the concessions contract at the park under a 10-year contract that ends in December 2016. Thereafter, it is anticipated that a temporary contract would be executed for three years, starting in 2017.

In 2014, the latest year for which employment by industry data are available from the Bureau of Economic Analysis, the health care and social assistance and retail trade industries comprised the largest percentage of total employment in the ROI, representing 15% and 13% of the total employment in the ROI, respectively. Employment in military and government in the ROI comprised 9% of total employment during this time. Employment in the construction industry comprised 5% of total employment in the ROI during this time, which is similar to the level of employment in this industry at

the state level at 5%. However, employment in this industry in the ROI declined by approximately 7% between 2010 and 2014, a loss of 154 workers, whereas at the state level, it increased by 11% (US Bureau of Economic Analysis 2014).

### LODGING AND HOUSING

Approximately 6% of all rental housing units were available for rent in Josephine County on average annually between 2010 and 2014. The percent of rental units available for rent in the ROI on average annually between 2010 and 2014 is similar to the percent of rental units available for rent in the ROI (US Census Bureau 2000, 2015) (table 3). Several hotels are located within 25 miles of the Chateau around the area of Cave Junction and include the Country Hills Resort, the Junction Inn, and the Holiday Motel. A number of other hotels, campgrounds, and recreational vehicle parks are located in the ROI as far away as Grants Pass, Oregon.

**TABLE 3. 2010–2014 HOUSING SUPPLY**

Census Unit	State of Oregon	Josephine County
Total number of housing units (2010–2014)	1,685,814	38,015
Percent change in number of housing units (2000–2014)	16%	14%
Total number of renter-occupied units (2009–2014)	586,182	11,609
Total number of vacant housing units (2009–2014)	162,826	3,828
Percent of rental units available for rent (2009–2014)	5%	6%

Source: US Census Bureau (2015)

### SOCIAL AND ECONOMIC IMPACTS OF PARK AND CHATEAU VISITATION

The park attracts approximately 70,000 visitors annually (NPS 2015). In 2014, the park had 69,405 recreation visits (NPS 2015). The Chateau currently operates from May through October and serves approximately 6,000 to 7,000 overnight visitors each year (NPS 2015). In 2014, 5,906 overnight stays were recorded at the Chateau. In addition to overnight use, approximately half of the roughly 70,000 annual park visitors use the day use facilities at the Chateau, such as public restrooms, dining rooms, and gift shop services. In 2014, visitor spending in the local region while visiting the park was approximately \$4.7 million, mostly on hotels and restaurants. This visitor spending supported approximately 79 jobs within the ROI, which had a combined income of 2 million, adding an additional value of \$3.3 million to the local community through related spending in 2014 (NPS 2015b).

Given that the Chateau serves as the park's sole public dining and lodging facility during the main visitor season, the majority of expenditures made within the park are spent there. The Chateau has been identified as a significant potential contributor to the economic viability of the gateway community of Cave Junction. Additionally, the Chateau represents the core operation of the Illinois Valley Community Development Organization (IVCDO), which is a non-profit organization that administers the facility through Oregon Caves Outfitters. IVCDO contributes directly to the economy of the adjacent community by limiting hires to area residents when possible. The organization supports local businesses by restricting purchasing of supplies for the food service and lodging operations to local cottage industry vendors whenever possible. IVCDO believes the Chateau is a major part of the local identity and sees the Chateau as a major source of community pride. Profits from the operation of the Chateau are returned to the community for economic development and improvement of living standards projects (NPS 2013b).

## **GOVERNMENT AND PUBLIC SERVICES**

Non-local visitors support the local economy through spending on gas, food, gift purchases, and hotel stays within the area of the ROI during their visits to the park. These expenditures are taxed, which supports the local government. Furthermore, employees of the park, as well as those concessioners employed in the Chateau, are taxed on their income. Local NPS staff and concessioners reside in the area of Cave Junction, so a portion of these taxes is returned to the local and state governments to support government services, which include police and fire protection, road repairs, snow removal, road drainage maintenance, and medical services. Local services provided by the government of Cave Junction and/or Josephine County include fire protection services, healthcare, law enforcement, waste disposal services, and public education services.

## **VISITOR USE AND EXPERIENCE**

The park hosts approximately 70,000 visitors annually (NPS 2015c). Of the total number of annual visitors to the park, a range of approximately 5,500 to 6,500 represent overnight visitors to the Chateau (NPS 2015c). Additionally, the Chateau itself is a destination for people wanting to experience a historic rustic lodge. Roughly half of the annual visitors to the park use the day use facilities within the Chateau, such as public restrooms, dining, and gift shop services. From fall through mid-spring, visitation at the park is day use only. The majority of visitation occurs between May and October.

The park offers 90-minute guided tours of the caves. Visitors can only enter the caves on a scheduled tour. No self-guided tours are available. Cave tour tickets are sold at the park on a first-come, first-served basis (NPS 2013b) and also are available in advance by reservation. Caves tours are not offered from late fall to mid-spring; however, the park remains open for visitors.

The Chateau is open seasonally from May to October. There is a free ranger-guided tour available to visitors to the Chateau that covers the history, architecture, and stories of the Chateau and the rest of the surrounding Historic District. Visitors are guided through the lobby (first floor), dining room, and coffee shop (first basement) (NPS 2013b). All overnight accommodations, food service, and merchandise sales at the park are provided within the Chateau.

On the first basement, the Chateau provides visitors with a formal dining room that features local meats, wines, and micro-brews. Additional food is available in the 1930s-era coffee shop, which is open from 7:00 a.m. to 5:00 p.m. during the main visitor season. The first basement also includes a small gift shop that sells locally produced goods, including artwork and Oregon Caves' memorabilia.

Currently, 24 guest rooms are available for overnight visitors to the Chateau. The rooms contain Monterey furniture, which is handmade from generally Oregon-sourced alder wood. Visitors are able to stay in rooms decorated with era-appropriate and furniture to enhance their overall experience at the Chateau. Similarly, the first floor furnishings provide day use visitors with an opportunity to experience the overall rustic design of the Chateau.

## **HUMAN HEALTH AND SAFETY**

NPS is committed to providing high-quality opportunities for visitors and employees to enjoy parks in a safe and healthy environment. Furthermore, NPS strives to protect human life and provide for injury-free visits. Safety applies to both visitors and NPS employees.

As described in chapter 2, the Chateau is currently equipped with both fire detection and fire suppression systems; however, the coverage is limited. The Chateau is constructed of flammable materials, both interior and exterior. The means of egress, or exit in case of emergency, do not meet current life safety requirements. Plumbing, telecommunications, water and sewage systems within the Chateau have exceeded their useful life and are failing. The electrical system includes “knob and tube” wiring, which does not meet contemporary fire codes for new construction. The plumbing system occasionally fails and requires emergency repairs. Leakage of water and sewage within the building occasionally occurs and has caused damage to the structure and its historic fabric. Water and sewage plumbing issues have been documented on the US Public Health Service inspections of the property.

The building is inspected each year but does not meet contemporary fire and safety codes for new construction. Within the last 20 years, accidental ignitions involving flames and/or smoke from furniture upholstery, roof shingles, kitchen fires, and oily rags on the basement boiler have occurred (NPS, Roth, pers. comm. 2016).

### **VISITOR SAFETY**

A visitor incident is defined as an unintentional event or mishap affecting any person, other than an NPS employee, that results in serious injury or illness requiring medical treatment. In 2015, there was one such incident adjacent to or within the monument’s historic district (Roth pers. comm. 2016). In the last five years there have been no such reported safety incidences within the Chateau (NPS, Roth, pers. comm. 2016).

### **EMPLOYEE SAFETY**

In the past five years, there have been several occupational safety incidences at the Chateau. In 2015, there was one employee injury (NPS, Snitzler pers. comm. 2016). All Oregon Caves Outfitters employees adhere to the standards included in the 2005 Environmental Management Program, which include an emergency preparedness and response approach and emergency exit plan.

### **ACCESSIBILITY**

Accessibility describes the ease and convenience with which people with physical disabilities, particularly mobility limitations, are able to enter and maneuver within structures, buildings, and landscapes. The concept is typically related to accessible points of entry, common areas, and features and fixtures that enable all persons to experience a space in the same way, to the maximum extent practicable.

The ABA requires that all public buildings, structures, and facilities comply with specific requirements related to architectural standards, policies, practices, and procedures that accommodate people with hearing, vision, or other disability; and other access requirements. Public facilities and places must remove barriers in existing buildings and landscapes, as necessary and where appropriate.

Director’s Order 42: *Accessibility for Visitors with Disabilities in National Park Service Programs and Services* (NPS 2000b), describes the NPS’s comprehensive approach to achieving the highest level of accessibility that is reasonable, while ensuring consistency with the other legal mandates of conservation and protection of the natural, human-made, and historic resources that NPS manages. NPS employs the

principles of universal design,<sup>1</sup> providing full access to persons with strollers and wheeled devices or impairments to sight, and sound.

Within historic structures, the ABA and ABA Accessibility Guidelines (US Access Board 2004) state: “in alterations, where compliance with applicable requirements is technically infeasible, the alteration shall comply with the requirements to the maximum extent feasible.” Therefore, NPS endeavors to provide the highest level of accessibility that is reasonable without causing adverse effects or other significant impacts on historic features.

Currently, the Chateau is not fully compliant with NPS policies for universal accessibility. In addition, numerous features and components within the Chateau are not compliant with contemporary building codes for new construction, including narrow doorways and no ramps for wheelchair access. The main point of entry to the Chateau is into the lobby via a staircase from the parking lot on the north side of the building. No ramp or lift are available to accommodate wheelchairs, and there is currently no means by which most persons in wheelchairs or other persons using walkers may safely enter the Chateau or have direct access to its resources.

---

<sup>1</sup> Universal design is a concept wherein “direct access” to all features of a building, landscape, or structure is provided to all people, irrespective of whether they have a disability or not.

This page intentionally left blank

## **CHAPTER 4: ENVIRONMENTAL CONSEQUENCES**

### **GENERAL METHODOLOGY FOR ESTABLISHING IMPACTS**

In accordance with 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.

Environmental consequences are determined by describing how the existing condition of a resource would change, either negatively or positively, as a result of implementing any of the alternatives under consideration. Analysis includes the consideration of the context (setting), type (beneficial or adverse), intensity (strength), and duration (short or long term) of the direct, indirect, and cumulative effects of the alternatives.

Context is the setting, situation, or circumstances surrounding a particular resource (40 CFR 1508.27(a)). Context provides a backdrop against which the intensity of impacts can be applied to understand their importance. The geographic study area (or area of analysis) for this assessment is the Chateau. The area of analysis may extend beyond the project area boundaries for some cumulative impact assessments. The specific area of analysis for each impact topic is defined at the beginning of each topic discussion.

Intensity is the severity or magnitude of an impact (40 CFR 1508.27(b)). Assessing the intensity of impacts on a specific resource is linked to the context in which that resource is found. The new NPS NEPA handbook (NPS 2015), removed the use of intensity definitions in an EA to define impacts or substitute for impact analysis. Impacts are not be defined as major, moderate, minor, or negligible. Instead, the analysis discloses the existing conditions of resources and documents the “hard look” standard in a narrative that discusses the impacts of the alternatives.

### **CUMULATIVE IMPACTS ANALYSIS METHOD**

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). Cumulative impacts were determined for each impact topic 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 cumulative impacts is based on a general description of the projects. These actions were identified through the internal project scoping process. Table 4 summarizes these actions that could affect the various resources at the park.

**TABLE 4. ACTIONS THAT CONTRIBUTE TO CUMULATIVE IMPACTS**

<b>Impact Topic</b>	<b>Study Area</b>	<b>Past Actions</b>	<b>Present Actions</b>	<b>Future Actions</b>
Historic structures and districts	The Chateau and Oregon Caves Historic District	None	None	None
Socioeconomics	Josephine County	None	None	None
Visitor use and experience	Oregon Caves National Monument and Preserve	50,000 gallon water tank installation (improved potable water and fire suppression)	Hazard tree removal	Distribution lines and hydrant replacement, enhanced water supply line to Chateau sprinkler system, scenic vista restoration
Human health and safety	The Chateau	50,000 gallon water tank installation (improved potable water and fire suppression)	Fire management, hazard tree removal	Distribution lines and hydrant replacement, enhanced water supply line to Chateau sprinkler system

## **CULTURAL RESOURCES – HISTORIC STRUCTURES AND DISTRICTS**

### **GUIDING REGULATIONS AND POLICIES**

Federal actions that have the potential to affect cultural resources are subject to a variety of laws and regulations. The NHPA of 1966, as amended, is the principal legislative authority for managing cultural resources associated with NPS projects. Generally, section 106 of the NHPA requires all federal agencies to consider the effects of their actions on cultural resources listed and/or determined eligible for listing in the National Register. Such resources are termed “historic properties.” In addition, the NHPA requires that federal agencies take action to minimize harm to historic properties that could potentially be adversely affected by a federal undertaking. Agencies must consult with the SHPO; Tribal Historic Preservation Officer, if applicable; the Advisory Council on Historic Preservation (ACHP), as required; and other interested parties in an effort to avoid, minimize, or mitigate adverse effects. Agreement on mitigation of adverse effects on historic properties is reached through consultation with relevant agencies, including the SHPO, the Tribal Historic Preservation Officer, and ACHP, where appropriate.

In addition, NPS is charged with the protection and management of cultural resources in its custody. This is furthered through the implementation of Director’s Order 28 (NPS 1998a), *NPS Management Policies 2006* (NPS 2006), and the 2008 NPS Programmatic Agreement with the ACHP and the National Conference of State Historic Preservation Officers (NPS 2008). These documents charge NPS managers with avoiding, or minimizing to the greatest degree practicable, adverse or other negative impacts on park resources and values. Although NPS has the discretion to allow certain impacts in parks, that discretion is limited by the statutory requirement that park resources and values remain unimpaired, unless a specific law directly provides otherwise.

## **METHODOLOGY AND ASSUMPTIONS**

CEQ regulations and Director’s Order 12 (NPS 2011a) call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the potential impact. Any resultant reduction in impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. Cultural resources are nonrenewable resources and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss in the integrity of the resource that can never be recovered. NPS guidance for evaluating impacts, the NPS NEPA Handbook (NPS 2015a), requires that impact assessment be scientific, accurate, and quantified to the extent possible. For cultural resources, it is rarely possible to measure impacts in quantifiable terms; therefore, impact assessment must rely heavily on the professional judgment of resource experts. The analyses of effects on cultural resources that are presented in this section respond to the requirements of NEPA. A separate assessment of effect under section 106 is being conducted separately, but concurrently with the NEPA effort.

## **SECRETARY OF INTERIOR STANDARDS: RELATION TO ASSESSING EFFECTS**

The Secretary of the Interior’s *Standards for the Treatment of Historic Properties* (NPS 2005) and its guidelines apply in general to all of the action alternatives to correct life, safety, and accessibility deficiencies. Work, which would be done in accordance with the standards, particularly in areas of least significance, would be automatically assumed to have no measurable impacts on the Chateau.

Therefore, the evaluation of the impacts of the alternatives on the Chateau concentrates on any aspect of an alternative or option, which appears to require discussion, in relationship to the significance of the space, its character-defining features, and its conformance to the Secretary’s standards. The Secretary’s standards for rehabilitation are provided below.

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

## **STUDY AREA**

Of the many types of historic properties, the project has the potential to directly or indirectly impact two historic resources: the Chateau, an NHL and listed in the National Register and the Oregon Caves Historic District, of which the Chateau is a contributing component.

## **IMPACTS OF ALTERNATIVE 1: NO ACTION**

The No Action Alternative provides a continuation of current conditions with no improvements to life safety features or accessibility within the Chateau. Under this alternative, no changes to the Chateau would be made beyond current maintenance practices.

A fire emergency at the Chateau would adversely impact the long-term preservation of the building with damage from smoke, heat, and/or fire. Although the building was previously retrofitted with an interior fire sprinkler system, potential fire safety issues are still present because of inadequate fire detection system coverage, flammable or non-rated materials, and an electrical system that does not meet modern-equivalent fire codes. In addition, potential water and sewage leaks within the building as a result of plumbing failures could result in damage to the structure and historic fabric of the Chateau. Under the No Action Alternative, the existing fire suppression system, interior materials, and electrical system would remain in place. Existing levels of maintenance would continue. The implementation of the No Action Alternative potentially would result in long-term, adverse impacts on the historic features of the Chateau as a result of the increased likelihood of water or fire damage. If the Chateau were to be damaged, there would be adverse impacts on the historic district, given that the Chateau is a contributing component.

The Chateau would continue to provide limited access for persons with disabilities, and the current circulation pattern would continue under the No Action Alternative. Although guests with disabilities would not be able to access all of the areas inside the Chateau, the No Action Alternative would not change the limited access to historic features and therefore would have no impact on the Chateau or the historic district.

Under the No Action Alternative, the three-level balcony on the west elevation would not be reconstructed, and the existing steel catwalks and fire escapes would remain in place. The balconies were removed and the existing catwalks and fire escapes were constructed before the time of the Chateau's designation as an NHL and its listing on the National Register; the loss of the balconies has diminished the historic integrity of the Chateau. This adverse effect on both the historic structure and district would continue as long as the balconies are not reconstructed.

*Cumulative Impacts*

None of the past, present, and future projects included in the cumulative impact analysis would have any effect on historic structures or on the historic district; therefore, no cumulative effects would occur as a result of the No Action Alternative.

*Conclusion*

Under the No Action Alternative, continued potential for plumbing failures, inadequate fire detection system coverage, and the presence of flammable materials would continue to present a fire safety hazard for the Chateau. These adverse impacts, or the increased probability of such impacts over time, would be long term for both the Chateau and surrounding historic district. Ongoing maintenance would not prevent the potential for damage to the historic fabric of the Chateau from future leaks or a fire; however, the potential for such events is highly uncertain. There would be the potential for long-term, adverse impacts as a result of the ongoing threat to the historic structure from fire and water damage. There would be no cumulative impacts.

**IMPACTS OF ALTERNATIVE 2: PROPOSED ACTION – REHABILITATION OF THE CHATEAU  
(PREFERRED ALTERNATIVE)**

*Exterior Actions*

*Correct Exterior Life and Fire Safety Deficiencies*—Egress improvements within the Chateau would include new emergency exit doors on the exterior of the building in several locations. These new exits and improvements would include new concrete landings, metal stairways, and railings along the west side (rear) of the building and a non-historic vestibule on the first basement would be removed. Alterations of windows and doors would slightly alter the historic fenestration patterns of the building; however, the majority of these actions would occur on the west elevation, a secondary elevation of the building, and/or would remove/replace features that are not historic. The alterations of the windows and doors would not alter the overall historic character of the building and would not alter the features or spaces that characterize the Chateau or the historic district. Therefore, there would be minimal, long-term, adverse impacts on the Chateau and historic district from these improvements.

Existing non-historic fire escapes on the first story of the north wing and the second story of the north and south wings would be removed and replaced to be compatible to the building's original fire escapes. Existing doors to the escapes would be widened and lowered to eliminate existing steps. While these doors were a later addition to the Chateau and are not historic, the widening of the doors would slightly alter the historic fenestration patterns of the Chateau, but not to a discernable degree. Removing and replacing the fire escapes would create overall long-term, beneficial impacts on the historic character of the building's exterior by eliminating a non-historic element and replacing it with a fire escape that more closely mirrors the original structure.

*Correct Exterior Visitor and Staff Accessibility Deficiencies*—To correct visitor accessibility deficiencies, an accessible ramp would be constructed at the south elevation's front/main stairs to enable visitors with disabilities access to the lobby via the main entrance. Although the addition of the ramp would alter the historic entrance of the building and change the appearance of the exterior of the building, impacts would be minimized because the ramp would be designed and constructed to be clearly differentiated from the historic structure to avoid creating a false historical appearance. Additionally, the ramp would be as compatible as possible in terms of mass, scale, materials, and color in keeping with the Secretary of the

Interior's *Standards for the Treatment of Historic Properties* (NPS 2005) and would not destroy historic materials, features, or spatial relationships that characterize the Chateau or the historic district. The difference between the old construction and the new ramp would be clear, minimizing the long-term, adverse impact.

*Exterior Historic Reconstruction Measures*—Existing, non-historic steel catwalks on the west elevation of the building would be removed and steel-framed balconies would be constructed in the same locations as the original balconies, which were removed in 1958. The steel balconies would be covered in a wood veneer to simulate the original wood balconies and would be reconstructed in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (NPS 2005) by matching the old balconies in terms of design, color, and texture. Because the original historic fabric has been lost, the reconstruction of the balconies would create overall long-term, beneficial impacts on the visual character of the west elevation and would enhance the overall integrity of the Chateau and the historic district.

*Correct Interior Life and Fire Safety Deficiencies*—Life safety deficiency improvements would include the removal of all existing wall and ceiling fiberboard panels on all floors. The panels in the first basement and in the public areas of the first floor would be replaced with code-compliant, fire-resistant panels that would be grooved and painted to simulate the existing fiberboard panels. Replacing the fiberboard panels would have a long-term, adverse impact on the Chateau because historic fabric that is a substantial part of the building's interior character would be removed. However, the impact would be minimized because the new panels would closely match the appearance of the historic panels.

Elements to improve the fire alarm/sprinkler system and fire source mitigation would be minimally visible from the public spaces inside the Chateau or in non-significant areas but would not detract from the historic or visual integrity of the primary contributing elements. A sprinkler system and corridor fire doors were added to the Chateau in 1950. The existing sprinkler system and fire doors are not historic features, so replacing and/or upgrading the sprinkler system and fire doors would not measurably impact the Chateau's historic fabric. Upgrading these systems would reduce the potential for damage to or loss of historic fabric during a fire emergency, resulting in a long-term, beneficial impact on the Chateau.

Adding the handrail and enclosing of the open risers with glass on the main staircase would slightly alter its historic design and materials and would cause a minimal, long-term, adverse impact on important character-defining features of the Chateau. Modifying the closed riser profiles would restore the original configuration of the staircase in these locations, resulting in a small, long-term, beneficial impact.

All proposed egress improvement activities in the interior of the third basement and second basement, including the demolition of the internal stairs, would occur in areas of least significance or of non-defining features in general and would have no measurable impact on the historic character of the Chateau.

*Overall Interior Building Construction Improvements and Utility Upgrades*—Overall building construction improvements and utility upgrades either would not be visible from the public spaces inside the Chateau or would occur in non-significant areas and would not detract from the historic or visual integrity of the primary contributing elements. Improvements to these elements, including prevention of leaks and water system failures, would reduce the potential for damage to or loss of historic fabric in the future and would have substantial, long-term, beneficial impacts on the Chateau.

*Correct Interior Public and Staff Accessibility Deficiencies*—Adding the elevator and shifting the location of the registration desk would change the historic configuration of the lobby area, one of the most historically significant spaces of the Chateau’s interior and would have a substantial, long-term, adverse impact on the Chateau from the alteration of the distinctive spatial relationship in the lobby. The construction of the elevator would alter character-defining features of the lobby and intrude on the historically significant public space. The elevator would be located adjacent to enclosed offices and would be in keeping with the overall design and character of this area, including maintaining the openness of the lobby. The elevator at this location would also minimize the impact on the historic fabric of the coffee shop and dining room on the first basement because the elevator would be located at the current location of the men’s room, an area of secondary significance. On the second basement, the elevator would be located in an area of least significance and adverse impacts would be minimal in this location.

Accessible public restrooms would be constructed in the current bar/lounge areas of the first basement. Originally a dance floor, this area was altered to accommodate the bar/lounge and is considered an area of secondary significance. Although the construction of the restrooms would alter the historic configuration of the first basement, this area had been previously altered and is not of primary significance. Therefore, the construction of the restrooms would result in no measurable impact on the Chateau. All staff accessibility deficiency improvements would occur in areas of least significance and would have no measurable impacts on the historic character of the Chateau.

Under Alternative 2, the Chateau would continue to operate as a hotel and additional accessibility deficiencies would be corrected to accommodate overnight guests. As indicated above, impacts on historic structures from life safety deficiencies and accessibility improvements common to all action alternatives would be long term and both adverse and beneficial and range from minimal to substantial in terms of the overall historic context of the Chateau.

#### *Alternative 2 – Specific Actions*

*Correct Exterior Life and Fire Safety Deficiencies*—Removing the fire escapes and installing the windows would have a long-term, beneficial impact on the historic integrity and character of the Chateau and historic district from the removal of a non-original feature and would return the windows to their historic configuration, restoring an original feature of the Chateau.

*Correct Interior Life and Fire Safety Deficiencies*—The removal of the fiberboard panels in the guest rooms of the first, second, and third floors would result in the loss of historic fabric and a character-defining feature of the Chateau, resulting in substantial, long-term, adverse impacts. The panels would be replaced with similar-looking panels, maintaining the overall character of the guest rooms and reducing the flammable material, should a fire occur. These actions would reduce the intensity of the overall long-term, adverse impact.

A new interior stair would be built between the second and third floors, requiring the removal of a guest restroom and a storage closet and the construction of new restrooms in Rooms 205 and 206. Rooms 305 and 311, which had been previously used as emergency egress areas, would be restored as guest rooms, resulting in a long-term, beneficial impact from restoration of the original use of the rooms. Impacts from the construction of the new stairs would affect the historic fabric and original floor plan of the Chateau. However, these actions would occur in areas of secondary significance and would result in no measurable impacts.

*Correct Interior Public and Staff Accessibility Deficiencies*—In addition to the construction of the elevator, under Alternative 2, a ramp would be installed on the north side of the main staircase and all doorways would be widened and restrooms modified for accessibility. New room doors would match existing doors, and existing lavatories would be salvaged and reinstalled. Efforts have been made during preliminary design to minimize impacts on the configuration of the lobby and its historic fabric by hiding the ramp behind the north side of the staircase and an existing wall to ensure the improvements occur in accordance with the Secretary of Interior’s *Standards for Rehabilitation* and avoid altering the features, spaces, and spatial relationship of the first floor. Alterations to the guest rooms would occur in areas of secondary and least significance. These actions would not diminish the overall aesthetic and historic integrity of the Chateau.

#### *Cumulative Impacts*

None of the past, present, and future projects included in the cumulative impact analysis would have any adverse impacts on historic structures or the historic district; therefore, no cumulative impacts would occur under Alternative 2.

#### *Conclusion*

There would be both beneficial and adverse impacts on the Chateau and historic district under Alternative 2. Actions that alter the character-defining space of the Chateau, such as the elevator, would result in substantial, long-term impacts, while fire and safety modifications would result in minimal or no measurable, long-term impacts because they would be in areas of secondary significance or would restore historic features. The utility and fire safety improvements would prevent future damage from leaks or fire hazards and would have substantial, long-term benefits on the Chateau. Overall, the Chateau would continue its historic use as a hotel but with improved accessibility for visitors and improved building protection from fire events, resulting in substantial, long-term benefits. There would be no cumulative impacts.

### **IMPACTS OF ALTERNATIVE 3: CONVERSION OF THE CHATEAU TO A DAY USE FACILITY**

Under Alternative 3, the Chateau would only operate as a day use facility, and all overnight functions would cease. As described under *Elements Common to all Action Alternatives*, public access would occur on the first floor and first basement only. Impacts from these elements would be the same as those described under Alternative 2, above.

The Chateau would lose its historic function as a hotel, a use that has been continuous since its construction in 1934. The use of the Chateau as a day use facility would change the character of the property’s use that is fundamental to its historic significance and would result in a substantial, long-term, adverse impact. Because the guest rooms and their associated corridors would not be in use under Alternative 3, all the original fiberboard panels in these areas would be removed, but not replaced, altering the character-defining features of the corridors and rooms. As a day-use facility, there could be the potential for adverse impacts on the historic structure and fabric as a result of non-use of the upstairs portions of the Chateau, such as water damage from leaks not detected early. Minimal maintenance and inspections could be conducted in unused areas to help prevent deterioration, limiting the adverse effect. The change in the property’s historic use and the removal of the fiberboard would result in substantial, long-term, adverse impacts on the Chateau.

### *Cumulative Impacts*

None of the past, present, and future projects included in the cumulative impact analysis would have any effect on historic structures or the historic district; therefore, no cumulative impacts would occur under Alternative 3.

### *Conclusion*

Similar to Alternative 2, both long-term, beneficial and long-term, adverse impacts would result under Alternative 3 as a result of the life safety and accessibility improvements common to all action alternatives, ranging from not measurable to substantial in intensity. Alternative 3 would also create a substantial, long-term, adverse impact from the change in the historic use of the building from a hotel to a day use facility and from the addition of the elevator and removal of the fiberboard panels in the guest rooms and their associated corridors. Unlike Alternative 2, the fiberboard panels would not be replaced above the first floor and, as a result, the substantial, adverse impact would not be minimized. The elements specific to Alternative 3 would contribute to long-term, adverse impacts with the adverse impacts from the elements common to all action alternatives, resulting in overall long-term, adverse impacts on historic structures and the historic district under Alternative 3. There would be no cumulative impacts.

## **SOCIOECONOMICS**

### **METHODOLOGY AND ASSUMPTIONS**

Potential impacts were assessed based on the extent of impacts on socioeconomic resources, including social, economic, and population impacts. Analysis of possible impacts on socioeconomic resources were based on the review of existing literature and maps, information provided by NPS and other agencies, and professional judgment. This section assesses the potential effects of the proposed renovation of the Chateau.

As described under *Environmental Justice and Protection of Children* within the *Socioeconomics* section above, the ROI, and specifically Cave Junction, are low income areas. However, this project is not anticipated to have a disproportionate impact on low income populations because the entire community is low income, all workers reside throughout the community, and none of the alternatives are anticipated to result in an environmental justice impact. Furthermore, while children reside in higher concentrations in some areas of the community and also visit the park and stay at the Chateau, it is not anticipated that children would be disproportionately impacted as a result of any of the alternatives.

### **STUDY AREA**

The geographic study area for impacts on socioeconomic resources is Josephine County, Oregon, because a majority of the socioeconomic impacts associated with this project are anticipated to occur within this county. The majority of the workforce at the Chateau resides within this study area, and it is assumed that a majority of the construction workforce associated with the renovation of the Chateau would reside in this area as well. Some specialized construction workers may temporarily relocate to the ROI during the construction period; however, their relocation would be short term in nature.

### **IMPACTS OF ALTERNATIVE 1: NO ACTION**

The No Action Alternative represents the current conditions in the project areas. If the No Action Alternative were selected, NPS would respond to future needs and conditions without substantial action or policy change. Current operation and maintenance practices would continue at the Chateau. The Chateau would continue to be open from May to October, and staffing levels at peak visitation time would be expected to continue at the current level of 41 concession employees. The existing concessions contract would end no later than December 2016 and a temporary concession contract would begin in 2017. It is anticipated that no new impacts on population, sales, income, housing, employment, or government services would occur under this alternative.

#### *Cumulative Impacts*

No past, present, or reasonably foreseeable future actions have been identified that would impact socioeconomic resources in the ROI. Therefore, there would be no cumulative impacts on socioeconomic resources as a result of this alternative.

#### *Conclusion*

Under the No Action Alternative, the Chateau would not be renovated. Existing staff levels and visitation spending in the ROI would continue. No impacts on socioeconomic resources would occur, and there would be no cumulative impacts.

### **IMPACTS OF ALTERNATIVE 2: PROPOSED ACTION – REHABILITATION OF THE CHATEAU (PREFERRED ALTERNATIVE)**

During construction, the Chateau would be closed to visitors during its normal visitation season for up to two visitation seasons. This is expected to create adverse impacts on local employment since there would be no employment for the 41 concession employees at the Chateau. These impacts are anticipated to be short term in nature, lasting only during the construction period when the Chateau is closed to visitation.

When the Chateau is closed, it is anticipated that displaced concessioner workers would find work elsewhere in Josephine County because the unemployment rate in the ROI has steadily decreased between 2010 and 2015, as demonstrated in chapter 3. Impacts also would be minimized as a result of the nature of the concession contract, which is held for a 10-year period and scheduled to expire before construction would begin. Concession employees are typically aware when a contract is set to expire and anticipate they may need to look for another job if the contract is not renewed.

It is anticipated that spending associated with the employment of construction workers associated with the renovation of the Chateau would offset some of the loss in spending associated with the minimal, short-term removal of the concessioner jobs from the local economy. However, this spending would impact separate segments of the economy. For instance, those who are employed as concessioners of the Chateau spend most of their income locally, while those employed as construction workers who may not reside in the local area would spend their income on hotel stays and restaurants. It is anticipated that construction workers could be sourced from within the ROI or from Josephine County as well as outside the ROI for specialized construction needs. These construction workers would be expected to commute to and from the site each day and would not be expected to relocate as a result of this alternative. A small percentage of the construction workforce may be required to relocate to the ROI in the short term because some specialized workers may be required to fill jobs that the local workforce cannot supply. These workers

could have an impact on hotels and lodging in the ROI during this period due to their temporary residence in the ROI. However, the relatively small number of these workers would limit the beneficial impact.

The local economy may be impacted by a change in visitor spending associated with the short-term closure of the Chateau during construction. It is anticipated that visitors may be deterred from visiting the park during the renovation of the Chateau, while visitors who would otherwise stay overnight may choose to visit and stay at alternate lodging within the ROI. This may cause a temporary, beneficial economic impact on the hotel, lodging, and campground industry in the ROI, although it is anticipated that impacts on this industry would be limited given the offsetting reduction in visitors to the park during this period. Furthermore, the retail and tourism industries would likely be impacted as a result of the short-term closure of the Chateau. It is unclear if the potential increase in those overnight visitors desiring to stay in lodging outside the park and the subsequent local spending associated with construction workers would offset the temporary loss in local income associated with the loss of 41 employed concessioners and a reduction in the number of visitors.

In the short term, the local government's tax revenue may be impacted by the reduction of visitor spending within the park and subsequent minor reduction in income taxes associated with those 41 concession employees who would not be employed for two seasons and are not able to find other work in the ROI. It is anticipated that this could have an adverse impact on local government spending on services, such as police, fire, and medical care; however, some of this impact would be offset by construction related spending, specifically the spending of construction workers within the ROI, as well as if the 41 Chateau employees are hired at another job within the ROI.

Because the Chateau has been identified as a significant potential contributor to the economic viability of the gateway community of Cave Junction, the closure of the Chateau, even in the short term could have a noticeable impact on the economy of Cave Junction. Furthermore, impacts on the community could occur because this facility represents the core operation of IVCDO. Closure of this facility in the short term would likely impact the ability to operate for two seasons and would necessitate advanced and careful planning by this organization to maintain operability through the short-term closure of the Chateau. Further economic impacts on the local community could occur as a result of this organization's short-term secession in purchases of local supplies for food service and lodging operations at the Chateau (NPS 2013b). However, visitation to the Chateau is highly seasonal, with most visitation occurring between May and October, so socioeconomic impacts would be most noticeable during the period of Chateau closure.

In the long term, the renovation of the Chateau would increase visitor use of the facility and the visitors' satisfaction with their experience at the park. As visitor use increases, it is anticipated that visitor spending would also increase, creating beneficial economic impacts on the local economy. Improving the insulation at the Chateau may also improve the viability of a longer visitor season once construction is complete, providing the potential for additional visitation and visitor spending over a longer duration that would benefit the local economy.

#### *Cumulative Impacts*

No past, present, or reasonably foreseeable future actions have been identified that would impact socioeconomic resources in the ROI. Therefore, no cumulative impacts on socioeconomics would occur as a result of this alternative.

### *Conclusion*

Renovation of the Chateau would result in short-term, adverse impacts on socioeconomic resources in the ROI as a result of the disruption in employment of the concessioner and related spending as well as the reduction in the number of visitors and visitor spending during the construction period. Short-term impacts from the reduction of 41 concessioner positions at the Chateau would be minimized by the fact that the current concessioner contract is set to expire no later than December 2016 and positions are not guaranteed beyond that timeframe. Long-term, beneficial impacts on socioeconomic resources in the ROI would occur as a result of the Chateau's increased visitation and spending over the long term. There would be no cumulative impacts.

### **IMPACTS OF ALTERNATIVE 3: CONVERSION OF THE CHATEAU TO A DAY USE FACILITY**

Under this alternative, overnight lodging in the Chateau would be discontinued. Short-term socioeconomic impacts would be similar to those described for Alternative 2 above, resulting in adverse impacts from the disruption in employment of the concessioner and related spending and the disruption in the number of visitors and visitor spending during the construction period.

Alternative 3 would result in fewer beneficial impacts on socioeconomic resources in the ROI relative to Alternative 2 because this alternative would result in the permanent reduction of 15 positions that are currently staffed by concessioners within the lodging function of the Chateau. The permanent reduction in staff would result in a subsequent reduction in income taxes to the local government and would result in a small increase in unemployment in the ROI until these 15 workers locate work elsewhere, either within (temporary increase) or outside the ROI (permanent increase). This adverse impact is offset slightly by the fact that the concessions contract is set to expire in December 2016. However, under Alternative 2, a new contract would be expected to begin again after construction at the same pre-construction employment level. Furthermore, this alternative would result in the concessioner of the Chateau purchasing fewer supplies from the local community, resulting in a long-term, adverse impact that would be most noticeable to the local economy and businesses that currently support the lodging functions of the Chateau, but would not impact the overall ROI. Finally, because the lodging function of the Chateau would be eliminated under this alternative, it is anticipated that visitor spending would be reduced as well over the long term. However the reduction in visitor spending may be offset as a result of visitors relocating their overnight stays to other locations in the ROI, reducing the overall adverse impact.

### *Cumulative Impacts*

No past, present, or reasonably foreseeable future actions have been identified that would impact socioeconomic resources in the ROI. Therefore, no cumulative impacts on socioeconomic resources would occur under this alternative.

### *Conclusion*

Renovation of the Chateau would result in short-term, adverse impacts on socioeconomic resources in the ROI as a result of the disruption in employment of the concessioner and related spending and the reduction in visitation and visitor spending during the construction period. Long-term impacts on socioeconomic resources in the ROI would occur as a result of the reduction in Chateau's employees because lodging at the Chateau would be eliminated. Relative to Alternative 2, the socioeconomic impacts of Alternative 3 would be more adverse as a result of the elimination of overnight stays at the Chateau and the potential reduction in visitor spending. These impacts would be most noticeable to the local

economy and businesses that directly support the operation of overnight lodging at the Chateau. Long-term, adverse impacts on the entire ROI would be minimal. There would be no cumulative impacts.

## **VISITOR USE AND EXPERIENCE**

### **METHODOLOGY AND ASSUMPTIONS**

To assess impacts, the current uses and condition of the Chateau were considered, and the potential effects of the construction and implementation of the proposed actions on visitor use and experience were analyzed. The types of visitor experience and use/visitation that occur in the Chateau (and could be affected by the proposed actions) and the visual character of the area and noises experienced by the visitors, were considered.

### **STUDY AREA**

The study area for visitor use and experience is the Chateau. The study area for cumulative impacts analysis encompasses the entire park.

### **IMPACTS OF ALTERNATIVE 1: NO ACTION**

Under the No Action Alternative, life safety and accessibility improvements at the Chateau would not occur. Visitors would continue to experience the Chateau in its current condition, with occasional water and sewer failures. These repeated disruptions to visitors' hotel stays could result in large declines in the visitor experience. Visitors would be adversely impacted by paying for services that are not in good working order; this is a noticeable adverse effect on the visitor experience at the Chateau.

Visitors would continue to be able to stay overnight in 24 guest rooms; however, no accessible rooms would be provided. NPS staff would continue to provide tours on a regular basis. The Chateau would continue to fail to comply with contemporary fire and building codes for new construction. Visitors who are unable to be carried or walk the short distance up the entry stairs would continue to be unable to enter the Chateau, resulting in a continued substantial, long-term, adverse impact on visitor use and experience from limited accessibility. Visitor use may decline as the conditions at the Chateau decline.

#### *Cumulative Impacts*

Past and present projects that would impact visitor use and experience include the hazard tree removal program and the installation of a 50,000 gallon water tank. When hazard trees are identified, there is a short-term, adverse impact on visitor use from the noise associated with tree removal but a long-term benefit from the removal of a tree that could potentially fall and damage visitors' property (vehicles) or harm visitors. The installation of a 50,000 gallon water tank improved potable water to the Chateau, benefitting visitor experience during period of water failures. Future projects that could contribute to cumulative impacts include the replacement of water distribution lines and hydrant replacements, which would result in short-term, adverse impacts during construction because of the noise associated with the operation of construction equipment. Additionally, the restoration of the scenic vista would include short-term, adverse impacts during tree removal, but long-term, beneficial impacts from the improved viewshed. When combined with the long-term, adverse impacts under Alternative 1, cumulative impacts on visitor use and experience would be long term and adverse, with the No Action Alternative contributing noticeable adverse impacts to overall cumulative impacts.

### *Conclusion*

Implementation of the No Action Alternative would result in long-term, adverse impacts on visitor use and experience resulting from continued failing utilities and a lack of visitor accessibility to the Chateau. Adverse impacts could be substantial. Cumulative impacts on visitor use and experience would be long-term and adverse, with the No Action Alternative contributing noticeable adverse impacts on overall cumulative impacts.

### **IMPACTS OF ALTERNATIVE 2: PROPOSED ACTION – REHABILITATION OF THE CHATEAU (PREFERRED ALTERNATIVE)**

#### *Elements Common to All Action Alternatives*

Under Alternative 2, the Chateau would be closed during the rehabilitation and repair construction period, which is expected to last up to two visitor seasons. Construction activities associated with Alternative 2 would add noise pollution from operating heavy machinery and air pollution (dust and exhaust) from operating construction vehicles. The Chateau is not located in a populated area, and noise from construction activities would not be expected to be noticeable to neighbors; however, people visiting the caves or other facilities at the park, such as the visitor center, would experience noise from construction activities. Impacts on air quality would be minimal since the exterior work would not involve a lot of soil disturbance or idling construction equipment. Some dust could be created during the work on the fire escapes, windows, catwalks, and ramp construction. These impacts would be expected to dissipate and would not impact a wider area. Construction activities associated with Alternative 2 would therefore have short-term, adverse impacts on visitor use and experience during the closure period.

Furthermore, visitors would be unable to experience the Chateau for up to a maximum of two full seasons during the construction period. Visitors would not be able to stay overnight in the park and experience the area after day visitors have left the monument. Visitors would have to drive 20 or more miles for lodging, either in Cave Junction or Grants Pass. All visitation would be limited to day use only. This change would have an adverse effect on visitor use and experience. The visitor center (Chalet) would remain open during this time, providing restroom facilities and limited food service.

Following completion of construction, accessibility improvements, such as the addition of an entry ramp and elevator and retrofitting of doors, would enable all visitors to use the main floor and first basement areas, including food services and accessible public restrooms. The improved fire alarm/sprinkler system, fire source mitigation, and improved means of building egress would improve visitors' safety, as described under *Human Health and Safety*. Water system upgrades would reduce the frequency of water system failures. Alternative 2 would therefore have substantial, long-term, beneficial impacts on visitor use and experience.

#### *Alternative 2 – Specific Actions*

Under Alternative 2, repairs to the second and third floors would enable visitors to continue to use those areas of the Chateau for overnight lodging. Accessibility improvements to the first floor, including the conversion of all five first floor guest rooms to accessible rooms and the addition of a ramp from the first floor lobby to the first floor guest rooms, would make overnight lodging available to visitors with mobility impairments. Two additional guest rooms would be available for overnight use, increasing the Chateau capacity from 24 to 26 guest rooms; this would be a benefit for visitors because the Chateau is often fully booked during times of peak visitation. Construction at the Chateau may impact the experience

for day use visitors enjoying a meal at the coffee shop or dining room, depending on where in the building the construction was occurring and the level of dust and noise.

However, once all construction is complete, Alternative 2 would enable a larger number and greater diversity of visitors to experience the Chateau. Furthermore, insulation to interior walls, exterior walls, and ceilings likely would be added, improving thermal and sound comfort for visitors. Alternative 2 would therefore result in long-term, beneficial impacts on visitor use and experience.

#### *Cumulative Impacts*

Impacts on visitor use and experience from cumulative actions would be similar to those described for Alternative 1 above. When combined with the impacts from past and present projects, such as the hazard tree removal program and water tank installation, and future projects, such as the replacement of distribution lines and hydrant replacements and scenic vista restoration, Alternative 2 would have long-term, beneficial cumulative impacts, with Alternative 2 contributing noticeable beneficial impacts to the overall cumulative impact.

#### *Conclusion*

Implementation of Alternative 2 would result in short-term, adverse impacts on visitor use and experience as a result of construction activities and the related closure of the Chateau for up to two seasons. There would be long-term, beneficial impacts on visitor use and experience for people with mobility impairments because they would be able to access the Chateau and overnight lodging areas. There would also be long-term, beneficial impacts for visitors generally because of the increased amenities and addition of two guest rooms. Cumulative impacts on visitor use and experience would be short term, adverse and long term, beneficial, with Alternative 2 contributing noticeable beneficial impacts.

### **IMPACTS OF ALTERNATIVE 3: CONVERSION OF THE CHATEAU TO A DAY USE FACILITY**

Impacts on visitor use and experience under Alternative 3 would be similar to those described under *Elements Common to All Action Alternatives*. Construction activities would have short-term, adverse impacts on visitor use and experience from construction-related noise and vehicle emissions, along with the closure of the Chateau for up to two visitor seasons. Following construction, accessibility improvements to the first floor lobby and basement areas would result in long-term, beneficial impacts on visitor use and experience by enabling a larger and more diverse group of visitors to experience these areas of the Chateau. Improvements to provide for greater life and fire safety and utility upgrades would likewise result in long-term, beneficial impacts from improved fire protection and reliable water and sewer systems.

A longer operating season may be considered if the Chateau were a day use facility, resulting in potential long-term, beneficial impacts for day use visitors. However, Alternative 3 would have overall noticeable, long-term, adverse impacts on visitor use and experience because visitors would no longer be able to stay overnight in the building and would not be able to view as much of the interior of the building. Food services and restroom facilities would still be available to visitors; however, there would be no overnight facilities within 45 minutes of the Chateau. As a result, overall visitation at the park may be reduced.

#### *Cumulative Impacts*

Impacts on visitor use and experience from cumulative actions would be similar to those described under the No Action Alternative. When combined with the impacts from past and present projects, such as the

hazard tree removal program and water tank installation, and future projects, such as the replacement of distribution lines and hydrant replacements and scenic vista restoration, Alternative 3 would have long-term, beneficial cumulative impacts. Alternative 3 would contribute an adverse impact to overall cumulative impacts.

### *Conclusion*

Implementation of Alternative 3 would result in short-term, adverse impacts on visitor use and experience as a result of construction activities and closure of the Chateau, similar to Alternative 2. There would be long-term, beneficial impacts from improved fire prevention measures and improved access to the first floor lobby and first basement areas. Day use visitors would experience long-term, beneficial impacts from a longer operating season and reliable water and sewer services; however, the overall visitor population would experience noticeable, long-term, adverse impacts from the closure of overnight lodging at the Chateau.

## **HUMAN HEALTH AND SAFETY**

### **METHODOLOGY AND ASSUMPTIONS**

The analysis of public safety considers risks to NPS staff and the general public that are associated with hazards in the project area, as well as the proposed life safety and accessibility improvements. Impacts for this resource area were analyzed qualitatively, using information provided by the project architects and NPS staff familiar with the current operation and maintenance within the project area.

### **STUDY AREA**

The study area for human health and safety is the Chateau. The study area for cumulative impacts analysis encompasses the park.

### **IMPACTS OF ALTERNATIVE 1: NO ACTION**

*Correct Life and Fire Safety Deficiencies*—Under the No Action Alternative, life and fire safety deficiencies would not be corrected. All existing fiberboard finishes, which are flammable, would remain, and the existing fire detection and suppression system would continue to provide limited coverage. The Chateau visitors and employees would remain at risk in the event of a wildland or structural fire. The existing fire escape, which is to be used in the event of an emergency, would continue not to comply with contemporary building codes for new construction. The utilities, including electrical, water, and sewer systems, would continue to be antiquated and experience failure events. While the Chateau would continue to be inspected each year and would be required to pass inspection to operate, the building would not meet contemporary building codes for new construction, resulting in long-term, adverse impacts on human health and safety.

*Correct Visitor and Staff Accessibility Deficiencies*—Under the No Action Alternative, the Chateau would continue to be inaccessible to persons in wheelchairs or otherwise limited in mobility. For those visitors with limited mobility who are nonetheless able to enter the first floor of the Chateau, there would continue to be no accessible restrooms or food services available. Because of physical limitations that preclude universal accessibility in the Chateau, long-term, adverse impacts on accessibility would continue under the No Action Alternative.

### *Cumulative Impacts*

Past and present projects with the potential to impact human health and safety include fire management, water tank installation, and hazard tree removal. These projects contribute long-term, beneficial impacts on human health and safety by removing potential hazards from fire and falling trees and provide an improved source of water to respond to fires. When combined with the long-term, adverse impacts on human health and safety, including accessibility, from the No Action Alternative, overall cumulative impacts would be long term and adverse. The No Action Alternative would contribute a noticeable adverse impact to overall cumulative impacts.

### *Conclusion*

Implementation of the No Action Alternative would result in long-term, adverse impacts on human health and safety from the continued presence of life and fire safety and accessibility deficiencies within the Chateau, including water and sewer leaks, flammable materials, and limited sprinkler coverage. Overall cumulative impacts would be long term and adverse, with the No Action Alternative contributing a noticeable adverse impact to overall cumulative impacts.

## **IMPACTS OF ALTERNATIVE 2: PROPOSED ACTION – REHABILITATION OF THE CHATEAU (PREFERRED ALTERNATIVE)**

### *Elements Common to All Action Alternatives*

Under Alternative 2, fire and life safety deficiencies throughout the Chateau would be corrected. To prevent fires, all flammable fireboard finishes would be removed. In common areas, these finishes would be replaced with non-flammable materials, reducing the potential fire risk. Additional upgrades would be completed, including the upgrades to the kitchen and staff dining room exhaust and ventilation systems and building-wide electrical system upgrades. These measures would reduce fire risk within the Chateau, providing a long-term, beneficial impact on visitor and employee safety.

The existing fire suppression system would be upgraded to better identify fires and quickly alert building occupants and the local fire department. Sprinkler upgrades would be implemented to extinguish fires quicker, and fire separation walls would be added throughout the building to contain fires or substantially slow the spreading of fires between areas of the building. These improvements would have beneficial impacts in the event that a fire ignites in the building.

Egress improvements, including widening egress doors, would be made throughout the building making it easier for visitors and employees to quickly exit the building during a fire emergency. These improvements would have beneficial impacts in the event that a fire ignites in the building.

In the event of a fire emergency, all occupants would be quickly alerted and able to exit the building quickly and safely. The fire department would be alerted automatically, and fire suppression and containment measures would reduce the potential spread and limit fire damage. Life and fire safety improvements to the Chateau would therefore result in long-term, beneficial impacts on visitor and employee safety.

*Correct Visitor and Staff Accessibility Deficiencies*—Under the elements common to all action alternatives, accessibility throughout the Chateau would be improved. A pedestrian path and entry ramp would provide accessible entry to the main (first) floor of the Chateau, providing ABA-compliant access to the entrance and first floor. An elevator extending from the first floor to the second basement would

improve access for both visitors and employees, providing ABA access to food service and gift shop areas not previously accessible. The registration desk would be shifted toward the entry and would have a lowered portion for visitors in wheelchairs, improving the interaction with staff while checking in and out. On the first basement level, accessible public restrooms would be created in the gift shop area. In the coffee shop, accessibility improvements would provide space for wheelchair access at the counter.

In employee areas of the Chateau, accessibility improvements would include lever handle hardware on dorm and toilet doors, accessible restrooms, and construction of an accessible ramp in the storage and staff lounge area, improving the overall accessibility in those areas.

The accessibility improvements to the visitor and employee areas of the Chateau that would take place under all action alternatives would result in long-term, beneficial impacts on accessibility on multiple floors of the Chateau.

#### *Alternative 2 – Specific Actions*

*Correct Life and Fire Safety Deficiencies*—Under Alternative 2, flammable finishes would be replaced throughout all guest rooms and in the public spaces in the first floor and first basement. On the second floor, new emergency exit doors would be installed to improve egress. These replacements would result in a long-term, beneficial impact on life safety by improving the fire resistance and emergency egress from the Chateau.

*Correct Visitor and Staff Accessibility Deficiencies*—Under Alternative 2, accessibility throughout the first floor would be improved because a ramp would be installed to provide access from the main floor to the guest rooms, which are currently accessed by a short flight of stairs. On the first floor, five guest rooms would be remodeled to meet accessibility requirements, including accessible restrooms, wider doors, and lever handle hardware. These improvements would result in long-term, beneficial impacts on accessibility.

Overall, Alternative 2 would result in long-term, beneficial impacts on life safety and accessibility from the improved fire resistance, detection, and suppression systems; improved egress; and accessibility throughout the first floor and first and second basement areas for visitors and employees.

#### *Cumulative Impacts*

Impacts from cumulative actions would be the similar to those described for the No Action Alternative and would result in beneficial impacts on human health and safety. When combined with the long-term, beneficial impacts on human health and safety, including accessibility, under Alternative 2, overall cumulative impacts would be long term and beneficial. Alternative 2 would contribute noticeable beneficial impacts to overall cumulative impacts.

#### *Conclusion*

Implementation of Alternative 2 would result in long-term, beneficial impacts from the reduction in fire risk, improved fire response, and improved accessibility throughout the first floor and first basement. Cumulative impacts on human health and safety would be long term and beneficial, with Alternative 2 having a noticeable beneficial contribution. Alternative 2 would contribute noticeable beneficial impacts to overall cumulative impacts.

**IMPACTS OF ALTERNATIVE 3: CONVERSION OF THE CHATEAU TO A DAY USE FACILITY**

Impacts under Alternative 3 from the *Elements Common to All Action Alternatives* would be the same as those described under Alternative 2, with long-term, beneficial impacts on human health and safety, including accessibility. Under Alternative 3, no additional life safety improvements would be included beyond those described under the elements common to all action alternatives. Wheelchair access would be provided to the public areas of the Chateau, including the first floor and first basement, but no access to the first floor rooms would be provided.

Overall impacts on human health and safety would be long term and beneficial under Alternative 3. Accessibility improvements to the first floor and first basement would result in long-term, beneficial impacts.

*Cumulative Impacts*

Impacts from cumulative actions would be the similar to those described under the No Action Alternative, resulting in beneficial impacts on human health and safety. When combined with the long-term, beneficial impacts on human health and safety, including accessibility, under Alternative 3, overall cumulative impacts would be long term and beneficial. Alternative 3 would contribute noticeable beneficial impacts to overall cumulative impacts.

*Conclusion*

Implementation of Alternative 3 would result in long-term, beneficial impacts from the reduction in fire risk, improved fire response, and improved accessibility throughout the first floor and first basement. Cumulative impacts on human health and safety would be long term and beneficial with Alternative 3 having a noticeable beneficial contribution. Alternative 3 would contribute noticeable beneficial impacts to overall cumulative impacts.

This page intentionally left blank.

## **CHAPTER 5: CONSULTATION AND COORDINATION**

This chapter describes the public involvement and agency consultation used during the preparation of the EA. A combination of activities, including internal scoping, helped guide NPS in developing this EA. This chapter provides a detailed list of the various consultations initiated during the development of the EA, as well as a list of preparers for this document.

### **PLANNING AND PUBLIC INVOLVEMENT**

#### **INTERNAL SCOPING**

Internal scoping was completed at the park on November 8, 2011, when representatives from the park, Pacific West region, and Denver Service Center and the consultant team (together, the planning team) met at the park. The planning team discussed the purpose of and need for the project, potential design alternatives that could meet these needs, and resource conditions and issues within the project area. After discussing the preliminary alternative options and the planning team determined which impact topics should be analyzed in the EA. The team also initiated plans for public involvement activities. Throughout the development of this EA, the planning team coordinated regularly to review relevant issues, discuss the development of alternatives and impact analysis, and further develop means of including agencies and the public in the planning process.

#### **PUBLIC INVOLVEMENT**

Public scoping for the EA began with the issuance of a scoping letter on April 23, 2012, and concluded May 21, 2012. A public scoping meeting was held at the Chateau on May 12, 2012, from 10:00 a.m. to 4:00 p.m. Notice of the public scoping period was posted on the Planning, Environment, and Public Comment (PEPC) website and sent to the park's mailing list. During the public scoping period, NPS received eight pieces of correspondence from the public. Six correspondences were received through the PEPC system, and two were submitted via the comment form distributed at the public scoping meeting. All commenters supported rehabilitation, and most commenters expressed specific support of alternatives that increased accessibility for individuals with disabilities and improved fire detection and suppression. Two commenters expressed concern regarding the potential use of an elevator and its impacts on the character of the building, while one commenter did not support any accessibility improvements. Three commenters recommended that the proposed project seek to support the local community and economy and recommended the establishment of a HUB Zone<sup>2</sup> to support small businesses.

The EA will be available for formal public and agency review for 30 days. Interested individuals, agencies, and organizations will be notified of its availability. The EA will be available for public review on the NPS PEPC website at <http://parkplanning.nps.gov/ORCA>. Copies of the EA also will be available at local branches of the Josephine Community Libraries system, including the Illinois Valley Branch in Cave Junction and the Grants Pass branch in Grants Pass. Copies of the document also will be provided upon request.

---

<sup>2</sup> The Historically Underutilized Business Zones (HUB Zone) program, operated by the U.S. Small Business Administration, helps small businesses in urban and rural communities gain preferential access to federal procurement opportunities <http://www.sba.gov/hubzone/>.

## **AGENCY CONSULTATION**

Coordination with state and federal agencies was conducted during the NEPA process to identify issues and/or concerns related to natural and cultural resources within the park.

### **SECTION 7 OF THE ENDANGERED SPECIES ACT**

Section 7 of the Endangered Species Act requires federal agencies to consult with USFWS regarding proposed actions to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. Six federally listed species occur within Josephine County; however, only one species, the northern spotted owl, is known to exist in the vicinity of the Chateau and is the only one expected to occur, given the habitat requirements of the other species. In March 2016, the park conducted informal consultation with USFWS for this project. The USFWS confirmed no adverse effect to spotted owls would be anticipated with the implementation of mitigation measures. Mitigation measures include:

1. Use of only low noise construction methods outside and inside the building, including laying the foundation for the external balconies, during the non-nesting season for spotted owls (August 1 – March 1).
2. Require larger combined spread footings, thereby eliminating the potential risk of the contractor using the noise and vibration-producing pile driving method for constructing the foundations of the balcony's steel frames.
3. Ensure that no noise will rise to the level of a chain saw, jackhammer or rock drill by using environmentally-focused engineering design methods so as to avoid disturbance to spotted owls (during the critical breeding season, March 30- June 30) that might be within the monument at the time of construction.
4. Conduct pre-project surveys for spotted owls beginning in the spring of 2016. If spotted owls are detected, and nesting is confirmed within the disruption distance of proposed construction activities or routine park maintenance, the park would implement seasonal restrictions that limit work to outside the breeding season and re-initiate consultation with the Service to discuss additional mitigation measures.

A copy of this EA will be provided to USFWS for agency review.

### **SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT**

The proposed actions described in this EA are subject to section 106 of the NHPA, as amended (16 USC 470 et seq.). NPS initiated consultation with the Oregon SHPO and ACHP on August 18, 2010. In September 2010, ACHP declined to participate as a consulting party. NPS continued informal consultation with the SHPO in 2011, providing background information and initial alternative concepts. NPS staff from the park, Denver Service Center, and the region met with the SHPO on November 9, 2011, and September 29, 2015, to continue to discuss the proposed improvements to the Chateau. Section 106 consultation is being conducted in parallel with the NEPA process and will be ongoing until the EA is finalized. Mitigation measures agreed upon by the Oregon SHPO and NPS will be included in the FONSI.

Members of several tribes (Umpqua, Cow Creek, and Grand Ronde) have made overlapping territorial claims on broad geographic ranges that have included the park, although no tribes consulted during a cultural affiliations study mentioned the park specifically (Deur 2007). When this EA is released to the public, several members of each of these tribes will be contacted for their input, and consultation will be completed if they request it.

## **LIST OF PREPARERS**

### **US DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE**

#### *Oregon Caves National Monument and Preserve*

Vicki Snitzler, Superintendent

John Roth, Natural Resource Specialist

Laurin Huffman, Historic Architect (Ret.)

Steve Mark, Historian (Crater Lake National Park)

#### *Denver Service Center*

Rich Kagiya, Project Manager

Larry Beal, Project Manager (Ret.)

Connie Chitwood, Natural Resource Specialist

Greg Cody, Technical Specialist for Cultural Resources

James Brunese, Project Specialist

#### *Pacific West Region*

Karen Cantwell, Environmental Protection Specialist

Debbie Campbell, Construction Program Coordinator

Sueann Brown, Historic Architect

Alan Schmierer, Regional Environmental Coordinator

### **LOUIS BERGER**

Rebecca (Rudi) Byron, Project Manager/Senior Environmental Planner

Jason Medema, Deputy Project Manager/Environmental Planner

Megan Blue-Sky, Geographic Information System /Environmental Scientist

Patti Kuhn, Architectural Historian

Camilla Deiber, Architectural Historian

Larry Earle, Senior Planner (Ret.)

Chris Dixon, Environmental Planner

Julia Yuan, QA/QC/Senior Environmental Scientist

Nancy Van Dyke, QA/QC

Deborah Mandell, Editor

Coreen Johnson, Editor

This page intentionally left blank

## CHAPTER 6: GLOSSARY AND ACRONYMS

### GLOSSARY OF TERMS

**Affected environment**—The existing environment to be affected by a proposed action and alternatives.

**Area of refuge**—The National Fire Protection Association Glossary of Terms (NFPA 2014) defines an area of refuge as “an area that is either (1) a story in a building where the building is protected throughout by an approved, supervised automatic sprinkler system and has not less than two accessible rooms or spaces separated from each other by smoke-resisting partitions; or (2) a space located in a path of travel leading to a public way that is protected from the effects of fire, either by means of separation from other spaces in the same building or by virtue of location, thereby permitting a delay in egress travel from any level.

**Chateau**—Chateau at the Oregon Caves National Monument and Preserve

**Consultation**—The act of seeking and considering the opinions and recommendations of appropriate parties about undertakings that might affect properties on the National Register. Appropriate parties ordinarily include the SHPO and ACHP. Consultation is formal and procedurally oriented. Correct procedures are promulgated in 36 CFR 800.

**Council on Environmental Quality (CEQ)**—Established by Congress within the Executive Office of the President with passage of NEPA. CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives.

**Cultural landscape**—A geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

**Cultural resources**—Historic districts, sites, buildings, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or any other reason.

**Enabling legislation**—NPS legislation setting forth the legal parameters by which each park may operate.

**Environmental assessment (EA)**—An environmental analysis prepared pursuant to NEPA to determine whether a federal action would significantly affect the environment and thus require a more detailed environmental impact statement.

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

**Executive Order**—Official proclamation issued by the President that may set forth policy or direction or establish specific duties in connection with the execution of federal laws and programs.

**Finding of No Significant Impact (FONSI)**—A document prepared by a federal agency showing why a proposed action would not have a significant impact on the environment and thus would not require preparation of an environmental impact statement. A FONSI is based on the results of an EA.

**Life Safety**—Construction, structural, protection, and occupancy features necessary to minimize danger to human life from the effects of fire, structural or mechanical failure, or other building-related hazards.

**National Environmental Policy Act of 1969 (USC 432 1-4347) (NEPA)**—NEPA as amended articulates the federal law that mandates protecting the quality of the human environment. It requires federal agencies to systematically assess the environmental impacts of their proposed activities, programs, and projects, including the No Action Alternative of not pursuing the proposed action. NEPA requires agencies to consider alternative ways of accomplishing their missions in ways that are less damaging to the environment.

**National Historic Landmark**—A building, site, structure, or object that is officially recognized by the US government for its outstanding historical significance.

**National Historic Preservation Act of 1966 (16 USC 470 et seq.)**—An Act to establish a program for the preservation of historic properties throughout the nation, and for other purposes, approved October 15, 1966 [Public Law 89–665; 80 STAT.915; 16 USC 470 as amended by Public Law 91–243, Public Law 93–54, Public Law 94–422, Public Law 94–458, Public Law 96–199, Public Law 96-244, Public Law 96–515, Public Law 98–483, Public Law 99–514, Public Law 100–127, and Public Law 102–575].

**National Register of Historic Places (National Register)**—The official list of the nation’s historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service’s National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America’s historic and archeological resources.

**One-hour Fire Wall**—A fire-resistance rated wall with protected openings that restricts the spread of fire for a duration of at least one hour and extends continuously from the foundation to or through the roof, with sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall.

**Organic Act**—Enacted in 1916, the Organic Act commits NPS to making informed decisions that perpetuate the conservation and protection of park resources unimpaired for the benefit and enjoyment of future generations.

**Planning, Environment, and Public Comment**—The NPS website for public involvement. This site provides access to current plans, environmental impact analyses, and related documents on public review. Users of the site can submit comments for documents available for public review.

**Scoping**—Scoping, as part of NEPA, requires examining a proposed action and its possible impacts; establishing the depth of environmental analysis needed; determining analysis procedures, data needed, and task assignments. The public is encouraged to participate and submit comments on proposed projects during the scoping period.

**Section 106**—Refers to section 106 of the NHPA, which requires federal agencies to take into account the effects of their proposed undertakings on properties included or eligible for inclusion in the National Register and give ACHP a reasonable opportunity to comment on the proposed undertakings.

**State Historic Preservation Officer (SHPO)**—Official appointed by the governor of each state and US territory, responsible for certain responsibilities relating to federal undertakings within the state.

---

## ACRONYMS

ABA	Architectural Barriers Act
ABAAS	Architectural Barriers Act Accessibility Standards
ACHP	Advisory Council on Historic Preservation
ARG	Architecture Resource Group
CCC	Civilian Conservation Corps
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EA	environmental assessment
FONSI	Finding of No Significant Impact
GHG	greenhouse gas
HUB Zone	Historically Underutilized Business Zones
IVCDO	Illinois Valley Community Development Organization
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NPS	National Park Service
OCC	Oregon Caves Company
PEPC	Planning, Environment and Public Comment
ROI	Region of Influence
SHPO	State Historic Preservation Office
TCP	Traditional Cultural Property
USC	United States Code
USFWS	US Fish and Wildlife Service

This page intentionally left blank

## CHAPTER 7: BIBLIOGRAPHY

### Architectural Resource Group (ARG)

- 2006 *Chateau Accessibility and Safety Study, Oregon Caves Chateau Oregon Caves National Monument Cave Junction, Oregon.*

### Council on Environmental Quality (CEQ)

- 1978 “Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act.” *Code of Federal Regulations* Title 40, Parts 1500–1508. Washington DC.

### Deur, D.

- 2007 Oregon Caves National Monument. “Traditionally Associated Populations and Ethnohistory Study: A Study Performed under Contract Q9340D0030.”

### Federal Reserve Bank of Minneapolis

- 2013 “The Recession and Recovery in Perspective” webpage. Accessed on June 23, 2013. [http://www.minneapolisfed.org/publications\\_papers/studies/recession\\_perspective/index.cfm?](http://www.minneapolisfed.org/publications_papers/studies/recession_perspective/index.cfm?)

### Glanville, A.

- 2010 “National Register Nomination Form, Oregon Caves National Monument, Boundary Increase.”

### Harrison, L. S.

- 1985 “National Register Nomination Form, Oregon Caves Chateau.” National Park Service Southwest Region, Santa Fe, NM.

### Historic American Buildings Survey

- 1998 “Oregon Caves National Monument Chateau” (HABS No. OR-145A). United States Department of the Interior, Washington, DC.

### Kaiser, H. H.

- 2008 *The National Park Architecture Sourcebook*. Princeton Architectural Press, New York, NY.

### Mark, S. R.

- 1991 “National Register Nomination Form, Oregon Caves National Monument Historic District.” National Park Service, Pacific Northwest Region, Seattle, WA.

### McMurry, A.

- 1999 *Oregon Caves National Monument Historic Structures Report*. University of Oregon Historic Preservation Program, School of Architecture and Applied Arts. [http://www.nps.gov/history/history/online\\_books/orca-hsr/hsr.htm](http://www.nps.gov/history/history/online_books/orca-hsr/hsr.htm).

### National Fire Protection Association (NFPA)

- 2014 National Fire Protection Association Glossary of Terms. 2014 Edition. September 16, 2014.

National Park Service (NPS)

- Undated Technical Preservation Briefs. <http://www.nps.gov/tps/how-to-preserve/briefs.htm>.
- 1998a Director's Order 28: *Cultural Resources Management Guidelines*. National Park Service, Washington, DC.
- 1998b National Register Bulletin 38, *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. <http://www.nps.gov/history/nR/publications/bulletins/nrb38/>.
- 2000a Director's Order 47: *Soundscape Preservation and Noise Management*. National Park Service, Washington DC
- 2000b Director's Order 42: *Accessibility for Visitors with Disabilities in National Park Service Programs and Services*. National Park Service, Washington, DC.
- 2005 Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation*, the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Treatment of Cultural Landscapes*, and the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. <http://www.nps.gov/tps/standards/four-treatments/treatment-guidelines.pdf>.
- 2006 *NPS Management Policies 2006*. <http://www.nps.gov/policy/MP2006.pdf>.
- 2008 Programmatic Agreement Among the National Park Service (U.S. Department of the Interior), 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.
- 2011a Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-Making.
- 2011b *Economic Benefits to Local Communities from National Park Visitation, 2011*, by Yue Cui, Ed Mahoney, and Teresa Herbowicz. Department of Community, Agriculture, Recreation and Resource Studies Michigan State University East Lansing, Michigan 48824-6446. <http://www.nature.nps.gov/socialscience/docs/NPSSystemEstimates2011.pdf>
- 2013a Email from John Roth, NPS, to Rudi Byron, The Louis Berger Group, June 12, 2013.
- 2013b Oregon Caves website. <http://www.nps.gov/orca>. National Park Service, Washington, DC.
- 2013c Project Identification - PMIS 150025. Project Title: Correct Life Safety and Other Deficiencies in the NHL Oregon Caves Chateau.
- 2015a *National Park Service NEPA Handbook*. Washington, DC. September 2015.
- 2015b National Park Service Social Sciences Branch. Visitor Spending Effects – Oregon Caves National Monument. June 24, 2015.

- 2015c Summary of Visitor Use by Month and Year, 2005–2014. Accessed October 22, 2015. [https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Summary%20of%20Visitor%20Use%20By%20Month%20and%20Year%20\(1979%20-%20Last%20Calendar%20Year\)?Park=ORCA](https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Summary%20of%20Visitor%20Use%20By%20Month%20and%20Year%20(1979%20-%20Last%20Calendar%20Year)?Park=ORCA).
- 2015d Personal communication with John Roth, Natural Resource Specialist at Oregon Caves National Monument and Preserve. July 8, 2015.
- 2016 Personal communication with John Roth, Natural Resource Specialist, Oregon Caves National Monument and Preserve. Comments on Internal Draft EA. January 22, 2016.
- 2016 Personal Communication. Vicki Snitzler, Superintendent, Oregon Caves National Monument and Preserve. February 9, 2016.

Parker, P. L. and T. K. King

- 1998 National Register Bulletin 38, *Guidelines for Documenting and Evaluating Traditional Cultural Properties*. US Department of the Interior, National Park Service, National Register, History and Education, National Register of Historic Places, Washington, DC.

US Access Board

- 2004 *Architectural Barriers Act Accessibility Guidelines*. July 23, 2004. <http://www.access-board.gov/ada/>.

US Census Bureau

- 2000 Table DP-1-Geography: Profile of General Population and Housing Characteristics: 2000. Summary File 1. Geographies: State of Oregon; Josephine County, OR; Grants Pass, OR; Cave Junction, OR; United States.
- 2015a 2010–2014 American Community Survey Demographics and Housing Estimates.
- 2015b 2010–2014 American Community Survey Income and Poverty Estimates.

US Bureau of Economic Analysis

- 2014 Table CA25N. Total full-time and part-time employment by NAICS industry. For Geographies: State of Oregon and Josephine County, OR. For the Years 2012 through 2014.

US Bureau of Labor Statistics

- 2015 Labor Force Data by County, 2014 Annual Averages.

US Department of Commerce

- 2013 US Census on the Map. Data grab for Josephine County. Workforce Analysis.

U.S. Environmental Protection Agency

- 1998 Final Guidance for Incorporating Environmental Justice Concerns into EPA's NEPA Compliance Analyses. U.S. Environmental Protection Agency, Washington, D.C. April 1998.



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.