



Curry Village Rockfall Hazard Zone Structures Project

Environmental Assessment
July 2011



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Environmental Assessment

Yosemite National Park

Lead Agency: National Park Service

ABSTRACT

Established in 1899, Curry Village is a concessioner-operated complex of guest accommodations, employee residences, and visitor services located on the eastern end of Yosemite Valley, below Glacier Point. Much of the developed area is listed on the National Register of Historic Places as part of the Yosemite Valley Historic District.

Several sizable rockfall events have affected occupied areas of Curry Village; since 1999 these events have resulted in several injuries and damage to numerous structures in the area. After the most recent significant rockfall event, in October 2008, the National Park Service redefined and expanded the designated rockfall hazard zone at Curry Village and permanently closed visitor accommodations and concessioner employee housing units within the zone. The National Park Service erected temporary hazard fencing to deter visitors from entering the rockfall hazard zone, however, visitors are circumventing the fencing to view or use the abandoned structures. This illicit use poses a major public health and safety issue for visitors as well as park employees who patrol the site. In addition, the historic structures in the rockfall hazard zone have not been maintained since October 2008 and their condition is deteriorating.

This document presents and analyzes five alternatives for public review and comment regarding the disposition of structures in the rockfall hazard zone at Curry Village, in accordance with the National Environmental Policy Act and the National Historic Preservation Act. The No Action Alternative represents continuing the existing operation and management of the rockfall hazard zone at Curry Village. The four action alternatives are: Alternative 1 (Preferred): Remove All Structures; Alternative 2: Retain the Majority of Historic Structures; Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types; and Alternative 4: Retain Structures with Structural and Historic Integrity. These alternatives represent a reasonable range of options to satisfy the purpose of and need for the project, while also meeting all relevant legal requirements.

The National Park Service initiated public scoping for this project in February 2010. Following the release of this environmental assessment, there will be a 30-day public comment period. Please refer to <http://parkplanning.nps.gov/CurryRockfall> for the comment review period, open house dates, and to submit comments electronically.

Comments postmarked within the 30-day comment period can also be submitted to:

Mail: Superintendent, Yosemite National Park
Attn: Curry Village Rockfall Hazard Zone Structures Project
P.O. Box 577
Yosemite National Park, CA 95389

Fax: (209) 379-1294

To request a printed copy or CD of this environmental assessment (available in limited number), please email: Yose_Planning@nps.gov.

Yosemite National Park

National Park Service
U.S. Department of the Interior



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Table of Contents

Executive Summary

Chapter 1: Purpose and Need

Introduction	1-1
Project Background	1-1
Purpose of and Need for the Project	1-5
Policy and Planning Context.....	1-5
Public Scoping Process	1-10

Chapter 2: Alternatives

Description of the Alternatives	2-1
Common Assumptions for All Alternatives	2-2
The No Action Alternative	2-2
Actions Common to Alternatives 1-4.....	2-5
Actions Common to Alternatives 2-4.....	2-5
Alternative 1 (Preferred Alternative): Remove All Structures	2-6
Alternative 2: Retain the Majority of Historic Structures	2-9
Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types.....	2-12
Alternative 4: Retain Structures with Structural and Historic Integrity	2-15
Actions Considered but Dismissed	2-18
Stabilize, Mothball, and Maintain All Structures.....	2-18
Relocate Historic Structures Outside of Yosemite Valley	2-18
Retain the Nob Hill Shower House for Storage of Salvaged Materials.....	2-19
Identification of the Preferred Alternative.....	2-19
Comparison of the Alternatives.....	2-20
Environmentally Preferable Alternative	2-27

Chapter 3: Affected Environment and Environmental Consequences

Introduction	3-1
Organization of this Chapter	3-1
Resource Topics Considered in this Environmental Assessment	3-1
Resource Topics Dismissed From Detailed Analysis	3-2
Methods for Analyzing Environmental Consequences	3-5
Cumulative Impacts.....	3-8
Impairment	3-9
Impact Mitigation Measures	3-9
Natural Resources	3-10
Geohazards.....	3-10
Wildlife	3-16
Special-Status Species.....	3-20
Sociocultural Resources.....	3-31
Visitor Experience and Recreation.....	3-31
Park Operations and Infrastructure	3-37
Historic Properties	3-43
Historic Sites, Buildings, and Cultural Landscapes	3-43
Archeological Resources	3-58

Chapter 4: Consultation and Coordination

Chapter 5: List of Preparers

Chapter 6: Glossary and Acronyms

Chapter 7: Bibliography

Appendix A: Draft Memorandum of Agreement

Appendix B: Impairment Determination

Appendix C: Cumulative Plans and Projects

Appendix D: Mitigation Measures Common to all Action Alternatives

List of Figures

Figure 1-1 Map showing the Project Location and Yosemite Region 1-1
Figure 1-2 Curry Village Rockfall Hazard Zone Structures Project Area within Yosemite Valley 1-3
Figure 1-3 Detailed map of the Project Area 1-4
Figure 2-1 No Action Alternative – Bungalows (Cabins with Bath) 2-3
Figure 2-2 No Action Alternative – Bungalettes (Cabins without Bath) 2-4
Figure 2-3 Alternative 1 – Bungalows (Cabins with Bath) 2-7
Figure 2-4 Alternative 1 – Bungalettes (Cabins without Bath) 2-8
Figure 2-5 Alternative 2 – Bungalows (Cabins with Bath) 2-10
Figure 2-6 Alternative 2 – Bungalettes (Cabins without Bath) 2-11
Figure 2-7 Alternative 3 – Bungalows (Cabins with Bath) 2-13
Figure 2-8 Alternative 3 – Bungalettes (Cabins without Bath) 2-14
Figure 2-9 Alternative 4 – Bungalows (Cabin with Bath) 2-16
Figure 2-10 Alternative 4 – Bungalettes (Cabins without Bath) 2-17

List of Tables

Table 2-1 Summary of Alternatives 2-21
Table 2-2 Summary Comparison of Impacts for the No Action and Action Alternatives 2-22
Table 3-1 Special-Status Wildlife Species in Yosemite Valley 3-22

Executive Summary

Introduction

The National Park Service (NPS) has prepared an environmental assessment identifying and evaluating five alternatives for the disposition of structures within the Curry Village rockfall hazard zone. This document is intended to meet the requirements of section 102(2) (C) of the National Environmental Policy Act (NEPA) and section 106 of the National Historic Preservation Act (NHPA).

Established in 1899, Curry Village is a concessioner-operated complex of guest accommodations, employee residences, and visitor services located on the eastern end of Yosemite Valley, below Glacier Point. Much of Curry Village is listed on the National Register of Historic Places as a developed area within the Yosemite Valley Historic District.

Due to its location at the base of a steep granite cliff, Curry Village is vulnerable to rockfall and related slope movement events (e.g., rockslides, debris flows, etc.). In the last decade, several sizable rockfall events have affected occupied areas of the complex, resulting in several injuries and damage to numerous structures. Generally speaking, rockfall events at Curry Village have been more common in the past two decades than in previous years, but geological research indicates these recent rockfalls are consistent with long-term rates of rockfall debris accumulation at Glacier Point. Therefore, the recent rockfalls cannot be considered anomalous and the National Park Service recognizes that action is needed to reduce risks related to rockfall hazards at Curry Village.

After the most recent significant rockfall event, in October 2008, the NPS, in collaboration with the U.S. Geological Survey and academic geologists, redefined and expanded the designated rockfall hazard zone at Curry Village, permanently closing visitor accommodations and concessioner employee housing units within the hazard zone to all use.

Although the National Park Service has relocated some structures out of the hazard zone, 72 structures remain. The National Park Service erected temporary hazard fencing to deter visitors from entering the rockfall hazard zone, however, visitors are circumventing the fencing to view or use the abandoned structures. This illicit use in an active rockfall area poses a major risk to public health and safety for visitors, as well as park employees who patrol the site. In addition, these historic structures have not been maintained since they were closed in October 2008, and their condition is deteriorating due to environmental damage, wildlife infestation, illicit use, and other factors. This lack of maintenance is contrary to NPS cultural preservation guidelines.

Purpose and Need

The purpose of this project is to meet stated goals in NPS management policies by addressing the public health and safety risk of retaining structures in the rockfall hazard zone at Curry Village, and to address cultural resource preservation goals for these historic resources. Structures in the rockfall hazard zone at Curry Village are permanently closed to reduce potential risk to life and safety. However, visitors continue to circumvent the fencing at the site to view or use the structures, in some cases overnight. In addition, these structures have not been maintained since

October 2008 and their condition is deteriorating due to a combination of illicit use, wildlife infestation, and environmental damage, such as tree fall. As a result, the disposition of these structures within the rockfall hazard zone must be addressed to mitigate inherent safety risks associated with unauthorized visitor access to the closed rockfall hazard zone and to address the potential for further loss of historically significant structures and/or features that contribute to the Yosemite Valley Historic District.

Relationship to Other Plans

The Curry Village Rockfall Hazard Zone Structures Project Environmental Assessment is informed by the 1980 *General Management Plan*. The goals for Curry Village described in the *General Management Plan*, as amended by the 1992 *Concession Services Plan*, involve maintaining low-cost accommodations at Curry Village, providing facilities and services consistent with the historic setting of the area, and removing facilities from geologically hazardous areas “to avoid personal injury and structural damage.”

Overview of the Alternatives

The Curry Village Rockfall Hazard Zone Structures Project Environmental Assessment describes and analyzes five alternatives in Chapter 2. Upon consideration of NPS public health and safety objectives, protection of natural and cultural resources, and cost, the NPS selected Alternative 1: Remove All Structures, as the Preferred Alternative.

No Action Alternative

The No Action Alternative is required by the National Environmental Policy Act and NPS Director’s Order 12: Conservation Planning, Environmental Impact Analysis and Decision-making, to provide the baseline against which to compare the other alternatives. The No Action Alternative represents continuing the existing operations and management in the rockfall hazard zone. Actions to address public health and safety and cultural resource preservation goals are included in the action alternatives, but are not considered part of the No Action Alternative for the purposes of this assessment.

Alternative 1 (Preferred): Remove All Structures

Alternative 1 would result in the removal of all of the structures located in the rockfall hazard zone project area. The goal of this alternative is to maximize safety for park visitors and employees by removing all attractants from the active rockfall hazard zone and eliminating the need for administrative access to the site.

Alternative 2: Retain the Majority of Historic Structures

Alternative 2 would result in the stabilization, mothballing, and maintenance of all but two historic structures located in the rockfall hazard zone project area. All non-historic structures would be removed. The goal of this alternative is to retain as many historic structures as possible for potential future relocation.

Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types

Alternative 3 would result in the stabilization, mothballing, and maintenance of a representative sample of historic structures located in the rockfall hazard zone. The goal of this alternative is to maintain historic structures or a grouping of structures that are not otherwise represented in Curry Village for potential future relocation. Structures retained would be significantly associated with the founding or early history of Camp Curry and/or would represent architectural types that are nonexistent or rare outside of the rockfall hazard zone.

Alternative 4: Retain Structures with Structural and Historic Integrity

Alternative 4 would result in the stabilization, mothballing, and maintenance of structures that are considered to have both structural and historic integrity. The structures selected to remain are those that retain sufficient structural and historic integrity to warrant stabilization for potential reuse outside of the rockfall hazard zone.

Environmental Analysis

Chapter 3 of this document presents the Affected Environment and the Environmental Consequences for resource topics. The Affected Environment section describes the existing conditions of resources that could be affected by the project. The Environmental Consequences section analyzes the environmental effects associated with each of the alternatives described in Chapter 2. Table 2-1 in Chapter 2 presents a summary comparison of the environmental consequences for each alternative.

Environmentally Preferable Alternative

The Council on Environmental Quality (CEQ) regulations and the NPS guidelines require that “the alternative or alternatives which were considered to be environmentally preferable” be identified (CEQ regulations, section 1505.2). Environmentally preferable is defined as “the alternative that will promote the national environmental policy as expressed in NEPA’s section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources” (CEQ 1981).

Upon full consideration of the elements of section 101 of NEPA, Alternative 1 represents the environmentally preferable alternative for the Curry Village Rockfall Hazard Zone Structures Project. This conclusion is analyzed in detail in Chapter 2 of this environmental assessment.

Consultation and Coordination Process

Public scoping was initiated for the Curry Village Rockfall Hazard Zone Structures Project Environmental Assessment on February 22, 2010, and the National Park Service accepted public scoping comments through April 7, 2010. The park received comments from 29 individuals and 4 organizations.

Internal scoping and consultation with other government agencies and American Indian governments and organizations also informed the planning process.

The public outreach called for in section 106 of NHPA was integrated with the NEPA process described above, in accordance with the *Programmatic Agreement Among the National Park Service at Yosemite, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Planning, Design, Construction, Operations, and Maintenance, Yosemite National Park, California* (NPS 1999). The National Park Service is developing a Memorandum of Agreement with the State Historic Preservation Officer to resolve the adverse effect of the undertaking.

Chapter 1: Purpose and Need

Introduction

The National Park Service (NPS) is considering the disposition of structures in the rockfall hazard zone at Curry Village, on the east end of Yosemite Valley in Yosemite National Park (Figures 1-1 and 1-2). These structures are within an active rockfall area and have been permanently closed to use due to risks to public health and safety. Most of these structures are historic and are significant contributors to the Yosemite Valley Historic District, but they have not been maintained since their closure. The disposition of these structures needs to be addressed in order to meet NPS public safety, risk management, and cultural resource preservation goals.

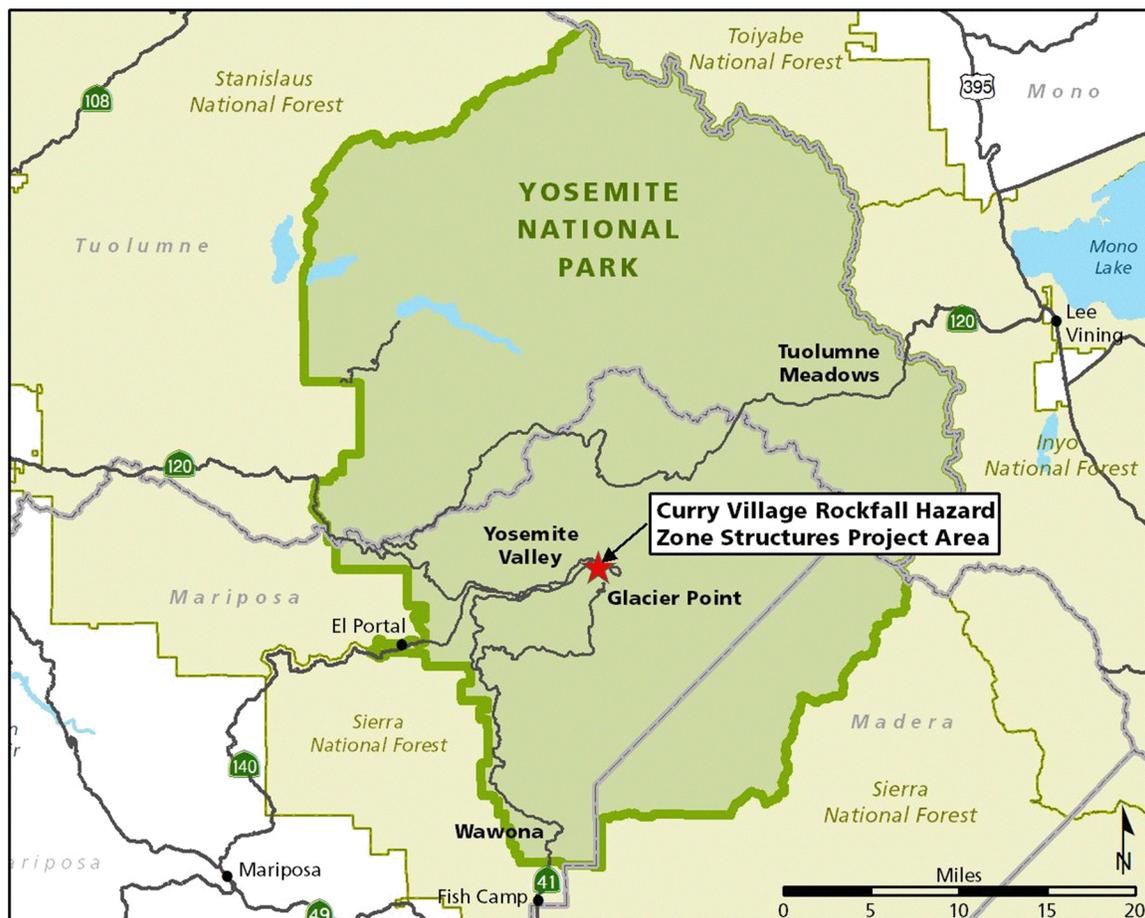


Figure 1-1 Map showing the Project Location and Yosemite Region

Project Background

Curry Village (formerly known as ‘Camp Curry’) is a concessioner-operated complex of guest and employee accommodations and visitor service structures nestled among talus boulders at the base of Glacier Point. Established in 1899, Curry Village has been in continuous operation for over 110 years. The general layout of Curry Village, with tent cabins, hard-side cabins, and amenities such as a store, pool, and ice rink, has not changed significantly since 1936 (NPS 2010a). Much of the developed area and its structures are listed on the National Register of Historic Places (NRHP) as contributors to the Yosemite Valley Historic District.

The location of Curry Village, and the layout of its structures among boulders at the foot of steep granite cliffs, is perhaps also its greatest vulnerability. Rockfall and related movement of rock (i.e., rockslides, debris flows, and rock avalanches) have affected the Curry Village area for thousands of years, and there have been numerous rockfall events in recorded history. Most recently, a series of rockfalls originating above Curry Village has led to a considerable amount of reexamination and reconsideration of the extent of rockfall hazards in the area.

Since 1999, several sizable rockfall events have affected occupied areas of Curry Village, resulting in several injuries and damage to numerous structures in the area. In late 2003, rockfall debris struck 14 occupied cabins in Curry Village. In October 2008, two rockfall events again sent debris into occupied areas of Curry Village, injuring three visitors and damaging numerous structures. Numerous smaller rockfall events have also occurred within the same timeframe but did not result in injuries or property damage.

Due to the rockfalls originating above Curry Village in 2008, the National Park Service realigned the boundary of the rockfall hazard zone at Curry Village and permanently closed all structures within this zone. This was done in collaboration with the U.S. Geological Survey and academic geologists and was based on recent research on the potential extent of rockfall hazards in the area. As a result, visitor accommodations (tent cabins and hard-sided cabins with and without a bath), associated visitor support structures (shower house, restrooms, etc.), and concessioner employee housing units at Curry Village have been permanently closed. Although some structures have been relocated from the rockfall hazard zone, 72 structures still remain within the zone (Figure 1-3).

Although the National Park Service erected temporary hazard fencing to deter visitors from entering the closure area, the remaining unoccupied structures pose an immediate danger to curious onlookers and visitors who are circumventing the fencing to view or use (e.g., camp in) the abandoned structures. In addition, these structures have not been maintained since they were closed in October 2008, and they are deteriorating as a result of environmental damage (such as tree fall and snow loading), wildlife infestation, illicit use, and other factors. This lack of maintenance is also contrary to guidance provided in NPS cultural resource preservation guidelines.

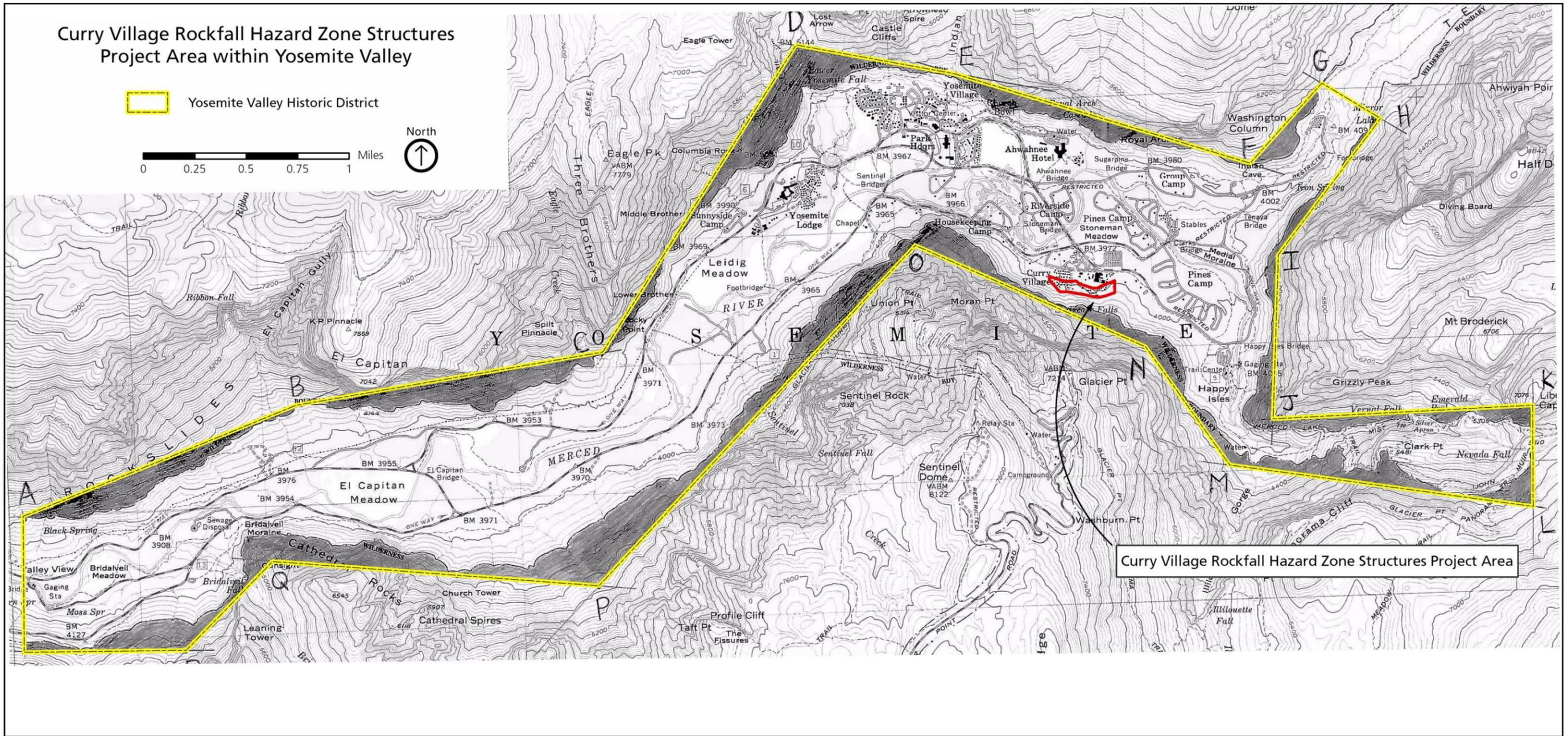


Figure 1-2 Curry Village Rockfall Hazard Zone Structures Project Area within Yosemite Valley

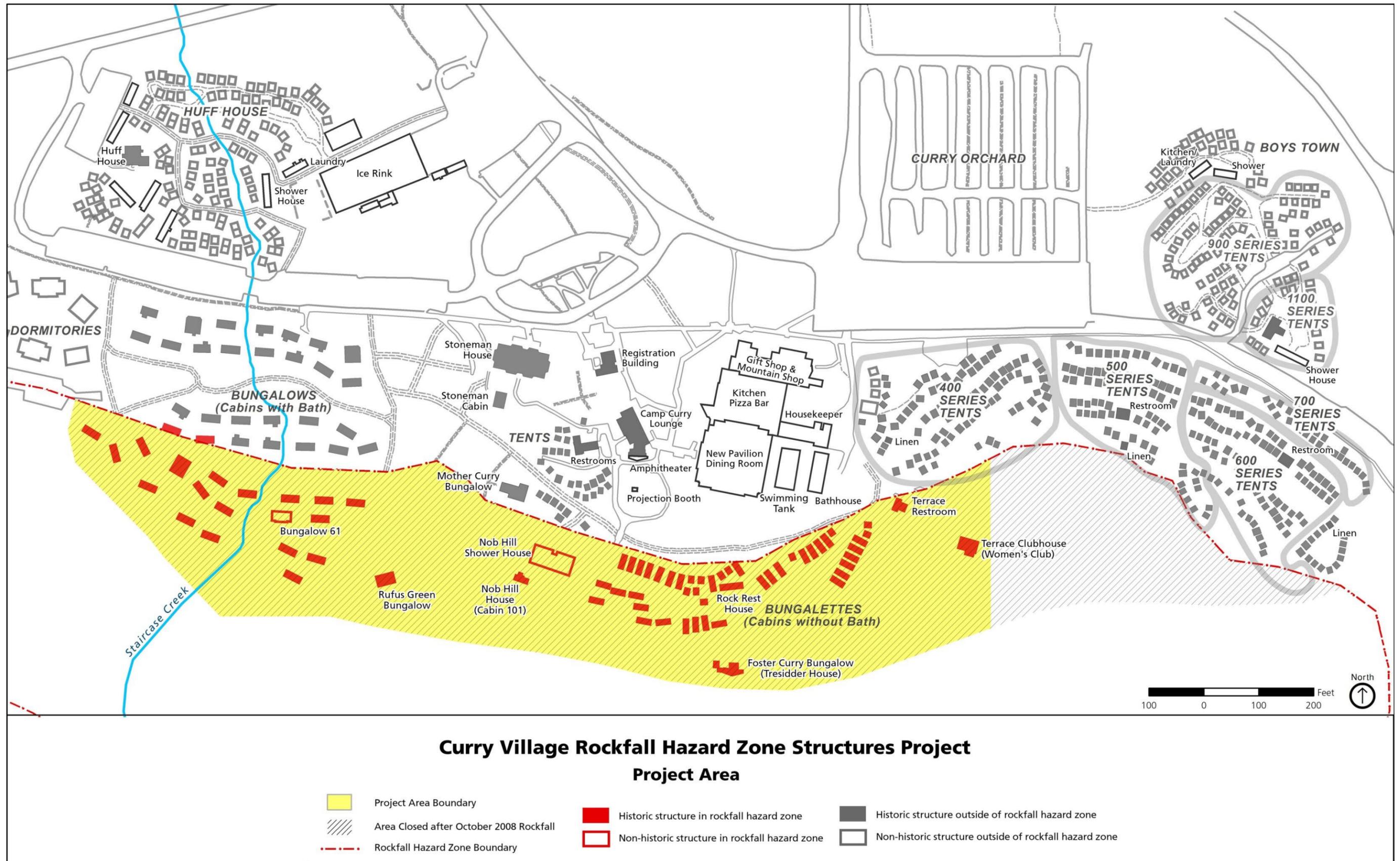


Figure 1-3 Detailed map of the Project Area

Purpose of and Need for the Project

Purpose of the Project

The purpose of this project is to meet stated goals in NPS management policies by addressing the public health and safety risk of retaining structures in the rockfall hazard zone at Curry Village, and to address cultural resource preservation goals for these historic resources. Structures in the rockfall hazard zone at Curry Village are permanently closed to reduce potential risk to life and safety. However, visitors continue to circumvent the fencing at the site to view or use the structures, in some cases overnight. In addition, these structures have not been maintained since October 2008 and their condition is deteriorating. As a result, the disposition of these structures within the rockfall hazard zone must be addressed to:

- Mitigate inherent safety risks associated with unauthorized visitor access to the closed rockfall hazard zone.
- Address the potential for further loss of historically significant structures and/or features that contribute to the Yosemite Valley Historic District.
- Identify appropriate mitigation to resolve the potential adverse effect on the Yosemite Valley Historic District.

Need for the Project

As a result of the ongoing safety risks associated with these structures and the continuing structural deterioration noted above, this project is needed because of the following:

- The abandoned structures create a nuisance that attracts curious on-lookers to an active rockfall area.
- Some visitors have circumvented the temporary hazard fencing to enter the rockfall hazard zone and the abandoned structures, thereby creating an illicit use of the abandoned structures and creating the potential for vandalism.
- Wildlife is using the buildings for nesting or foraging, which could cause further structural damage.
- The historic structures will continue to deteriorate and could be further damaged if not stabilized and maintained, or removed.

Policy and Planning Context

Several established policies and plans provide direction for management of facilities and historic properties at Yosemite National Park.

Regulations and Policies

National Park Service Organic Act

In 1916, the Organic Act established the National Park Service in order to “promote and regulate the use of parks. . .” The stated purpose of national parks is “to conserve the scenery and natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” The Organic Act establishes the management responsibilities of the National Park Service. While Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that park

resources and values be left unimpaired. It ensures that park resources and values will continue to exist in a condition that allows future generations to enjoy them. NPS Management Policies provide additional guidance on impairment of park resources and values (NPS 2006).

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

The amended NPS General Authorities Act prohibits the National Park Service from allowing any activities that would cause derogation of the values and purposes for which the parks have been established (except as directly and specifically provided by Congress in the enabling legislation for the parks). Parks also adhere to other applicable federal laws and regulations, such as the Endangered Species Act, the National Historic Preservation Act, the Wilderness Act, and the Wild and Scenic Rivers Act. To articulate its responsibilities under these laws and regulations, the National Park Service has established management policies for all units under its stewardship.

National Environmental Policy Act (1969) (42 USC 4341 et seq.)

The National Environmental Policy Act (NEPA) requires the identification and documentation of the environmental consequences of federal actions. Regulations implementing the National Environmental Policy Act are set by the President’s Council on Environmental Quality (CEQ) (40 CFR Parts 1500-1508). CEQ regulations establish the requirements and process for agencies to fulfill their obligations under the act. In compliance with the National Environmental Policy Act, this environmental assessment evaluates potential project impacts on the human environment. Compliance with the National Historic Preservation Act (NHPA) (see below) is integrated into the NEPA compliance process, using NHPA criteria for the analysis of impacts on cultural resources. The NEPA process is also used to coordinate compliance with other federal laws and regulations applicable to this environmental assessment, including but not limited to the following:

- Clean Air Act (as amended) (42 USC 7401 et seq.)
- Endangered Species Act (16 USC 1531 et seq.)
- Executive Order 11593: Protection and Enhancement of the Cultural Environment

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

Section 106 of the National Historic Preservation Act directs federal agencies to take into account the effect of any undertaking (a federally funded or assisted project) on historic properties. A “historic property” is any district, building, structure, site, or object, including any resource considered by American Indians to have cultural and religious significance, that is eligible for listing in the National Register of Historic Places because the property is significant at the national, state, or local level in American history, architecture, archeology, engineering, or culture.

Section 106 also provides the Advisory Council on Historic Preservation (ACHP) and the California State Historic Preservation Officer (SHPO) an opportunity to comment on assessment of effects by the undertaking. For this project, the National Park Service notified SHPO and ACHP of the undertaking, and consultation with SHPO is ongoing. A Memorandum of Agreement between the National Park Service, SHPO, and ACHP is in development for this project and is attached in draft form as Appendix A.

The Archeological Resources Protection Act of 1979 (16 USC 470aa-470ll)

The Archeological Resources Protection Act (ARPA) prohibits unauthorized excavation of archeological sites on federal land, as well as other acts involving cultural resources, and implements a permitting process for excavation of archeological sites on federal or Indian lands (see regulations at 43 CFR 7). The Archeological Resources Protection Act also provides civil and criminal penalties for removal of, or damage to, archeological and cultural resources. This environmental assessment evaluates potential effects on archaeological resources.

The Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 *et seq.*; see regulations at 43 CFR 10)

The Native American Graves Protection and Repatriation Act (NAGPRA) provides for the protection and repatriation of Native American human remains and cultural items and requires notification of the relevant Native American tribe upon accidental discovery of cultural items. No cultural resources covered by this act are present within the project area.

The American Indian Religious Freedom Act of 1979 (42 USC 1996)

The American Indian Religious Freedom Act (AIRFA) preserves for American Indians and other indigenous groups the right to express traditional religious practices, including access to sites under federal jurisdiction. Regulatory guidance for the American Indian Religious Freedom Act is lacking, although most land-managing federal agencies have developed internal procedures to comply with this act. Access to American Indian traditional religious practice sites is not relevant to the proposed project alternatives.

Executive Order No. 13007: Indian Sacred Sites

Executive Order 13007 directs federal agencies with statutory or administrative responsibility for the management of federal lands, to the extent practicable, permitted by law to accommodate access to and ceremonial use of Indian sacred sites by American Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. No American Indian sacred sites are present within the project area.

2006 National Park Service Management Policies

Management Policies 2006 is the basic service-wide policy document of the National Park Service. For this environmental assessment, the management policies provide guidance in two ways: first, for determining whether actions proposed by the National Park Service would impair park resources and values:

“In making a determination of whether there would be an impairment, a NPS decision maker must use his or her professional judgment. This means that the decision maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to that decision.

Accordingly, an impairment determination for the preferred alternative in this environmental assessment is included as Appendix B at the end of this document.

Second, the *Management Policies 2006* provide guidance specific to the public health and safety and cultural resource preservation issues addressed in the Curry Village Rockfall Hazard Zone Structures Project. The management policies state that,

Although the magnitude and timing of future geologic hazards are difficult to forecast, park managers will strive to understand future hazards and, once the hazards are understood, minimize their potential impact on visitors, staff, and developed areas. Before interfering with natural processes that are potentially hazardous, superintendents will consider other alternatives. The Service will try to avoid placing new visitor and other facilities in geologically hazardous areas. Superintendents will examine the feasibility of phasing out, relocating, or providing alternative facilities for park developments subject to hazardous processes, consistent with other sections of these Management Policies (NPS 2006a, Chapter 4).

The National Park Service will employ the most effective concepts, techniques, and equipment to protect cultural resources against theft, fire, vandalism, overuse, deterioration, environmental impacts, and other threats without compromising the integrity of the resources (NPS 2006a, Chapter 5).

The saving of human life will take precedence over all other management actions as the Park Service strives to protect human life and provide for injury-free visits. The Service will do this within the constraints of the 1916 Organic Act. (NPS 2006a, Chapter 8)

National Park Service Director's Orders

Director's Order 28 regarding cultural resources management and the accompanying *Cultural Resource Management Guideline* (NPS-28)—Chapter 8 of the guideline discusses management of historic structures, including their identification, documentation, stewardship, and use, and it states:

According to both federal law and NPS Management Policies, all historic structures in which the Service has a legal interest are to be managed as cultural resources. Regardless of type, level of significance, or current function, every structure is to receive full consideration for its historical values whenever a decision is made that might affect its integrity. Historic structures that are central to the legislated purposes of parks, especially those that are to be interpreted, may be subjects of additional, specialized efforts appropriate to their functions and significance (NPS 1998).

Director's Order 50C: Public Risk Management Program, regarding public safety and risk management, outlines a new direction for the National Park Service with increased emphasis on the prevention of visitor incidents. The policy is intended to provide standards and guidelines to improve overall injury protection. As stated in Section 8.2.5.1 of the *NPS Management Policies 2006*, the safety of human life takes precedence over all other management actions. Park managers are charged with the responsibility to mitigate hazards, protect human life, and promote injury-free visits.

Section 8.2.5.1 of Management Policies 2006 says: "The saving of human life will take precedence over all other management actions as the Park Service strives to protect human life and provide for injury-free visits. The Service will do this within the constraints of the 1916 Organic Act." Fulfilling the terms of that Act may often restrict the NPS's ability to eliminate hazards, but it is NPS policy to charge park managers with the responsibility to see reasonable measures, within available resources, to mitigate those hazards, protect human life, and promote an injury-free visit. In addition to NPS policy, NPS performance goals mandated under the Government Performance and Results Act include the requirement that NPS work

toward achieving the following goal: “Visitors safely enjoy and are satisfied with the availability, accessibility, diversity and quality of park facilities, services and appropriate recreational opportunities.” This goal includes two targeted objectives that directly relate to visitor safety: (1) reduce the number of visitor serious injuries, and (2) reduce the number of fatalities in parks.

Park Plans and Guidelines

1980 Yosemite National Park General Management Plan

The *General Management Plan* provides overall planning guidance for Yosemite National Park. The Curry Village Rockfall Hazard Structures Project Environmental Assessment is informed by the *General Management Plan*, as amended by the 1992 *Concession Services Plan* (see below).

The goals for the Curry Village area in the *General Management Plan* relate to reducing the overall footprint of development in the area and reducing safety risks and the potential for damage from rockfalls, while continuing to provide visitors with low-cost accommodations. Specific to this project, it called for eliminating tents and structures in the active rockfall zone on the south side of Curry Village. The *General Management Plan* also approved demolition of the Foster Curry Bungalow, one of the most historically significant buildings in Curry Village.

1992 Concession Services Plan

The *Concession Services Plan/Supplemental Environmental Impact Statement* presented guidance for management of concession services in Yosemite National Park to meet *General Management Plan* goals. The *Concession Services Plan* amended the *General Management Plan*; it is consistent with the *General Management Plan* regarding actions at Curry Village, with the following revisions: under the *Concession Services Plan*, the total overnight accommodations at Curry Village would be reduced.

1999 Programmatic Agreement Among the National Park Service at Yosemite, the California State Historic Preservation Officer and the Advisory Council on Historic Preservation Regarding Planning, Design, Construction, Operations and Maintenance, Yosemite National Park, California

Under the 1999 Programmatic Agreement (NPS 1999), the park has the responsibility to review most undertakings without further review by the California State Historic Preservation Officer or the Advisory Council on Historic Preservation, provided the stipulations of the agreement have been fulfilled. The agreement stipulates required consultation with the California State Historic Preservation Officer, Advisory Council on Historic Preservation, Indian tribes, and interested persons: when an undertaking may affect a National Historic Landmark, properties of national significance listed on the National Register of Historic Places, or a human burial; when an undertaking may adversely affect a traditional cultural property; or when an undertaking generates significant public controversy or involves a disagreement among the park, the California State Historic Preservation Officer, any Indian Tribe, or any Interested Persons regarding proposed use of standard mitigating measures. The agreement applies to undertakings performed by NPS lessees, permittees, concessioners, cooperators and park partners. It also requires Yosemite to “make every reasonable effort to avoid adverse effects to Historic Properties identified . . . through project design, facilities’ location or other means” and to document avoidance alternatives through the NEPA process (NPS 1999).

Merced River Comprehensive Management Plan Settlement Agreement

The Merced River, which flows north of the project area, was designated a wild and scenic river in 1987. In order to meet its resource management obligations under the Wild and Scenic Rivers Act and the Organic Act, the National Park Service initiated a comprehensive river management planning process for the Merced Wild and Scenic River corridor in 1999. The subsequent Merced River Plan (2000) and Revised Merced River Plan (2005) met legal challenges and both were rescinded. An outstanding lawsuit against these plans was settled and a legally binding Settlement Agreement was executed between the National Park Service and former plaintiffs in September 2009 (see <http://www.nps.gov/yose/parkmgmt/upload/mrpsettlementagreement.pdf>).

Pursuant to the terms of the Settlement Agreement, the National Park Service is preparing a new Merced River Plan that will inform land uses and land management decisions in the Merced Wild and Scenic River corridor within Yosemite National Park, including visitor and administrative facilities at Curry Village. Until the Record of Decision for the Merced River Plan is signed, the Settlement Agreement constrains actions that may be undertaken in much of Yosemite Valley, and therefore limits certain potential actions at Curry Village. The Settlement Agreement conditions influenced the scope of proposed actions and the alternatives for this planning effort.

According to Section E of the September 2009 Settlement Agreement, the National Park Service may undertake maintenance projects and emergency response projects intended to stabilize and protect park facilities, address visitor health and safety, and protect natural and cultural resources. The agreement further states that these actions “should not influence or predetermine the NPS analysis of user capacity or the MRP planning process.”

Accordingly, this environmental assessment does not address the number or type of accommodations available at Curry Village, and none of the alternatives under consideration would result in a change in capacity or development in Curry Village or Yosemite Valley. This project addresses the immediate need to protect life and safety at Curry Village. It does not propose the relocation of the abandoned historic structures outside of the rockfall hazard zone, but does evaluate the option of retaining historic structures within this zone for potential future relocation and/or reuse outside of the Curry Village rockfall hazard zone, dependent on the outcome of the user capacity analysis in the Merced River Plan.

Public Scoping Process

The park initiated public scoping on the Curry Village Rockfall Hazard Zone Structures Project on February 22, 2010. Information on the project was provided at park open houses in Yosemite Valley on February 24, 2010, and March 31, 2010. Scoping comments were received through April 7, 2010.

Written public scoping comments were received online through the Planning, Environment, and Public Comment website; by fax, email, and U.S. mail; and on comment forms that were distributed at open houses during the scoping period. As a result of the public scoping period, the park received 33 pieces of correspondence with 154 discrete comments, from which 38 general concern statements were generated. The concern statements were categorized and considered for incorporation in the planning process. The Public Scoping Comment Report can be reviewed online at <http://parkplanning.nps.gov/CurryRockfall>. Internal scoping and consultation with other government agencies and American Indian communities also informed the planning process. See Chapter 4, Consultation and Coordination, for more information on consultation procedures.

Issues and Concerns Addressed in this Document

The following issues were identified during the public scoping process and through input from NPS staff; Yosemite National Park concessioner Delaware North Companies, Inc. staff; and American Indian communities:

- Address the geologic hazards present in the rockfall hazard zone.
- Address the safety risks associated with structures in the rockfall hazard zone.
- Address how removal of the structures would enhance natural processes and natural resources.
- Address the effect that removal of the cabins would have on cultural and historic resources.
- Address how the significance of the area is related to its lodging function and rustic architecture.
- Address whether these cabins are historic in the sense that other Curry Village structures are historic.
- Consider the cultural significance of Yosemite Valley.
- Consider benefits to the local economy if cabins can be reused outside the park.
- Address impacts on the visitor experience from cabins decaying in the rockfall hazard zone.
- Comply with the Merced River Plan Settlement Agreement.
- Do not take action that prejudices the outcome of the Merced River Plan.

These issues are addressed in the analysis presented in Chapter 3, Affected Environment and Environmental Consequences.

Issues and Concerns Not Addressed in this Document

Issues and concerns generated through public scoping that, while relevant to the management of Yosemite National Park, would not be affected by this project, were determined to be outside the scope of this project. Issues that are beyond the scope of this project and therefore are not addressed in this environmental assessment include the following:

- preference for Curry Village lodging by some visitors
- affordability of Curry Village lodging
- availability of low-cost lodging for visitors
- reduction of visitor lodging
- availability of employee housing in Yosemite Valley

The structures considered under this environmental assessment have been permanently closed due to active rockfall in the area, and cannot be used in situ for visitor lodging or employee housing due to the safety risk from rockfall. Under the terms of the 2009 Settlement Agreement in the lawsuits concerning the Merced River Plan, these structures cannot be relocated or reused in Yosemite Valley until a new Merced River Plan is in place. Therefore, this environmental assessment addresses the immediate concerns with public health and safety in the rockfall hazard zone at Curry Village, and does not address visitor lodging or employee housing.

All comments received during the scoping period have been duly considered and are now part of the administrative record for this project.

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Chapter 2: Alternatives

This chapter describes the No Action Alternative along with four action alternatives associated with the Curry Village Rockfall Hazard Zone Structures Project, a list of assumptions common to the alternatives, alternatives considered but dismissed, a summarized comparison of the environmental consequences of each alternative, and identification of the environmentally preferable alternative.

Description of the Alternatives

This section describes five alternative approaches for the Curry Village Rockfall Hazard Zone Structures Project. The No Action Alternative would represent a continuation of the current status of the structures located within the rockfall hazard zone, while Alternatives 1 through 4 would implement specific actions to address the purpose and need described in Chapter 1. Each alternative discussion includes a summary of the overall approach, a narrative description of the alternative, and graphic maps detailing the alternative.

Determinations of historical significance for structures within the rockfall hazard zone were made through a study of the following documents:

- Camp Curry National Register of Historic Places nomination form (NPS 1979)
- Yosemite Valley Historic District National Register of Historic Places nomination form (NPS 2006)
- Camp Curry Historic District Cultural Landscape Report (NPS 2010a)
- Curry Village Cabins Historic Structure Report, 95% draft (FFA, Inc. 2011)

Determinations of structures with sufficient historic and structural integrity for potential relocation were made by study of the following conditions reports:

- Structural Condition Assessment Report: Curry Village Rockfall Hazard Zone (DOWL HKM 2010)
- Curry Village Bungalow Rapid Assessment (University of Oregon 2010)

There are 72 individual buildings within the portion of the rockfall hazard zone included in the project area. The structures are located in the Camp Curry developed area within the Yosemite Valley Historic District. A total of 69 structures are contributing resources to the Yosemite Valley Historic District: 21 bungalows with private bathrooms; 44 bungalettes, which consist of a single room with no bathrooms; 2 comfort stations (Rock Rest House and the Terrace Restroom); the Women's Club/Terrace Clubhouse; and the Foster Curry Bungalow/Tresidder House (Figure 1-3). There are two nonhistoric structures (Nob Hill Shower House [1993], Bungalow 61 [1980]) and one historic structure (Cabin 101, or Nob Hill Cabin [circa 1925]) that are considered noncontributing to the historic district.

Common Assumptions for All Alternatives

Common assumptions for all of the project alternatives for these structures include the following:

- The 2009 Settlement Agreement regarding the Merced River Plan calls for any decisions about relocation and/or reuse of facilities from the rockfall hazard zone in Yosemite Valley to be postponed until the Merced River Plan has been developed. Therefore, some action alternatives identify which structures could be maintained until the Merced River Plan is completed and a decision can be made on whether these structures could potentially be relocated and/or reused in the park, preferably to a location that would preserve their contributing status within the Yosemite Valley Historic District. A decision to continue to retain facilities under this analysis does not guarantee future relocation and reuse of the structures in Yosemite Valley or elsewhere in the park.
- Although much of the significance of the historic structures in the rockfall hazard zone is related to their arrangement and placement and their function of providing low-cost accommodations, there are some historic features and typologies of structures within the rockfall hazard zone that are not found elsewhere in Curry Village outside the rockfall hazard zone, such as the unique panel/plank frame method of construction. In addition, the architectural significance of the Foster Curry Bungalow is specifically mentioned in the Camp Curry National Register of Historic Places nomination form (NPS 1979).

The No Action Alternative

Under the No Action Alternative, all structures located within the rockfall hazard zone would remain in place. The facilities would continue to be left vacant, with no use for visitor lodging or employee housing. The National Park Service would continue to fence the rockfall hazard zone boundary to prevent entry into the facilities by visitors and would take measures to prevent wildlife from infesting structures; however, no ongoing maintenance of the facilities would occur. Although the facilities would remain in their historic context, their condition would continue to decline due to environmental damage and illicit use. This alternative would continue to require park enforcement of the area closure.

Under this alternative, the following historic and nonhistoric structures would remain in the rockfall hazard zone (Figures 2-1 and 2-2):

- 44 bungalows
- 22 bungalows
- 3 comfort stations (Nob Hill, Rock, and Terrace)
- Cabin 101(Nob Hill Cabin)
- Women's Club/Terrace Clubhouse
- Foster Curry Bungalow/Tresidder House

The No Action Alternative would be considered deliberate neglect of structures. Deliberate neglect of historic structures must be documented according to NPS Director's Order 28: Cultural Resources Management (NPS 1998) and stipulations specified in an agreement with the California State Historic Preservation Officer.

The estimated costs associated with the No Action Alternative would include the cost of documentation and other mitigations for historic structures, which would be approximately \$100,000. Remaining costs such as enforcement, fencing, and maintenance are reflected in existing operational costs and projects.

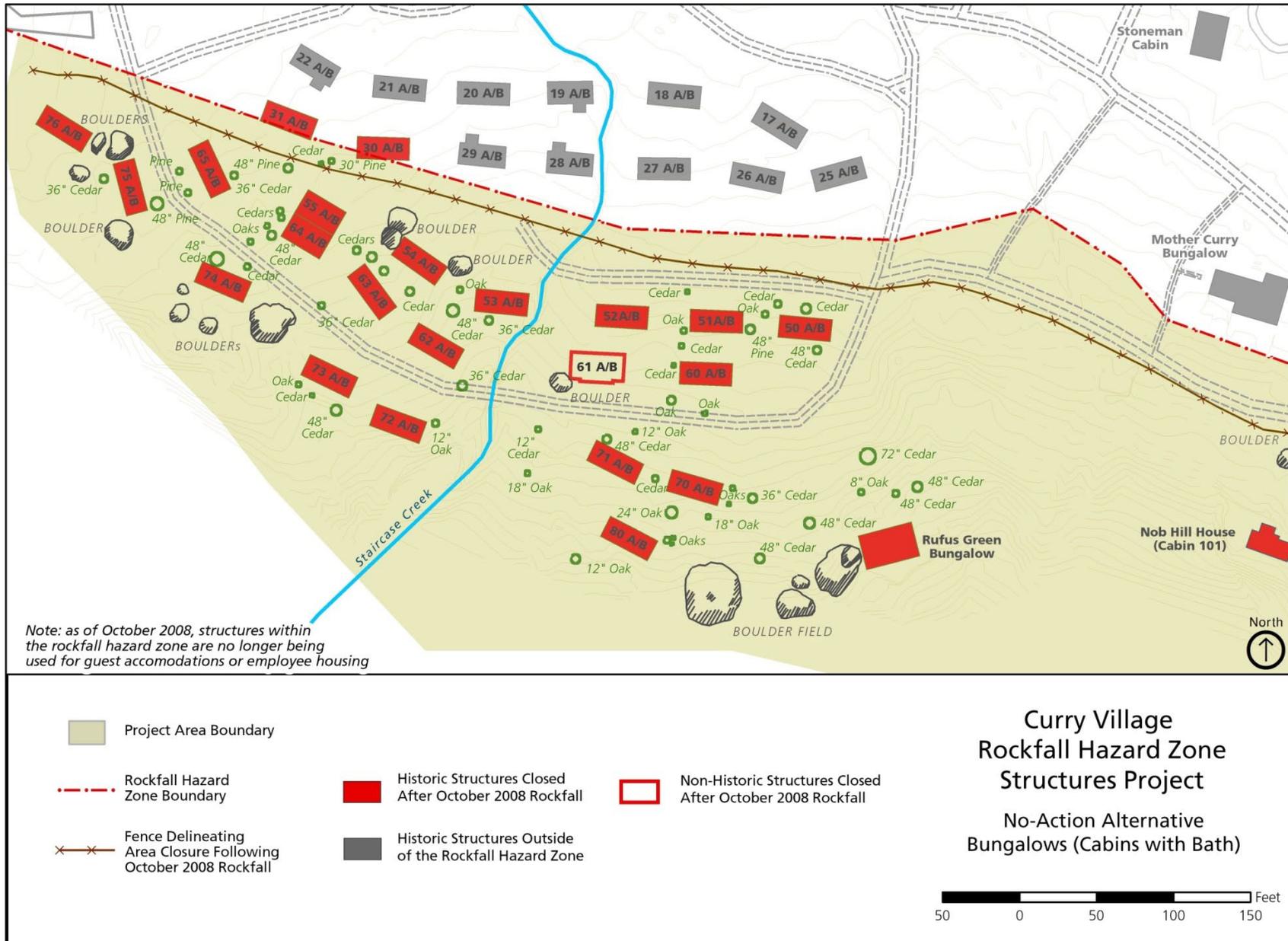


Figure 2-1 No Action Alternative – Bungalows (Cabins with Bath)

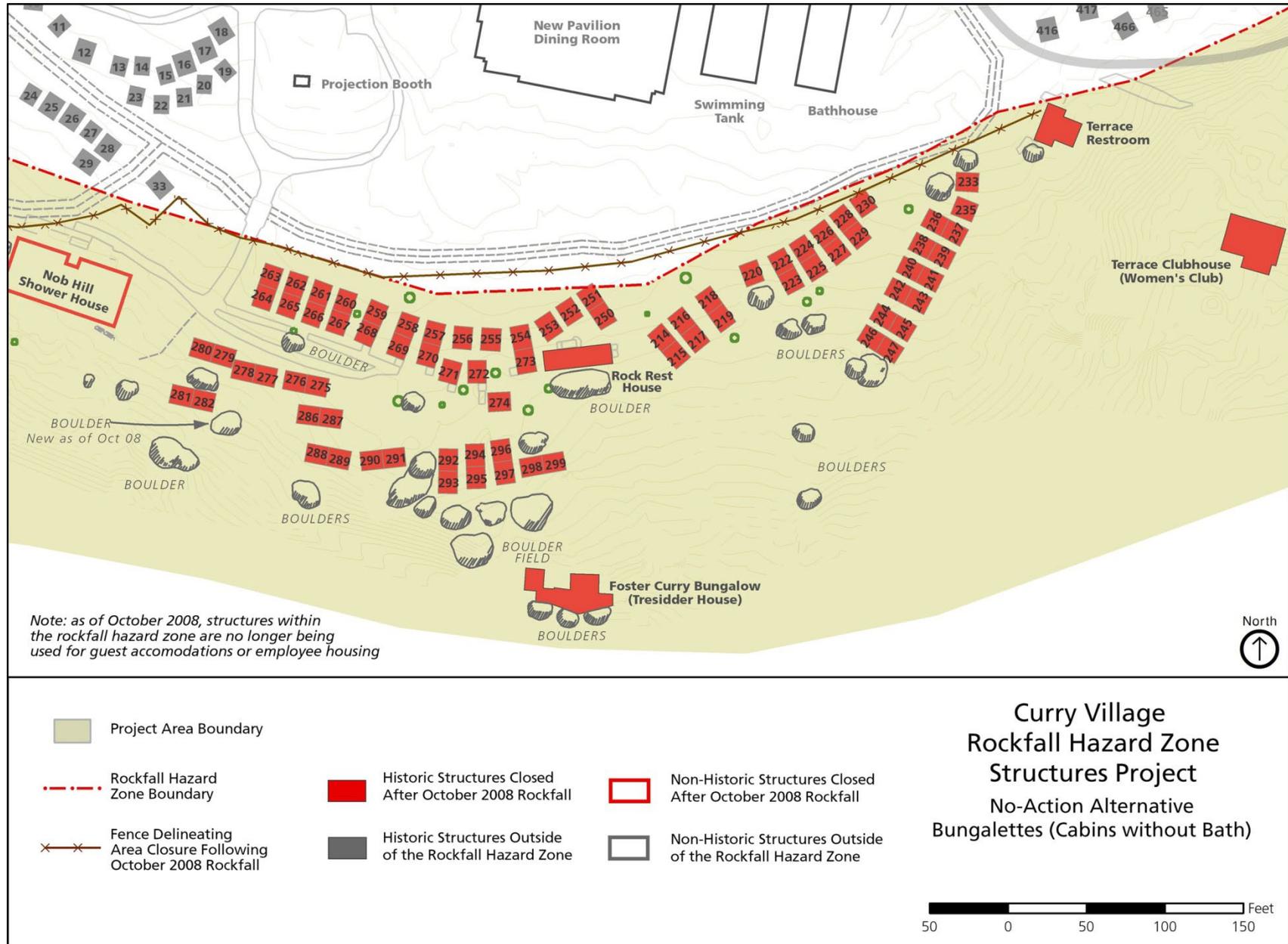


Figure 2-2 No Action Alternative – Bungalettes (Cabins without Bath)

Actions Common to Alternatives 1-4

All of the action alternatives (Alternatives 1-4) include the removal of structures in the rockfall hazard zone. Actions related to the removal of structures that are common to all action alternatives are described below.

- Before any removal of historic structures occurs, the site and structures would be recorded through photograph documentation, drawings, and written documentation or as otherwise stipulated in a Memorandum Agreement developed in consultation with the California State Historic Preservation Officer. A draft of this agreement is attached as Appendix A.
- Nonhistoric structures (Nob Hill Shower House and Bungalow 61) would be removed.
- If a historic structure were to be removed, any foundations, retaining walls, and pathways would be retained for the cultural landscape record to denote the location and association of structures within the site and characteristic circulation patterns between structures. Piers and the one chimney would be removed with the structures.
- Materials would be salvaged from structures being removed for potential use outside of the rockfall hazard zone. Particular attention would be paid to salvaging historic doors, windows, siding, and masonry. The park's History, Architecture, and Landscapes staff would determine which materials are suitable for salvage.
- When all documentation and salvage of materials is completed, the National Park Service would consider alternative options for removal of the structures, pursuant to relevant federal regulations and procedures governing the disposal of government real property. Eligibility and suitability determinations for the structures will determine what procedures the National Park Service has to follow.
- When all documentation, salvage of materials, and removal is completed, any remaining structural debris would be removed and natural succession would be allowed to occur.
- Any utilities above grade would be removed, and buried utilities would be capped and abandoned in place, according to NPS and pertinent state and local codes and procedures.
- Interpretive materials (e.g., signs) would be installed outside of the rockfall hazard zone to inform visitors of the cultural and geologic setting of the area or as otherwise stipulated in a Memorandum of Agreement with the State Historic Preservation Officer. Historic photos and documentation would be used in the interpretation of the historic development Curry Village, the impacts of geologic processes on Curry Village over time, and management decisions regarding the disposition of the structures within the rockfall hazard zone (e.g., why structures are closed, were removed).

Actions Common to Alternatives 2-4

Alternatives 2, 3, and 4 would retain a varying number of historic structures within the rockfall hazard zone at Curry Village. Actions related to retention of historic structures that would be common to these alternatives are listed below.

- All actions would comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (U.S. Department of the Interior 1995).
- The rockfall hazard zone would continue to be fenced with NPS enforcement of the closure and coordination with park Facilities Management staff and/or contractors for any access needed for ongoing maintenance of the structures.
- Prior to actual treatment, a final determination of structures most appropriate to retain based on historic and structural integrity would occur after reevaluating current conditions. The determination of structures suitable for retention in Alternatives 2, 3, and 4 (as shown in Figures 2-5 through 2-10) incorporated known conditions at the time of the historic and

structural condition assessments performed in 2010. These conditions could change and would be verified in the field prior to project implementation.

- Remaining structures would be closed to all use, stabilized, mothballed, maintained, and secured sufficiently to prevent further deterioration from environmental damage (e.g., site drainage problems) and illicit use. These activities would be conducted in consultation with the park's History, Architecture, and Landscapes staff and are defined as follows:
 - **Stabilization:** Stabilization would consist of roof shoring where needed, installing lateral bracing, making miscellaneous repairs needed for structural integrity, and weatherproofing the buildings.
 - **Mothball:** Mothballing activities would be consistent with the recommendations and guidelines provided in *NPS Preservation Brief 31: Mothballing Historic Buildings* (NPS 1993) and guidance provided by the park's Historical Architect. The focus of the mothballing activities would be to secure and protect the buildings against vandalism, infestation, and the build-up of humidity and condensation inside the structures. Measures would include covering all windows and doors with plywood, replacing skirting, and repairing veneers. Correction of drainage issues would also be included.
 - **Maintenance:** Maintenance activities would include inspections twice a year to ensure the roof is clean, intact, and watertight; doors and windows are secured; walls, foundations, and roofs are in good condition; there is positive drainage away from the structure on all sides; and the ground area around each structure is clear of vegetation and debris. Minor repairs might be needed based on the findings of the inspections. Maintenance would be consistent, as applicable, with the guidance in *NPS Preservation Brief 47: Maintaining the Exterior of Small and Medium Size Historic Buildings*. Buildings would be secured by the most appropriate means to prevent entry via doors and windows and other openings.

Alternative 1 (Preferred Alternative): Remove All Structures

Alternative 1 would result in the removal of all of the structures located in the rockfall hazard zone project area. The goal of this alternative is to maximize safety for park visitors and employees by removing all attractants from the active rockfall hazard zone and eliminating the need for administrative access to the site. Structures would be removed in accordance with regulations and procedures pertaining to the disposal of federal real property. Implementation of Alternative 1 would result in the removal of the following historic and nonhistoric structures (Figures 2-3 and 2-4):

- 44 bungalettes
- 22 bungalows (including Rufus Green Bungalow)
- 3 comfort stations (Nob Hill, Rock, and Terrace)
- Cabin 101 (Nob Hill Cabin)
- Women's Club/Terrace Clubhouse
- Foster Curry Bungalow/Tresidder House

Associated actions and mitigation related to the removal of structures from the rockfall hazard zone are included above under "Actions Common to Alternatives 1-4."

Cost

The estimated cost for implementation of Alternative 1 is \$915,940. This includes costs for removal activities, documentation, and other mitigation (e.g., interpretation, salvaged material storage) costs.

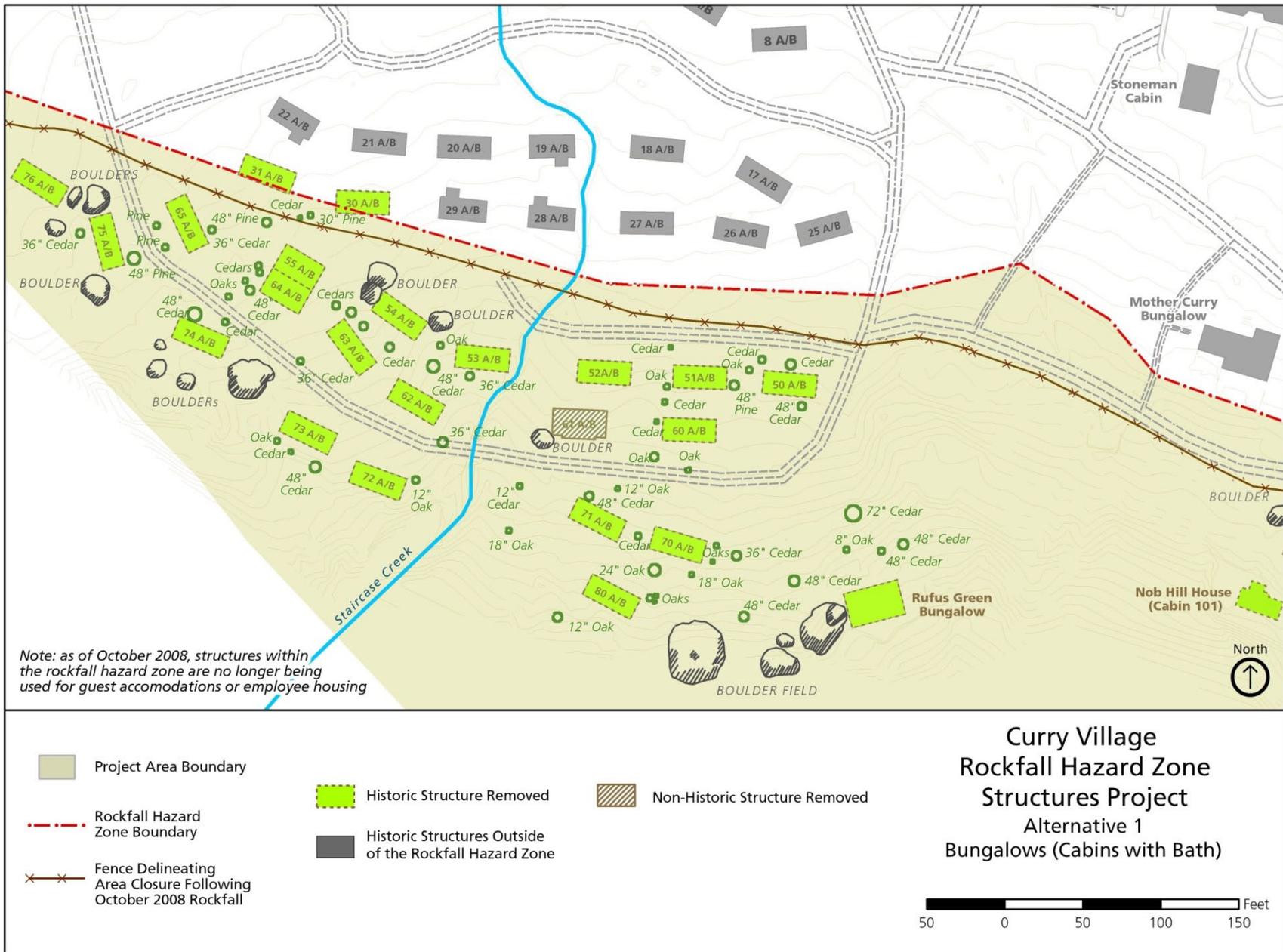


Figure 2-3 Alternative 1 – Bungalows (Cabins with Bath)

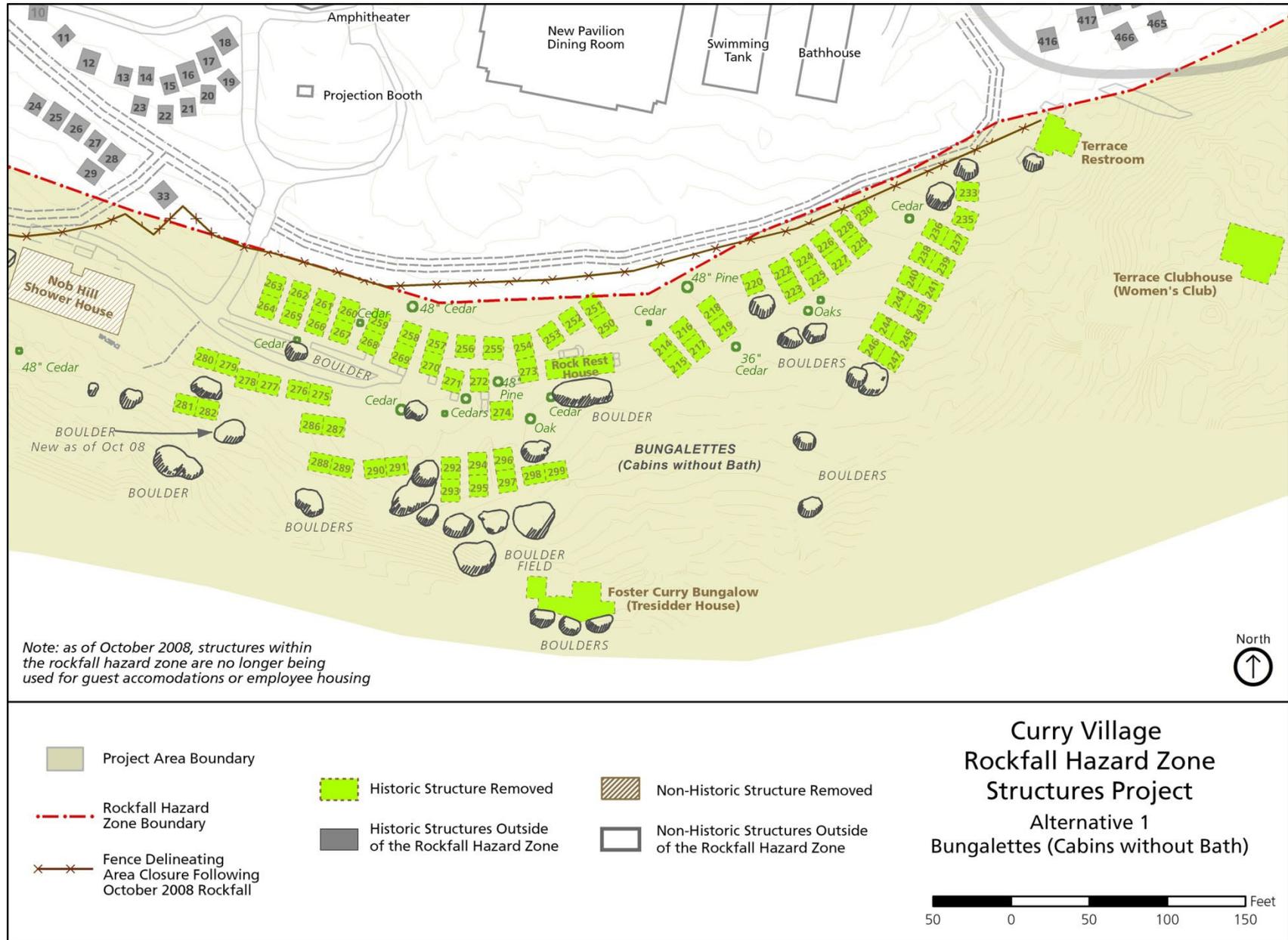


Figure 2-4 Alternative 1 – Bungalettes (Cabins without Bath)

Alternative 2: Retain the Majority of Historic Structures

Alternative 2 would result in the stabilization, mothballing, and maintenance of all but two historic structures located in the rockfall hazard zone project area. All (two) nonhistoric structures would be removed. The goal of this alternative is to retain as many historic structures as possible for potential future relocation. One historic structure, the Women's Club/Terrace Clubhouse, would be removed because it is of low priority for preservation, would be extremely difficult to relocate, and the surrounding tent cabins that it serviced have all been removed (NPS 2010a). Cabin 101 (Nob Hill Cabin) is a historic structure that is not listed as a contributing structure to the Yosemite Valley Historic District. Although a 2010 Cultural Landscape Report recommends that Cabin 101 be considered a contributing resource to the historic district, it is in generally poor condition and is of diminished historic integrity (NPS 2010a, University of Oregon 2010).

In summary, Alternative 2 would result in the stabilization, mothballing, and maintenance of the following historic structures (Figure 2-5 and Figure 2-6):

- 44 bungalettes
- 21 bungalows (including Rufus Green Bungalow)
- Foster Curry Bungalow/Tresidder House
- 2 comfort stations (Rock Rest House and Terrace Restroom)

The following historic structures would be removed and disposed of in accordance with regulations and procedures pertaining to the disposal of federal real property:

- Cabin 101(Nob Hill Cabin)
- Women's Club/Terrace Clubhouse

Both of the nonhistoric structures in the project area (listed below) would be removed and disposed of in accordance with regulations and procedures pertaining to the disposal of federal real property:

- Nob Hill Shower House
- Bungalow 61

Associated actions and mitigation related to the removal and retention of structures from the rockfall hazard zone are included above under "Actions Common to Alternatives 1-4" and "Actions Common to Alternatives 2-4."

Cost

The estimated cost for implementing Alternative 2 is \$3,086,480. This includes one-time costs for removal activities, mothballing, stabilization, documentation and other mitigation (e.g., interpretation, salvaged material storage) costs. For cost estimating purposes only, this cost estimate includes five-year maintenance and operational (e.g., patrol) costs because it was assumed that the final disposition of retained structures would be determined within five years.

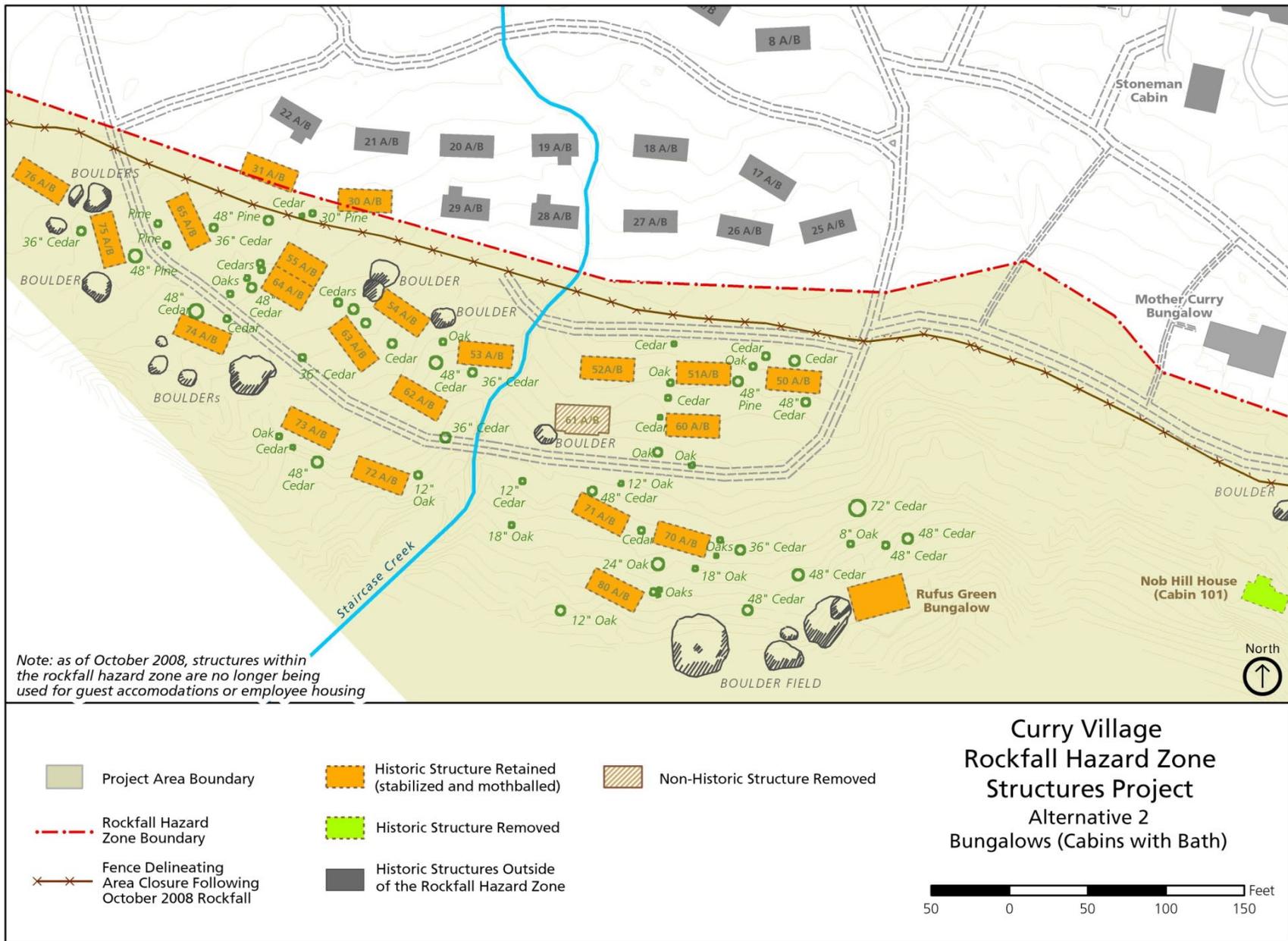


Figure 2-5 Alternative 2 – Bungalows (Cabins with Bath)

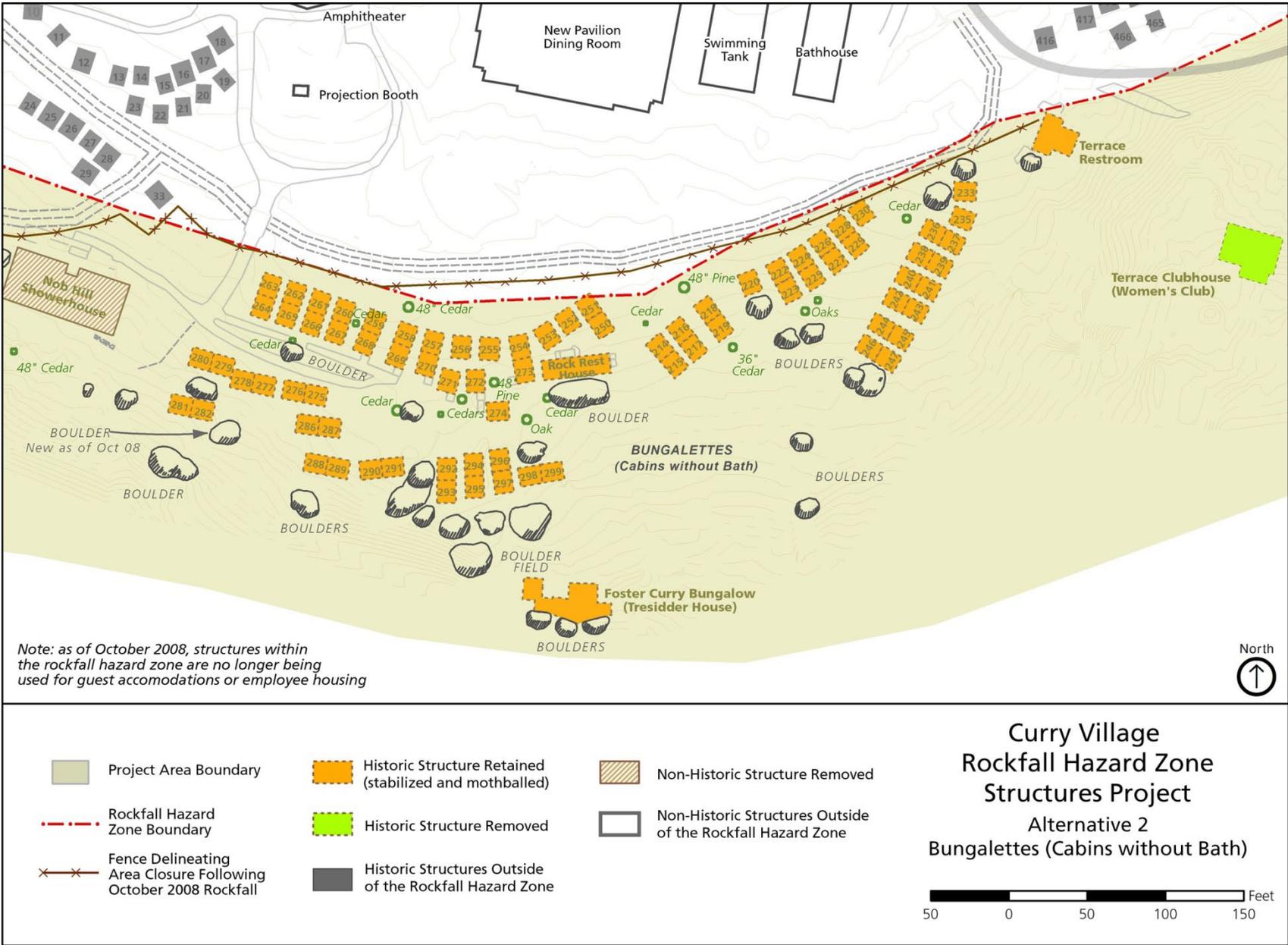


Figure 2-6 Alternative 2 – Bungalettes (Cabins without Bath)

Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types

Alternative 3 would result in the stabilization, mothballing, and maintenance of a representative sample of historic structures located in the rockfall hazard zone. The goal of this alternative is to maintain historic structures or a grouping of structures that are not otherwise represented in Curry Village for potential future relocation. Structures retained would be significantly associated with the founding or early history of Camp Curry and/or would represent architectural types that are nonexistent or rare outside of the rockfall hazard zone.

Specifically, Alternative 3 would retain a range of 5 to 16 structures. Retention of 5 structures would represent the minimum number necessary to retain the most historically significant structures and representation of architectural types. The Foster Curry Bungalow/Tresidder House is strongly associated with the history of Curry Village and would be retained. In addition, a minimum of one board-and-batten bungalow would be retained and a minimum of three bungalettes would be retained in a linear grouping to preserve their character-defining setting because these types of structures are not found outside the rockfall hazard zone. Retention of 16 structures would represent a more comprehensive sample of structures that provides a larger representation of clustering within the landscape.

In summary, Alternative 3 would result in the stabilization, mothballing, and maintenance of a representative sample of 5 to 16 structures identified from the following (Figures 2-7 and 2-8):

- 2 bungalows: one with shakes and one with board and batten (architectural types not represented outside of the rockfall hazard zone)
- Rufus Green Bungalow
- Foster Curry Bungalow/Tresidder House
- 12 bungalettes

The remaining historic structures within the rockfall hazard zone would be removed and disposed of in accordance with regulations and procedures pertaining to the disposal of federal real property, including but not limited to:

- 18-20 bungalows
- 32-41 bungalettes
- 2 comfort stations (Rock and Terrace)
- Cabin 101 (Nob Hill Cabin)
- Women's Club/Terrace Clubhouse

Both of the nonhistoric structures in the project area (listed below) would be removed and disposed of in accordance with regulations and procedures pertaining to the disposal of federal real property:

- Nob Hill Shower House
- Bungalow 61

Associated actions and mitigation related to the removal and retention of structures from the rockfall hazard zone are included above under "Actions Common to Alternatives 1-4" and "Actions Common to Alternatives 2-4."

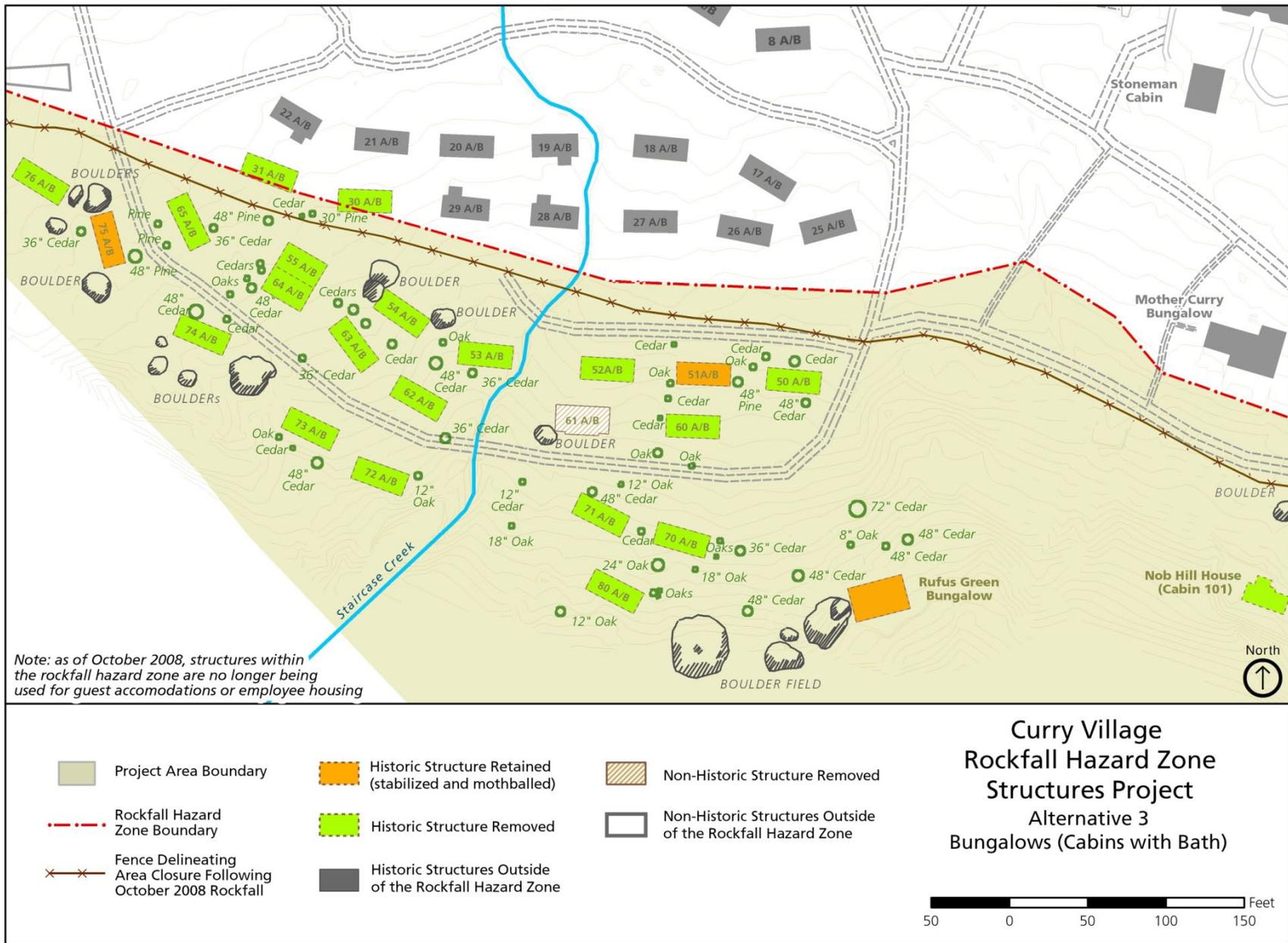


Figure 2-7 Alternative 3 – Bungalows (Cabins with Bath)

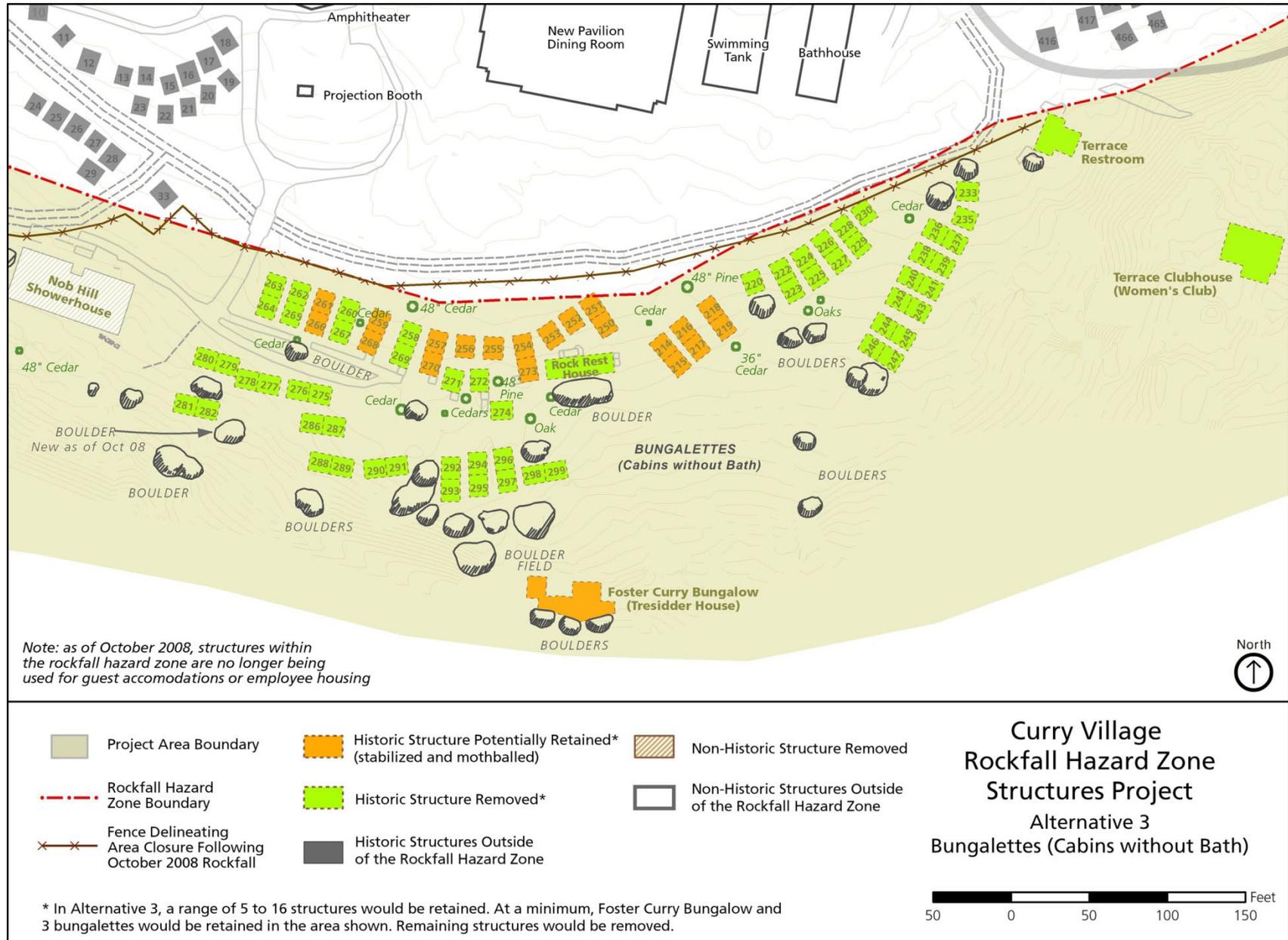


Figure 2-8 Alternative 3 – Bungalettes (Cabins without Bath)

Cost

The estimated cost for implementing Alternative 3 is from \$1,403,960 to \$2,062,045, depending on the number of structures retained. This includes costs for removal activities, mothballing, stabilization, documentation and other mitigation (e.g., interpretation, salvaged material storage) costs. For cost estimating purposes only, this cost estimate includes five-year maintenance and operational (e.g., patrol) costs because it was assumed that the final disposition of retained structures would be determined within five years.

Alternative 4: Retain Structures with Structural and Historic Integrity

Alternative 4 would result in the stabilization, mothballing, and maintenance of structures that are considered to have both structural and historic integrity. The selection of structures to remain was a combination of the results of two studies conducted in Spring 2010 in support of this project: a historic conditions rapid assessment (University of Oregon 2010) and a structural assessment (DOWL HKM 2010). Both studies evaluated the condition of the structures and the difficulty of relocation as primary considerations for which structures to retain. Site visits were conducted to resolve discrepancies between the condition ratings in the two studies. The structures selected to remain were those that retained sufficient structural and historic integrity to warrant stabilization for potential relocation outside of the rockfall hazard zone.

In summary, Alternative 4 would result in the stabilization, mothballing, and maintenance of the following historic structures (Figures 2-9 and 2-10):

- 15 bungalows (including Rufus Green Bungalow)
- Foster Curry Bungalow/Tresidder House
- 24 bungalettes

The following historic structures would be removed and disposed of in accordance with regulations and procedures pertaining to the disposal of federal real property:

- 6 bungalows
- 20 bungalettes
- 2 comfort stations (Rock and Terrace)
- Cabin 101(Nob Hill Cabin)
- Women’s Club/Terrace Clubhouse

Both of the nonhistoric structures in the project area (listed below) would be removed and disposed of per regulations and procedures pertaining to the disposal of federal real property:

- Nob Hill Shower House
- Bungalow 61

Associated actions and mitigation related to the removal and retention of structures from the rockfall hazard zone are included above under “Actions Common to Alternatives 1-4” and “Actions Common to Alternatives 2-4.”

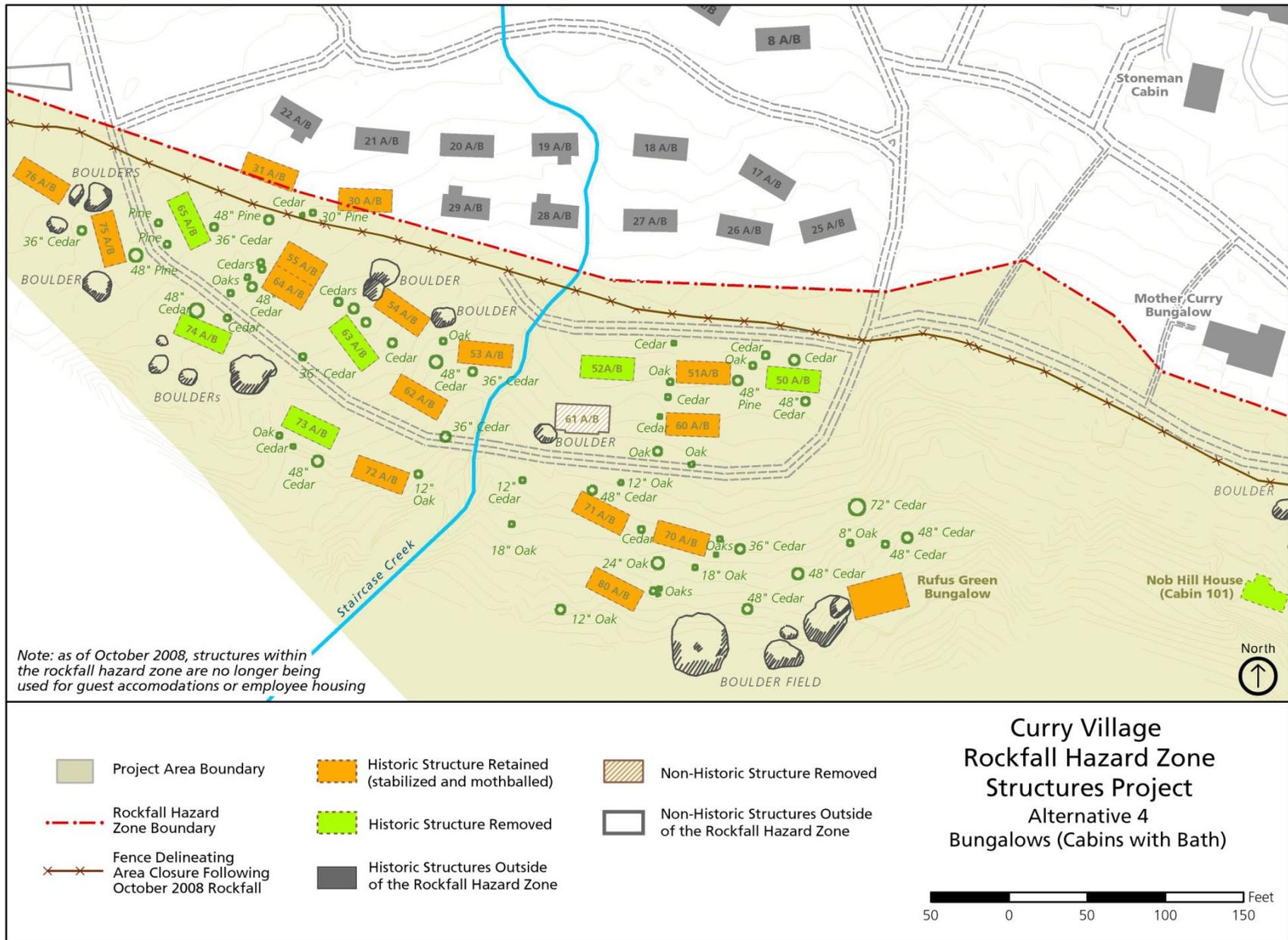


Figure 2-9 Alternative 4 – Bungalows (Cabin with Bath)

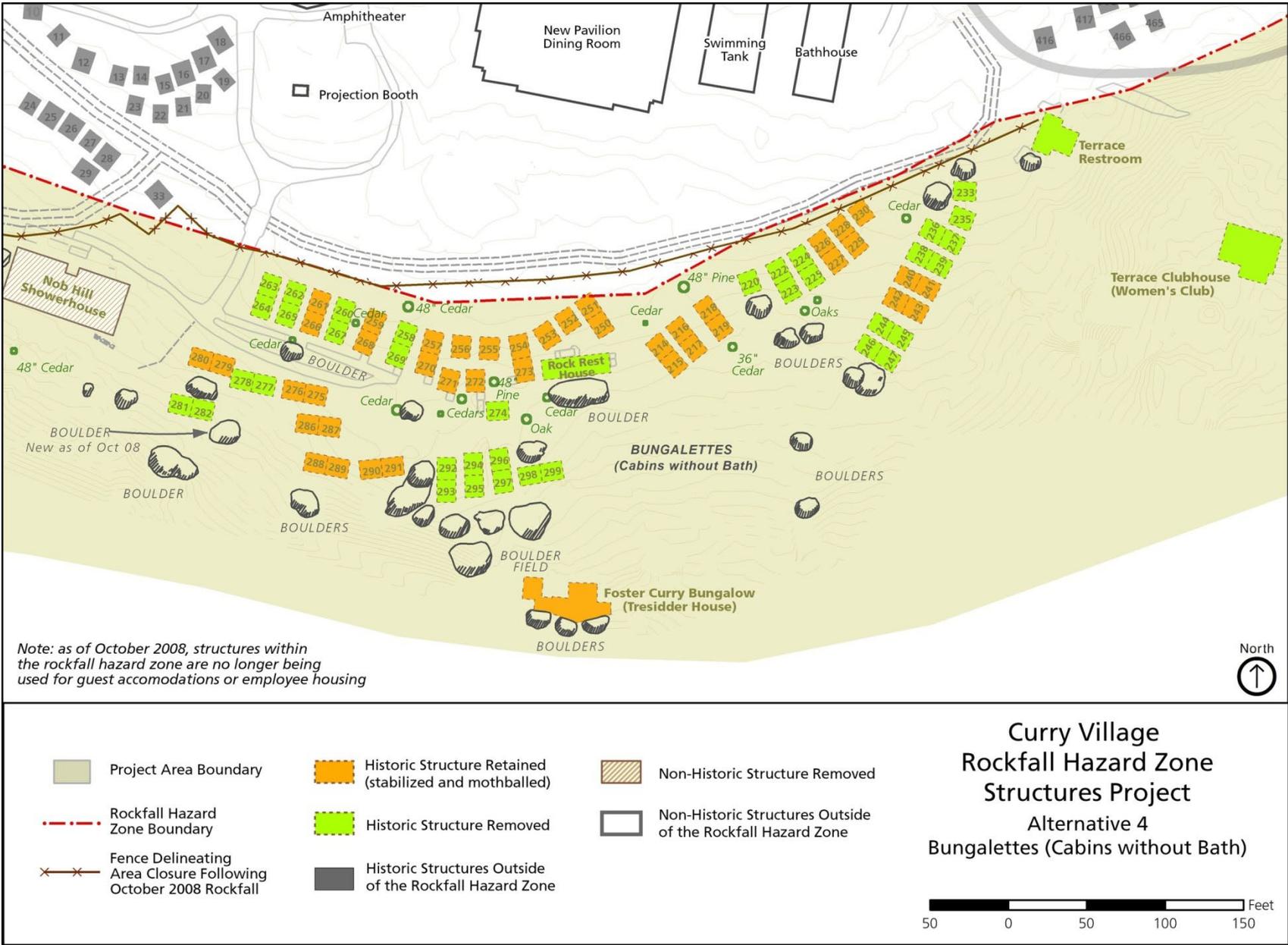


Figure 2-10 Alternative 4 – Bungalettes (Cabins without Bath)

Cost

The estimated cost for implementation of Alternative 4 is \$2,645,840. This includes costs for removal activities, mothballing, stabilization, documentation and other mitigation (e.g., interpretation, salvaged material storage) costs. For cost estimating purposes only, this cost estimate includes five-year maintenance and operational (e.g., patrol) costs because it was assumed that the final disposition of retained structures would be determined within five years.

Actions Considered but Dismissed

The National Park Service considered a range of actions when developing possible alternatives for the Curry Village Rockfall Hazard Zone Structures Project. The following actions were analyzed, considered, and dismissed because they did not fully satisfy the objectives of this planning effort. Actions are dismissed for one of the following reasons:

- The action would not satisfy the project's purpose and need.
- Less environmentally damaging options were available.
- The action would cause unacceptable environmental, cultural, or social impacts.
- The action would present unacceptable risks or constraints with an associated increase in costs.
- The action would conflict with the guidance and direction provided in the *General Management Plan*.

Stabilize, Mothball, and Maintain All Structures

This action included retaining all structures in the rockfall hazard zone project area, including nonhistoric structures. Retaining all structures would not meet the project purpose and need because it would not reduce or eliminate the attractive nuisance and safety hazards in the rockfall hazard zone; nonhistoric structures would remain in the historic district, thereby providing little advantage beyond that offered by Alternative 2 while increasing risks and costs.

Relocate Historic Structures Outside of Yosemite Valley

The National Park Service considered whether historic structures within the Curry Village rockfall hazard zone could be relocated elsewhere in the park.

The 2009 Settlement Agreement regarding the Merced River Plan calls for any decisions about relocation and/or reuse of facilities from the rockfall hazard zone within Yosemite Valley to be postponed until a Record of Decision for the Merced River Plan has been signed. Therefore, the National Park Service considered moving structures to an interim location outside of Yosemite Valley until the Record of Decision is signed. Current planning efforts in the Merced and Tuolumne Wild and Scenic River corridors (which, in addition to Yosemite Valley, encompass developed areas at Wawona and Tuolumne Meadows) limit the range of suitable locations for these structures to relatively few areas of the park. Moving structures to a location outside of Camp Curry would diminish the historic integrity of the structures and would not provide any advantage beyond alternatives that retain structures in place until a later decision can be made on whether the structures could potentially be relocated within the Camp Curry area.

Retain the Nob Hill Shower House for Storage of Salvaged Materials

This action included retaining a relatively new, nonhistoric building in the rockfall hazard zone project area for storage of salvaged materials from demolished structures. While this action would reduce the need to haul materials to and from storage facilities outside of the park, it was dismissed because it would increase employee exposure to rockfall risk. In addition, it would expose the historic materials to risk from rockfall damage.

Identification of the Preferred Alternative

The National Park Service developed four preliminary alternatives in June 2010 based on the results of public scoping and documentation developed in support of this planning effort (e.g., structural analysis and historic condition assessment reports). A Choosing By Advantages (CBA) Workshop was held on July 14, 2010 to evaluate the relative advantages of each alternative. CBA participants identified eight evaluation factors against which the alternatives were measured. The eight factors were as follows (in no particular order):

- project purpose and need
- future park planning efforts
- public and employee safety
- visitor experience
- natural and cultural resources
- decision making
- optimizing reuse of building materials
- cost

Alternatives were evaluated and ranked by assigning each factor a numerical value and assessing its relative advantage. Participants shared their professional expertise regarding the potential beneficial or adverse effects of each aspect of the alternatives.

With eight factors considered equally, less than 2% separated the top three ranked alternatives (5% separated all four alternatives). Alternative 4: “Retain Structures with Structural and Historic Integrity” scored the highest.

Considering the very close results, the CBA participants then assigned a weight to all eight factors. When weighted, the four highest-ranking factors were, in order of highest to lowest: Safety, Natural and Cultural Resources, Cost, and Visitor Experience. Based on the weighted findings, Alternatives 1 and 4 were ranked equally; however, Alternative 1 scored highest in three of the four highest-ranking factors: Safety, Natural and Cultural Resources, and Cost.

On July 22, 2010, the results of the CBA workshop were presented to the park leadership team for identification of the preferred alternative. Upon review of the information gathered in support of this project and the results of the CBA workshop, the leadership team identified Alternative 1: Remove All Structures as the preferred alternative, primarily because it would immediately improve public and employee safety. Retaining any structures in the rockfall hazard zone was considered a hazard for which the National Park Service would be liable. Alternatives 2, 3, and 4 would also entail extremely high costs of stabilizing, mothballing, and maintaining unoccupied

structures for an undetermined period of time. The leadership team revisited this decision in Spring 2011 and reaffirmed the identification of Alternative 1 as the preferred alternative, based on safety concerns and cost.

Comparison of the Alternatives

The five alternatives presented in this environmental assessment represent a reasonable range of options for the Curry Village Rockfall Hazard Zone Structures Project. Table 2-1 provides a summary of the proposed actions under each alternative. Table 2-2 provides a summary comparison of the potential impacts associated with each of the alternatives, based on the environmental analysis provided in Chapter 3.

**Table 2-1
Summary of Alternatives**

No Action Alternative	Alternative 1 (Preferred): Remove All Structures	Alternative 2: Retain the Majority of Historic Structures	Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types	Alternative 4: Retain Structures with Structural and Historic Integrity
<ul style="list-style-type: none"> ▪ All 72 structures located in the rockfall hazard zone project area would remain in place and closed to all use. ▪ The rockfall hazard zone boundary would continue to be fenced and patrolled to deter and detect illicit use. ▪ The National Park Service would take measures to prevent wildlife from infesting structures. ▪ Although facilities would remain in their historic context, no stabilization or maintenance would occur. 	<ul style="list-style-type: none"> ▪ All 72 structures in the project area would be removed. ▪ The security fence would be removed and there would be no specific access restrictions in this area; it would be managed similar to other undeveloped areas in Yosemite Valley. 	<ul style="list-style-type: none"> ▪ 68 historic structures would be stabilized, mothballed, and maintained. ▪ 2 historic structures in poor to fair condition would be removed. ▪ 2 nonhistoric structures would be removed. 	<ul style="list-style-type: none"> ▪ 5 to 16 historic structures would be stabilized, mothballed, and maintained. The selected structures would be most significantly associated with Camp Curry and/or would represent architectural types that are nonexistent or rare outside of the rockfall hazard zone maintained. ▪ 54 to 65 historic structures would be removed. ▪ 2 nonhistoric structures would be removed. 	<ul style="list-style-type: none"> ▪ 40 historic structures with both structural and historic integrity would be stabilized, mothballed, and maintained. ▪ 30 historic structures would be demolished and removed. ▪ 2 nonhistoric structures would be removed.
	<ul style="list-style-type: none"> ▪ Before any structures are removed, the site and structures would be recorded through photo and written documentation in consultation with the California State Historic Preservation Officer. ▪ All (two) nonhistoric structures would be removed. ▪ Where structures are removed, foundations, retaining walls, and pathways would be retained. Piers and one chimney would be removed. ▪ Materials would be salvaged from structures being removed for potential use outside of the rockfall hazard zone. ▪ When all documentation and salvage of materials is completed, the National Park Service would consider alternative options for removal of the structures, pursuant to relevant federal regulations and procedures governing the disposal of government real property. ▪ When all documentation, salvage of materials, and removal is completed, any remaining structural debris would be removed. ▪ Above-grade utilities would be removed and buried utilities would be capped and abandoned in place. ▪ Interpretive materials would be installed outside of the rockfall hazard zone to inform visitors of the cultural and geologic setting of the area. 			
	<ul style="list-style-type: none"> ▪ Actions would comply with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i>. ▪ The rockfall hazard zone would continue to be fenced and patrolled, with access to park staff and/or contractors for ongoing maintenance of the structures. ▪ Prior to implementation, a final determination of structures to retain would occur after reevaluating current conditions. ▪ Remaining structures would be closed to all use, stabilized, mothballed, maintained, and secured sufficiently to prevent further deterioration from environmental damage and illicit use. ▪ Mothballing activities would be consistent with the recommendations and guidelines provided in <i>NPS Preservation Brief 31: Mothballing Historic Buildings</i>. 			

**Table 2-2
Summary Comparison of Impacts for the No Action and Action Alternatives**

No Action Alternative	Alternative 1 (Preferred): Remove All Structures	Alternative 2: Retain the Majority of Historic Structures	Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types	Alternative 4: Retain Structures with Structural and Historic Integrity
GEOHAZARDS				
<p>Under the No Action Alternative, the ongoing threat to life and property due to rockfall hazards would continue. While the active rockfall hazard zone is currently closed to both visitor and administrative use, some visitors would likely continue to circumvent the temporary fencing at the site to explore the area and occasionally to occupy the abandoned structures overnight. This illicit use presents an ongoing threat to life-safety for both visitors and NPS staff in the project area. In addition, the threat of property damage would remain very high because structures would remain in the active rockfall hazard zone. Overall, this results in a local, long-term, moderate, adverse impact.</p>	<p>Under Alternative 1, the existing threat to life-safety due to rockfall hazards would be substantially reduced by the removal of all structures. The removal of the primary attractants that have been drawing visitors into the hazard zone would have a local, long-term, moderate, beneficial impact.</p> <p>The threat to life-safety would not be entirely eliminated because the area closure would be lifted after the structures are removed and NPS and/or contractor staff would be exposed to additional risk during project implementation.</p> <p>The risk of property damage from rockfall would be eliminated in the project area because all of the structures would be removed. The primary benefit would be an opportunity to immediately salvage materials for reuse without exposing the structures to the potential for further damage due to natural processes or illicit use. This would result in a local, long-term, moderate, beneficial impact.</p>	<p>Under Alternative 2, the existing threat to life-safety due to rockfall hazards would continue. While mothballing activities would deter illicit overnight use of remaining structures, leaving them in place would likely continue to attract use to the project area. In addition, NPS staff would be exposed to additional risk during structure removal and mothballing activities, long-term routine maintenance of structures, and patrols needed to enforce the area closure.</p> <p>The potential for property damage due to rockfall would remain as high as under the No Action Alternative. Overall, this would result in a local, long-term, moderate, adverse impact.</p>	<p>Under Alternative 3, the existing threat to life-safety due to rockfall hazards would continue but would be reduced in the long term by removal of the majority of structures. While mothballing activities would deter illicit overnight use of remaining structures, leaving any structures in place would likely continue to attract use to the project area. In addition, NPS staff would be exposed to additional risk during structure removal and mothballing activities, long-term routine maintenance of structures, and patrols needed to enforce the area closure. Overall, this would result in a local, long-term, minor to moderate, adverse impact.</p> <p>The risk of property damage from rockfall would be lower than under the No Action Alternative, but some structures would remain in the hazard area. With the removal of most structures there would be an opportunity to immediately salvage materials for reuse without exposing the structures to the risk of further damage due to natural processes or illicit use. Overall, this would result in a local, long-term, negligible to minor, beneficial impact.</p>	<p>Under Alternative 4, the existing threat to life-safety due to rockfall hazards would continue but would be reduced by removal of approximately one-half of the structures. While mothballing activities would deter illicit overnight use of the remaining structures, leaving any structures in place would likely continue to attract use to the project area. In addition, NPS staff would be exposed to additional risk during structure removal and mothballing activities, long-term routine maintenance of structures, and patrols needed to enforce the area closure. Overall, this would result in a local, long-term, moderate, adverse impact.</p> <p>The risk of property damage from rockfall would be lower than under the No Action Alternative, although approximately one-half of the structures would remain in the hazard area. With the removal of some structures there would be an opportunity to immediately salvage materials for reuse without exposing the structures to the potential for further damage due to natural processes or illicit use. Overall, this result would in a local, long-term, negligible to minor, beneficial impact.</p>

Table 2-2
Summary Comparison of Impacts for the No Action and Action Alternatives (continued)

No Action Alternative	Alternative 1 (Preferred): Remove All Structures	Alternative 2: Retain the Majority of Historic Structures	Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types	Alternative 4: Retain Structures with Structural and Historic Integrity
WILDLIFE				
<p>Under the No Action Alternative, there would be no change in activities and no change in public access to the project area. Access restrictions would continue to result in local, long-term, negligible to minor, beneficial impacts on wildlife habitat quality by limiting human-caused disturbance.</p>	<p>Fence removal and naturalization of the project area would increase long-term habitat quality, resulting in a local, long-term, minor, beneficial impact on wildlife.</p> <p>Temporary disturbance from removal of structures would result in local, short-term, minor, adverse impacts on wildlife. Implementation of mitigation measures (Appendix D) with a focus on limiting demolition activities during breeding seasons and conducting detailed surveys immediately before removing structures would minimize impacts on wildlife.</p>	<p>Continued access restrictions and naturalization in some portions of the project area would result in local, long-term, minor, beneficial impacts on wildlife habitat quality by limiting human-caused disturbance.</p> <p>Temporary disturbance from removal of structures, stabilization, mothballing, and routine maintenance activities would result in local, short-term, negligible to minor, adverse impacts on wildlife. Implementation of mitigation measures (Appendix D) with a focus on limiting work during breeding seasons and conducting detailed surveys immediately before removing structures and stabilizing/ mothballing activities would minimize impacts on wildlife. Routine maintenance of mothballed structures would have a negligible impact on wildlife habitat and populations.</p>		
SPECIAL STATUS SPECIES				
<p>Under the No Action Alternative, there would be no effect on special-status species.</p>	<p>The project would occur in suitable habitat for special-status bird and bat species, but the application of mitigation measures (Appendix D) with a focus on limiting activities during breeding seasons and conducting detailed surveys at each structure immediately before project implementation would minimize the potential for impacts on habitat or individuals. Therefore, Alternative 1 may affect, but is not likely to adversely affect special-status species.</p>	<p>The project would occur in suitable habitat for special-status bird and bat species, but the application of mitigation measures (Appendix D) with a focus on limiting activities during breeding seasons and conducting detailed surveys at each structure immediately before project implementation would minimize the potential for impacts on habitat or individuals. After project implementation, routine maintenance of structures would have a negligible impact on special-status wildlife habitat and populations. Therefore, Alternatives 2, 3, and 4 may affect, but are not likely to adversely affect special-status species.</p>		

Table 2-2
Summary Comparison of Impacts for the No Action and Action Alternatives (continued)

No Action Alternative	Alternative 1 (Preferred): Remove All Structures	Alternative 2: Retain the Majority of Historic Structures	Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types	Alternative 4: Retain Structures with Structural and Historic Integrity
VISITOR EXPERIENCE AND RECREATION				
<p>The No Action Alternative would result in a local, long-term, minor to moderate, adverse impact on visitor experience from views of structures deteriorating in place behind a security fence. There would be a local, long-term, moderate, adverse impact on visitor safety from continued unauthorized access in an active rockfall hazard zone.</p>	<p>Alternative 1 would result in a local, short-term and long-term, minor to moderate, adverse impact on the quality of the visitor experience due to construction activities associated with removal of the structures and the permanent removal of 70 historic structures from the park. This adverse impact might be offset by a local, long-term, minor to moderate, beneficial impact from removal of the deteriorating structures, removal of security fencing, and installation of interpretive materials that illustrate the historic significance of the site.</p> <p>In addition, there would be a local, long-term, moderate, beneficial impact on visitor safety from the removal of structures.</p>	<p>Alternative 2 would result in a local, long-term, minor, adverse impact on the quality of the visitor experience from the presence of mothballed structures and security fencing. This impact might be offset by a local, long-term, minor to moderate, beneficial impact on the visitor experience from retaining 68 historic structures for potential future relocation and installing interpretive materials to explain their significance.</p> <p>In the short term, there would be local, minor to moderate, adverse impacts on visitor experience caused by construction activities related to removing structures and the stabilization, mothballing, and maintenance activity for remaining structures.</p> <p>Alternative 2 would not appreciably reduce the threat to public health and safety in the project area, resulting in a continued local, long-term, moderate, adverse impact on visitor safety.</p>	<p>Alternative 3 would result in a local, long-term, minor to moderate, adverse impact on the quality of the visitor experience from the presence of mothballed structures and security fencing, as well as the permanent loss of up to 65 historic structures. This impact might be offset by the local, long-term, minor, beneficial impact on the visitor experience from retention of 5 to 16 of the most significant structures for potential future relocation and installation of interpretive materials to explain their significance.</p> <p>In the short term, there would be local, minor to moderate, adverse impacts on visitor experience due to construction activities related to removing structures and the stabilization, mothballing, and maintenance activity for remaining structures.</p> <p>The threat to public health and safety from rockfall hazards in the project area would continue, although the potential for visitors to occupy structures would be reduced. This would result in a local, long-term, minor to moderate, adverse impact on visitor safety.</p>	<p>Alternative 4 would result in a local, long-term, minor to moderate, adverse impact on the quality of the visitor experience from the presence of mothballed structures and security fencing, as well as the permanent loss of 30 historic structures. This impact might be offset by the local, long-term, minor, beneficial impact on the visitor experience from retention of approximately 40 historic structures for potential future relocation with installation of interpretive materials to explain their significance.</p> <p>In the short term, there would be local, minor to moderate, adverse impacts on visitor experience caused by construction activities related to removing structures and the stabilization, mothballing, and maintenance activity for remaining structures.</p> <p>The threat to public health and safety from rockfall hazards in the project area would continue, although the potential for visitors to occupy structures would be reduced. This would result in a local, long-term, minor to moderate, adverse impact on visitor safety.</p>

Table 2-2
Summary Comparison of Impacts for the No Action and Action Alternatives (continued)

No Action Alternative	Alternative 1 (Preferred): Remove All Structures	Alternative 2: Retain the Majority of Historic Structures	Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types	Alternative 4: Retain Structures with Structural and Historic Integrity
PARK OPERATIONS AND MANAGEMENT				
<p>Under the No Action Alternative, the efficiency of NPS Visitor Protection, Resources Management, and Science and Facilities Management staff would continue to be impacted by requirements to spend time managing this closed area at the expense of their other responsibilities. Structures would remain unmaintained in the rockfall hazard zone, resulting in threats to life-safety for NPS staff as well as unauthorized visitors. The No Action Alternative would result in a local, long-term, moderate, adverse impact on park operations.</p>	<p>Alternative 1 would result in a long-term, moderate, beneficial impact on park operations from a reduction in workload and a decrease in threats to life-safety. There would be a local, short-term, minor, adverse impact on NPS Visitor Protection, Resources Management and Science, and Facilities Management staff from increased workloads and increased safety risks during project implementation.</p>	<p>Alternative 2 would result in a local, long-term, moderate, adverse impact on park operations due to continued exposure to rockfall hazards and increased workloads, particularly for Visitor Protection staff, who would continue to be responsible for enforcing the area closure, and Facilities Management staff, who would need to respond to any damage incurred to remaining structures. There would be a local, short-term, minor to moderate, adverse impact on NPS Visitor Protection, Resources Management and Science, and Facilities Management staff from increased workloads and increased safety risks during project implementation.</p>	<p>Alternative 3 would result in impacts similar to Alternative 2, with reduced long-term intensity of impacts from fewer structures retained in the project area. There would be a local, long-term, minor, adverse impact on park operations due to continued exposure to rockfall hazards and increased workloads, particularly for Visitor Protection staff, who would continue to be responsible for enforcing the area closure, and Facilities Management staff, who would need to respond to any damage incurred to remaining structures. There would be a local, short-term, minor to moderate, adverse impact on NPS Visitor Protection, Resources Management and Science, and Facilities Management staff from increased workloads and increased safety risks during project implementation.</p>	<p>Alternative 4 would result in impacts similar to Alternative 3. There would be a local, long-term, minor, adverse impact on park operations due to continued exposure to rockfall hazards and increased workloads, particularly for Visitor Protection staff, who would continue to be responsible for enforcing the area closure, and Facilities Management staff, who would need to respond to any damage incurred to remaining structures. There would be a local, short-term, minor to moderate, adverse impact on NPS Visitor Protection, Resources Management and Science, and Facilities Management staff from increased workloads and increased safety risks during project implementation.</p>

Table 2-2
Summary Comparison of Impacts for the No Action and Action Alternatives (continued)

No Action Alternative	Alternative 1 (Preferred): Remove All Structures	Alternative 2: Retain the Majority of Historic Structures	Alternative 3: Retain Most Historically Significant Structures and Representatives of Architectural Types	Alternative 4: Retain Structures with Structural and Historic Integrity
HISTORIC SITES, BUILDINGS, AND CULTURAL LANDSCAPES				
<p>Under the No Action Alternative, existing features within the rockfall hazard zone at Camp Curry would remain, but would not receive the required level of maintenance and upkeep to retain their integrity and their ability to convey their significance. This would to alter, directly or indirectly, the characteristics of the historic site that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Therefore, the No Action Alternative would have an adverse effect on the Yosemite Valley Historic District.</p>	<p>With implementation of Alternative 1, all structures within the rockfall hazard zone at Camp Curry would be removed. The proposed activities would alter, directly or indirectly, characteristics of the Yosemite Valley Historic District that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property's setting, workmanship, feeling, materials, association, and design. Therefore, Alternative 1 would result in an adverse effect on the Yosemite Valley Historic District.</p> <p>The adverse effect would be resolved through application of a Memorandum of Agreement between the National Park Service and the California State Historic Preservation Officer, a draft version of which is attached as Appendix A.</p>	<p>Alternative 2 presents a higher attainment of the overall maintenance of the Camp Curry historic site, as compared with the No Action Alternative, allowing for Standards-compliant maintenance and protection of all but one contributing structure within the rockfall hazard zone. The removal of two historic structures (only one of which contributes to the historic district) would, however, alter the characteristics of the historic site that qualify the Yosemite Valley Historic District for inclusion in the National Register of Historic Places and diminish the integrity of the property's workmanship and materials. Therefore, Alternative 2 would result in an adverse effect on the Yosemite Valley Historic District.</p> <p>The adverse effect would be resolved through application of a Memorandum of Agreement between the National Park Service and the California State Historic Preservation Officer, a draft version of which is attached as Appendix A.</p>	<p>Alternative 3 would achieve Standards-compliant maintenance and protection of the most historically significant remaining historic resources and architectural types. However, the removal of up to 65 historic structures (64 of which contribute to the historic district) would alter, directly and indirectly, many of the characteristics of the Yosemite Valley Historic District that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property's setting, workmanship, feeling, materials, association and design. Therefore, Alternative 3 would result in an adverse effect on the Yosemite Valley Historic District.</p> <p>The adverse effect would be resolved through application of a Memorandum of Agreement between the National Park Service and the California State Historic Preservation Officer, a draft version of which is attached as Appendix A.</p>	<p>Alternative 4 would achieve Standards-compliant maintenance and protection of contributing resources that retain structural and historic integrity. However, removal of 30 historic structures (29 of which contribute to the historic district) would alter, directly and indirectly, many of the characteristics of the Yosemite Valley Historic District that qualify the property for inclusion in the National Register of Historic Places would diminish the integrity of the property's setting, workmanship, feeling, materials, association, and design. Therefore, Alternative 4 would have an adverse effect on the Yosemite Valley Historic District.</p> <p>The adverse effect would be resolved through application of a Memorandum of Agreement between the National Park Service and the California State Historic Preservation Officer, a draft version of which is attached as Appendix A.</p>
ARCHEOLOGICAL RESOURCES				
<p>Under the No Action Alternative, no buildings would be removed, the area would remain closed to visitor use, and the area would remain fenced. There would be no effect on the Yosemite Valley Historic District or the Yosemite Valley Archeological District.</p>	<p>With mitigation and avoidance measures in place (see Appendix D), ground-disturbing activities under Alternatives 1, 2, 3, and 4 would have no adverse effect on archeological resources, including one site that contributes to the Yosemite Valley Historic District.</p>			

Environmentally Preferable Alternative

The CEQ regulations implementing the National Environmental Policy Act and the NPS NEPA guidelines require that “the alternative or alternatives which were considered to be environmentally preferable” be identified (CEQ Regulations, Section 1505.2). Environmentally preferable is defined as “the alternative that will promote the national environmental policy as expressed in NEPA’s section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources” (CEQ 1981).

Section 101 of the National Environmental Policy Act states that:

It is the continuing responsibility of the Federal Government to . . . (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; (2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences; (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice; (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life’s amenities; and (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Conformance: Alternative 1 would best fulfill the responsibilities of the National Park Service to identify the alternative that will promote national environmental policy as expressed in NEPA section 101.

The No Action Alternative and Alternatives 2, 3, and 4 would retain historic structures in the rockfall hazard zone. Alternative 2 would best meet criteria (4) and (6) because it would stabilize, mothball, and maintain the greatest number of historic structures within the rockfall hazard zone. However, leaving structures in the rockfall hazard zone would result in the continued potential for risks to life and safety from unauthorized use. The National Park Service would make every effort to restrict visitor access to this area under these alternatives, but it is not possible to detect and deter all unauthorized use. In addition, alternatives that maintain structures within the rockfall hazard zone also continue to put park staff at risk as they patrol and maintain the facilities.

In addition, Alternatives 2, 3, and 4 would require ongoing maintenance of vegetation to protect remaining structures, which would limit the amount of naturalization allowed to occur in the project area.

Alternative 1 best meets NEPA section 101 criteria (1), (2), (3), and (5) by removing all structures from the rockfall hazard zone project area to provide the maximum reduction in threats to public health and safety. Compared with other project alternatives, Alternative 1 would also provide better conditions for natural processes to prevail.

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Chapter 3: Affected Environment and Environmental Consequences

Introduction

This chapter describes the environment that could be affected by the Curry Village Rockfall Hazard Zone Structures Project alternatives and analyzes the potential environmental impacts of the proposed actions in each alternative.

Organization of this Chapter

This chapter includes an introduction that provides a brief overview of the resource topics analyzed and the methods used for analysis. A rationale for excluding certain resource topics is also included. Following the introduction, this chapter is organized by resource topics relevant to the project. Descriptions of the current conditions of each resource topic, based on the most recent studies and analyses, are described in the Affected Environment sections. The Affected Environment sections are followed by an analysis of the Environmental Consequences associated with each proposed alternative, including the No Action Alternative.

Resource Topics Considered in this Environmental Assessment

Resource topics considered were selected based on federal law, regulations, executive orders, NPS management policies, NPS subject matter expertise, and concerns expressed by other agencies or members of the public during scoping and comment periods.

Natural Resources

The federal and state Endangered Species Acts (and associated legislation), Clean Water Act, Clean Air Act, and National Environmental Policy Act require that the effects of any federal undertaking on natural resources be examined. In addition, NPS management policies and natural resource management guidelines call for the consideration of natural resources in planning proposals. As a result, analysis was performed for the following natural and physical resource topics:

- geohazards
- wildlife
- special-status species

Sociocultural Resources

Sociocultural resources are cultural resources associated with the relationship of people with the human environment (both biophysical and built). These cultural resources might have historic merit but do not qualify as historic properties (see below). They include resources protected under the American Indian Religious Freedom Act and Executive Order 13007, which protect American Indian traditional religious practices and sacred sites. To meet NPS obligations under the National Environmental Policy Act and NPS *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making* (Director's Order 12) (NPS 2001), it is necessary to analyze the potential effects of the Curry Village Rockfall Hazard Zone Structures Project on these resources. As a result, analysis was performed for the following sociocultural resource topics:

- visitor experience and recreation
- park operations and management

Historic Properties

Cultural resources that are eligible for listing in the National Register of Historic Places are considered Historic Properties and are protected under the National Historic Preservation Act (NHPA). Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to provide the Advisory Council on Historic Preservation with a reasonable opportunity to comment.

In addition, NPS management policies and cultural resource management guidelines call for the consideration of historic properties in planning proposals. For this project, analysis was performed for the following historic properties resource topics:

- historic sites, buildings, and cultural landscapes
- archeological resources

Resource Topics Dismissed From Detailed Analysis

Soils: A 1991 study of soils in Yosemite Valley by the Soil Conservation Service (now known as the Natural Resources Conservation Service) (SCS 1991) identified 21 distinct soil types in Yosemite Valley. The project area, along the talus slopes south of Curry Village, occurs within one soil type: the Happy Isles-Half Dome complex, which is considered a resilient soil. The project area is an active talus slope; generally, soils are not well-developed.

Implementation of any of the action alternatives would cause very minor, short-term disturbance to surface soils in previously disturbed areas immediately surrounding the structures and the paths used to access the structures and haul materials. There would be very small areas of short-term soil disturbance where soils are temporarily removed to access and cap underground utilities. Considered together, these impacts were considered to be negligible to minor. Therefore, this resource topic has been dismissed from further analysis in this document.

Hydrology and Water Quality: There is one perennial stream (Staircase Creek) that is channeled through the project site, and there are some informal drainages in the project area that have been disrupted by previous alterations to the site. None of the project alternatives propose to alter these drainages, directly or indirectly. While some of the action alternatives propose drainage corrections in the immediate vicinity of structures, these actions would be extremely localized, intended only as a maintenance action to repair and stabilize structures, and are not likely to impact the hydrology in the project area. Furthermore, with the implementation of a Storm Water Pollution Prevention Plan and general construction Best Management Practices (see Appendix D, Mitigation Measures), the proposed action would not have any direct or indirect impacts on hydrology or water quality in the project area or downstream. Therefore, this resource topic has been dismissed from further analysis in this document.

Wetlands and Floodplains: There are no wetlands in the project area, and the project area is not within a floodplain. With the implementation of a Storm Water Pollution Prevention Plan and general construction Best Management Practices (see Appendix D, Mitigation Measures) the proposed action would not have impacts on downstream wetlands. Therefore, this resource topic has been dismissed from further analysis in this document.

Vegetation: The vegetation in the project area consists of upland species, such as black oak (*Quercus kelloggii*), canyon live oak (*Quercus chrysolepis*), ponderosa pine (*Pinus ponderosa*), incense-cedar (*Calocedrus decurrens*), white fir (*Abies concolor*), and Douglas-fir (*Pseudotsuga menziesii*). Understory vegetation is sparse. Implementation of any of the action alternatives might impact vegetation immediately surrounding the structures and paths used to access the structures and haul materials. Similarly, the proposed work to cap underground utilities might result in very small areas of disturbance to understory vegetation. No trees would be removed; however, some trees might be limbed. Naturalization would occur in areas where structures are removed.

There is a small patch of montane riparian habitat east of the Foster Curry Bungalow in the southern portion of the project area. The riparian area would be avoided during project activities (actions to either remove or stabilize/maintain the Foster Curry Bungalow) and implementation of a Storm Water Pollution Prevention Plan and general construction Best Management Practices (see Appendix D, Mitigation Measures) would reduce any potential impacts on the riparian area to negligible.

In summary, proposed project activities are expected to have negligible to minor impacts on the size and continuity of native plant communities. Therefore, this topic has been dismissed from further analysis in this document.

Lightscares: There is currently no artificial lighting in the project area because the structures under consideration are no longer occupied, and this project does not propose additional lighting in the project area. Therefore, this topic has been dismissed from further analysis in this document.

Soundscapes: Ambient noise levels in the project area are affected by regular operations at Curry Village. New impacts on soundscapes under all of the action alternatives would generally be limited to short-term effects from structure removal and/or stabilization and mothballing activities. The type of noise generated during these activities would include the operation of heavy equipment, voices of workers, handheld manual and power tools (e.g., hammers, drills, and saws), and noise associated with material haul vehicles. Disturbance to visitors and employees could be mitigated to some degree through timing project implementation (e.g., avoiding peak visitation periods to the extent possible). In addition, scheduling demolition/removal activities outside of breeding seasons, as proposed in Appendix D under mitigation measures for wildlife, would reduce potential impacts on wildlife species.

Subsequent routine maintenance of remaining structures would require only semi-annual inspection, potentially followed by some maintenance work. This work would not be expected to require heavy equipment, multiple truck trips, or more than a handful of employees. Therefore, routine maintenance activities would have minimal impact on soundscapes.

Overall, the impacts on soundscapes would be short-term and minor. Therefore, this topic has been dismissed from further analysis in this document.

Air Quality: There would be no long-term impacts on air quality from implementation of this project because, regardless of the alternative selected, the project area would remain unoccupied and the structures would remain closed to visitor and administrative use. Implementation of any of the action alternatives would result in short-term impacts from emissions generated from removal of structures, dust, tailpipe emissions from heavy-duty equipment, worker commute trips, and truck trips to haul salvage materials or haul materials for stabilizing/mothballing

structures. Demolition activities would occur at times when recreational users would be present in the area; however, the short duration of the removal period would limit the potential for tailpipe emissions and diesel particulates to adversely affect local air quality. With alternatives where structures are stabilized, mothballed, and maintained, associated activities would be of very short duration (days) and would likely include hand tools and some power tools, but the overall impact on air quality would be negligible. Therefore, this topic has been dismissed from further analysis in this document.

Scenic Resources: Changes to scenic views from and towards the project area are analyzed under the Historic Sites, Buildings, and Cultural Landscapes section. Therefore, scenic resources have been dismissed from further analysis as a separate resource topic in this document.

Public Health and Safety: Public health and safety is a fundamental element of the purpose and need for the Curry Village Rockfall Hazard Zone Structures Project. As such, it is analyzed under the following topics, rather than as one separate topic: Geohazards (which evaluates the project alternatives in terms of threats to life and property), Visitor Experience (which considers visitor safety), and Park Operations (which considers employee safety).

Wilderness Experience: The project area does not overlap with designated wilderness, and implementation of any of the action alternatives would not have any effect on the wilderness experience or wilderness access. Therefore, this resource topic has been dismissed from further analysis in this document.

Transportation: This project does not propose to change existing amounts and types of visitor use, vehicular or pedestrian circulation patterns, transportation corridors, or parking configuration. Therefore, this resource topic has been dismissed from further analysis in this document.

Orientation and Interpretation: Implementation of any of the action alternatives would have no impact on park orientation and interpretation because the project area is currently closed to all use. Any additions or changes, such as the installation of interpretive signs on the outside of the rockfall hazard zone boundary, would be minor and would not affect overall park orientation and interpretation. Therefore, this topic has been dismissed from further analysis in this document.

Environmental Justice: This project does not propose to change existing visitor access or levels of visitor service at Curry Village. No aspect of this project would result in disproportionately high and adverse human health or environmental effects on minority or low-income populations; destruction or disruption of community cohesion and economic vitality; displacement of public and private facilities and services; increased traffic congestion; and/or exclusion or separation of minority or low-income populations from the broader community. Therefore, this resource topic has been dismissed from further analysis in this document.

Socioeconomics: There would be no measurable effects on the regional or gateway community economies, or changes in visitor attendance or visitor spending patterns as a result of implementation of this project. Therefore, this resource topic has been dismissed from further analysis in this document.

Energy Consumption and Global Climate Change: The project area is currently closed to use. There is no energy consumed in the project area, and project alternatives do not propose to increase energy consumption. There would be some short-term consumption of fuel during project implementation, but implementation is expected to be of short duration. In the long-term, occasional routine maintenance would have a negligible effect on energy consumption and global climate change. Therefore, this topic has been dismissed from further analysis in this document.

Prime and Unique Agricultural Lands: There are no agricultural lands in the project area, and the proposed action would not have any indirect effects on downstream agricultural lands. Therefore, this resource topic has been dismissed from further analysis in this document.

Land Use: Land uses within Yosemite National Park are classified as “parklands,” regardless of the individual types of land uses within the park. Implementation of this project would not affect parkland land uses within the park. Therefore, this resource topic has been dismissed from further analysis in this document.

Traditional Cultural Resources and Practices: Implementation of this project would cause short-term disturbance to vegetation in the project area; however, the impact on vegetation would be negligible to minor, primarily from tree limbing required to remove structures. Tree removal would be avoided. Any potential impacts and on nearby sites of importance to American Indians are addressed under the ‘Archeological Resources’ section. Therefore, this topic has been dismissed as a separate analysis topic in this document.

Museum Collections and Objects: Implementation of the Curry Village Rockfall Hazard Zone Structures Project is unlikely to affect museum collections. Any efforts would be minimal and undertaken as part of routine collection duties associated with the maintenance of the museum collection. Therefore, this resource topic has been dismissed from further analysis in this document.

Methods for Analyzing Environmental Consequences

The National Environmental Policy Act requires that environmental documents disclose the environmental impacts of a proposed federal action, reasonable alternatives to that action, and any adverse environmental effects that cannot be avoided should the proposed action be implemented. The National Environmental Policy Act and NPS Director’s Order 12 require consideration of the context, duration, intensity, and type of impacts. To meet NPS obligations under the National Historic Preservation Act and the National Environmental Policy Act, among other regulations, methods for identifying historic properties and assessing impacts must meet the standards in NHPA section 106 implementing regulations (36 CFR 800).

Both direct and indirect impacts of the action must be included in the analysis. Direct impacts are caused by, and occur at the same time and place as the action, including such impacts as animal and plant mortality and damage to cultural resources. Indirect impacts are caused by the action, but occur later in time at another place or to another resource, including changes in species composition, vegetation structure, range of wildlife, offsite erosion, or changes in general economic conditions tied to park activities. In addition, potential cumulative impacts caused by the project in combination with other actions are considered in Appendix C. Potential impairment of park resources and values are considered in Appendix B.

Impact Analysis - General

The environmental consequences for each impact topic were defined based on the following information regarding context, duration, intensity, and type of the impact. Unless otherwise stated, the impact analysis is based on a qualitative assessment of impacts. Context, duration, intensity, and type of impact are characterized in more detail specific to each resource topic, when applicable, preceding the environmental consequences discussion in each resource section below.

Context of Impact

Context is the setting or area within which impacts are analyzed – such as the local project area, the region, or national area of influence.

- *Local*: Detectable only in the vicinity of the proposed action.
- *Regional*: Detectable on a landscape scale (beyond the affected site).
- *National*: Detectable on a national scale.

Duration of Impact

Duration is a measure of the time period over which the effects of an impact would persist. The duration of impacts evaluated in this environmental assessment may be one of the following:

- *Short-term*: Generally, short-term impacts are temporary, transitional, and associated with construction and removal activities.
- *Long-term*: Long-term impacts are typically those effects that continue to occur after construction and last 10 years or more and could be considered permanent.

Intensity of Impact

The intensity of an impact is characterized in more detail specific to each resource topic. Intensity considers whether the impact is judged negligible, minor, moderate, or major relative to existing conditions. Intensity of impact for special-status species and historic properties are measured differently, and are described below.

Type of Impact

A measure of whether the impact would improve or harm the resource and whether that harm occurs immediately or at some later point in time.

- *Beneficial*: Reduces or improves impact being discussed.
- *Adverse*: Increases or results in negative impact being discussed.

Impact Analysis for Special-Status Species

Federal agencies must consult with the U.S. Fish and Wildlife Service to ensure their actions would not jeopardize the continued existence of any federally listed or proposed threatened or endangered species, or adversely modify designated or proposed critical habitat (Endangered Species Act section 7 (a) (2)). If listed species or their critical habitat are present, the federal agency must determine if the action would have “no effect,” “may effect, not likely to adversely affect,” or “may effect, likely to adversely affect” those species or their habitat. The National Park Service makes the determination of effect for the alternatives following guidance outlined in the 1998 U.S. Fish and Wildlife Service and National Marine Fisheries Service *Endangered Species Act Consultation Handbook: Procedures for Conducting Section 7 Consultations and Conference Activities* (USFWS 1998).

Impact Analysis for Historic Properties

“Historic properties,” as defined by the implementing regulations of the National Historic Preservation Act, are any districts, buildings, structures, sites, or objects, including resources that are considered by American Indians to have cultural and religious significance, that are eligible for inclusion in the National Register of Historic Places because they are significant at the national, state, or local level in American history, architecture, archeology, engineering, or culture. The term “eligible for inclusion” includes both properties formally determined eligible and all other properties that meet NRHP listing criteria.

NPS management policies and cultural resource management guidelines call for the consideration of historic properties in planning proposals. To meet NPS obligations under the National Historic Preservation Act and the National Environmental Policy Act, among other regulations, methods for identifying historic properties and assessing impacts must meet the standards in NHPA section 106 implementing regulations (36 CFR 800).

NHPA Determinations of Effect

Conventional terms used by the National Park Service to measure the context, duration, intensity, and type of impact analysis are not valid for assessing effects on historic properties under NHPA standards. Because the effect on a historic property is measured by the status of the historic property’s eligibility for listing in the National Register of Historic Places, the negligible, minor, moderate, and major degrees do not apply: either a historic property maintains the characteristics making it eligible for listing in the National Register of Historic Places, or it does not.

The Advisory Council on Historic Preservation has issued regulations for the implementation of section 106, entitled *Protection of Historic Properties* (36 CFR 800). ACHP regulations discuss the following types of effect:

- *No Historic Properties Affected:* When there are no historic properties present, or the action will have no effect on historic properties, the action is said to have *no effect* on historic properties.
- *No Adverse Effect:* Occurs when there will be an effect on a historic property, but the action will not alter characteristics that make the property eligible for inclusion in the National Register of Historic Places in a way that would diminish the integrity of the property.
- *Adverse Effect:* Occurs when an action will alter, directly or indirectly, any of the characteristics of a historic property that qualify it for inclusion in the National Register of Historic Places, in a way that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the action that may occur later in time, be farther removed in distance, or be cumulative.

Resolving Adverse Effects to Historic Properties

An adverse effect under section 106 of the National Historic Preservation Act can be resolved with a good faith effort to consider whether and how to avoid, reduce, or mitigate the effect, which could be done by modifying the undertaking or imposing certain mitigation conditions, such as photo documentation and treatment of historic buildings, structures, and landscapes in accordance with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties* (*Standards*) or other measures negotiated in consultation with the California State Historic Preservation Officer, American Indian tribal governments, and the public.

Significant Impact

For the purposes of the National Environmental Policy Act and Director's Order 12, an impact on an NRHP property would be considered significant when an adverse effect cannot be resolved by agreement among the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, American Indian tribal governments, other consulting and interested parties, and the public. The resolution must be documented in a memorandum or programmatic agreement or the NEPA decision document. For this project, a Memorandum of Agreement is being developed between the National Park Service and the California State Historic Preservation Officer to resolve the adverse effect of the undertaking (see Appendix A).

Methodology

In accordance with ACHP implementing regulations, impacts on historic properties were identified and evaluated by:

- determining the area of potential effect
- identifying cultural resources present in the area of potential effect that were either listed in or eligible for listing in the National Register of Historic Places
- applying the criteria of adverse effect to affected cultural resources listed in or eligible for listing in the National Register of Historic Places
- considering ways to avoid, minimize, or mitigate adverse effects

Area of Potential Effect for this Project

As defined under section 106 of the National Historic Preservation Act, the area of potential effect for this project is the Yosemite Valley Historic District (see Historic Buildings, Structures, and Cultural Landscapes resource topic; also Figure 1-2).

Properties Analyzed for this Project

Historic properties that could potentially be affected by this project are the historic structures within the Curry Village rockfall hazard zone that contribute to the Yosemite Valley Historic District, and archeological sites in the Curry Village rockfall hazard zone that contribute to the Yosemite Valley Historic District and/or the Yosemite Valley Archeological District.

Cumulative Impacts

Cumulative impacts are the effects on the environment that would result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions. Impacts would be considered cumulative regardless of what agency or group (federal or nonfederal) undertakes the action. The CEQ describes a cumulative impact as follows (Regulation 1508.7):

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

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

particular resource. Because some of the cumulative projects are in the early planning stages, the evaluation of cumulative impacts was based on a general description of the project. Appendix C contains a list of projects included in the cumulative impacts analysis. Cumulative impacts are addressed for each alternative in the Environmental Consequences section of each resource topic.

Impairment

In addition to determining the environmental consequences of the alternatives, *NPS Management Policies 2006* (NPS 2006) and Director's Order 12 require analysis of potential effects to determine if actions would impair park resources and values. The evaluation of impairment is included with this environmental assessment as Appendix B.

Impact Mitigation Measures

The National Park Service places a strong emphasis on avoidance, minimization, and mitigation of impacts to help ensure that the activities associated with the Curry Village Rockfall Hazard Zone Structures Project would protect park resources and the quality of the visitor experience. Mitigation measures include the following types of actions:

- *Avoid* conducting management activities that would adversely affect the resource.
- *Minimize* the type, duration, or intensity of the impact on an affected resource.
- *Repair* localized damage to the affected resource immediately after an adverse impact.
- *Rehabilitate* an affected resource with a combination of additional management activities.
- *Compensate* a direct, long-term, major, adverse, impact through additional strategies designed to improve an affected resource to the degree practicable.

Specific mitigation measures that would occur prior to, during, and after construction under all action alternatives are described in Appendix D.

Natural Resources

Geohazards

Affected Environment

Yosemite National Park is a geologically active area where natural processes continue to shape the landscape. Since 1857 more than 600 rockfalls, rock slides, debris slides, and debris flows have been documented in the park, with rockfalls in Yosemite Valley representing the majority of the recorded events (Wieczorek et al. 2008, Wieczorek and Snyder 2004). In 2009, there were 52 documented rockfalls in Yosemite, with an approximate cumulative volume of 48,120 cubic meters (NPS 2010e).

A recent series of rockfalls originating from below Glacier Point has spurred reexamination and reconsideration of rockfall hazards at Curry Village. In November 1998 and again in May, June, and July 1999, several rockfalls occurred above eastern Curry Village, including a rockfall on June 13, 1999, that killed one climber and injured two other visitors. Several structures were also damaged in these events. The events of June 1999 and the subsequent discovery of a potentially unstable rock mass in the rockfall source area (Wieczorek and Snyder 1999) led to the permanent closure of guest and employee cabins in the affected areas of Curry Village (Terrace housing area).

In December 2003, a rockfall originating near Staircase Falls sent approximately 200 cubic meters of rock debris down to the floor of Yosemite Valley; rockfall struck 14 occupied cabins in western Curry Village (Wieczorek and Snyder 2004, Wieczorek et al. 2008). In June and July 2007, smaller rockfalls originated from the same source area as the December 2003 event, causing additional minor structural damage (Wieczorek et al. 2008). On October 7 and 8, 2008, two rockfalls originating from above the Ledge Trail sent approximately 5,700 cubic meters of rock to the base of the cliff, again sending debris into occupied areas of Curry Village, injuring three visitors, and damaging numerous structures (NPS 2010e).

Due to these recent damaging rockfalls, and in conjunction with collaborative geologic research into the potential extent of rockfall hazards from Glacier Point and elsewhere in Yosemite Valley, the National Park Service realigned the rockfall hazard zone boundary at Curry Village in the fall of 2008 and permanently closed structures, including visitor accommodations (tent cabins, cabins with bath, cabins without bath), associated visitor support structures (shower house, restrooms, etc.), and concessioner employee housing units within the designated zone.

The extent of the rockfall hazard zone at Curry Village is currently defined by mapped surface talus deposits and fresh rockfall debris, talus slope angles, and the results of computer-simulated rockfalls from the cliffs above Curry Village. Figure 1-3in Chapter 1 illustrates the current rockfall hazard zone in the project area.

Environmental Consequences - Methodology

The National Park Service defines a geohazard as any geological or hydrological process that poses a threat to people and/or their property. This analysis focuses on the potential hazards to life and property in the project area due to rockfall. Several assumptions regarding facility placement and public safety were integrated into this assessment, as summarized below.

- It is not possible to completely avoid all hazards due to geologic processes such as rockfall. Considering this, any type of use in the project area exposes visitors and employees to life-safety geohazards. In addition, structures located within the project area could be exposed to damage from rockfall debris.
- Large-impact, low-frequency geohazards that affect public safety are rarely predictable, and the extent to which they might affect people and/or property cannot be quantified. Analysis of such effects is therefore qualitative, and professional judgment is applied to reach reasonable conclusions as to the context, duration, and intensity of potential impacts.
- Rockfall risk is most effectively mitigated by avoiding development in hazard zones.

Context: Potential for impacts related to geohazards would be local.

Duration: Potential for impacts related to geohazards would be long-term and permanent.

Intensity: The intensity of the impact would be negligible if the probability (risk) of impact from a geohazard on life and property is minimal. The intensity of the impact would be minor if there is a detectable risk of impact on life and property. The intensity of the impact would be moderate if there is a substantial risk of impact to life and property. The intensity of the impact would be major if there is a substantial increase or decrease in threats to life and property.

There will always be a potential for adverse impacts on life and property due to geologic hazards, especially in developed areas. Therefore, management actions to avoid or restrict use or placement of facilities in areas susceptible to geohazards might decrease the risks but would not necessarily reduce the intensity of the impact.

Type: All rockfall events are potentially hazardous. The type of impact is related to risk (i.e., probability of impact), and it is difficult to estimate risk of impacts involving natural events. In general, reducing risk to life and property from geohazards is considered a beneficial impact. Maintaining facilities as-is or moving facilities into a zone of higher threat or exposing people to greater potential for geohazards would be considered adverse.

Specifically, the impact is considered adverse if facilities remain in the rockfall hazard zone.

Environmental Consequences of the No Action Alternative

Analysis

There is a clearly demonstrated, ongoing threat to life and property in the project area due to rockfall. While the active rockfall hazard area is currently closed to both visitor and administrative use, some visitors have circumvented the temporary fencing at the site to explore the closure area and the abandoned structures. Some of these visitors have occupied the abandoned structures overnight. The closure of the area in 2008 might have reduced threats to life-safety by prohibiting occupancy in the hazard zone, but the ongoing illicit use, particularly the overnight use, presents an unacceptable threat to life and safety for some visitors and the NPS staff who continue to respond to incidents in the area.

In addition, all of the structures within the active rockfall hazard area remain at risk. Several structures in this area have been damaged or destroyed by recent rockfall events; this threat of rockfall damage remains the same regardless of occupancy. Furthermore, because the remaining structures in the rockfall hazard closure area are not being maintained, many of these structures have sustained damage from other natural processes (e.g., tree fall), wildlife use, and illicit visitor use.

Conclusion: Under the No Action Alternative, the ongoing threat to life and property due to rockfall hazards would continue. While the active rockfall hazard zone is currently closed to both visitor and administrative use, some visitors would likely continue to circumvent the temporary fencing at the site to explore the area and occasionally to occupy the abandoned structures overnight. This illicit use presents an ongoing threat to life-safety for both visitors and NPS staff in the project area. In addition, the threat of property damage would remain very high because structures would remain in the active rockfall hazard zone. Overall, this results in a local, long-term, moderate, adverse impact.

Cumulative Impacts

Past actions that contributed to adverse impacts on threats to life and property within the project area included the original construction and expansion of Curry Village into the active talus slope below Glacier Point, where damage from rockfall debris is most likely to occur. Closure of the rockfall hazard zone to public access in 2008 would be considered a beneficial impact on threats to life and property. The recent removal and relocation of tent cabins, including employee housing, from the rockfall hazard zone had a beneficial effect; however with hard-sided structures remaining in the project area, the potential for injury or property damage remains high.

Current or reasonably foreseeable projects associated with the risk of rockfall include the planned removal of rockfall two bungalows destroyed by the 2008 rockfall; however, removal of so few structures would have a negligible impact. Overall, the cumulative actions in combination with the No Action Alternative would result in a net local, long-term, moderate, adverse impact on threats to life and property.

Environmental Consequences of Alternative 1

Analysis

Removal of all of the structures from the project area would substantially reduce the threat to life-safety from rockfall hazards. This risk would not be entirely eliminated because the area closure would be lifted after the structures are removed (e.g., temporary fencing would be removed and visitor use would be allowed in the active rockfall hazard zone, just as it is in other geologically active areas in the park). In addition, NPS employees and contractors who are removing the structures in the project area would be exposed to additional risk during project implementation. However, in the long term, the removal of the structures and the temporary fencing would remove the primary attractants that have been drawing visitor use to this area, reducing the threat to life-safety from rockfall hazards. Interpretive materials, such as permanent signs posted to warn visitors of the dangers of active rockfall zones, would further reduce threats to life-safety in this area.

The inherent risk to property from rockfall damage would be eliminated under this alternative. Since all of the structures would be removed, the primary benefit would be an opportunity to immediately salvage materials for reuse elsewhere in Yosemite Valley or the park without exposing the structures to the potential for damage due to natural processes or illicit use.

Conclusion: Under Alternative 1, the existing threat to life-safety due to rockfall hazards would be substantially reduced by the removal of all structures. The removal of the primary attractants that have been drawing visitors into the hazard zone would have a local, long-term, moderate, beneficial impact.

The threat to life-safety would not be entirely eliminated because the area closure would be lifted after the structures are removed and NPS and/or contractor staff would be exposed to additional risk during project implementation.

The risk of property damage from rockfall would be eliminated in the project area because all of the structures would be removed. The primary benefit would be an opportunity to immediately salvage materials for reuse without exposing the structures to the potential for further damage due to natural processes or illicit use. This would result in a local, long-term, moderate, beneficial impact.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on the project area would be the same as provided under the No Action Alternative. These actions, in combination with Alternative 1, would have a local, long-term, moderate, beneficial impact on threats to life and property in the project area.

Environmental Consequences of Alternative 2

Analysis

Under Alternative 2, the ongoing threat to life and property from rockfall hazards would continue. The risk associated with illicit overnight use would be abated somewhat by mothballing activities that would secure the remaining structures against entry; however, leaving structures in place would likely continue to attract curious visitors to the closure area. Interpretive materials, such as signs posted to warn visitors of the dangers of active rockfall zones, would help address threats to life-safety in this area. In the short term, NPS employees and contractors who are removing or stabilizing and mothballing structures in the project area would be exposed to additional risk associated with working in an active rockfall hazard zone. In the long term, routine maintenance activities and patrolling of the area would also expose NPS employees to rockfall hazards.

Because the majority of structures would remain under this alternative, the potential for rockfall damage to property would remain the same as under the No Action Alternative. However, the threat of damage to the structures from lack of maintenance would be substantially reduced by stabilization, mothballing, and routine maintenance activities.

Conclusion: Under Alternative 2, the ongoing threat to life-safety due to rockfall hazards would continue. While mothballing activities would deter illicit overnight use of these structures, leaving them in place would likely continue to attract use to the project area. In addition, NPS staff would be exposed to additional risk during structure removal and mothballing activities, long-term routine maintenance of structures, and patrols needed to enforce the area closure.

The potential for property damage due to rockfall would remain as high as under the No Action Alternative. Overall, this would result in a local, long-term, moderate, adverse impact.

Cumulative Impacts

The list of past projects, current approved actions, or reasonably foreseeable actions that might have a cumulative impact on the project area would be the same as provided under the No Action Alternative. Overall, the cumulative actions in combination with Alternative 2 would result in a net local, long-term, moderate, adverse impact on risk to life and property.

Environmental Consequences of Alternative 3

Analysis

Under Alternative 3, the ongoing threat to life-safety from rockfall hazards would continue, although removal of the majority structures from the project area would reduce risk in the long term. The risk associated with leaving structures in place would be abated by mothballing activities that would make overnight use of remaining structures less likely, but any remaining structures would likely continue to attract curious visitors to the closure area. Interpretive materials, such as permanent signs posted to warn visitors of the dangers of active rockfall zones, would help address threats to life-safety in this area. As under Alternative 2, NPS employees and contractors who are removing or stabilizing and mothballing structures in the project area would be exposed to additional risk associated with working in an active rockfall hazard zone. In the long term, routine maintenance activities and patrolling of the area would also expose NPS employees to rockfall hazards.

Since the majority of structures would be removed under this alternative, the potential for property damage would be substantially reduced. As under Alternative 1, the primary benefit would be an opportunity to immediately salvage materials for reuse elsewhere in Yosemite Valley or the park without exposing the structures to the potential for further damage due to natural processes or illicit use.

Conclusion: Under Alternative 3, the existing threat to life-safety due to rockfall hazards would continue but would be reduced in the long term by removal of the majority of structures. While mothballing activities would deter illicit overnight use of remaining structures, leaving any structures in place would likely continue to attract use to the project area. In addition, NPS staff would be exposed to additional risk during structure removal and mothballing activities, long-term routine maintenance of structures, and patrols needed to enforce the area closure. Overall, this would result in a local, long-term, minor to moderate, adverse impact.

The risk of property damage from rockfall would be lower than under the No Action Alternative, but some structures would remain in the hazard area. With the removal of most structures there would be an opportunity to immediately salvage materials for reuse without exposing the structures to the risk of further damage due to natural processes or illicit use. Overall, this would result in a local, long-term, negligible to minor, beneficial impact.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on the project area would be the same as provided under the No Action Alternative. Overall, the cumulative actions in combination with Alternative 3 would result in a net local, long-term, minor to moderate, adverse impact on threats to life-safety and a local, long-term, negligible to minor, beneficial impact on the risk of property damage.

Environmental Consequences of Alternative 4

Analysis

Under Alternative 4, the ongoing threat to life and property from rockfall hazards would continue, although approximately one-half of the structures from the project area would be removed. The risk associated with leaving structures in place would be abated somewhat by the mothballing activities that would make overnight use of remaining structures less likely, but any remaining structures would likely continue to attract curious visitors to the closure area.

Interpretive materials, such as permanent signs posted to warn visitors of the dangers of active rockfall zones, would help address threats to life-safety in this area. As under Alternatives 2 and 3, NPS employees and contractors who are removing or stabilizing and mothballing structures in the project area would be exposed to additional risk associated with working in an active rockfall hazard zone. In the long term, routine maintenance activities and patrolling of the area would also expose NPS employees to rockfall hazards.

Since approximately one-half of the structures would be removed under this alternative, the risk of property damage would be somewhat reduced. As under Alternative 1, the primary benefit would be an opportunity to immediately salvage materials for reuse elsewhere in Yosemite Valley or the park without exposing the structures to the potential for further damage due to natural processes or illicit use.

Conclusion: Under Alternative 4, the existing threat to life-safety due to rockfall hazards would continue but would be reduced by removal of approximately one-half of the structures. While mothballing activities would deter illicit overnight use of the remaining structures, leaving any structures in place would likely continue to attract use to the project area. In addition, NPS staff would be exposed to additional risk during structure removal and mothballing activities, long-term routine maintenance of structures, and patrols needed to enforce the area closure. Overall, this would result in a local, long-term, moderate, adverse impact.

The risk of property damage from rockfall would be lower than under the No Action Alternative, although approximately one-half of the structures would remain in the hazard area. With the removal of some structures there would be an opportunity to immediately salvage materials for reuse without exposing the structures to the potential for further damage due to natural processes or illicit use. Overall, this result would in a local, long-term, negligible to minor, beneficial impact.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on the project area would be the same as described under the No Action Alternative. Overall, the cumulative actions in combination with Alternative 4 would result in a net local, long-term, moderate, adverse impact on threats to life safety and a long-term, negligible to minor, beneficial impact on the potential for property damage.

Wildlife

Affected Environment

Wildlife in the Vicinity of Curry Village

Several bat species have the potential to be within the project area, including the pallid bat (*Antrozous pallidus*), pale big-eared bat (*Corynorhinus townsendii pallescens*), Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum*), Greater Western mastiff bat (*Eumops perotis californicus*), small-footed myotis (*Myotis ciliolabrum*), Sierra long-eared myotis bat (*Myotis evotis*), fringed myotis bat (*Myotis thysanodes*), long-legged myotis bat (*Myotis volans*), and the Yuma myotis bat (*Myotis yumanensis*). Many of these bat species use the surrounding forest and nearby meadows for foraging. Communal nesting bats such as the pale big-eared bat might roost in the structures of the project area (NPS 2010d).

There are special-status bat species that have the potential to occur in the project area. These are further discussed in the 'Special-Status Species' section, below.

Other mammals that might be present in the project area include the deer mouse (*Peromyscus maniculatus*), western gray squirrel (*Sciurus griseus*), broad-footed mole (*Scapanus latimanus*), Botta's pocket gopher (*Thomomys botti*), ringtail (*Bassariscus astutus raptor*), raccoons (*Procyon lotor psora*), coyote (*Canis latrans lestes*), mule deer (*Odocoileus hemionus hemionus*), and black bear (*Ursus americanus*).

The most regularly seen resident birds in Yosemite Valley are Steller's jay (*Cyanocitta stelleri*), American robin (*Turdus migratorius*), acorn woodpecker (*Melanerpes formicivorus*), common raven (*Corvus corax*), and mountain chickadee (*Poecile gambeli*). In addition, there are several special-status bird species with the potential to occur in the project area; these are addressed in detail in the 'Special-Status Species' section, below.

Wildlife Habitat in the Project Area

The project area is primarily upland habitat. Native upland vegetation found in the project area includes California black oak (*Quercus kelloggii*), canyon live oak (*Quercus chrysolepis*), ponderosa pine (*Pinus ponderosa*), incense-cedar (*Calocedrus decurrens*), white fir (*Abies concolor*), and Douglas-fir (*Pseudotsuga menziesii*). The constant presence of people and development in the project vicinity results in a reduced habitat value compared to those areas in which people and development are not present.

Mast crops produced by trees are an important source of food for wildlife in this habitat, and mature trees provide cavities for nesting birds. In particular, acorns provided by California black oak in Yosemite Valley are an important source of food to a variety of wildlife. Mule deer and black bears forage extensively in this habitat in years of good acorn production. Acorn woodpeckers, as their name suggests, are highly dependent on this food source. Gray squirrels, ground squirrels (*Spermophilus spp.*), deer mice, and band-tailed pigeons also feed heavily on acorns. The large, mature California black oaks also provide cover and nesting habitat for species such as great-horned owls (*Bubo virginianus*). Pallid bats (*Antrozous pallidus*) favor mature oaks as roost sites. Many small birds such as ruby-crowned kinglets (*Regulus calendula*), yellow-rumped warblers (*Dendroica coronata auduboni*), and western bluebirds (*Sialia Mexicana*) glean the foliage for insects or hawk them in the understory.

Environmental Consequences – Methodology

Wildlife analysis was based on a qualitative assessment of wildlife that could occur in the project area and the effects anticipated as a result of removal activities and/or stabilization, mothballing, and routine maintenance of structures.

Context: Due to the limited and localized nature of the proposed actions that could affect wildlife, impacts would be detectable only locally, within the vicinity of the proposed action. No regional impacts would be expected.

Duration: Short-term impacts are those that would have an immediate effect on native habitat, diversity, and native wildlife populations, but would not cause long-term declines in populations or diversity. Long-term impacts are those that would lead to a loss of native habitat, diversity, and species populations as exhibited by a decline in species abundance, viability, and/or survival.

Intensity: The intensity of the impact considers effects of an action on the size and integrity of native habitats, diversity, and species population. Negligible impacts would induce no measurable or perceptible changes on wildlife habitat or populations. Minor impacts would be localized within a relatively small area, and the impacts on the integrity of animal populations would not be expected to have an overall effect on natural community structure. Without further impacts, negative effects might be reversed, and habitat quality would recover. Moderate impacts would be those clearly detectable on wildlife habitat and populations and sufficient to cause a change in the abundance, distribution, quantity, or integrity of species; community ecology (e.g., the number of different kinds of species present); or natural processes (e.g., hydrology). Major impacts would be substantial and highly noticeable, with the potential for permanent landscape-scale changes in the distribution, quantity, or integrity of species; community ecology; or natural processes.

Type: The type of impact considers whether the impact would be beneficial or adverse. Impacts are considered beneficial if an action causes no detrimental effect and results in an increase in the size or integrity of species populations or habitat components, native ecosystem processes, native species richness/diversity, or native habitat quantity and quality. Impacts are considered adverse if they degrade the size, integrity, or diversity of native habitat quantity and quality.

Environmental Consequences of the No Action Alternative

Analysis

Under the No Action Alternative, there would be no new impacts on wildlife. Structures located within the rockfall hazard zone project area would remain vacant and in place with no use for visitor lodging or employee housing. Access restrictions would continue to result in beneficial impacts on wildlife habitat quality by limiting auditory, visual, and vegetation disturbance. The retention of structures within the project area would also continue to potentially provide roosting habitat for certain species of bat.

Conclusion: Under the No Action Alternative, there would be no change in activities and no change in public access to the project area. Access restrictions would continue to result in local, long-term, negligible, beneficial impacts on wildlife habitat quality by limiting human-caused disturbance.

Cumulative Impacts

Past actions that contributed to impacts on wildlife and wildlife habitat within the project area include the construction and expansion of Curry Village; past and present routine maintenance

activities; the recent relocation of structures to the Huff and Boys Town portions of Curry Village, and the recent construction of a temporary guest shower house. The recent actions to relocate housing would have had only minor short-term impacts from noise and vehicle-related disturbance during structure relocation. All structures were relocated to previously disturbed areas.

Reasonably foreseeable future projects, including the removal of rockfall-destroyed structures from the project area, rehabilitation of historic cabins outside of the project area, and the Merced River Plan, would have short-term impacts on wildlife from disturbance associated with project implementation. The Merced River Plan is under development, but it is assumed that there would be long-term beneficial impacts on wildlife and wildlife habitat from implementation of a comprehensive river management plan.

In conjunction with the past, present, and reasonably foreseeable future projects, the No Action Alternative would have a local, long-term, negligible, beneficial impact on wildlife.

Environmental Consequences of Alternative 1

Analysis

Under Alternative 1, short-term impacts on wildlife habitat and populations from removal of structures would include temporarily increased noise, increased human presence, equipment use, and vehicle traffic. In addition to the ongoing impacts resulting from normal operations at Curry Village, the impact of these activities would be minor and short-term in duration.

Tree removal is not anticipated under any of the action alternatives, although some trees may be limbed in order to access and stabilize structures. After structures are removed, vegetation maintenance would no longer be required. This would result in a beneficial impact on wildlife by allowing natural processes, such as vegetation growth and tree fall, to occur.

Compared with the No Action Alternative, impacts under Alternative 1 would be minor. Mitigation measures included in Appendix D to minimize or avoid potential impacts on wildlife would include scheduling demolition activities with seasonal consideration of wildlife lifecycles to minimize impacts during sensitive periods (such as after bird nesting seasons, when bats are neither hibernating nor have young, etc.)

In addition, to avoid impacts on maternal or hibernating bat colonies, removal of structures would occur between the end of August and the end of October. Or, if work must occur outside this window, the structures slated for demolition would be checked for bat occupancy just prior to removal and the park wildlife biologist would be consulted. The removal of fencing and the naturalization of portions of the project area would increase habitat quality for wildlife.

Conclusion: Fence removal and naturalization of the project area would increase long-term habitat quality, resulting in a local, long-term, minor, beneficial impact on wildlife.

Temporary disturbance from removal of structures would result in local, short-term, minor, adverse impacts on wildlife. Implementation of mitigation measures (Appendix D) with a focus on limiting demolition activities during breeding seasons and conducting detailed surveys immediately before removing structures would minimize impacts on wildlife.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on wildlife and wildlife habitat in the project area would be the same as provided under the No Action Alternative. In conjunction with the past, present, and reasonably foreseeable future projects, Alternative 1 would have a local, short-term, minor, adverse impact on wildlife and a local, long-term, minor, beneficial impact on wildlife.

Environmental Consequences of Alternatives 2, 3, and 4

The proposed actions that might affect wildlife habitat or wildlife populations are the same for Alternatives 2, 3, and 4, with only very minor exceptions. Therefore, these alternatives are analyzed together.

Analysis

Short-term impacts on wildlife habitat and populations from removal of some structures and stabilization/mothballing of remaining structures would include temporarily increased noise, increased human presence, equipment use, and vehicle traffic. In addition to the ongoing impacts resulting from normal operations at Curry Village, the impact of these activities would be minor and short term in duration.

Vegetation maintenance would be required where structures remain to prevent property damage (e.g., tree limbing). Tree removal is not anticipated under any of the action alternatives. The amount of area that would be naturalized would vary by alternative (Alternative 2 would have the least opportunity for naturalization and Alternative 3 would have the most), but overall, continuing access restrictions, some naturalization, and vegetation maintenance to protect fewer structures would have in a beneficial impact on wildlife habitat.

Mitigation measures to avoid or minimize impacts on wildlife (see Appendix D) include scheduling structure removal and stabilization/mothballing activities with seasonal consideration of wildlife life cycles to minimize impacts during sensitive periods (such as after bird nesting seasons, when bats are neither hibernating nor have young, etc). To avoid impacts on maternal or hibernating bat colonies, work would occur between the end of August and the end of October. Or, if work must occur outside this window, the structures slated for demolition would be checked for bat occupancy just prior to removal and the park wildlife biologist would be consulted.

Routine maintenance of remaining structures would also result in very occasional, negligible to minor disturbance from equipment noise and increased human presence, but with mitigation measures in place (Appendix D), these impacts would be minimal.

Conclusion: Continued access restrictions and naturalization in some portions of the project area would result in local, long-term, negligible to minor, beneficial impacts on wildlife habitat quality by limiting human-caused disturbance.

Temporary disturbance from removal of structures, stabilization, mothballing, and routine maintenance activities would result in local, short-term, minor, adverse impacts on wildlife. Implementation of mitigation measures (Appendix D) with a focus on limiting work during breeding seasons and conducting detailed surveys immediately before removing structures and stabilizing/ mothballing activities would minimize impacts on wildlife. Routine maintenance of mothballed structures would have a negligible impact on wildlife habitat and populations.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on wildlife and wildlife habitat in the project area would be the same as provided under the No Action Alternative analysis. In conjunction with the past, present, and reasonably foreseeable future projects, Alternatives 2, 3, and 4 would have a local, short-term, minor, adverse impact on wildlife and a local, long-term, negligible to minor, beneficial impact on wildlife.

Special-Status Species

Overview

The U.S. Fish and Wildlife Service (USFWS) and the State of California Department of Fish and Game (CDFG) classify threatened, endangered, or rare species of plants and animals as those that have undergone serious national, state, or local declines, and which might be threatened with extinction if not otherwise protected. Species that are being monitored because they are undergoing noticeable declines or are threatened by significant loss of habitat, but are not protected by law, may be categorized by the state as rare or sensitive.

Federal and state regulations, including section 7 of the 1973 Endangered Species Act (ESA), CEQ regulations, as well as NPS *Management Policies 2006* (NPS 2006a), require all federal agencies to conduct an impacts analysis and consult with the USFWS to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or their designated critical habitat.

In addition, CEQ regulations for implementing the National Environmental Policy Act (section 1508.27) also require considering whether the proposed action may violate federal, state, or local law or requirements imposed for the protection of the environment. For this reason, species listed under the California Endangered Species Act or accorded special status by the California Department of Fish and Game (i.e., species considered rare or sensitive and monitored by the California Natural Diversity Database) are included in this analysis.

Special-Status Species Considered

Special-Status Wildlife Species

For the purposes of this assessment, “special-status species” are defined as those that are listed by the U.S. Fish and Wildlife Service as endangered, threatened, proposed, or candidate or are listed by the State of California as endangered, threatened, candidate, species of special concern, fully protected, or bird species of special concern. Based on species lists obtained from the U.S. Fish and Wildlife Service and the California Department of Fish and Game, reported observations, scientific research, and professional judgment on the part of NPS staff, a list of 23 special-status wildlife species that have the potential to occur in Yosemite Valley was developed (Table 3-1). From this list, NPS staff determined that 19 special-status wildlife species are known or have the potential to occur in the project vicinity and are discussed in more detail below.

Special-Status Plant Species

The National Park Service has determined that no special-status plant species occur or are likely to occur in the project area, or would be affected by the proposed action.

Federal Special-Status Species

The National Park Service obtained a list of federally listed endangered and threatened species for the project area from the U.S. Fish and Wildlife Service in April 2010 and reviewed this list for

any changes in species status in June 2011. The NPS wildlife biologist reviewed these lists to determine whether these species were known to occur in the park.

Based on the lists provided, reported observations, scientific research, and best professional judgment, the National Park Service has determined that there are no federally listed threatened, endangered, proposed, or candidate species that are known to occur or have the potential to occur in the project vicinity. The National Park Service will consult with the U.S. Fish and Wildlife Service to obtain an updated list of federally endangered, threatened, proposed, or candidate species prior to project implementation.

Federally Designated Critical Habitat

No critical habitat has been designated for any federally listed species within the project area.

State of California Special-Status Species

Of the 19 species that are known or have the potential to occur in the project area, 3 bird species are listed as endangered, 3 bird species are listed as a fully protected, and 9 bird species are listed as species of special concern by the state of California. In addition, 5 bat species are listed as California species of special concern.

Special-Status Species Categories

The various federal and state categories for special-status species considered for this analysis are defined below:

Federal candidate (FC): Candidate species are plants and animals for which the U.S. Fish and Wildlife Service has sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Federal Candidate Species are also known as “warranted but precluded.”

California endangered (CE): Any species that is in danger of extinction throughout all or a significant portion of its range in the state.

California threatened (CT): Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its state range.

California fully protected (CFP): Fully protected species status was part of an early effort by the state to identify and provide additional protection to those animals that were rare or faced possible extinction. Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations

California species of special concern (CSC): Any species that might become vulnerable to extinction on a state level from declining population trends, limited range, and/or continuing threats or could become threatened or endangered.

California Bird Species of Special Concern (BSSC): Species, subspecies, or distinct populations of native birds that currently satisfy one or more of the following (not necessarily mutually exclusive) criteria: (1) are extirpated from the state totally or in their primary seasonal or breeding role and were never listed as state threatened or endangered; (2) are listed as federally, but not state, threatened or endangered; (3) meet the state definition of threatened or endangered but have not formally been listed; (4) are experiencing, or formerly experienced, serious population declines or range retractions that, if continued or resumed, could qualify them for

state threatened or endangered status; (5) have naturally small populations exhibiting high susceptibility to risk from any factor(s) that if realized could lead to declines that would qualify them for state threatened or endangered status.

**Table 3-1
 Special-Status Wildlife Species in Yosemite Valley**

Species	Federal ESA ¹	State CESA ²	Habitat Type	Potential Occurrence in Project Area	Selected for Further Analysis
AMPHIBIANS					
Mount Lyell salamander (<i>Hydromantes platycephalus</i>)		CSC	High elevation, 2,100 to 3,700 m (6,890 to 12,139 ft), snowmelt seep and waterfall habitat throughout the Sierra Nevada. Several populations of Mount Lyell salamanders at lower elevation in the spray zones of waterfalls in Yosemite Valley (1,200 to 1,300 m (3,937 to 4,265 ft) and in riparian areas at lower elevation, 1,400 to 2,000 m (4,593 to 6,562 ft).	Not likely. Believed restricted in range; known from several locations in Yosemite Valley, but there is no habitat in or adjacent to the project area.	Dismissed
BIRDS					
harlequin duck (<i>Histrionicus histrionicus</i>)		CSC, BSSC	Breeding range includes Sierra Nevada. Breeds along clear, fast-flowing rivers and streams with substantial streamside vegetation.	Low. Habitat may be adjacent to project area.	Yes
northern goshawk (<i>Accipiter gentilis</i>)		CSC, BSSC	Moderately dense coniferous forests between 1,500 and 2,700 meters (4,920 and 8,860 ft). Hunts in a variety of vegetative cover, including meadow edges.	Medium. Most observations in Merced River corridor are from Yosemite Valley.	Yes
northern harrier (<i>Circus cyaneus</i>)		CSC, BSSC	Nests on the ground. Favors open areas such as grasslands, meadows, wetlands, and agricultural clearings. Rarely seen migrant in Yosemite.	Medium. Majority of observations in the park are from meadows in Yosemite Valley.	Yes
bald eagle (<i>Haliaeetus leucocephalus</i>)		CE, CFP	Favors lakes and rivers with abundant prey (mostly fish) and large trees in which to nest.	Medium. Suitable habitat is present.	Yes
golden eagle (<i>Aquila chrysaetos</i>)		CFP	Favors grasslands and areas of shrubs or saplings, and open-canopied woodlands of blue oaks. Can range above tree-line in summer. Hunts in meadows, clearings, rock outcroppings, granite shelves, fell fields, talus, and other open or openly wooded habitats.	Medium. Majority of observations from Merced River corridor are from Yosemite Valley.	Yes
peregrine falcon (<i>Falco peregrinus</i>)		CFP	Nests are often scrapes on ledges or cliffs, a habit observed in Yosemite Valley. Hunts in a wide variety of habitats including meadows, woodlands, marshes, and mudflats.	High. Currently known to occur in Yosemite Valley.	Yes
long-eared owl (<i>Asio otus</i>)		CSC, BSSC	Found from blue oak savannah up to ponderosa pine and black oak habitats, usually in association with riparian habitats. In Yosemite, known to nest in riparian forests and oak-conifer woodlands.	Low. Only three records from Yosemite Valley.	Yes

**Table 3-1
Special-Status Wildlife Species in Yosemite Valley (continued)**

Species	Federal ESA ¹	State CESA ²	Habitat Type	Potential Occurrence in Project Area	Selected for Further Analysis
BIRDS (CONTINUED)					
great gray owl (<i>Strix nebulosa</i>)		CE	Requires extensive, densely vegetated wet or moist meadows margined by old - growth coniferous forest from the mixed conifer through the red fir to the lower lodgepole pine zones between 750 to 2,700 meters (2,460 to 8,858 ft). Breeds in conifer stands with large snags and high canopy closure in the immediate vicinity of a montane meadow.	Low to Medium. An estimated 100 - 200 pairs of great gray owls occur in California, with a limited geographic distribution centered in Yosemite National Park and adjacent National Forest lands. Only five observations in Yosemite Valley.	Yes
California spotted owl (<i>Strix occidentalis occidentalis</i>)		CSC, BSSC	Areas of mature and old forest with thick canopy that contains many dense, old, live, and dead trees and fallen logs. Nests in large, broken - topped conifer snags, particularly red fir, white fir, or in black oak in lower elevations.	Medium. Population density in Yosemite is higher than elsewhere in the Sierra Nevada. However, sightings have been sporadic in Yosemite Valley.	Yes
Vaux's swift (<i>Chaetura vauxi</i>)		CSC, BSSC	Older trees and hollow snags for nesting and roosting habitat.	Medium. Habitat requirements include large-diameter trees in old growth areas.	Yes
black swift (<i>Cyseloides niger</i>)		CSC, BSSC	In Yosemite, nests near or behind waterfalls.	Low. Project area does not contain habitat, however there are known populations in Yosemite Valley.	Yes
olive-sided flycatcher (<i>Contopus cooperi</i>)		CSC, BSSC	Forages in unobstructed canopies with high perches.	Medium. Observed in Yosemite Valley and is a fairly common summer resident in the park.	Yes
willow flycatcher (<i>Empidonax traillii</i>)		CE	Frequent the willows found along languid streams and, to a lesser degree, within moist meadows. Deciduous trees and shrubs interspersed with open areas enhance the quality of foraging habitat.	Low. Once commonly observed in Yosemite Valley, last record in Yosemite Valley was in 1974.	Yes
yellow warbler (<i>Dendroica petechia</i>)		CSC, BSSC	Breeds primarily in riparian woodlands, up to 2,400 meters (7,874 ft) in the Sierra Nevada. Other breeding habitat includes montane chaparral, ponderosa pine, and mixed conifer where substantial amounts of brush occur.	High. Recent confirmed observations in Yosemite Valley, including confirmed breeding.	Yes
MAMMALS					
pallid bat (<i>Antrozous pallidus</i>)		CSC	Low to mid elevations, versatile in selection of roosting sites, including rock crevices, caves, and anthropogenic structures.	High. Suitable foraging habitat is present or adjacent to the project area.	Yes
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)		CSC	Low to mid elevations, concentrated in areas with mines or caves. Forages at edge habitats along streams, adjacent to or within wooded areas.	High. Suitable foraging habitat is present or adjacent to the project area.	Yes
spotted bat (<i>Euderma maculatum</i>)		CSC	Roosts in crevices in high cliff faces. Forages over meadows, along forest edges, or in open coniferous woodland.	High. Suitable foraging habitat is present or adjacent to the project area.	Yes

**Table 3-1
 Special-Status Wildlife Species in Yosemite Valley (continued)**

Species	Federal ESA ¹	State CESA ²	Habitat Type	Potential Occurrence in Project Area	Selected for Further Analysis
MAMMALS (CONTINUED)					
Western red bat (<i>Lasiurus blossevillii</i>)		CSC	Roosts on the underside of overhanging leaves. Forages at canopy height or low over the ground.	Medium. Suitable foraging habitat is present or adjacent to the project area.	Yes
Western mastiff bat (<i>Eumops perotis</i>)		CSC	Presence is determined by the availability of significant rock features offering suitable roosting habitat. Foraging habitats include dry desert washes, floodplains, chaparral, oak woodland, open ponderosa pine forest, grassland, agricultural areas, and high elevation meadows surrounded by mixed conifer forests.	High. Yosemite Valley has the highest population of the greater western mastiff bat of any locality surveyed in California.	Yes
Sierra Nevada mountain beaver (<i>Aplodontia rufa californica</i>)		CSC	Well-vegetated, moist, cool environments. Requires abundant riparian plants for harvesting and large amounts of small diameter woody debris or uprooted stumps.	Not likely. No confirmed observations in Yosemite Valley.	Dismissed
Sierra Nevada red fox (<i>Vulpes vulpes necator</i>)		CT	High-elevation, barren, conifer, and shrub habitats; montane meadows; talus slopes; subalpine woodlands; and fell-fields. Possible den sites include natural cavities in talus slopes or rockslides, earthen dens, boulder piles, or even the space beneath vacant cabins.	Not likely. No confirmed observations in Yosemite Valley (but several unconfirmed sightings in or near Yosemite Valley since 1977).	Dismissed
Pacific fisher (<i>Martes pennanti</i>)	FC		Generally found in stands with high canopy closure, large trees and snags, large woody debris, large hardwoods, and multiple canopy layers. Avoids entering open areas that have no overstory or shrub cover.	Not likely. Believed to have limited potential for occurrence in Yosemite Valley. Habitat is present in the Valley; however, no recent records support their occurrence.	Dismissed

¹ ESA = Endangered Species Act administered by the U.S. Fish and Wildlife Service.

² CESA = California Endangered Species Act administered by the California Department of Fish and Game.

Source: Yosemite National Park Resources Management and Science Division, May 2011

BSSC = bird species of special concern

CE = California endangered

CFP = California fully protected

CSC = California species of special concern

CT = California threatened

FC = federal candidate

Special-Status Wildlife Species Selected for Further Analysis

Bird Species

Harlequin duck (*Histrionicus histrionicus*)

As of 2011, there are 43 records of harlequin ducks in Yosemite's Wildlife Observation Database. Of these records, 39 observations are from the Merced River corridor. From 1977 to 1985, harlequins were observed with some regularity in the Merced River. After a 15-year absence, harlequins were documented repeatedly in the Merced River between 2000-2007 (NPS 2011). Harlequin ducks have disappeared from most of their historic breeding range in the Sierra Nevada (Beedy 2008), possibly because of hunting pressure from fishermen early in the 20th century (Grinnell 1918, Brown 1998). In the Merced River corridor, harlequin ducks are

susceptible to disturbance by hikers, rafters, and fisherman at suitable nesting sites. Such disturbances might discourage harlequin ducks from recolonizing previously used streams and can reduce nesting success where breeding does occur (Beedy 2008).

Northern goshawk (Accipiter gentilis)

Northern goshawk observations have been recorded on 160 occasions in Yosemite National Park. Of these records, 54 observations were in the Merced River corridor, with the majority from Yosemite Valley. The greatest threats to northern goshawk populations are habitat loss and degradation due to the alteration of forests through timber harvest and changes in fire regimes (Keane 1999). Although timber harvest is not a concern within the park, changes in fire frequency could have an impact on park populations (Steel et al. 2011).

Northern harrier (Circus cyaneus)

Northern harrier observations have been recorded on 47 occasions in Yosemite National Park. Of these observations, 19 records are from the Merced River corridor (NPS 2011). The majority of the records are from meadows in Yosemite Valley during the fall. Beginning in 1977, there are records of several northern harriers per decade in Yosemite Valley through 2006 (NPS 2011). Human disturbance and recreation activities near nest sites have also been linked to harrier decline (Burrige 1995, Unitt 2004).

Golden eagle (Aquila chrysaetos)

Golden eagle observations have been recorded on 273 occasions in Yosemite National Park. Of these observations, there are 74 records from the Merced River corridor. The majority of these observations are from locations in Yosemite Valley. The greatest outside threat to golden eagle populations stems from interactions with humans and human-built structures (Steel et al. 2011). In particular, collisions with structures and electrocution by power lines cause the majority of non-natural golden eagle deaths (Steel et al. 2011). Such interactions could have detrimental effects on golden eagle populations in Yosemite.

Bald eagle (Haliaeetus leucocephalus)

Bald eagle observations have been recorded on 123 occasions in Yosemite National Park. Of those observations, 25 records are from the Merced River corridor (NPS 2011). Roughly half of the bald eagle observations in the Merced River corridor are from areas downstream of Yosemite Valley. From the late 1970s to 1992, bald eagles were documented in the Merced River corridor at a rate of one every few years. Bald eagles might abandon territories in cases of recreational development or human disturbance near nests (Thelander 1973). Also of concern is mortality due to interactions with vehicles and human infrastructure (Steel et al. 2011).

Peregrine falcon (Falco peregrinus)

Peregrine falcon observations have been recorded on 118 occasions in Yosemite National Park. Of those observations, 65 records are from the Merced River corridor (NPS 2011). In 1978, nesting peregrine falcons were found in Yosemite Valley, the first time they had been recorded in the park for over 35 years. Since 1978, peregrine falcons have continued to recover in the park. Breeding surveys conducted in 2010 revealed eight active nests in Yosemite, the most ever documented in one season. Primary threats to peregrine falcons include predation on young by golden eagles and great horned owls and competition with ravens for nest sites. Other threats include disturbances posed by helicopters during search and rescue flights or medical evacuations and conflicts between nesting falcons and rock climbers.

Long-eared owl (Asio otus)

The long-eared owl has been recorded on 22 different occasions in Yosemite National Park, of which only three records are from Yosemite Valley (NPS 2011). Long-eared owls are only known to have nested in Yosemite Valley on one occasion, in 1915. Two records in Yosemite Valley from 1987 are from the same date and general location (Yosemite School and Leidig Meadow). During one year of meadow surveys for great gray owls, long-eared owls were detected at 5 out of 15 meadows (Keane et al. 2011); none of these meadows were within the Merced River corridor. Known factors in the decline of long-eared owls in California are destruction and fragmentation of riparian woodlands, live oak habitats, and isolated tree groves, but there might be other factors as well.

Great gray owl (Strix nebulosa)

Great gray owl observations have been recorded on 204 occasions in Yosemite National Park. Of these observations, 21 records are from the Merced River corridor. Five of these observations were in Yosemite Valley (NPS 2011). Human development and activities, including noise and light, and automobile traffic, might have an impact on great gray owl presence, foraging success, and reproductive success both inside and outside Yosemite (Wildman 1992, Maurer 1999).. Disturbance to great gray owls from vehicle collisions and recreational activities has also been identified as a potential negative factor ((Maurer 2006; J. Maurer, S. Stock, unpubl. data; Wildman 1992).

California spotted owl (Strix occidentalis occidentalis)

California spotted owl observations have been recorded on 72 occasions in Yosemite National Park. Of these observations, 14 records are from the Merced River corridor. Sightings of California spotted owls are sporadic in Yosemite Valley. The California spotted owl is primarily threatened by habitat loss and fragmentation. Alterations of the natural fire regime in Yosemite and elsewhere have led to frequent stand-replacing wildfires that destroy or reduce the quality of California spotted owl habitat (Weatherspoon et al. 1992).

Vaux's swift (Chaetura vauxi)

Vaux's swift observations have been recorded on 24 different occasions in Yosemite National Park. Of these observations, five records are from the Merced River corridor (NPS 2011). According to Breeding Bird Survey data from the Sierra Nevada, Vaux's swift is significantly and rapidly declining in the Sierra Nevada region (Sauer et al. 2008). Loss of roosting trees is the single greatest threat to Vaux's swifts (Shuford and Gardali 2008).

Black swift (Cyseloides niger)

Black swifts have been observed on 32 occasions in Yosemite National Park. The vast majority of black swift observations in the park are in or near the main stem of the Merced River (NPS 2011). Grinnell and Miller (1944) indicate Yosemite Valley and other locations in Mariposa County as nesting sites. Bridalveil Fall is suspected to be one of only three sites in California where nesting populations of black swifts exceed 10 pairs (Roberson and Collins 2008). Habitat for black swifts within Yosemite is largely intact and protected as designated wilderness.

Olive-sided flycatcher (Contopus cooperi)

Olive-sided flycatcher observations have been recorded on 81 occasions in Yosemite National Park. Of these observations, 15 records are from the Merced River corridor, including several observations in Yosemite Valley in the 1920s and 1970s. The most significant threat to the olive-sided flycatcher is habitat degradation and loss on both breeding and wintering grounds

(Widdowson 2008). In the southern Sierra Nevada, where habitat remains essentially unchanged, declines probably have resulted from destruction of forests on wintering grounds in Central America (Marshall 1988).

Willow flycatcher (*Empidonax trailii*)

Once a commonly observed bird in Yosemite Valley, willow flycatchers are now exceedingly rare in Yosemite National Park as a whole. Gaines (1992) indicates that they had stopped breeding in Yosemite Valley by 1966. One observation from 1974 in Yosemite Valley is the most recent sightings of willow flycatchers in the Valley, though they are still seen on rare occasions elsewhere in the park. Within the Sierra Nevada, habitat degradation due to historic and/or ongoing grazing of riparian and meadow habitats appears to be associated with population declines (Siegel et al. 2008). Willow flycatcher are particularly vulnerable to brood parasitism by brown-headed cowbirds (*Molothrus ater*), which are frequently observed in Yosemite taking advantage of unnatural food sources at pack stations, stables, campgrounds, and in park residential areas.

Yellow warbler (*Dendroica petechia*)

In 2010, bird surveys detected 49 individual yellow warblers in Yosemite Valley and confirmed breeding based on two specific observations: (1) an adult carrying food for young and (2) recently fledged young. Human population growth and resulting habitat degradation threaten yellow warbler populations, given their sensitivity to decreases in deciduous habitat, riparian habitat heterogeneity, and riparian corridor width (Saab 1999). In Yosemite, the Monitoring Avian Productivity and Survivorship Program documented a significant decline in yellow warbler captures between 1993 and 2006 (Siegel et al. 2006).

Bat Species

Special-status bat species that have the potential to occur within the project area are pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum*), Western red bat (*Lasiurus blossevillii*), and the greater Western mastiff bat (*Eumops perotis californicus*). The majority of these bat species are somewhat specialized in their habitat requirements, preferring large trees, hollow trees, dense foliage, meadows, or snags for roosting or foraging habitat. There is suitable habitat for all five bat species in the project area.

In 2010 acoustic surveys for special-status bat species were performed at two locations in Yosemite Valley, at Yosemite Creek and at North Pines Campground. None of the five special-status bat species listed above were detected in the 2010 Yosemite Valley survey (NPS 2011a).

Environmental Consequences – Methodology

The National Park Service evaluated effects of the alternatives according to guidance outlined in the 1998 U.S. Fish and Wildlife Service and National Marine Fisheries Service *Endangered Species Act Consultation Handbook: Procedures for Conducting Section 7 Consultations and Conference Activities*, and as described below:

- *No Effect*: The project (or action) is located outside suitable habitat and there would be no disturbance or other direct, indirect, or cumulative impacts on the species. The action would not affect the listed species or its designated critical habitat (USFWS 1998).
- *May Affect, Not Likely to Adversely Affect*: The project (or action) occurs in suitable habitat or results in indirect impacts on the species, but the effect on the species is likely to be entirely beneficial, discountable, or insignificant. The action might pose effects on listed species or designated critical habitat, but given circumstances or mitigation conditions, the effects might be discounted, insignificant, or completely beneficial. Insignificant effects would not result in

take. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects or (2) expect discountable effects to occur (USFWS 1998).

- *May Adversely Affect*: The project (or action) would have an adverse effect on a listed species as a direct, indirect, or cumulative result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial (USFWS 1998).

The impact evaluation for special-status wildlife species was based on the following: (1) the known or likely occurrence of a species or its preferred habitat in the vicinity of the project area; (2) the direct physical loss or gain, or modification of habitat; and (3) the effective loss of habitat (through avoidance or abandonment) due to construction activity or noise, or the species' sensitivity to human disturbance. No special-status plants are expected to be affected by the project.

Environmental Consequences of the No Action Alternative

Analysis

Under the No Action Alternative, there would be no new impacts on special-status wildlife habitat or populations. Structures located within the rockfall hazard zone would remain vacant and in place with no use for visitor lodging or employee housing. Access restrictions would continue to result in minor beneficial impacts on habitat quality by continuing to limit auditory disturbance and vegetation disturbance. The retention of structures within the project area would also continue to provide roosting habitat for special-status bat species.

Conclusion: Under the No Action Alternative, there would be no effect on special-status species.

Cumulative Impacts

Past actions that contributed to impacts on wildlife and wildlife habitat within the project area include the construction and expansion of Curry Village; past and present routine maintenance activities; the recent relocation of structures to the Huff and Boys Town portions of Curry Village, and the recent construction of a temporary guest shower house. The recent actions to relocate housing would have had only minor short-term impacts from noise and vehicle-related disturbance during structure relocation. All structures were relocated to previously disturbed areas.

Reasonably foreseeable future projects, including the removal of rockfall-destroyed structures from the project area, rehabilitation of historic cabins outside of the project area, and the Merced River Plan, would have short-term impacts on wildlife from disturbance associated with project implementation. The Merced River Plan is under development, but it is assumed that there would be long-term, beneficial impacts on special-status wildlife habitat from implementation of a comprehensive river management plan.

In conjunction with the past, present, and reasonably foreseeable projects, the No Action Alternative would have no effect on special-status species.

Environmental Consequences of Alternative 1

Analysis

Removal of structures would temporarily increase noise, human presence, equipment use, and vehicle traffic in the project area. In addition to the ongoing impacts resulting from normal

operations at Curry Village, the impact of these activities would be minor and short term in duration.

Tree removal is not anticipated under any of the action alternatives, although some trees may be limbed in order to access and stabilize structures.

Impacts on special-status bird and bat species would be minimized or avoided with the implementation of mitigation measures described in the wildlife section of Appendix D. These measures include bird and bat surveys immediately prior to project implementation. In addition, construction activities would be scheduled with seasonal consideration of wildlife life cycles to minimize impacts during sensitive periods (such as after bird nesting seasons, when bats are neither hibernating nor have young, etc). For example, to avoid adverse impacts on maternal or hibernating bat colonies, structures would be removed between the end of August and the end of October. Or, if work must occur outside this window, every structure would be checked for bat occupancy just prior to removal and the park wildlife biologist would be consulted.

Conclusion: The project would occur in suitable habitat for special-status bird and bat species, but the application of mitigation measures (Appendix D) with a focus on limiting activities during breeding seasons and conducting detailed surveys at each structure immediately before project implementation would minimize the potential for impacts on habitat or individuals. Therefore, Alternative 1 may affect, but is not likely to adversely affect special-status species.

Cumulative Impacts

The list of past, current, or reasonably foreseeable future projects that might have a cumulative impact on the project area would be the same as provided under the No Action Alternative analysis. None of the past, current, or reasonably foreseeable projects would be likely to adversely affect special-status species. Therefore, in conjunction with the past, present, and reasonably foreseeable projects, Alternative 1 may affect, but is not likely to adversely affect special-status species.

Environmental Consequences of Alternatives 2, 3, and 4

The proposed actions that might have an impact on special-status wildlife habitat or special-status wildlife populations are the same for Alternatives 2, 3, and 4, with only very minor exceptions. Therefore, these alternatives are analyzed together.

Analysis

The short-term impacts of proposed activities would be very similar to Alternative 1. Removing structures and/or stabilizing and mothballing structures would temporarily increase noise, human presence, equipment use, and vehicle traffic in the project area. In addition to the ongoing impacts resulting from normal operations at Curry Village, the impact of these activities on special-status wildlife populations and their habitat would be minor and short term in duration.

Tree removal is not anticipated under any of the action alternatives, although some trees may be limbed in order to access and stabilize structures.

Impacts on special-status bird and bat species would be minimized or avoided with the implementation of mitigation measures described in the wildlife section of Appendix D. These measures include bird and bat surveys immediately prior to project implementation. In addition, construction activities would be scheduled with seasonal consideration of wildlife life cycles to minimize impacts during sensitive periods (such as after bird nesting seasons, when bats are

neither hibernating nor have young, etc). For example, to avoid adverse impacts on maternal or hibernating bat colonies, structures would be removed between the end of August and the end of October. Or, if work must occur outside this window, every structure would be checked for bat occupancy just prior to removal and the park wildlife biologist would be consulted.

In the long term, mothballing of remaining structures would reduce the potential for special-status wildlife species to use structures for roosting or rests. Routine maintenance of remaining structures would also result in very occasional, minor disturbance from equipment noise and increased human presence, but with mitigation measures in place (Appendix D), these impacts would be negligible.

Conclusion: The project would occur in suitable habitat for special-status bird and bat species, but the application of mitigation measures (Appendix D) with a focus on limiting activities during breeding seasons and conducting detailed surveys at each structure immediately before project implementation would minimize the potential for impacts on habitat or individuals. After project implementation, routine maintenance of structures would have a negligible impact on special-status wildlife habitat and populations. Therefore, Alternatives 2, 3, and 4 may affect, but are not likely to adversely affect special-status species.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on the project area would be the same as described under the No Action Alternative analysis. None of the past, current, or reasonably foreseeable projects would be likely to adversely affect special status species. Therefore, in conjunction with the past, present, and reasonably foreseeable projects, Alternatives 2, 3, and 4 may affect, but are not likely to adversely affect special-status species.

Sociocultural Resources

Visitor Experience and Recreation

Affected Environment

Stewardship of Yosemite National Park requires the consideration of two integrated purposes: (1) to preserve Yosemite's unique natural and cultural resources and scenic beauty, and (2) to make these resources available to visitors for study, enjoyment, and recreation. The experience of visitors in Yosemite National Park is dependent on a number of factors, including the availability of recreational and interpretive opportunities, the availability of services, and the quality of the recreational environment.

Curry Village is located in Yosemite Valley, the most popular destination in the park. Curry Village provides over 600 units of overnight lodging, including bungalows (cabins with private baths), bungalettes (cabins without private baths), tent cabins, and rooms in Stoneman Lodge. The area also provides food service in a cafeteria and fast-food facilities. Other services located at Curry Village include a grocery and gift shop, bicycle and raft rentals, post office, a mountain sport shop for camping and climbing supplies, an information and registration office, and employee housing. There is an ice rink that operates in the winter.

The 1992 *Concession Services Plan* (NPS 1992), which amended the park's 1980 *General Management Plan*, called for a reduction in guest accommodations to 420 units, removal of tent cabins from geohazard zones, and replacement of cabins without baths with cabins with baths.

The area affected by this project contains 22 bungalows, 44 bungalettes, three comfort stations, Cabin 101 (Nob Hill Cabin), the Women's Club/Terrace Clubhouse, and the Foster Curry Bungalow/Tresidder House. All of the structures in the project area have been closed since two consecutive rockfalls in October 2008 resulted in minor injuries to visitors and damaged guest accommodations.

The risk to public health and safety associated with rockfalls at Curry Village has been recognized for many years, and several park planning documents have called for removal of the structures located in the rockfall hazard zone. As noted in the Geohazard section above, the rockfall events of October 2008 were the latest reminder of the life-safety issues related to retaining structures located in the rockfall hazard zone at Curry Village. The continued unauthorized use of these abandoned structures is a serious public health and safety issue for the park.

Environmental Consequences – Methodology

This analysis evaluates the quality of visitor experiences in terms of how they might be altered as a result of the action alternatives. Professional judgment was applied to reach reasonable conclusions as to the context, duration, intensity, and type and of potential impacts.

Analysis was based on whether there would be a complete loss of a recreation opportunity, a change in access to or availability of a recreation opportunity, a change in the quality of visitor experience or recreational opportunities, or a change in safety.

Since none of the structures would be used as accommodations after project implementation (any remaining structures would be mothballed), the level of visitor services provided would be no different than the existing condition. Therefore, the impact on visitor services is not further analyzed.

Context: Due to the limited and localized nature of the proposed actions, impacts would be detectable only locally, within the vicinity of the proposed action. No regional impacts would be expected. For the purposes of this analysis, only local impacts are considered.

Duration: In terms of duration, short-term construction-related impacts on the visitor experience would be those impacts that occur only during the implementation of the action alternative. Long-term impacts would have a permanent effect on the visitor experience or visitor safety.

Intensity: In terms of intensity, impacts are defined as negligible, minor, moderate, and major. Negligible impacts are effects considered not detectable and would result in little noticeable change in visitor experience or visitor safety. Minor impacts would result in changes in desired experiences, but without appreciably limiting or enhancing the overall effect. Changes to visitor safety would be detectable, but not substantive. Moderate impacts would be clearly detectable and could change the desired experience or visitor safety appreciably. Major impacts would greatly reduce or greatly enhance visitor experience or visitor safety, thereby creating a substantial, highly noticeable influence.

Type: In terms of type, impacts were evaluated in terms of whether they would be beneficial or adverse to the quality of visitor experience or visitor safety.

Environmental Consequences of the No Action Alternative

Analysis

Under the No Action Alternative, the structures in the rockfall hazard zone at Curry Village would remain closed to all use. The structures would likely deteriorate and be subject to damage from natural processes, including rockfall. The security fencing around the area would remain in place to deter access to the structures. It is likely that unauthorized access to the closure area and abandoned structures would continue.

This alternative would not result in any change in visitor services because the structures have been closed to all use since October 2008. There would be a continued adverse impact on the quality of the visitor experience at Curry Village caused by views of structures deteriorating in place behind a security fence. Potential safety hazards related to unauthorized access to the structures would result in a local, long-term, moderate, adverse impact on visitor safety.

Conclusion: The No Action Alternative would result in a local, long-term, minor to moderate, adverse impact on visitor experience from views of structures deteriorating in place behind a security fence. There would be a local, long-term, moderate, adverse impact on visitor safety from continued unauthorized access in an active rockfall hazard zone.

Cumulative Impacts

Past actions in the project area that have had an impact on visitor experience include the closure of visitor accommodations after the 2008 rockfall, the recent relocation of closed structures out of the rockfall hazard zone, and the recent construction of a temporary guest shower house to replace the closed Nob Hill Shower House.

Reasonably foreseeable actions that would cumulatively have impacts on visitor experience within the project area include the removal of structures destroyed by the October 2008 rockfall and the rehabilitation of historic cabins located outside the rockfall hazard zone, and the removal of remaining tent cabins in the rockfall hazard zone east of the project area. Additionally, the

Merced River Plan could affect visitor experience in Yosemite Valley and Curry Village, although the results of this planning process are not yet known.

The cumulative impact of these projects would likely be beneficial in the long term, but would not affect the adverse impacts associated with the No Action Alternative. Therefore, the cumulative actions in combination with the No Action Alternative would result in local, long-term, minor to moderate, adverse impact on visitor experience and visitor safety in the project area.

Environmental Consequences of Alternative 1

Analysis

Under Alternative 1, all 72 structures would be removed from the rockfall hazard zone. Materials may be salvaged for use outside of the rockfall hazard zone, but the structures would be permanently lost to the visiting public. The removal of deteriorating structures and security fencing might be a beneficial visual impact on some visitors to the Curry Village area. In accordance with the Memorandum of Agreement with the California State Historic Preservation Officer (Appendix A), the National Park Service would document the structures and site prior to their removal and interpretive displays would be installed outside of the rockfall hazard zone boundary to provide visitors with information regarding the historic site, historic structures, and rockfall hazards. When the structures are removed, the area would be naturalized and the security fencing would be removed.

With implementation of Alternative 1, the threat to life-safety would be substantially reduced because the attractive nuisance would be removed. The threat to visitor safety from rockfall hazard would not be completely eliminated because the area closure would be lifted after the structures are removed (e.g., when the security fencing is removed, visitor use would be allowed in the active rockfall hazard zone, just as in other geologically active areas in the park).

There would be short-term impacts on visitor experience from construction activities related to the removal of the structures due to increased noise, air emissions, equipment operations, and construction access through the area.

Conclusion: Alternative 1 would result in a local, short-term and long-term, minor to moderate, adverse impact on the quality of the visitor experience due to construction activities associated with removal of the structures and the permanent removal of 70 historic structures from the park. This adverse impact might be offset by a local, long-term, minor to moderate, beneficial impact from removal of the deteriorating structures, removal of security fencing, and installation of interpretive materials that illustrate the historic significance of the site.

In addition, there would be a local, long-term, moderate, beneficial impact on visitor safety from the removal of structures.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on the project area would be the same as provided under the No Action Alternative analysis. The cumulative impact of these plans and projects would likely be beneficial in the long term. Therefore, the cumulative actions in combination with Alternative 1 would result in local, short-term and long-term, minor to moderate, adverse impacts from construction activity and the loss of historic structures, and a long-term, moderate, beneficial impact on visitor safety.

Environmental Consequences of Alternative 2

Analysis

Alternative 2 would retain the majority of structures currently in the rockfall hazard zone. Although remaining structures would be stabilized and mothballed, the visitor experience at Curry Village would continue to be affected by views of boarded up structures behind security fencing.

There might be a beneficial impact on visitors through the retention of historic structures for potential future relocation outside of the project area. In accordance with the Memorandum of Agreement with the California State Historic Preservation Officer (Appendix A), the National Park Service would document the historic structures that would be removed, and interpretive displays would be installed outside of the rockfall hazard boundary to provide visitors with information regarding the remaining historic structures and rockfall hazards.

Retaining the majority of structures would not appreciably reduce the threat to life-safety from rockfall hazards. Mothballing remaining structures would reduce the potential for visitors to occupy structures overnight, but the remaining structures would likely continue to attract visitors into the active rockfall hazard zone.

Short-term impacts on visitor experience from construction activities would occur from the visual impacts of stabilization, mothballing, and maintenance activities in the closed area. There would be minimal impacts from increased noise, air emissions, equipment operations, and construction access through the area during removal activities.

Conclusion: Alternative 2 would result in a local, long-term, minor, adverse impact on the quality of the visitor experience from the presence of mothballed structures and security fencing. This impact might be offset by a local, long-term, minor, beneficial impact on the visitor experience from retaining 68 historic structures for potential future relocation and installing interpretative materials to explain their significance.

In the short term, there would be local, minor to moderate, adverse impacts on visitor experience caused by construction activities related to removing structures and the stabilization, mothballing, and maintenance activity for remaining structures.

Alternative 2 would not appreciably reduce the threat to public health and safety in the project area, resulting in a continued local, long-term, moderate, adverse impact on visitor safety.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on visitor experience in the project area would be the same as provided under the No Action Alternative analysis. The cumulative impact of these plans and projects would likely be beneficial in the long term; however, they would not address the adverse impact associated threats to visitor safety under this alternative. Therefore, the cumulative actions in combination with Alternative 2 would result in a local, long-term, moderate, adverse impact on visitor safety, and a local, long-term, negligible, adverse impact on visitor experience.

Environmental Consequences of Alternative 3

Analysis

Alternative 3 would retain 5 to 16 structures currently in the rockfall hazard zone. Although remaining structures would be stabilized and mothballed, the visitor experience at Curry Village would continue to be affected by the view of boarded-up structures behind security fencing.

There might be a beneficial impact on visitor experience through the retention of historic structures. In accordance with the Memorandum of Agreement with the California State Historic Preservation Officer (Appendix A), the National Park Service would document the historic structures removed, and interpretive displays would be installed outside of the rockfall hazard boundary to provide visitors with information regarding the historic site, the remaining historic structures, and rockfall hazards.

Removing the majority of structures and mothballing remaining structures would reduce the threat to life-safety from rockfall hazards, although any structures remaining would likely continue to attract visitors into the active rockfall hazard zone.

In the short term, there would be local, minor to moderate, adverse impacts on visitor experience due to construction activities related to removing structures and the stabilization, mothballing, and maintenance activity for remaining structures.

Conclusion: Alternative 3 would result in a local, long-term, minor to moderate, adverse impact on the quality of the visitor experience from the presence of mothballed structures and security fencing, as well as the permanent loss of up to 65 historic structures. This impact might be offset by the local, long-term, minor, beneficial impact on the visitor experience from retention of 5 to 16 of the most significant structures for potential future relocation and installation of interpretative materials to explain their significance.

In the short term, there would be local, minor to moderate, adverse impacts on visitor experience due to construction activities related to removing structures and the stabilization, mothballing, and maintenance activity for remaining structures.

The threat to public health and safety from rockfall hazards in the project area would continue, although the potential for visitors to occupy structures would be reduced. This would result in a local, long-term, minor to moderate, adverse impact on visitor safety.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on the project area would be the same as described under the No Action Alternative analysis. The cumulative impact of these plans and projects would likely be beneficial in the long term; however, they would not address the adverse impact associated threats to visitor safety under this alternative. Therefore, the cumulative actions in combination with Alternative 3 would result in a local, long-term, minor, adverse impact on visitor experience, and a local long-term, minor to moderate, adverse impact on visitor safety.

Environmental Consequences of Alternative 4

Analysis

Alternative 4 would retain approximately one-half of the structures currently in the rockfall hazard zone. Although remaining structures would be stabilized and mothballed, the visitor experience at Curry Village would continue to be affected by the view of boarded-up structures behind security fencing.

There might be a beneficial impact on visitors through the retention of historic structures. In accordance with the Memorandum of Agreement with the California State Historic Preservation Officer (Appendix A), the National Park Service would document the historic structures removed, and interpretive displays would be installed outside of the rockfall hazard boundary to provide visitors with information regarding the historic site, the remaining historic structures, and rockfall hazards.

Removing approximately one-half of structures and mothballing remaining structures would reduce the threat to life-safety from rockfall hazards, although any structures remaining would likely continue to attract visitors into the active rockfall hazard zone.

Short-term impacts on visitor experience from construction activities could occur from increased noise, air emissions, equipment operations, and construction access through the area.

Conclusion: Alternative 4 would result in a local, long-term, minor to moderate, adverse impact on the quality of the visitor experience from the presence of mothballed structures and security fencing, as well as the permanent loss of 30 historic structures. This impact might be offset by the local, long-term, minor, beneficial impact on the visitor experience from retention of approximately 40 historic structures for potential future relocation with installation of interpretative materials to explain their significance.

In the short term, there would be local, minor to moderate, adverse impacts on visitor experience caused by construction activities related to removing structures and the stabilization, mothballing, and maintenance activity for remaining structures.

The threat to public health and safety from rockfall hazards in the project area would continue, although the potential for visitors to occupy structures would be reduced. This would result in a local, long-term, minor to moderate, adverse impact on visitor safety.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on the project area would be the same as provided under the No Action Alternative analysis. The cumulative impact of these plans and projects would likely be beneficial in the long term; however, they would not address the adverse impact associated with threats to visitor safety under this alternative. Therefore, the cumulative actions in combination with Alternative 4 would result in a local, short-term and long-term, minor, adverse impact on visitor experience and a local, long-term, minor to moderate, adverse impact on visitor safety.

Park Operations and Infrastructure

Affected Environment

Operations at Curry Village can be categorized as either NPS or concessioner functions. In general, the National Park Service is responsible for maintaining the infrastructure outside of buildings (i.e., water lines, water storage, wastewater disposal, electrical service, roads, and parking lots) and providing visitor protection. The concessioner is responsible for maintaining the exterior and interior of concession-run buildings and interior mechanical, electrical, and plumbing systems; removing solid waste; providing interpretive services; and operating the facility for use by the public as a day use destination and overnight accommodations for park visitors.

The structures located in the rockfall hazard zone were removed from the concessioner's inventory of facilities after the October 2008 rockfall and are now the responsibility of the National Park Service.

Operations

The structures located in the rockfall hazard zone have been closed to public use and security fencing was installed in 2008 to prevent unauthorized access.

The NPS Division of Visitor Protection is responsible for monitoring the area and enforcing the area closure. There has been unauthorized use of the closed structures by visitors, and NPS law enforcement rangers that perform law enforcement services in Yosemite Valley must monitor, detect, and deter these uses. Managing this closed area occurs at the expense of other visitor protection responsibilities in Yosemite Valley.

The NPS Division of Resources Management and Science (RMS) is responsible for research, documentation, monitoring, and ultimately stewardship of cultural and natural resources in the project area. RMS staff respond to wildlife issues at the abandoned structures in the rockfall zone and are also responsible for monitoring and documenting the condition of historic structures in the area.

The NPS Division of Facilities Management performs preventive and corrective maintenance on utility infrastructure, which includes the water supply system and the wastewater disposal infrastructure. The National Park Service also maintains the roads and parking lots located at the site. The utilities to the structures in the rockfall hazard zone have been disconnected and are not being maintained. Until the utility service lines are permanently capped and/or removed, NPS personnel are responsible for any leaks or other problems that might occur related to the service lines.

Life-Safety Issues

As noted in the 'Visitor Experience' and 'Geohazard' sections above, the threat to public health and safety associated with rockfalls at Curry Village has been recognized for many years, and several planning documents have called for removal of the structures located in the rockfall hazard zone. The rockfall events of October 2008 were the latest reminder of the life-safety issues related to retaining structures located in an active rockfall hazard zone. The continued unauthorized use of these abandoned structures is a serious public health and safety issue for the park. This threat to public health and safety includes NPS staff who continue to work within the active rockfall hazard zone for visitor protection, facilities management, wildlife management, and cultural resource management purposes.

Environmental Consequences – Methodology

This analysis evaluates park operations and infrastructure in terms of how they might be altered as a result of the no-action and action alternatives. Analysis was based on whether there would be a loss, gain, or change in the efficiency of operations or infrastructure or a change in safety. Professional judgment was applied to reach reasonable conclusions as to the context, duration, intensity, and type of potential impacts

Context: For the purposes of this analysis, only local impacts are considered. This includes impacts specific to park operations and facilities within Yosemite Valley.

Duration: In terms of duration, short-term impacts on park operations are those that would only occur during construction activities. Long-term impacts would have a permanent impact on park operations or infrastructure.

Intensity: The intensities of impacts consider whether the impact would be negligible, minor, moderate, or major. Negligible impacts are effects considered not detectable and would have no discernible effect on park operations or infrastructure. Minor impacts are effects on park operations or infrastructure that would be slightly detectable, but not expected to have an overall effect on those conditions. Moderate impacts would be clearly detectable and could have an appreciable effect on park operations or infrastructure. Major impacts would have a substantial, highly noticeable influence on park operations or infrastructure and could result in permanent and substantive changes.

Type of Impact: Impacts would be considered either beneficial or adverse. Beneficial impacts would represent a change that would improve park operations or infrastructure. Adverse impacts would negatively alter park operations or infrastructure.

Environmental Consequences of the No Action Alternative

Analysis

Under the No Action Alternative, NPS staff present in the project area would be exposed to rockfall hazards.

NPS Visitor Protection staff would continue to be responsible for enforcing the closure of the area and deterring illicit use of the site by visitors. Managing this closed area would continue to occur at the expense of other responsibilities in Yosemite Valley.

The NPS Resources Management and Science Division would continue to respond to wildlife issues at the abandoned structures in the rockfall zone and would continue to monitor and document the condition of historic structures.

The NPS Division of Facilities Management would continue to be responsible for responding to any incidents related to the utility service lines to the structures. There is no maintenance occurring on the abandoned structures.

Conclusion: Under the No Action Alternative, the efficiency of NPS Visitor Protection, Resources Management, and Science and Facilities Management staff would continue to be impacted by requirements to spend time managing this closed area at the expense of their other responsibilities. Structures would remain unmaintained in the rockfall hazard zone, resulting in threats to life-safety for NPS staff as well as unauthorized visitors. The No Action Alternative would result in a local, long-term, moderate, adverse impact on park operations.

Cumulative Impacts

Past actions in the project area that affected park operations and management include responses to rockfall events, including those that resulted in injuries and property damage. Additional projects that affected park operations included the closure of visitor accommodations and relocation of employee housing following the 2008 rockfall, and the recent construction of a temporary guest showerhouse to replace the closed Nob Hill Shower House. These projects resulted in beneficial impacts on park operations by removing operations and structures out of hazardous areas.

Reasonably foreseeable actions that would cumulatively have an impact on park operations within the project area include the removal of structures destroyed by the October 2008 rockfall and the rehabilitation of historic cabins located outside the rockfall hazard zone. Additionally, the Merced River Plan might affect park operations in Yosemite Valley and Curry Village; however, the plan is still in development.

The cumulative impact of these projects is likely to be beneficial in the long term, but would not change the adverse impacts associated with the No Action Alternative. Therefore, the cumulative actions in combination with the No Action Alternative would result in a local, long-term, minor, adverse impact on park operations.

Environmental Consequences of Alternative 1

Analysis

Implementation of Alternative 1 would include the permanent capping or removal of underground utilities, which would result in a short-term increase in workload for NPS Facilities Management staff during removal of structures. Similarly, NPS Resources Management and Science staff and NPS Visitor Protection staff would see a short-term increase in workload from monitoring activities. NPS staff would be exposed to rockfall hazards during project implementation.

Under Alternative 1, NPS Visitor Protection staff workload would be reduced because they would no longer be responsible for enforcing the closure of the area or detecting and deterring unauthorized use. The NPS Division of Resources Management and Science staff would no longer be responsible for responding to wildlife issues at the abandoned structures, or for monitoring and documenting the condition of historic structures in the area. There would be a small increase in workload for NPS Resources Management and Science staff due to the creation of a new archeological site, where components of historic structures (foundations and retaining walls) and circulation features would be left in place. The NPS Division of Facilities Management would no longer be responsible for responding to any incidents related to the utility service lines to the structures. In the long term, NPS staff would no longer be exposed to the risk of working within an active rockfall hazard zone.

Conclusion: Alternative 1 would result in a long-term, moderate, beneficial impact on park operations from a reduction in workload and a decrease in threats to life-safety. There would be a local, short-term, minor, adverse impact on NPS Visitor Protection, Resources Management and Science, and Facilities Management staff from increased workloads and increased safety risks during project implementation.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on park operations and infrastructure in the project area would be the same as described under the No Action Alternative analysis. The cumulative impact of these plans and projects would likely be beneficial in the long term. Therefore, the cumulative actions in combination with Alternative 1 would result in a local, long-term, minor to moderate, beneficial impact on park operations.

Environmental Consequences of Alternative 2

Analysis

Implementation of Alternative 2 would include the permanent capping or removal of utilities, which would result in a short-term increase in workload for NPS Facilities Management staff due to participation and/or oversight of removal of structures, stabilization, and mothballing activities. As under Alternative 1, NPS Resources Management and Science and NPS Visitor Protection staff would see a short-term increase in workload from monitoring activities and a short-term increase in safety risks from exposure to rockfall hazards during project implementation.

Under Alternative 2, NPS Visitor Protection staff would continue to be responsible for enforcing the closure of the area and deterring illicit use of the site by visitors, although the mothballing of structures would reduce the likelihood of illicit overnight use. The NPS Division of Resources Management and Science would continue to be responsible for responding to any wildlife-related issues at the structures and ensuring that these historic resources are being maintained to a level that meets NPS cultural resource preservation goals. In the long-term, the NPS Division of Facilities Management would be responsible for routine maintenance of the remaining structures, and responding for to any incidents related damage to structures from natural processes or illicit use.

The efficiency of NPS Visitor Protection, Resources Management and Science, and Facilities Management staff would be reduced by requirements to spend time managing this closed area at the expense of other existing responsibilities. Retaining structures would result in risk for NPS staff required to periodically access the project area and unauthorized visitors who may be attracted to the closure area by standing structures.

Conclusion: Alternative 2 would result in a local, long-term, moderate, adverse impact on park operations due to continued exposure to rockfall hazards and increased workloads, particularly for Visitor Protection staff, who would continue to be responsible for enforcing the area closure, and Facilities Management staff, who would need to respond to any damage incurred to remaining structures. There would be a local, short-term, minor to moderate, adverse impact on NPS Visitor Protection, Resources Management and Science, and Facilities Management staff from increased workloads and increased safety risks during project implementation.

Cumulative Impacts

The list of past, current, or reasonably foreseeable actions that might have a cumulative impact on park operations and infrastructure in the project area would be the same as described under the No Action Alternative analysis. The cumulative impact of these plans and projects would likely be beneficial in the long term. Therefore, the cumulative actions in combination with Alternative 2 would result in local, long-term, moderate, adverse impact on park operations and infrastructure.

Environmental Consequences of Alternative 3

Analysis

Implementation of Alternative 3 would also include the permanent capping or removal of utilities, which would result in a short-term increase in workload for NPS Facilities Management staff due to participation and/or oversight of removal of structures, stabilization, and mothballing activities. As under Alternatives 1 and 2, NPS Resources Management and Science and NPS Visitor Protection staff would see a short-term increase in workload from monitoring activities and a short-term increase in safety risks from exposure to rockfall hazards during project implementation.

Under Alternative 3, impacts would be very similar to Alternative 2, although the intensity of the impact would be reduced to minor with fewer retained structures. NPS Visitor Protection staff would continue to be responsible for enforcing the closure of the area and deterring illicit use of the site by visitors. The NPS Division of Facilities Management would be responsible for routine maintenance of the remaining structures, and responding for to any incidents related damage to structures from natural processes or illicit use. Retaining any structures would result in safety hazards for park staff required to access the project area and unauthorized visitors who may be attracted to the closure area by standing structures. The NPS Division of Resources Management and Science would continue to be responsible for responding to any wildlife-related issues at the structures and ensuring that these historic resources are being maintained to a level that meets NPS cultural resource preservation goals.

Conclusion: Alternative 3 would result in impacts similar to Alternative 2, with reduced long-term intensity of impacts from fewer structures retained in the project area. There would be a local, long-term, minor, adverse impact on park operations due to continued exposure to rockfall hazards and increased workloads, particularly for Visitor Protection staff, who would continue to be responsible for enforcing the area closure, and Facilities Management staff, who would need to respond to any damage incurred to remaining structures. There would be a local, short-term, minor to moderate, adverse impact on NPS Visitor Protection, Resources Management and Science, and Facilities Management staff from increased workloads and increased safety risks during project implementation.

Cumulative Impacts

As mentioned under the No Action Alternative, the cumulative effects of the past, current, and reasonably foreseeable projects are likely to be negligible to minor and beneficial, but would not address the adverse effects associated with Alternative 3. Therefore, the cumulative actions in combination with Alternative 3 would result in local, long-term, minor, adverse impact on park operations and infrastructure.

Environmental Consequences of Alternative 4

Analysis

Implementation of Alternative 4 would include the permanent capping or removal of utilities, which would result in a short-term increase in workload for NPS Facilities Management staff due to their participation and/or oversight of removal of structures, stabilization, and mothballing activities. As under Alternatives 1, 2, and 3, NPS Resources Management and Science and NPS Visitor Protection staff would see a short-term increase in workload from monitoring activities and a short-term increase in safety risks from exposure to rockfall hazards during project implementation.

Under Alternative 4, impacts would be very similar to Alternative 2, although the intensity of the impact would be reduced to minor to moderate with about one-half of the structures retained. NPS Visitor Protection staff would continue to be responsible for enforcing the closure of the area and deterring illicit use of the site by visitors. The NPS Division of Facilities Management would be responsible for routine maintenance of the remaining structures, and responding to any incidents related damage to structures from natural processes or illicit use. The NPS Division of Resources Management and Science would continue to be responsible for responding to any wildlife-related issues at the structures and ensuring that these historic resources are being maintained to a level that meets NPS cultural resource preservation goals. Retaining any structures would result in safety hazards for park staff required to access the project area and unauthorized visitors who might be attracted to the closure area by standing structures.

Conclusion: Alternative 4 would result in impacts similar to Alternative 3. There would be a local, long-term, minor, adverse impact on park operations due to continued exposure to rockfall hazards and increased workloads, particularly for Visitor Protection staff, who would continue to be responsible for enforcing the area closure, and Facilities Management staff, who would need to respond to any damage incurred to remaining structures. There would be a local, short-term, minor to moderate, adverse impact on NPS Visitor Protection, Resources Management and Science, and Facilities Management staff from increased workloads and increased safety risks during project implementation.

Cumulative Impacts

As mentioned under the No Action Alternative, the cumulative impacts of the past, current, and reasonably foreseeable projects are likely to be negligible to minor and beneficial, but would not address the adverse effects associated with Alternative 4. Therefore, the cumulative actions in combination with Alternative 4 would result in local, long-term, minor, adverse impact on park operations and infrastructure.

Historic Properties

Historic Sites, Buildings, and Cultural Landscapes

Affected Environment

Curry Village, historically known as Camp Curry, is situated in Yosemite Valley between the Merced River and the base of Glacier Point. Camp Curry is associated with two NRHP historic districts. The Camp Curry Historic District was first listed in the NRHP in 1976 (amended 1979). The Yosemite Valley Historic District was listed in the NRHP in 2006 and includes all of the contributing resources defined in the 1979 Camp Curry Historic District, plus additional contributing resources that fall within the period of significance for the Yosemite Valley Historic District (1855-1942). The Camp Curry Historic District was incorporated into the larger Yosemite Valley Historic District and is referred to as the Camp Curry developed area.

The 55-acre developed area at Camp Curry has provided Yosemite National Park visitors with affordable accommodations, food service, and entertainment for nearly 112 years. According to the findings of the 2010 Camp Curry Historic District Cultural Landscape Report (NPS 2010a), Camp Curry may be considered the longest continuously operating facility of its kind in the national park system. The portion of Camp Curry within the rockfall hazard zone includes structures that are historically significant as the earliest accommodations of their type in the park (i.e., hard-sided, detached cabins designed to be rentals). These structures might also be the oldest detached cabin rentals original to the national park system (NPS 2010a).

Area of Potential Effect

The area of potential effect for this project is the Yosemite Valley Historic District, which is a single, contiguous district that extends roughly from Pohono Bridge to Mirror Lake and Vernal Fall, and from the base of the valley walls to the north and south (Figure 1-2). This comprehensive district includes natural features and landscape characteristics, as well as historic buildings and structures, which collectively make up the historically significant cultural landscape of Yosemite Valley. Camp Curry is one of three developed areas in the historic district that is independently significant for its part in the history of Yosemite.

Yosemite Valley is nationally significant under National Register criteria *A* and *C*. Under criterion *A*, Yosemite Valley is nationally significant in the themes of outdoor recreation, tourism, and conservation. Yosemite Valley was the first public place to be set aside by the U.S. Congress for the purposes of scenic preservation and outdoor recreation (in 1864). Many influential plans, developments, and events subsequently were associated with Yosemite Valley as a state, then a national park. Conditions at Yosemite Valley in the early 20th century were a direct impetus for creation of the National Park Service, and resulted in the most significant early park planning and development efforts by the agency. In addition, many recreational trends, including sightseeing, camping, auto camping, mountaineering, winter sports, and others began or were significantly advanced at Yosemite. John Muir, who lived and worked in Yosemite Valley, began developing his philosophy of conservation while residing there. Muir was later a principal founder of the Sierra Club.

Under criterion *C*, Yosemite Valley features nationally significant examples of architecture, including three National Historic Landmarks. Camp Curry, although not a National Historic Landmark, is described in the Yosemite Valley Historic District National Register nomination as a rare example of a surviving tent cabin complex of the type that was once common in many parks.

Landscape Characteristics of the Camp Curry Developed Area

The following is a detailed description of landscape characteristics at the Camp Curry developed area, with a focus on the characteristics that would be affected by the implementation of the Curry Village Rockfall Hazard Zone Project. Information presented has been largely extracted from the Yosemite Valley National Register of Historic Places nomination form (NPS 2006a) and the 2010 *Camp Curry Historic District Cultural Landscape Report* (NPS 2010a).

Natural Systems and Features

Curry Village is positioned at the base of the active talus slope directly below Glacier Point. Its location at the south side of the valley offers protection from the annual flood of the Merced River as well as shade and cooler conditions during the summer months. Through expansions the camp grew both east and west, along the base of the talus. Blasting enabled limited expansion to accommodate structures to the south, including structures in the project area.

Spatial Organization

The overall layout of Camp Curry is essentially longitudinal, with a central, core facility area, tent cabins to the east, and bungalows to the west. In addition, smaller groups of tent cabins were set on high ground to the south.

To the west of the core facility area, the original 48 wooden bungalows (cabins with bath, circa 1920s), 21 of which are in the project area, still retain their character and spatial organization. The bungalows were laid out in regular rows. The space created by the buildings is comparable to that of elongated city blocks, with streets on the fronts of the bungalows and narrower alleys separating the backs of the buildings. Some of the streets are broad, with planted areas down the center.

The talus slope rises quickly south of the core facility area. The bungalows, a group of wooden, one-room cabins without baths, were built on the talus slopes in the 1930s. An additional group of tent cabins were also built on the talus slopes to the south and east. One group, known as Nob Hill, made up a distinctive neighborhood. Another group of tent cabins sited on the high ground was known as the Terrace and housed female employees. These tents, which were in high-risk area for rockfalls, were recently removed. These groups of tent cabins, above the core area on the beginnings of the talus slope, did not define characteristic spaces, as did the larger groups of cabins to the east; the sight of some of the higher tent cabins, perched among the rocks, did create a characteristic image.

Characteristics of spatial organization in the project area that contribute to the character of the Camp Curry developed area include:

- wider, straighter streets and alleys created by the bungalows in the west end of the development
- overall zoning of spaces with tent cabins, bungalows, and core facilities, all in separate zones and characterized by distinct and different qualities of outdoor spaces

Land Use

Land use at Camp Curry, both historically and currently, can be characterized as visitor accommodation and recreation. Historically, accommodations have been mainly in tents on wooden platforms, rustic bungalows, and one-room wooden cabins without baths known as bungalows. All accommodations within the project area are permanently closed due to the risk of rockfall.

Vegetation

Vegetation at Camp Curry is characterized to some degree by the mature conifers, especially ponderosa pine and incense-cedars, and understories typical of the south (more shaded and moist) side of Yosemite Valley. In addition, the overall trend in the valley towards increased forest cover is evident here.

Throughout the years, the managers of Camp Curry have made some attempts to preserve significant trees from damage, and to remove trees and other vegetation that they felt were blocking important views. Shrubs and other plants have also been planted around buildings, especially in recent years. Since the 1970s, revegetation of formerly open areas has, in some cases, had a negative effect on spatial organization and views.

Characteristics of vegetation in the project area that contribute to the character of Camp Curry include a mixture of deciduous and coniferous vegetation at various canopy layers that is primarily native.

Circulation

Circulation patterns within Camp Curry include roads, trails, and widened trails that provide fire lane and service access. These vehicular and pedestrian routes run all throughout the district, with hierarchical organization. The primary vehicular point of entrance and egress is Curry Village Drive. Upon entering, motorists park their vehicle in one of five different parking areas before making their way on foot to their cabin. The circulation routes through the guest accommodation portions of the camp are generally wide enough for automobile traffic, but are limited to emergency and service vehicles. In addition, several foot trails and a bicycle trail bisect Camp Curry en route to scenic destinations in the Valley.

Within the project area, circulation was primarily pedestrian and characterized by relatively unstructured movement on packed earth trails. In heavier use areas, asphalt pavement had been added. The pathways in the project area are now closed to visitor use.

Views and Vistas

Views and vistas of surrounding Yosemite Valley features, including Half Dome, Royal Arches, and Glacier Point, led to the initial siting of Camp Curry, and helped determine the internal layout of the developed area. Views from the core facility area are particularly impressive and define the character of Camp Curry to a significant degree.

Views that contribute to the character of the historic area include those views to the east and west through the bungalow area (on the western side of the Camp Curry developed area, see Figure 1-3), where the rustic wood cabins are set irregularly in a forested setting.

Buildings and Structures in the Project Area

The following is a detailed description of the buildings and structures in the project area. Information presented has been largely extracted from the Yosemite Valley National Register of Historic Places nomination form (NPS 2006b) and the 2010 *Camp Curry Historic District Cultural Landscape Report* (NPS 2010a) and identifies buildings, structures, and features of Camp Curry located within the rockfall hazard zone.

There are 72 individual buildings within the portion of the rockfall hazard zone included in the project area (Figure 1-3). The structures are located within the Camp Curry developed area of the Yosemite Valley Historic District (Figure 1-2). Three of the 72 structures are considered

noncontributing to the historic district: the Nob Hill Shower House (1993), Bungalow 61¹ (1980), and Cabin 101² (Nob Hill Cabin) (ca. 1925). A total of 65 structures are guest cabins constructed between 1917 and 1937, 21 of which have private bathrooms (bungalows) and 44 of which consist of a single room with no bathrooms (bungalettes).

Bungalettes (Cabins Without Baths)

Constructed in the 1930s, the 44 bungalettes are located in the eastern portion of the project area. The bungalettes are timber structures of single-wall, wood frame construction. The lumber used in their construction came from native pine trees harvested in Yosemite Valley and was milled at the Curry Company sawmill, which was located at the extreme east end of Curry Village.

Studies conducted in spring of 2010 in support of this project, including a historic conditions rapid assessment (University of Oregon 2010) and a structural assessment (DOWL HKM 2010), evaluated the condition of the structures and the difficulty of relocation as primary considerations for which structures to retain. Both studies included observations of deteriorated condition at many of the bungalettes. The bungalettes consistently exhibited the following forms of degradation:

- sagging roof structure
- decayed corner posts
- decayed walls and skirting at the base of the structure
- decayed foundation posts and sills
- foundation settlement
- adverse surface water drainage

Despite these conditions, the bungalettes are in better condition than might be expected given the lack of maintenance since the October 2008 rockfall. Key changes that have affected the integrity of the cabins are the replacement of the historic casement windows with sliding aluminum windows, composition shingle roofs, and the installation of plywood paneling and insulation on the interiors. Despite these changes in appearance and structure, the bungalettes retain enough historic integrity to warrant historic preservation and contribute to the historic district due to their original construction date, location, and massing (University of Oregon 2010).

Bungalow Duplexes and Four-plex (Cabins With Bath)

Constructed between 1918 and 1923, the 21 bungalows located in the western portion of the rockfall hazard zone represent a significant historic resource for Yosemite National Park as the earliest form of wooden structures (and therefore of bungalow guest lodging) within the Camp Curry developed area. The buildings provided more elaborate overnight accommodations in the camp and can be described as Arts and Crafts bungalows. The timber structures used single-wall

¹ Although the Yosemite Valley Historic District nomination form (NPS 2006b) lists Bungalow 61 as a contributing structure, the 2010 CLR (NPS 2010a) notes that this was an error, as Bungalow 61 was built in the 1980s (outside the period of significance for the historic district.)

² The Yosemite Valley Historic District nomination form (NPS 2006b) does not list Cabin 101 as a contributing structure, although the 2010 CLR (NPS 2010a) recommends it be considered as contributing to the historic district.

construction with roof, floor, and foundation construction. They are of exposed log frame construction, with board and batten or shake siding, although a few have tongue-and-groove walls set in herringbone patterns. Split log gable ends, overhanging eaves, river stone foundations, and porches all contribute to the rustic quality of the bungalows. The Foster Curry Cabin and other residential buildings in the camp share these general characteristics, on a slightly more elaborate scale.

A historic conditions rapid assessment performed by students at the Historic Preservation Program of the University of Oregon (University of Oregon 2010) found that approximately 15 of these structures could be stabilized and potentially relocated. The poor condition of the rest, combined with very difficult access for relocation, would give them a lower priority for rehabilitation. Tree impact has damaged the roof and walls of a number of structures. While some of the damage has major implications, due to penetration of the building envelope, most is repairable and would not affect the long-term stability of the buildings.

According to the structural condition assessment prepared by DOWL HKM (DOWL HKM 2010), 14 of the 20 bungalows inventoried would be difficult to relocate because of trees, boulders, no discernible equipment or vehicle access, and their proximity to other structures.

Foster Curry Bungalow

The Foster Curry Bungalow (Tresidder House) is a highly regarded, contributing structure that is representative of the National Park Service Rustic style. Constructed in 1916, the Foster Curry Bungalow was the first wood-frame residence in the area. Several separate buildings have been combined and redivided into the existing duplex structure. The recent historic conditions rapid assessment (University of Oregon 2010) and a structural assessment (DOWL HKM 2010) both found the bungalow to be in fair-to-good condition. The house retains a high degree of historic integrity of the exterior and interior. Adverse surface drainage prevails along the south wall, which is built on and around some very large boulders. The vertical half-log battens at the gabled end above these boulders exhibited decay.

Cabin 101 (Nob Hill Cabin)

The small building behind the Nob Hill Shower House, built circa 1925, consists of a varied assemblage of features and materials. The building is not currently considered a contributing resource to the historic district, although the 2010 CLR recommends it be considered a contributing structure (NPS 2010a). The 2010 historic conditions rapid assessment (University of Oregon 2010) found a lack of distinction, compromised integrity, and all-around poor condition of the building.

Comfort Stations

Contributing restroom structures within the rockfall hazard zone include the comfort station at the bungaloes (the “Rock”) and the comfort station at the base of the terrace (below the Women’s Club structure). The Rock Restroom and the Terrace comfort station are both in poor condition, and their historic integrity has been compromised.

Terrace Clubhouse (Women's Club)

This wood-frame building has vertical and herringbone tongue-and-groove siding, with log details at the building corners, rafters, lookouts, and gables. The original gabled roof is covered in non-original asphalt shingles. Built in circa 1922, the building was originally used as a recreation lounge and clubhouse for female employees. The structure maintains a fair degree of historic integrity and is in fair condition.

Historical Significance of Buildings and Structures in the Project Area

According to the findings of the 2010 CLR (NPS 2010a), the bungalows and bungalettes included in the project area are the earliest accommodations of their type in the park (i.e., hard-sided, detached cabins designed to be rentals). They are also likely the oldest detached cabin rentals original to the national park system. As prototypes for what would become a highly popular trend in recreational motor vehicle overnight accommodations, both inside and outside the national parks, these structures have national historical significance in the areas of commerce and transportation (NPS 2010a).

Several buildings at Camp Curry, including the Foster Curry Bungalow (1916) and Curry guest bungalows (1918-1923), have been identified as precedents for the early twentieth century architectural style that became known as “National Park Service Rustic,” making these structures eligible for NRHP listing under criterion C due to their distinctive construction and architectural characteristics. Camp Curry buildings were among the first structures in a designated park to be deliberately designed to harmonize with their natural surroundings. These structures are significant for their contributing role in the development of one of this nation’s most important indigenous architectural designs.

As Camp Curry evolved, the rustic design of buildings evolved as well. By 1929, more simplified Rustic structures were being constructed. The later Rustic structures at Camp Curry, many of which are in the project area, include all of the bungalettes and four 1930s comfort stations. They also continue key Rustic design principles, including the use of native materials, notably wood shake roofing and siding. The last structure built in the Rustic style in Camp Curry was built circa 1936.

Integrity

Camp Curry includes a substantial amount of intact and significant features and characteristics from the Yosemite Valley Historic District period of significance. Despite growth and some modifications to features of the district, the site retains its physical integrity as a Yosemite Valley concession operation and displays the characteristics of a rustic outpost that was established to be affordable to park visitors of modest means. The Camp Curry developed area underwent the most development from 1899 through 1936, and still exhibits characteristics unique to this time period. The district’s landscape features have undergone few physical changes. Together, the historic characteristics of the Camp Curry developed area retain all seven of the aspects of integrity: materials, design, workmanship, location, setting, feeling, and association, as detailed below.

In spite of considerable changes to the appearance and structure of the bungalettes, the structures retain enough historic integrity to warrant historic preservation. The main changes that have affected the integrity of the cabins are the replacement of historic casement windows with sliding aluminum windows, and the installation of plywood paneling and insulation on the interiors.

In general, the bungalows have maintained a fairly high level of historic integrity. Some alterations and inappropriate repairs have been made to the exteriors. A majority of the historic windows are intact in all the buildings. The bathroom windows have been replaced with aluminum sliders. Most of the decorative historic log rafter tails and gable brackets have been replaced with dimensional lumber, leaving only the shadow of the original member. Porches on all bungalows have been altered by the removal of the original log pergolas, as well as repair and replacement of decks and railings. Door hoods were added over the entries to the duplex bungalows, thereby

altering the historic simple gabled roof configuration. The interior finishes retain a high degree of integrity, with the exception of the bathrooms, which have been remodeled. Original door and window hardware is present in a number of buildings.

Location

The contributing features of the Camp Curry developed area have remained in the same location and configuration within Yosemite National Park since the camp's inception (1899) through the end of the period of significance for the Yosemite Valley Historic District (1942). Therefore, the property retains integrity of location to convey its historic significance.

Design

The overall pattern of development for the Camp Curry area remains as it was at the end of the period of historic significance. The character of the historic village has been compromised by excessive planting in some areas, but its informal rustic character remains. The buildings retain their historic placement and physical appearance. Some original buildings have been lost and a number of structures have been added. Despite these changes, the overall character of the design and layout of the site have not been altered, and the historic site as a whole (buildings and structures, circulation systems, and natural systems, spatial organization, land use, topography, vegetation, views and vistas, and small-scale features) continues to retain integrity to convey its historic significance.

Setting

The setting of Camp Curry, including the narrow confines of its position between cliffs, meadow, and river, is intact. Although changes have been made to individual contributing features of the site, including buildings and structures, and circulation patterns, these changes do not affect the overall character of the setting of the Camp Curry area. Therefore, the property retains sufficient integrity of setting to convey its historic significance.

Materials

Despite alterations and additions to buildings, structures, and small-scale features, the historic materials of the Camp Curry area remain largely intact. Original materials, including circulation systems, natural systems and features, structural materials, and associated elements have remained unchanged since the period of significance. Camp Curry structures contributed in the development of one of this nation's most important indigenous architectural designs, National Park Service Rustic, and retain integrity of materials related to this and other architectural significance. Therefore, the property retains sufficient integrity of materials to convey its historic significance.

Workmanship

Camp Curry was transformed into a guest lodging facility, including the earliest form of wooden structures within Yosemite National Park, from a pristine natural environment. This transformation involved a high level of workmanship, and included the manipulation of existing terrain and vegetation, as well as the introduction of buildings, structures, circulation systems, and other necessary facilities to the site. This workmanship remains evident today and, therefore, the property retains sufficient integrity of workmanship to convey its historic significance.

Feeling

The feeling of the Camp Curry developed area is characterized by its remote location, its natural features, and the appearance of its rustic structures. Despite the site's experience of continual growth throughout its period of significance, the site continues to evoke the feeling of an early

lodging facility and, until closing, continued to experience high levels of visitation. Therefore, the property retains sufficient integrity of feeling to convey its historic significance.

Association

Camp Curry is associated with the early development of recreation and tourism in Yosemite National Park and the western United States, and its association with these historic contexts is still evident. Therefore, the property retains sufficient integrity of association to convey its historic significance.

Environmental Consequences - Methodology

The methodology for evaluating effects on historic properties is discussed at the beginning of this chapter, under “Impact Analysis for Historic Properties.”

In accordance with the 36 CFR 800 criteria of effect, historic properties were analyzed qualitatively, based on modifications that would be made to character-defining features (features that qualify the properties for inclusion in the National Register of Historic Places).

Environmental Consequences of the No Action Alternative

Analysis

Structures in the project area were routinely maintained by the park concessioner prior to the October 2008 rockfall event; since their closure and subsequent removal from the concessioner land assignment, these structures have not been maintained. Without regular maintenance, structural and other deterioration, and/or removal and loss of character-defining features of the resources, would occur. A significant and noticeable rate of decline has already occurred with these structures since 2008, including broken fenestration and failing roof systems; in some places trees have fallen on the structures. Vandalism is occurring because some structures cannot currently be locked and cannot be sealed at openings where fenestration or entryways have settled or become broken. These conditions are in noncompliance with NPS Director’s Order 28 (NPS 1998).

Under the No Action Alternative, the continued degradation of the structures located in the rockfall hazard zone, contributors to the Yosemite Valley Historic District, would diminish their ability to convey their historic significance.

The No Action Alternative would also affect the character and setting of the rockfall hazard zone and all of Curry Village because of the lack of maintenance performed within the zone, and would affect elements that contribute to the significance of the Camp Curry developed area. Fencing at the boundary of the rockfall hazard zone would also continue to affect the character and setting of the entire Camp Curry developed area.

Significant spatial relationships between the structures within the rockfall hazard zone would be maintained. Current visitor arrival and circulation organization would also be maintained, while accessibility within the rockfall hazard zone would still be limited.

The design and intent of the project area, as a portion of a guest accommodation and recreation facility, would not be maintained or protected. However, the features representative of the area's original purpose, including existing spatial relationships and architectural character of buildings and structures, would be retained. While no accommodations or recreation are currently allowed in the rockfall hazard zone, the original function and aesthetic of the historic site would be protected for future interpretation and/or removal and reconstruction elsewhere.

The No Action Alternative would not affect the significant vistas and views within the historic area, including views within the core facility area, because the existing buildings and features related to Camp Curry's structures would remain largely unaltered from their existing state.

The No Action Alternative would be considered deliberate neglect of historic structures. Any deliberate neglect of historic structures must be documented according to Director's Order 28 and as otherwise agreed to with the California State Historic Preservation Officer through a Memorandum of Agreement.

Conclusion: Under the No Action Alternative, existing features within the rockfall hazard zone at Camp Curry would remain, but would not receive the required level of maintenance and upkeep to retain their integrity and their ability to convey their significance. This would alter, directly or indirectly, the characteristics of the historic site that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Therefore, the No Action Alternative would have an adverse effect on the Yosemite Valley Historic District.

Cumulative Impacts

Past actions evaluated for this analysis include the installation of a temporary guest showerhouse in Curry Village and the relocation of historic tent cabins out of the rockfall hazard zone.

Reasonably foreseeable actions that could impact historic structures and the cultural landscape include the rehabilitation of historic cabins with baths (bungalows) outside of the rockfall hazard zone. In addition, the upcoming Merced River Plan might have an impact on the location and amount of visitor lodging and employee housing in Yosemite Valley through implementation of a user capacity management program. Under the No Action Alternative, the historic structures in the rockfall hazard zone project area would be available for relocation and reuse as visitor lodging or employee housing should the opportunity arise, although many of the structures might be deteriorated at that time.

Upon review of these past, present, and reasonably foreseeable actions, these projects in conjunction with the No Action Alternative would have a cumulative adverse effect on the Yosemite Valley Historic District.

Environmental Consequences of Alternative 1

Analysis

Under Alternative 1, structures that contributed directly to the origin of the National Park Rustic style would be removed, as would examples of architectural design and construction that are unique to Camp Curry. The significant panel/plank frame method of construction found within Camp Curry and the individually significant Foster Curry Bungalow would be removed. Structures to be removed also include those that represent the earliest and longest continually occupied tent camp facility in the nation.

The design and intent of the project area as a portion of Camp Curry's guest accommodation and recreation facility would not be maintained or protected, and the features representative of the area's original purpose, including existing spatial relationships and the architectural character of buildings and structures, would be removed. While no accommodations or recreation are allowed currently in the rockfall hazard zone, the original function and aesthetic of the historic site would

be reduced by the permanent removal of structures. When structures are removed, vegetation would not be managed and natural succession would be allowed to occur.

The foundations and retaining walls of historic structures, as well as pathways, would be retained to denote the location and association of structures within the site and characteristic circulation patterns between structures. Removing all structures would affect the significant spatial relationships that lend to the integrity of Camp Curry and its individual contributing resources. Removal of these structures would also eliminate building typologies that are unique to Camp Curry and structures that represent early Rustic style architecture within a national park setting.

Any removal of historic structures must be documented according to NPS Director's Order 28 and as agreed to with the California State Historic Preservation Officer. A draft Memorandum of Agreement with the California State Historic Preservation Officer (Appendix A) includes mitigating measures such as documentation, salvage, interpretation, site clean-up, and national register reevaluation.

Conclusion: With implementation of Alternative 1, all structures within the rockfall hazard zone at Camp Curry would be removed. The proposed activities would alter, directly or indirectly, characteristics of the Yosemite Valley Historic District that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property's setting, workmanship, feeling, materials, association, and design. Therefore, Alternative 1 would result in an adverse effect on the Yosemite Valley Historic District.

The adverse effect would be resolved through application of a Memorandum of Agreement between the National Park Service and the California State Historic Preservation Officer, a draft version of which is attached as Appendix A.

Cumulative Impacts

Past actions evaluated for this analysis include the installation of a temporary guest showerhouse in Curry Village and the relocation of historic tent cabins out of the rockfall hazard zone.

Reasonably foreseeable actions include the rehabilitation of historic cabins with baths (bungalows) outside of the rockfall hazard zone. This action would, to some degree, help resolve the adverse effect of demolishing and removing historic structures in the project area. In addition, the upcoming Merced River Plan might have an impact on the location and amount of visitor lodging and employee housing in Yosemite Valley through implementation of a user capacity management program. Under Alternative 1, the historic structures in the rockfall hazard zone project area would not be available for relocation and potential reuse.

Upon review of these past, present, and reasonably foreseeable actions, these projects in conjunction with Alternative 1 would have a cumulative adverse effect on the Yosemite Valley Historic District.

Environmental Consequences of Alternative 2

Analysis

Alternative 2 would treat the majority of historic buildings and structures within the historic site. The character of the site would be better retained, improved, and protected, although one contributing structure (Women's Club/Terrace Clubhouse) in fair condition would be removed. Alternative 2 would stabilize, mothball, and maintain remaining structures for future interpretation and/or removal and relocation elsewhere.

Four buildings would be removed in Alternative 2, including three noncontributing structures: Nob Hill Shower House (1993), Bungalow 61 (1980), and Cabin 101 (ca. 1925), and one contributing structure, the Women's Club/Terrace Clubhouse. Retaining all but two historic structures within the rockfall zone (Cabin 101 and Women's Club) fulfills the basic project needs for stabilization, maintenance, and general repair. Retained structures would be maintained with minor physical alteration. Structural strengthening and repairs to framing systems; replacement of failing, noncontributing envelope systems critical to safety; and weather protection would be completed. Vegetation in the project area would be managed to protect structures (e.g., tree limbing to prevent damage). Alternative 2 presents a higher attainment of the overall maintenance of Camp Curry, when compared with the No Action Alternative. All work on remaining structures would be compliant with the Secretary of the Interior's *Standards for the Treatment of Historic Properties Standards* (Standards). Significant character-defining features and existing spatial relationships would be maintained and protected. While disturbances to the functionality of the historic site are unavoidable due to the rockfall hazard zone, work proposed in Alternative 2 would stabilize, mothball, and maintain features and materials significant to the historic site.

Alternative 2 would affect the character and setting of the area due to the visual effects of mothballing. The change to the character and setting of the district due to these actions is directly related to the effort to further protect and preserve these structures, and such work would be Standards-compliant. As long as structures remain within the rockfall hazard zone, a fence and interpretive signs would be installed outside of the rockfall hazard zone to explain why the structures are closed and why they are being maintained. This fence would represent an intrusion into the cultural landscape.

The design and intent of the area as a portion of Curry Village's guest accommodation and recreation facility would not be maintained or protected; however, the features representative of the area's original purpose, including existing spatial relationships and architectural character of buildings and structures, would be retained. While no accommodations or visitor access is currently allowed in the rockfall hazard zone, the original function and aesthetic of the historic site would be protected for future interpretation and/or removal and relocation elsewhere.

Alternative 2 would not affect the significant vistas and views within the historic area, including views within the core facility area because the existing buildings and features related to Camp Curry's structures would remain largely unaltered from their existing state.

The removal of historic structures would be documented according to NPS Director's Order 28 and the mitigation measures as agreed to with the California State Historic Preservation Officer. A draft Memorandum of Agreement with the California State Historic Preservation Officer (Appendix A) includes mitigating measures such as documentation, salvage, interpretation, site clean-up, and national register reevaluation.

Conclusion: Alternative 2 presents a higher attainment of the overall maintenance of the Camp Curry historic site, as compared with the No Action Alternative, allowing for Standards-compliant maintenance and protection of all but one contributing structure within the rockfall hazard zone. The removal of two historic structures (only one of which contributes to the historic district) would, however, alter the characteristics of the historic site that qualify the Yosemite Valley Historic District for inclusion in the National Register of Historic Places and diminish the integrity of the property's workmanship and materials. Therefore, Alternative 2 would result in an adverse effect on the Yosemite Valley Historic District.

The adverse effect would be resolved through application of a Memorandum of Agreement between the National Park Service and the California State Historic Preservation Officer, a draft version of which is attached as Appendix A.

Cumulative Impacts

Past actions evaluated for this analysis include the installation of a temporary guest showerhouse in Curry Village and the relocation of historic tent cabins out of the rockfall hazard zone.

Foreseeable actions include the rehabilitation of historic cabins with baths (bungalows) outside of the rockfall hazard zone. This action would, to some degree, help resolve the adverse effect of demolishing and removing historic structures in the project area. In addition, the upcoming Merced River Plan might affect the location and amount of visitor lodging and employee housing in Yosemite Valley through implementation of a user capacity management program. Under Alternative 2, 68 historic structures in the rockfall hazard zone project area would be available for relocation and potential reuse, pending the Record of Decision on the Merced River Plan.

Upon review of these past, present, and reasonably foreseeable actions, these projects in conjunction with Alternative 2 would have a cumulative adverse effect on the Yosemite Valley Historic District.

Environmental Consequences of Alternative 3

Analysis

The representative sample of structures to be retained under Alternative 3 was carefully selected, through field research, to exemplify construction, features, materials, and groupings that are not otherwise represented in Curry Village outside the rockfall hazard zone. Examples of structures that represent the earliest use of the National Park Rustic style would be retained, as would examples of architectural design and construction that are unique to Camp Curry and not present elsewhere in Yosemite Valley. The significant panel/plank frame method of construction, found within the district and the individually significant Foster Curry Bungalow, would be retained. These structures would be maintained for future interpretation and/or removal and relocation elsewhere.

Retained structures would be maintained with minor physical alteration. Structural strengthening and repairs to framing systems; replacement of failing, noncontributing envelope systems critical to safety; and weather protection would be completed. All work would be Standards-compliant. Vegetation in the project area would be managed to protect remaining structures (e.g., tree limbing to prevent damage), and in areas where structures are removed, natural processes would be allowed to occur (such as tree fall, new growth, etc.)

As long as structures remain within the rockfall hazard zone, a fence and interpretive signs would be installed outside of the zone to explain why the structures are closed and why they are being maintained. This fence would represent an intrusion into the cultural landscape.

Although Alternative 3 would stabilize and maintain the most historically significant structures and architectural types, significant character-defining relationships between buildings would be lost through the removal of up to 20 bungalows, up to 41 bungalettes, 2 comfort stations, and the Women's Club/Terrace Clubhouse. This would cause direct impacts on the structures selected for removal and an indirect impact on the structures that would remain by diminishing the character of their setting and location. Most (up to 64) contributing structures and character-

defining spatial relationships would be removed. Removal of most historic structures would also eliminate many examples of construction techniques that represent the origin of a significant style of architecture within the national park system.

Removal of most historic structures would also affect the significant views within Camp Curry, particularly to and from the core facilities of Curry Village and the surrounding landscape. Original views to and from key buildings and structures, and the natural environment surrounding the historic camp, would be altered with the removal of historic structures and features.

The removal of historic structures would be documented according to NPS Director's Order 28 and the mitigation measures as agreed to with the California State Historic Preservation Officer. A draft Memorandum of Agreement with the California State Historic Preservation Officer (Appendix A) includes mitigating measures such as documentation, salvage, interpretation, site clean-up, and national register reevaluation.

Conclusion: Alternative 3 would achieve Standards-compliant maintenance and protection of the most historically significant remaining historic resources and architectural types. However, the removal of up to 65 historic structures (64 of which contribute to the historic district) would alter, directly and indirectly, many of the characteristics of the Yosemite Valley Historic District that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property's setting, workmanship, feeling, materials, association and design. Therefore, Alternative 3 would result in an adverse effect on the Yosemite Valley Historic District.

The adverse effect would be resolved through application of a Memorandum of Agreement between the National Park Service and the California State Historic Preservation Officer, a draft version of which is attached as Appendix A.

Cumulative Impacts

Past actions evaluated for this analysis include the installation of a temporary guest showerhouse in Curry Village and the relocation of historic tent cabins out of the rockfall hazard zone.

Reasonably foreseeable actions include the rehabilitation of historic cabins with baths (bungalows) outside of the rockfall hazard zone. This action would, to some degree, help resolve the adverse effect of demolishing and removing historic structures in the project area. In addition, the upcoming Merced River Plan might affect the location and amount of visitor lodging and employee housing in Yosemite Valley through implementation of a user capacity management program. Under Alternative 3, between 5 and 16 historic structures in the rockfall hazard zone project area would be available for relocation and potential reuse, pending the Record of Decision on the Merced River Plan.

Upon review of these past, present, and reasonably foreseeable actions, these projects in conjunction with Alternative 3 would have a cumulative adverse effect on the Yosemite Valley Historic District.

Environmental Consequences of Alternative 4

Analysis

Alternative 4 would stabilize, mothball, and maintain structures located in the rockfall hazard zone that retain sufficient historical and structural integrity in order to convey their significance.

Selection of the structures to be preserved under Alternative 4 was based on the results of two evaluations that determined the structural condition and historic integrity of the structures (DOWL HKM 2010, University of Oregon 2010).

Structures retained would include 15 bungalows, 24 bungalettes, and the Foster Curry Bungalow. Retaining these structures would enable contributing resources remaining within the rockfall hazard zone to be preserved and maintained. Examples of structures that represent the earliest use of the National Park Rustic style would be retained, as would examples of architectural design and construction that are unique to Camp Curry and not present elsewhere in Yosemite Valley. The significant panel/plank frame method of construction found within the district and the individually significant Foster Curry Bungalow would be retained. These structures would be maintained for future interpretation and/or removal and relocation elsewhere.

Retained structures would be maintained with minor physical alteration. Structural strengthening and repairs to framing systems; replacement of failing, noncontributing envelope systems critical to safety; and weather protection would be completed. All work would be Standards-compliant. Vegetation in the project area would be managed to protect remaining structures (e.g., tree limbing to prevent damage), and in areas where structures are removed, natural processes would be allowed to occur (e.g., tree fall, new growth, etc.)

As long as structures remain within the rockfall hazard zone, a fence and interpretive signs would be installed outside of the rockfall hazard zone to explain why the structures are closed and why they are being maintained. This fence would represent an intrusion into the cultural landscape.

Although Alternative 4 would preserve and maintain buildings with integrity, significant character-defining relationships between buildings would be lost through the removal of a significant number of identified historic resources. Alternative 4 would remove 6 bungalows, 20 bungalettes, 2 comfort stations, Cabin 101, and the Women's Club/Terrace Clubhouse, thus causing a direct impact on the structures selected for removal and an indirect impact on those structures that would remain by diminishing the character of their setting and location.

Alternative 4 would also affect the significant views within the Camp Curry developed area, particularly to and from the core facilities of Curry Village and the surrounding landscape. Original views to and from key buildings and structures and the natural environment surrounding the historic camp would be altered with the removal of historic structures and features that have lost integrity.

While primary character-defining buildings within the historic area would be freed visually and physically from nonhistoric construction and buildings lacking integrity, this action would also remove historic structures and relationships between structures, thus lessening the overall integrity of remaining structures by altering their setting and associations.

The removal of historic structures would be documented according to NPS Director's Order 28 and the mitigation measures as agreed to with the California State Historic Preservation Officer. A draft Memorandum of Agreement with the California State Historic Preservation Officer (Appendix A) includes mitigating measures such as documentation, salvage, interpretation, site clean-up, and national register reevaluation.

Conclusion: Alternative 4 would achieve Standards-compliant maintenance and protection of contributing resources that retain structural and historic integrity. However, removal of 30 historic structures (29 of which contribute to the historic district) would alter, directly and

indirectly, many of the characteristics of the Yosemite Valley Historic District that qualify the property for inclusion in the National Register of Historic Places would diminish the integrity of the property's setting, workmanship, feeling, materials, association, and design. Therefore, Alternative 4 would have an adverse effect on the Yosemite Valley Historic District.

The adverse effect would be resolved through application of a Memorandum of Agreement between the National Park Service and the California State Historic Preservation Officer, a draft version of which is attached as Appendix A.

Cumulative Impacts

Past actions evaluated for this analysis include the installation of a temporary guest showerhouse in Curry Village and the relocation of historic tent cabins out of the rockfall hazard zone.

Reasonably foreseeable actions include the rehabilitation of historic cabins with baths (bungalows) outside of the rockfall hazard zone. This action would, to some degree, help resolve the adverse effect of demolishing and removing historic structures in the project area. In addition, the upcoming Merced River Plan might affect the location and amount of visitor lodging and employee housing in Yosemite Valley through implementation of a user capacity management program. Under Alternative 4, 39 historic structures in the rockfall hazard zone project area would be available for relocation and potential reuse, pending the Record of Decision on the Merced River Plan.

Upon review of these past, present, and reasonably foreseeable actions, these projects in conjunction with Alternative 4 would have a cumulative adverse effect on the Yosemite Valley Historic District.

Archeological Resources

Affected Environment

National Register of Historic Places Listed Properties

The area within the rockfall hazard zone is listed in the National Register of Historic Places through three separate nominations:

- Yosemite Valley Archeological District, listed in 1978 for the prehistoric significance of the valley
- Camp Curry Historic District, listed in 1979
- Yosemite Valley Historic District, listed in 2006. The Camp Curry Historic District was incorporated into the historic district.

Yosemite Valley Archeological District

The Yosemite Valley Archeological District includes 107 archeological sites. The current inventory of sites is composed of 75 prehistoric sites, 8 historic sites, and 24 sites with both prehistoric and historic components.

Yosemite Valley Historic District

The Yosemite Valley Historic District includes a single, contiguous district that extends roughly from Pohono Bridge to Mirror Lake and Vernal Fall, and from the base of the Valley walls to the north and south (see Figure 1-2). Camp Curry is a developed area located within the historic district and is independently significant for its part in the history of Yosemite National Park.

Area of Potential Effect

The area of potential effect for this project is the Yosemite Valley Historic District (Figure 1-2). The Yosemite Valley Archeological District boundaries extend beyond the historic district boundaries, but the historic district boundaries encompass the relevant archeology for this project. Archeological sites located in or immediately adjacent to the project area include CA-MRP-753H and CA-MRP-1530/H.

Relevant Studies

Several archeological studies have taken place within Curry Village and the surrounding area, and include inventories, evaluations, and monitoring. These studies include the following:

- Archeological Investigation of the Priority 3 Sites, Yosemite National Park, California (Nilsson et al. 2008)
- Archeological Monitoring of Trenching for Gas Line Installation Cabins 401-465, Curry Village Tent Cabins, Yosemite National Park, California (Chick 2000)
- Letter Report to Superintendent Yosemite NP (NPS 1997a)
- Archeological Survey of Mirror Lake Vicinity Yosemite Archaeology (NPS 1995)
- YOSE 85-J and YOSE 86-B, Yosemite Valley Water and Electric Line Monitoring (Hull and Kelly 1995)
- YOSE 85-J and YOSE 86-B, Yosemite Valley Water and Electric Line Monitoring (NPS 1994)
- YOSE 85-J and YOSE 86-B, Yosemite Valley Water and Electric Line Monitoring (Baldrice 1987b).

Archeological Sites in the Project Area

Archeological sites that have the potential to be affected by this project include CA-MRP-753H and CA-MRP-1530/H. These resources and their eligibility for the National Register of Historic Places are described below.

CA-MRP-753H

CA-MRP-753H consists of two features. Feature 1 is a buried scatter of historic debris that is 60 feet long and up to 1 foot below the surface. It is covered by 3 to 6 inches of silt, 2 to 6 inches of white granite sand, and 1 to 2 inches of asphalt. Feature 2 is the foundation of the original Le Conte Memorial Lodge, constructed in 1904 and dismantled in 1919. It is 50-feet-long and 40-feet-wide and made of cut granite blocks mortared together. Feature 1 was bisected by a water line trench in 1986. Excavations to determine the sites eligibility for the National Register of Historic Places were undertaken in 2008. The site was recommended eligible for the National Register of Historic Places as a contributing element to the Yosemite Valley Historic District. The National Park Service requested concurrence on this recommendation from the California State Historic Preservation Officer according to a letter dated June 20, 2011.

CA-MRP-1530/H

CA-MRP-1530/H is a multicomponent site that is located just outside of the project boundary. The Native American component consists of a clear glass flake, obsidian tools, and debitage. The presence of the clear glass flake indicates use of the site by Native Americans after Euro-American contact.

The historic component is small and consists of items related to domestic, personal use, and specialized activities, as well as items associated with the construction and maintenance of the tent cabins. The tent cabins have been in use since 1906, and many of these objects are likely related to their occupation.

Excavations were conducted at this site in 2008 for the purpose of determining the significance of the site as well as to assess the relationship of this site to a nearby historic Miwok village of Toolah'-kah'-mah. No evidence of a relationship was identified. The site was recommended as a noncontributing element to the Yosemite Valley Archeological District and the Yosemite Valley Historic District (Nilsson et al. 2008). The National Park Service requested concurrence on this recommendation from the California State Historic Preservation Officer according to a letter dated June 20, 2011.

Environmental Consequences - Methodology

This impact assessment addresses whether an action affects the characteristics that might make a resource eligible for the National Register of Historic Places, along with other laws and regulations. The methodology for assessing impacts to historic properties is provided in the introduction to this chapter, under “Impact Analysis for Historic Structures.”

In addition, the impact assessment considers potential new disturbances to archeological resources. In the absence of disturbance, the management objectives for these resources (that they retain their current levels of integrity) would be met. It is not possible to improve the condition of (have a beneficial impact on) an archeological resource. New disturbance could include (1) construction and maintenance of facilities, (2) ground-disturbing restoration, or (3) human-caused factors, including visitor use activities.

The impact assessment for archeological resources is based on the assumptions listed below.

- The greater the archeological complexity, the greater potential value has for contribution to scientific inquiries into the historic record. Development may affect the values that provide regional information.
- The more surficially visible an archeological site, the more potential there is for that site to be damaged. Increased visitor use and accessibility to site areas has the potential to adversely affect archeological integrity.
- The more developed areas become, the less protective buffer area there is surrounding an archeological site.

Environmental Consequences of the No Action Alternative

Analysis

Under the No Action Alternative, no buildings would be removed and the area would remain closed to visitor use and fenced. No effect on archeological sites CA-MRP-753/H or CA-MRP-1530/H is anticipated under this alternative.

Conclusion: Under the No Action Alternative, no buildings would be removed, the area would remain closed to visitor use, and the area would remain fenced. There would be no effect on the Yosemite Valley Historic District or the Yosemite Valley Archeological District.

Cumulative Impacts

Past actions with the potential to cause ground disturbance in the project area include the installation of a temporary guest showerhouse, relocation of tent cabins out of the rockfall hazard zone, and the installation of temporary housing at Huff House and Boys Town. Reasonably foreseeable actions include the removal of rockfall-destroyed structures from the project area, relocation of additional tent cabins out of the rockfall hazard zone, installation of the Huff temporary employee commons area, and the Merced River Plan. While the actions called for in the Merced River Plan are currently unknown, the other cumulative projects would be expected to have ground-disturbing activities. With avoidance measures in place, there would be no adverse effect on either the Yosemite Valley Historic District or the Yosemite Valley Archeological District. Therefore, in conjunction with the No Action Alternative, there would be no cumulative adverse effect.

Environmental Consequences of Alternative 1

Analysis

There is a potential for ground disturbance at archeological site CA-MRP-753H from removal of nearby structures. Because the historic trash deposit is buried under up to 1 foot of fill and partially paved over, it is somewhat protected. However, the rock foundation of the original Le Conte Memorial is exposed and there is the potential for it to be driven over or moved.

Removal of structures in the vicinity of archeological site CA-MRP-1530/H would use existing pathways, and the site is not likely to be affected by ground disturbance. No further study or mitigation is necessary.

Removing structures but leaving foundations, retaining walls, and pathways intact would create an archeological site. The remains would leave a visual pattern that preserves history and can be used for interpretive purposes. The remains would be representative of the recreation and park development themes, as well as period of significance, that make the Yosemite Valley Historic District eligible for the National Register of Historic Places.

Avoidance, Minimization, and Mitigation Measures

As agreed to with the California State Historic Preservation Officer (see Appendix A for a draft Memorandum of Agreement), the National Park Service would make every reasonable effort to avoid adverse effects on historic properties. CA-MRP-753H would be protected from adverse effects with the following mitigation measures in place:

- The site would be fenced off with orange hazard fencing by a professional archeologist.
- All project personnel would be briefed to stay out of this sensitive area.

There is a possibility that additional buried trash deposits associated with this site lie outside of the CA-MRP-753H site boundary as it is currently defined. The possibility of inadvertent discovery of this type of feature would be addressed through monitoring and discovery stipulations as defined in the Memorandum of Agreement between the National Park Service and the California State Historic Preservation Officer (Appendix A).

Conclusion: With mitigation and avoidance measures in place, ground-disturbing activities under Alternative 1 would have no adverse effect on archeological resources, including one site that contributes to the Yosemite Valley Historic District.

Cumulative Impacts

Past actions with the potential to cause ground disturbance in the project area include the installation of a temporary guest showerhouse and relocation of tent cabins out of the rockfall hazard zone. Reasonably foreseeable actions include the removal of rockfall-destroyed structures from the project area and the Merced River Plan. While the actions called for in the Merced River Plan are currently unknown, it would be expected that all of the projects had or will have a potential to cause ground disturbance. With avoidance, mitigation, and monitoring measures in place, there would be no adverse effect. Therefore, in conjunction with Alternative 1, there would be no cumulative adverse effect on archaeological resources.

Environmental Consequences of Alternative 2

Analysis

There is a potential for ground disturbance at archeological site CA-MRP-753H from stabilization, mothballing, and/or maintenance activities. Because the historic trash deposit is buried under up to 1 foot of fill and partially paved over, it is somewhat protected. However, the rock foundation of the original Le Conte Memorial is exposed and there is the potential for it to be driven over or moved. In addition, the site's rock wall features are a contributing element to the historic district and thus consideration of the visibility of the site would be taken into account when determining the design of the security fence.

Stabilization, mothballing, and maintenance activities in the vicinity of archeological site CA-MRP-1530/H would use existing pathways, and the site is not likely to be affected by ground disturbance. No further study or mitigation is necessary.

Removing structures but leaving foundations, retaining walls, and pathways intact would create an archeological site. The remains would leave a visual pattern that preserves history and can be used for interpretive purposes. The remains would be representative of the recreation and park development themes, as well as period of significance, that make the Yosemite Valley Historic District eligible for the National Register of Historic Places.

Avoidance, Minimization, and Mitigation Measures

Avoidance, minimization, and mitigation measures would be the same as described under Alternative 1.

Conclusion: With mitigation and avoidance measures in place, ground disturbing activities under Alternative 2 would have no adverse effect on archeological resources, including one site that contributes to the Yosemite Valley Historic District.

Cumulative Impacts

The cumulative effect on archeological resources would be the same as described under Alternative 1.

Environmental Consequences of Alternative 3

Analysis

Under Alternative 3, there is a potential for ground disturbance at archeological site CA-MRP-753H from stabilization, mothballing, and/or maintenance activities as well as the removal of structures. Since the historic trash deposit is buried under up to 1 foot of fill and partially paved over, it is somewhat protected. However, the rock foundation of the original Le Conte Memorial is exposed and there is the potential for it to be driven over or moved. In addition, the site's rock wall features are a contributing element to the historic district and thus consideration of the visibility of the site would be taken into account when determining the design of the security fence.

Stabilization, mothballing, and maintenance activities in the vicinity of archeological site CA-MRP-1530/H would use existing pathways, and the site is not likely to be affected by ground disturbance. No further study or mitigation is necessary.

Removing structures but leaving foundations, retaining walls, and pathways intact would create an archeological site. The remains would leave a visual pattern that preserves history and can be used for interpretive purposes. The remains would be representative of the recreation and park development themes, as well as period of significance, that make the Yosemite Valley Historic District eligible for the National Register of Historic Places.

Avoidance, Minimization, and Mitigation Measures

Avoidance, minimization, and mitigation measures would be the same as described under Alternative 1.

Conclusion: With mitigation and avoidance measures in place, ground-disturbing activities under Alternative 3 would have no adverse effect on archeological resources, including one site that contributes to the Yosemite Valley Historic District.

Cumulative Impacts

The cumulative effect on archeological resources would be the same as described under Alternative 1.

Environmental Consequences of Alternative 4

Analysis

The impact of Alternative 4 on archaeological resources would be the same as described under Alternative 3.

Avoidance, Minimization, and Mitigation Measures

Avoidance, minimization, and mitigation measures would be the same as described under Alternative 1.

Conclusion: With mitigation and avoidance measures in place, ground-disturbing activities under Alternative 4 would have no adverse effect on archeological resources, including one site that contributes to the Yosemite Valley Historic District.

Cumulative Impacts

The cumulative effect on archeological resources would be the same as described under Alternative 1.

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Chapter 4: Consultation and Coordination

This chapter presents a review of all consultation and coordination efforts undertaken for the Curry Village Rockfall Hazard Zone Structures Project Environmental Assessment.

Project Scoping History

Public scoping was initiated for the Curry Village Rockfall Hazard Zone Structures Project Environmental Assessment on February 22, 2010, and the National Park Service accepted scoping comments through April 7, 2010. Two public open houses were held in the Valley Visitor Center Auditorium in Yosemite Valley on February 24, 2010 and March 31, 2010. Written public scoping comments were received online through the Planning, Environment, and Public Comment (PEPC) website; by fax, email, and U.S. mail; and on comment forms distributed at open houses during the scoping period. As a result of the public scoping period, the park received comments from 29 individuals and 4 organizations. The analysis of these letters identified 154 discrete comments from which 38 general concern statements were generated.

Based on internal and public scoping comments and applicable federal law, regulations, and executive orders, the National Park Service determined that an environmental assessment would be the appropriate level of compliance for the Curry Village Rockfall Hazard Zone Structures Project. Public scoping comments and issues raised by National Park Service staff were used in the alternatives development process and the analysis presented in this environmental assessment.

Agency Consultation

U.S. Fish and Wildlife Service

The Endangered Species Act of 1973, as amended (16 USC 1531 et seq.) requires all federal agencies to consult with the U.S. Fish and Wildlife Service to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitat. The National Park Service obtained a list of federally listed, proposed, and candidate species that may be present in the Curry Village area in June 2010 from the U.S. Fish and Wildlife Service. These lists were reviewed by the park wildlife biologist, and were used as the basis for the special status species analysis in this environmental assessment. The U.S. Fish and Wildlife Service will receive a copy of this environmental assessment during the public review period. Consultation with the U.S. Fish and Wildlife Service will continue, as defined by Section 7 of the Endangered Species Act, as environmental compliance for the Curry Village Rockfall Hazard Zone Structures Project is finalized.

California State Historic Preservation Officer/Advisory Council on Historic Preservation

A Programmatic Agreement among the National Park Service at Yosemite, the California State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) regarding Planning, Design, Construction, Operations and Maintenance was developed in consultation with Native American tribes having cultural association with Yosemite National Park and was executed in October 1999 (NPS 1999).

In accordance with Stipulation VIII B of the 1999 Programmatic Agreement, the National Park Service initiated consultation on January 16, 2009 with the California State Historic Preservation Officer and the Advisory Council on Historic Preservation on this environmental assessment regarding potential actions related to the disposition of structures in the rockfall hazard zone. Per a letter dated March 4, 2009, the Advisory Council on Historic Preservation declined to participate in consultation for this project but requested they be notified if the project had the potential to have an adverse effect or if a new programmatic agreement were to be developed.

In October 2010, SHPO staff visited the rockfall hazard zone site and discussed the undertaking with the National Park Service. Per a letter dated March 9, 2011, the California State Historic Preservation Officer recommended continuing with further consultation and encouraged the National Park Service to consider an alternative that does not preclude the possibility of relocating some of the historic buildings. In the letter, the California State Historic Preservation Officer concurred that implementation of any of the alternatives would constitute an adverse effect for the undertaking. On March 14, 2011, the National Park Service notified the Advisory Council on Historic Preservation that the undertaking had the potential to have an adverse effect. The National Park Service provided a copy of the draft Memorandum of Agreement to the California State Historic Preservation Officer and the Advisory Council on Historic Preservation on June 17, 2011. On July 5, 2011, the Advisory Council on Historic Preservation again declined to participate in consultation for this project, but requested they be contacted if the National Park Service and/or the California State Historic Preservation Officer require assistance in negotiating the Memorandum of Agreement (see Appendix A) to resolve the adverse effect of this undertaking. The National Park Service will continue consultation with the California State Historic Preservation Officer and the Advisory Council on Historic Preservation as necessary through the development of the Memorandum of Agreement for this project.

American Indian Consultation

Yosemite National Park is consulting with American Indian tribes and groups having cultural association with the Curry Village area, including the Mono Lake Kutzadika'a Tribe, North Fork Mono Rancheria, the Bridgeport Indian Colony, Picayune Rancheria of Chukchansi Indians, Tuolumne Band of Me-Wuk Indians, Bishop Paiute Tribe, and the American Indian Council of Mariposa County, Inc. (Southern Sierra Miwuk Nation), on proposed actions under the Curry Village Rockfall Hazard Zone Structures Project.

Consultation with these tribes and groups regarding the October 2008 rockfall damage was initiated on January 16, 2009. A letter dated April 9, 2010 was sent to each of the tribes and groups informing them of the intent to prepare an environmental assessment evaluating disposition of the structures in the rockfall hazard zone and requesting any comments from them. On May 18, 2010, a site visit was held with the Picayune Rancheria of Chukchansi Indians. In addition, a copy of the administrative review draft of this environmental assessment was provided to the tribes and groups on September 30, 2010 for review and comment. No comments were received.

The American Indian tribes and groups will also receive copies of this environmental assessment for review and comment. Consultation and partnering will continue with the American Indian tribes and groups throughout the planning and implementation of the Curry Village Rockfall Hazard Structures Project in accordance with the 1999 Programmatic Agreement and the Memorandum of Agreement, currently in development in consultation with SHPO.

Future Information

Updated information about various aspects of Curry Village Rockfall Hazard Structures Project will be periodically distributed via newsletters, mailings, the project website (http://www.nps.gov/yose/parkmgmt/curry_village.htm), and regional and local news media.

There will be a 30-day public comment period on this environmental assessment. Please refer to the project web page for the exact comment review close and end dates.

Readers are encouraged to submit comments electronically through the NPS Planning, Environment and Public Comment (PEPC) system. A link to PEPC can be found on the project website, above, or directly at <http://parkplanning.nps.gov/CurryRockfall>.

Written comments regarding this document should be postmarked by the end of the review period and directed to:

Superintendent, Yosemite National Park
 ATTN: Curry Village Rockfall Hazard Structures Project
 P.O. Box 577
 Yosemite, California 95389
 Fax: 209-379-1294

To request a printed copy or CD of this environmental assessment (available in limited quantity), please email: Yose_Planning@nps.gov.

List of Agencies, Organizations, and Businesses that Received the Curry Village Rockfall Hazard Structures Project Environmental Assessment

Advisory Council on Historic Preservation	National Park Service, Pacific West Region
American Indian Council of Mariposa County, Inc. (aka Southern Sierra Miwuk Nation)	National Park Service-Yosemite Archives
Bassett Memorial Library	National Park Service-Yosemite Research Library
Bishop Paiute Tribe	North Fork Rancheria of Mono Indians
Bridgeport Indian Colony	Oakhurst Public Library, Branch Manager
California State Historic Preservation Officer	Picayune Rancheria of Chukchansi Indians
Delaware North Companies Parks and Resorts at Yosemite	Target Marketing Business
El Portal Public Library	Sierra Club Tehipite Chapter Yosemite Committee
Friends of Yosemite Valley	Tuolumne Band of Me-Wuk Indians
Mariposa County Public Library	U.S. Fish and Wildlife Service
Mariposa Gazette	Yosemite Gateway Railway Museum
Mono Lake Kutzadikaa Tribe	Yosemite Institute

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Chapter 5: List of Preparers

The following persons were primarily responsible for preparing and reviewing this environmental assessment.

Name	Responsibility	Education	Years Experience
YOSEMITE NATIONAL PARK TECHNICAL EXPERTS AND CONTRIBUTORS			
Lisa Acree	Botany Program Manager	B.A. Environmental Studies	18 NPS
Tony Brochini	Division Liaison, Facilities Management	2 yrs. Undergraduate studies	33 NPS
Sueann Brown	Former Historical Architect, History, Architecture and Landscapes; Resources Management and Science Division	M.S. Historic Preservation B.A. Architecture	24 NPS
Larry Carter	Capital Improvement Fund Project Coordinator, Business and Revenue Management Division	B.A. Administration	1 NPS 25 other
Jim Donovan	Planning Division Liaison	M.A. Urban & Regional Planning B.A. Fine Arts	11 NPS 15 other
Dave Humphrey	Branch Chief, History, Architecture, and Landscapes; Resources Management and Science Division	B.S. Landscape Architecture	21 NPS 9 other
Sonny Montague	Project Archeologist	M.A. Anthropology B.S. Anthropology	20 NPS 4 other
Madelyn Ruffner	Environmental Protection Specialist, Project Management Division	M.P.P. Public Policy B.A. Environmental Studies	6 NPS 6 other
Daniel Schiable	Historic Landscape Architect, History Architecture and Landscapes, Resources Management and Science Division	B.A. Landscape Architecture	5 NPS
Jeannette Simons	Former Park Historic Preservation Officer and American Indian Liaison	M.A. Anthropology B.A. Anthropology	14 Public 14 Private
Greg Stock	Park Geologist, Resources Management and Science Division	Ph.D. Earth Science B.S. Geology	6 Public 5 other
Steve Thompson	Branch Chief: Wildlife Management; Resources Management and Science Division	M.S. Ecology – Wildlife B.S. Biology	21 NPS 5 other
DELAWARE NORTH COMPANIES PARKS AND RESORTS AT YOSEMITE			
Daniel R. Jensen	President	Masters of Business Administration	41 Private
Brian Fulce	Capital Improvement Fund Project Manager	B.S. Civil Engineering	15 Private
Vicki McMichael	Manager of Compliance and Client Relations	B.A. Recreation Administration	15 Private
Devon Rothell	Environmental Compliance Manager	B.A. Cultural Anthropology	7 Private
Steve Ullman	Director of Facility Services		39 Private
NEWFIELDS COMPANIES, PRIME CONTRACTOR			
Gary Hayward	Project Director	M.S. Marine Science B.A. Geology	28 Private
Ali Baird	Project Manager	M.A. Geography B.S. Conservation Biology	6 Public 10 Private
Adam Hamburg	Compliance Specialist	B.S. Environmental Sciences	5 Private
Andrea Schmid	Compliance Specialist	M.S. Natural Resource Ecology/ Journalism and Communications B.S. Horticulture	6 Private
Wendy Vittands	Senior Compliance Specialist; Visitor Experience, Scenic Resource, Park Operations	B.S. Environmental Science	10 Public 2 Private

Name	Responsibility	Education	Years Experience
DOWL HKM			
Maryellen Tuttell	Senior Planner	M.S. Food & Resource Economics B.S. Food & Resource Economics	8 Public 15 Private
HRA AND ASSOCIATES			
Lynn Compas	Associate Archeologist	M.A. Cultural Resource Management B.S. Anthropology Minor Geology	20 Public and Private
Erica Kachmarsky	Senior Project Architectural Historian	M.A. Preservation Studies B.A. Anthropology/Archeology	10 Private
INDIVIDUAL SUBCONTRACTORS			
Geoffrey Lane	Capital Improvement Fund Project Manager, Project Management Division	B.S. Civil Engineering	31 Private
Robert Wurgler	Layout, Production and Accessible PDF	B.A. Graphic Design	19 Private

Chapter 6: Glossary and Acronyms

Glossary of Terms

Affected environment: Existing natural, cultural, and social conditions of an area that are subject to change, both directly and indirectly, as a result of a proposed human action.

Alternatives: Sets of management elements that represent a range of options for how, or whether to proceed with a proposed project. An environmental assessment analyzes the potential environmental and social impacts of the range of alternatives presented, as required under the National Environmental Policy Act (NEPA).

Archeological resources: Historic and prehistoric deposits, sites, features, structure ruins, and anything of a cultural nature found within, or removed from, an archeological site.

Area of potential effect: The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. The area of potential effect is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking.

Best management practices: Effective, feasible (including technological, economic, and institutional considerations) conservation practices and land- and water-management measures that avoid or minimize adverse impacts to natural and cultural resources. Best management practices may include schedules for activities, prohibitions, maintenance guidelines, and other management practices.

CEQ Regulations: The Council on Environmental Quality (CEQ) was established by the National Environmental Policy Act (NEPA) and given the responsibility for developing federal environmental policy and overseeing the implementation of NEPA by federal agencies.

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.” There are four general types of cultural landscapes, not mutually exclusive: *historic sites*, *historic designed landscapes*, *historic vernacular landscapes*, and *ethnographic landscapes*. (Preservation Brief 36)

Cultural Landscape Report: A Cultural Landscape Report (CLR) is the primary report that documents the history, significance and treatment of a cultural landscape. A Cultural Landscape Report evaluates the history and integrity of the landscape including any changes to its geographical context, features, materials, and use. Cultural Landscape Reports are often prepared with a change to a landscape is proposed. In such instances, a Cultural Landscape Report can be a useful tool to protect the landscape’s character-defining features from undue wear, alteration or loss, and can provide managers, curators, and others with information needed to make management decisions. (Preservation Brief 36)

Decibel: A unit of measure of sound intensity.

Ecosystem: An ecosystem can be defined as a geographically identifiable area that encompasses unique physical and biological characteristics. It is the sum of the plant community, animal community, and environment in a particular region or habitat.

Environmental assessment: A public document required under the National Environmental Policy Act (NEPA) that identifies and analyzes activities that might affect the human and natural environment. An environmental assessment is a concise public document which provides sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS), aids an agency's compliance with NEPA when no EIS is necessary, and it facilitates preparation of an EIS when one is necessary.

Environmental consequences: This section of an environmental assessment describes the impacts a proposed action will have on resources. Direct, indirect, and cumulative impacts, both beneficial and adverse, are analyzed. The context, duration, and intensity of impacts are defined and quantified as much as possible.

Environmentally preferable alternative: The environmentally preferable alternative is the alternative within the range of alternatives presented in an environmental assessment that best promotes the goals of the National Environmental Policy Act (NEPA). In general, this is the alternative causes the least damage to the environment and best protects natural and cultural resources. In practice, one alternative may be more preferable for some environmental resources while another alternative may be preferable for other resources.

Facilities: Buildings and the associated supporting infrastructure such as roads, trails, and utilities.

Finding of No Significant Impact (FONSI): The public document describing the decision made on selecting the "preferred alternative" in an environmental assessment. See "environmental assessment."

Floodplain: A nearly level alluvial plain that borders a river or stream and is subject to flooding unless protected artificially.

Geologic Hazard (Geohazard): Geohazards are any geological or hydrological process that pose a threat to people and/or their property.

Historic building: For the purposes of the National Register of Historic Places, a building can be a house, barn, church, hotel, or similar construction, created principally to shelter human activity. "Building" may also refer to a historically and functionally related unit, such as a courthouse and jail or a house and barn.

Historic district: A historic district is an area which possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. To be eligible for the National Register of Historic Places, a district must be significant, as well as being an identifiable entity. It must be important for historical, architectural, archeological, engineering, or cultural values.

Historic property: A historic property is any prehistoric or historic building, site, district, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places. Types of historic properties can include archeological sites, historic cultural landscapes, and traditional cultural properties (listed as sites, buildings, or districts).

Historic site: A historic site is the location of significant event which can be prehistoric or historic in nature. It can represent activities or buildings (standing, ruined, or vanished). It is the location itself which is of historical interest in a historic site, and it possesses cultural or

archeological value regardless of the value of any structures that currently exist on the location. Examples of sites include shipwrecks, battlefields, campsites, natural features, and rock shelters.

Historic structure: For the purposes of the National Register of Historic Places, the term “structure” is used to distinguish from buildings those functional constructions made usually for purposes other than creating human shelter. Examples of structures include bridges, gazebos, and highways.

Implementation plan: Implementation plans, which tier off of programmatic plans (like the *General Management Plan*) and focus on how to implement an activity or project needed to achieve a long-term goal. Implementation plans may direct specific projects as well as ongoing management activities or programs. They provide a more extensive level of detail and analysis than do general management plans. Implementation plans are required to undergo NEPA review.

Mitigation: Activity that will avoid, reduce the severity of, or eliminate an adverse environmental impact.

National Environmental Policy Act (NEPA): The federal act that requires the development of an Environmental Impact Statement for federal actions that might have substantial environmental, social, or other impacts.

National Park Service Management Policies: A policy is a guiding principle or procedure that sets the framework and provides direction for management decisions. NPS policies are guided by and consistent with the Constitution, public laws, Executive proclamations and orders, and regulations and directives from higher authorities. Policies translate these sources of guidance into cohesive directions. Policy direction may be general or specific. It may prescribe the process by which decisions are made, how an action is to be accomplished, or the results are to be achieved. The primary source of NPS policy is the publication *Management Policies 2006*. The policies contained therein are applicable Service-wide. They reflect National Park Service management philosophy. Director's Orders supplement and may amend *Management Policies 2006*. Unwritten or informal “policy” and people’s various understandings of National Park Service traditional practices are never relied on as official policy.

Natural processes: All processes such as hydrologic, geologic, and ecosystemic, that are not the result of human manipulation.

No Action Alternative: The alternative in a plan that proposes to continue current management direction. “No action” means the proposed activity would not take place, and the environmental effects resulting from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward.

Nonattainment Area: A geographical area identified by the U.S. Environmental Protection Agency and/or the California Air Resources Board as not meeting national and/or California ambient air quality standards (NAAQS / CAAQS) for a given pollutant.

Non-native species: Species of plants or wildlife that are not native to a particular area and often interfere with natural biological systems.

Organic Act: In 1916, the National Park Service Organic Act established the National Park Service in order to “promote and regulate use of parks. . .” and defined the purpose of the national parks as “to conserve the scenery and natural and historic objects and wild life therein and to

provide for the enjoyment of the same in a manner and by such means as will leave them unimpaired for the enjoyment of future generations.” This law provides overall guidance for the management of Yosemite National Park.

Planning: An interdisciplinary process for developing short-term and long-term goals for visitor experience, resource conditions, and facility placement.

Preferred alternative: The preferred alternative is the alternative within the range of alternatives presented in an environmental assessment that the agency believes would best fulfill the purpose and need of the proposed action. While the preferred alternative is a different concept from the environmentally preferable alternative, they may also be one and the same for some environmental assessments.

Programmatic plan: Programmatic plans establish broad management direction for Yosemite National Park. The 1980 *General Management Plan* is a programmatic plan with a purpose to set a “clearly defined direction for resource preservation and visitor use” and provide general directions and policies to guide planning and management in the park. Programmatic plans are required to undergo NEPA review.

Public comment process: The public comment process is a formalized process required by the National Environmental Policy Act (NEPA) in which the National Park Service must publish a Notice Of Availability in the *Federal Register* which provides public notice that a draft environmental assessment and associated information, including scoping comments and supporting documentation, is available for public review and input pursuant to the Freedom Of Information Act.

Rehabilitation: The act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical or cultural values.

Riparian area: The land area and associated vegetation bordering a stream or river.

Special status species: Species of plants or wildlife that receive special protection under state and/or federal laws (also referred to as “listed species” or “endangered species”), and state, local, and park sensitive species that may not be protected by law.

Traditional cultural resource: 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.

Traditional cultural property: Traditional cultural resource that is eligible for or listed on the National Register of Historic Places as a historic property

Treatment: Work carried out to achieve a historic preservation goal. The four primary treatments are *preservation*, *rehabilitation*, *restoration*, and *reconstruction* (as stated in the Secretary of the Interior’s *Standards for the Treatment of Historic Properties*).

Visitor experience: The perceptions, feelings, and reactions a park visitor has in relationship with the surrounding environment.

Visitor use: Refers to the types of recreation activities visitors participate in, numbers of people in an area, their behavior, the timing of use, and distribution of use within a given area.

Wetland: Wetlands are defined by the U.S. Army Corps of Engineers (CFR, Section 328.3[b], 1986) as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are defined by the USFWS as transitional lands between terrestrial and aquatic systems, where the water table is usually at or near the surface or the land is covered by shallow water.

Acronyms

ACHP	Advisory Council on Historic Preservation
AIRFA	American Indian Religious Freedom Act
ARPA	Archaeological Resources Protection Act
CARB	California Environmental Protection Agency, Air Resources Board
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIF	Capital Improvement Fund
dB	Decibel
dBA	Decibel (on the “A-weighted” scale)
DNC	Delaware North Companies Parks and Resorts at Yosemite, Inc.
DO	Director’s Order
EA	Environmental assessment
EIS	Environmental impact statement
EPA	U.S. Environmental Protection Agency
FONSI	Finding of No Significant Impact
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NPS	National Park Service
PEPC	Planning, Environment, and Public Comment
PM	Particulate matter
SHPO	State Historic Preservation Officer
UFAS	Uniform Federal Accessibility Standards
USACE	U.S. Army Corps of Engineers
USFWS	U. S. Fish and Wildlife Service

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Appendix A: Draft Memorandum of Agreement

The following Memorandum of Agreement between the National Park Service, State Historic Preservation Officer, and the Advisory Council on Historic Preservation is in draft format. In final form, the Advisory Council on Historic Preservation may not be a signatory to the Agreement. Consultation between the parties is ongoing. The National Park Service has notified the State Historic Preservation Officer and the Advisory Council on Historic Preservation that it is providing notice to the public of the undertaking through the integrated National Environmental Policy Act (NEPA)/National Historic Preservation Act (NHPA) process.

Comments on this draft Agreement will be considered during the public environmental assessment review period. Should the conclusion of the NHPA Section 106 process lead to a final executed Agreement, the National Park Service will provide the final Agreement to the public in conjunction with the signed NEPA decision document.

DRAFT

DRAFT, 6-22-11
MEMORANDUM OF AGREEMENT

BETWEEN
THE NATIONAL PARK SERVICE, YOSEMITE NATIONAL PARK
AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
AND
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE
CURRY VILLAGE ROCKFALL HAZARD ZONE MITIGATION
MARIPOSA COUNTY, CALIFORNIA

Preamble

The U.S. Department of the Interior, National Park Service at Yosemite National Park (NPS), has determined that treatment of the Curry Village rockfall hazard is an Undertaking that will have an adverse effect on the Yosemite Valley Historic District, a property listed in the National Register of Historic Places in 2004. The Camp Curry Historic District, listed in the National Register in 1979, is a contributing resource within the Yosemite Valley Historic District. NPS, the California State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (Council) are entering into this Memorandum of Agreement (Agreement) to outline a program of mitigation that addresses the treatment of historic resources within the rockfall zone (project area).

Basis for Agreement

WHEREAS, the following are the basis for this agreement:

- **Treatment activities in the Curry rockfall hazard zone constitute an Undertaking.** In a letter dated March 9, 2011, to the Superintendent of Yosemite, the SHPO concurred that the treatment of historic buildings and structures, as described in the *Curry Village Rockfall Hazard Zone Structures Project, Environmental Assessment*, constitutes an Undertaking.
- **Consultation about the Undertaking has been initiated.** In the same letter to the Superintendent dated March 9, 2011, the SHPO acknowledged that NPS initiated consultation with the SHPO, Indian tribes and groups, and the Council, and will involve the public according to the process specified by the National Environmental Policy Act. NPS will maintain ongoing consultation with all parties as required, including the following Indian tribes and groups:
 - American Indian Council of Mariposa County (Southern Sierra Miwuk)
 - Bishop Paiute Tribe
 - Bridgeport Paiute Indian Colony
 - Mono Lake Kutzadikaa Paiute Tribe
 - North Fork Rancheria of Mono Indians
 - Picayune Rancheria of Chukchansi Indians
 - Tuolumne Band of Me-Wuk Indians

- **The Area of Potential Effect has been defined as the Yosemite Valley Historic District.** The Area of Potential Effect (APE) is the boundary of the Yosemite Valley Historic District, as described in the 2004 National Register nomination, including the portion of the Yosemite Valley Archeological District that falls within the Yosemite Valley Historic District. Appendix 1 of this agreement contains a map that shows the project area and the Camp Curry Historic District boundaries.
- **An adverse effect to historic resources cannot be avoided.** NPS, in consultation with the SHPO, has determined that the adverse effect of the Undertaking cannot be avoided, and implementation of the stipulations set forth in this Agreement will satisfactorily mitigate the adverse effects of the Undertaking on the Yosemite Valley Historic District.
- **There will be no adverse effect on archeological resources.** NPS and the SHPO agree that the project will have no adverse effect on archeological resources.
- **A Settlement Agreement strictly regulates construction activity at Yosemite.** In 2009, NPS and the Friends of Yosemite Valley entered into a Settlement Agreement to settle a lawsuit filed by the Friends of Yosemite Valley (Case No. CV-F-00-6191 AWI DLB and Case No. CV-F-06-1902 AWI DLB). The Settlement Agreement provides specific direction for various projects in progress or planned for Yosemite, including the Curry Village rockfall hazard zone.
- **The Settlement Agreement specifically addresses actions in Curry Village.** The Settlement Agreement allows NPS to compensate for the employee housing lost at Curry Village by relocating the same number of units lost to existing housing areas on a temporary basis. It does not permit guest accommodation cabins in the rockfall zone to be moved to another location in Curry Village, which is within the river corridor. Appendix C of the Settlement Agreement stipulates where a given number of particular types of housing units can be installed temporarily, but it does not address the disposition of vacated units in the rockfall zone.
- **This agreement meets requirements of the National Historic Preservation Act.** NPS will use the provisions of this Agreement to address applicable requirements of Sections 110(a)(1) and 110(b) of the National Historic Preservation Act, as amended.

NOW, THEREFORE, NPS, the SHPO, and the Council agree that if the Undertaking proceeds, it shall be implemented according to the stipulations outlined herein. These stipulations shall govern the Undertaking until all stipulations are executed satisfactorily, this Agreement expires, or this Agreement is terminated.

STIPULATIONS

NPS shall implement the following stipulations:

I. Stipulations for Mitigation

The measures described herein will be taken to mitigate the adverse effects of the Undertaking on the Yosemite Valley Historic District:

A. Registration

NPS will update the National Register nominations affecting the project area as follows:

- 1. Additional Documentation.** Within two years of completion of the Undertaking, NPS will prepare Additional Documentation for the Yosemite Valley Historic District National Register nomination, in order to amend the nomination to reflect any changes to the district resulting from the Undertaking. The Additional Documentation will include the following:
 - Description of the appearance of the Curry Village site
 - Discussion of the impact of the treatment of the site on the integrity of the Yosemite Valley Historic District
 - Photos, as required by the National Register and the SHPO
 - Maps, as required by the National Register and the SHPO
- 2. Additional Documentation submission.** NPS will submit the Additional Documentation to the SHPO. Within six months of the receipt of the SHPO's comments, if any, NPS will amend the nomination as needed, and forward it to the Keeper of the National Register.
- 3. Additional Documentation for other nominations.** NPS will submit Additional Documentation for the Yosemite Valley Archeological District and the Camp Curry Historic District to the SHPO and to the National Register to describe the changes to the site and its impact on the integrity of Camp Curry. This will be accomplished within two years of the completion of the Undertaking.

B. Documentation

Prior to implementing any construction, deconstruction, or removal aspects of this Undertaking, NPS will prepare landscape and architectural documentation for Curry Village, in keeping with the standards of the Historic American Building Survey (HABS) and the Historic American Landscape Survey (HALS). NPS will prepare the following:

- 1. HABS Drawings and Photos.** HABS documentation will consist of plan and elevation drawings for 11 representative buildings in the rockfall hazard zone, large format photographs of the same buildings, and large format photographs of other representative buildings and overviews of the rockfall zone. The buildings to be documented with drawings will be specified by the Yosemite historical architect.

2. **HALS Drawings and Photos.** The project area for the HALS documentation will be the area encompassed by the Camp Curry Historic District National Register boundaries. The HALS drawings will consist of site plan drawings, as well as plan and elevation drawings of representative landscape features. Large format photographs will be taken of the project area.
3. **Report.** A report on the history of Curry Village, within the context of the development of Yosemite and the rockfall history of this portion of Yosemite, will be prepared according to HABS and HALS report guidelines.
4. **Submission of products.** Two sets of all drawings, negatives, and prints, and two copies of the report, will be prepared according to the archival standards of the Library of Congress. One set will be submitted to the Library of Congress and the other will be submitted to the Yosemite National Park Archives.
5. **Digital copies of products.** A digital copy of all materials produced for this project will be submitted to the Yosemite National Park Archives and to the SHPO. The digital copies shall be submitted on gold-on-gold archival CDs.

C. Salvage

1. **Evaluation of buildings for salvageable materials.** Prior to removing any buildings from the rockfall zone, NPS historical architects and construction specialists will evaluate the buildings to be removed from Curry Village for their salvage potential. Architectural features, materials, and objects that might be reused in the rehabilitation of historic structures similar to those removed will be salvaged as permitted by federal regulations and appropriately stored.
2. **Types of materials to be salvaged.** Salvaged materials may consist of the following:
 - Historic doors
 - Historic windows
 - Hardware
 - Subflooring
 - Tongue-and-groove siding
 - Foundation rock
 - Any other items the NPS historic architect deems salvageable, useable, and storable
3. **Directory of salvaged materials.** NPS will create and maintain a directory of salvaged materials, and submit it to the SHPO within twelve (12) months of the conclusion of the project.
4. **Sunset on storing salvaged materials.** After five (5) years, NPS will handle the disposition of any remaining materials according to federal regulations.

- 5. Evaluation of materials for Yosemite Museum.** Historic materials and artifacts found in the buildings or on the site must be evaluated by the Yosemite National Park Museum for possible inclusion in the collections, before they are discarded, sold, or otherwise removed from the park.

D. Interpretation

NPS will prepare interpretive materials, utilizing HABS/HALS documentation and other materials, consisting of the following:

- 1. Interpretive display.** NPS will place an interpretive display or exhibit in a prominent location in Curry Village to inform the public about the history of Curry Village, the historic structures removed, and rockfall hazards. The display may consist of a large-scale photograph, a photo montage, or a mural, with explanatory signage. It will help the public understand the interface of historic resources, natural resources, and management decisions.
- 2. Small interpretive signs.** A minimum of six (6) and a maximum of ten (10) smaller signs will be placed at intervals along the boundary of the rockfall hazard zone to explain safety in rockfall zones, the history of the rockfall zone in Curry Village, the geology of the area, and rockfalls at Curry Village and Yosemite. These signs will stay in place for five (5) years from the date of their installation, unless their condition warrants earlier removal. If the signs are deteriorated in less than three (3) years, they should be repaired instead of removed.
- 3. NPS webpage.** NPS will modify the Yosemite webpage to include information about the Curry Village rockfall zone and the potential effects of rockfalls on cultural resources.
- 4. Video documentation.** NPS will document the rockfall zone with video coverage prior to the Undertaking, during the Undertaking, and after the Undertaking. The video footage shall be shot with a high definition video camera, and the footage will be submitted to the Yosemite National Park Archives (or Mary Kline's office?) as a high-definition (HD) video, for future use in films or web broadcasts. The preparation of such productions will not be part of the mitigation for the Undertaking.
- 5. Brochure.** NPS will prepare and distribute a brochure about Curry Village at the park's visitor centers and at other park venues. The brochure will include information about the rockfall history and changing nature of Curry Village.

E. Site Clean-up

After materials have been salvaged, the following will be done in the rockfall zone:

- 1. Treatment of remaining structures.** If any buildings remain, they will be stabilized, mothballed, maintained, and secured sufficiently to prevent further deterioration from environmental damage and illicit use. These activities will be carried out in consultation with the park's historical architect.

2. **Preservation maintenance as the treatment for remaining buildings.** If any buildings remain in the rockfall zone, their treatment will follow the guidelines for “preservation maintenance,” as explained in NPS 28, *Cultural Resource Management Guideline* (p. 186-187). Preservation maintenance is defined in NPS 28 as:

The action to mitigate wear and deterioration of a historic property without altering its historic character by protecting its condition, repairing when its condition warrants with the least degree of intervention including limited replacement in-kind, replacing an entire feature in-kind when the level of deterioration or damage of materials precludes repair, and stabilization to protect damaged materials or features from additional damage. Types of preservation maintenance are:

- a. Housekeeping: the removal of undesirable deposits of soil in ways that minimize harm to the surfaces treated, repeated at short intervals so that the gentlest and least radical methods can be used.
- b. Routine maintenance: usually consists of service activities such as tightening, adjusting, oiling, pruning, etc.
- c. Cyclic maintenance: maintenance performed less frequently than annually; usually involves replacement or at least mending of material.
- d. Stabilization: action to render an unsafe, damaged, or deteriorated property stable while retaining its present form.

3. **Materials and features to be left in place. If any solid foundations are revealed,** the bottom visible course will be retained to mark the locations of historic buildings. **The same treatment will be applied to stone skirts.** Retaining walls and pathways will be retained to denote the location and association of structures and landscape features. **None of these features will be maintained.**
4. **Architectural features to be removed.** Piers and chimneys will be removed, with the masonry salvaged as per the instructions of the park historical architect.
5. **Utilities.** Any utilities above grade will be removed. Buried utilities will be capped and abandoned in place, according to NPS, state, and local codes and procedures.
6. **Disposition of remaining property.** After NPS complies with Title V as required, the disposition of any cabins or materials remaining in the rockfall zone will be executed according to federal regulations pertinent to the disposition of federal property.
7. **Landscape treatment.** Any debris that remains after all salvage and removal are complete will be removed and the area will be naturalized. Naturalization will consist of spreading needles and duff in the rockfall zone and allowing re-vegetation to occur through natural succession. Should any building remain, the immediate setting of the building will be maintained so that plant materials do not conflict with the historic structures.

II. Stipulations regarding Standards and Special Conditions

A. Definitions

The definitions provided at 36 CFR 800.16 are applicable throughout this MOA.

B. Project Standards

The standards, guidelines, regulations, and codes cited below will be followed in execution of the Undertaking:

1. **Professional qualification standards.** All historic preservation activities implemented pursuant to this Agreement shall be carried out by or under the direct supervision of individuals meeting the Secretary of Interior's Professional Qualifications Standards (48 FR 44738-39) for the discipline appropriate to the activity.
2. **Standards for inventory, evaluation, registration, and documentation.** Any inventory, evaluation, registration, or documentation of historic properties completed as per this Agreement shall conform to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716-44740) and to applicable guidelines and conventions established by NPS and the SHPO.
3. **Treatment standards.** Any work on historic buildings, structures, and sites shall conform to the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties and the Secretary of the Interior's Guidelines for the Treatment of Cultural Landscapes.
4. **Curation standards.** If applicable, curation of materials and records resulting from actions stipulated by this Agreement shall be in accordance with 36 CFR 79. Such materials and records shall be curated by NPS to the extent permitted by sections 5097.98 and 5097.991 of the California Public Resources Code.
5. **Disclosure of archeological site information.** The Signatories to this Agreement acknowledge that historic properties covered by this Agreement are subject to the provisions of section 304 of the National Historic Preservation Act, as amended, and section 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archeological site information. All actions and documentation prescribed by this Agreement must be consistent with these sections.

C. Discoveries and Unanticipated Effects

If NPS encounters a previously unidentified property that may be eligible for the National Register during an action of the Undertaking or if it appears that a known historic property will be affected in an unanticipated manner, NPS and SHPO will follow these procedures:

1. **When unanticipated properties are found.** NPS will halt removal or stabilization activities in the vicinity of the previously unidentified property and take all reasonable measures to avoid or minimize harm to the property. NPS will notify the SHPO within two (2) working days of the discovery and provide the SHPO with a written assessment via electronic mail. The assessment will evaluate the National Register eligibility of the property and describe actions proposed to resolve any potential adverse effects
2. **SHPO's recommendation regarding eligibility and proposed actions.** The SHPO shall respond to NPS within two (2) working days of the notification via electronic mail. NPS shall take into account the SHPO's recommendations regarding National Register eligibility and proposed actions. Appropriate actions will then be carried out by NPS. A report of the actions will be submitted to the SHPO when they are completed.

D. Monitoring

NPS subject matter experts will be available during removal or stabilization activities. If ground disturbance is determined to be necessary anywhere within the project area during the Undertaking, NPS will conduct archeological monitoring while the ground disturbing activity is in progress.

III. Administrative Stipulations

A. Amendments

Any signatory party may propose amendments to this Agreement. If a signatory proposes an amendment, all parties shall consult on its appropriateness pursuant to 36 CFR 800.6(c)(7) and (8). This Agreement may be amended only upon the written agreement of all signatories. The amended Agreement shall take effect on the date it is executed by NPS, the SHPO, and the Council.

B. Termination

The following process shall be followed to terminate this Agreement:

1. **Proposed termination.** A signatory party can propose termination of this Agreement in writing to the other signatories, explaining the reasons for proposing termination. The signatories shall consult for 30 days to seek alternatives to termination.
2. **Amendment in lieu of termination.** If the consultation results in an agreement on an alternative to termination, the signatories shall proceed to amend this Agreement in accordance with Stipulation III.A.
3. **Failure to agree.** If consultation does not result in agreement on an alternative to termination, the party proposing termination may terminate this Agreement by promptly notifying the other parties in writing. Such termination shall remove all force and effect from this Agreement.
4. **Process to terminate.** Should this Agreement be terminated, NPS shall consult with the SHPO to develop a new Agreement in accordance with 36 CFR 800 14(b). Until and unless a new Agreement is executed for the

undertaking, NPS will consult with the SHPO in accordance with 36 CFR 800.4 - 6.

C. Dispute Resolution

If disputes arise, NPS, the SHPO, and the Council will consult with the objecting parties to resolve the objection and follow the following procedures:

- 1. Work will temporarily stop.** All work that is the subject of the dispute will stop until the dispute is resolved according to the procedures in this section.
- 2. Documentation will be forwarded.** If the dispute cannot be resolved, all documentation relevant to the dispute will be forwarded to all signatories of this agreement. If the SHPO objects to the NPS decision, the information will be forwarded to the NPS Regional Director. If NPS objects to the SHPO's opinion, the information will be forwarded to the Council.
- 3. Role of the Director of the National Park Service.** If the Regional Director cannot resolve SHPO's objection, the Regional Director will forward to the Council relevant documentation not previously furnished to the Council and notify the Director of the National Park Service (Director) of the dispute. Within thirty (30) days after receipt of all pertinent documentation, the Council will either:
 - a. Provide the Regional Director with a recommendation, with an informational copy provided to the Director. The Regional Director will take into account the Council's recommendation in reaching a final decision regarding the dispute; or
 - b. Notify the Regional Director that it will comment to the Director of the National Park Service pursuant to the provisions of 36 CFR 800.7 and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the Director, with reference to the subject of the dispute.
- 4. If there is not timely response from the Council.** In the event the Council does not respond within thirty (30) days of receipt of all pertinent documentation, the Regional Director may proceed with his or her recommended resolution.
- 5. Objections from the public.** At any time during implementation of the terms of the Agreement, should a member of the public object to the manner of such implementation, NPS shall immediately notify SHPO in writing. NPS shall consult with the objecting party and, if the objecting party so requests, with the other signatories to this Agreement, for no more than 30 days. Within 30 days following closure of this consultation period, NPS will render a decision regarding the objection and notify the other parties of its decision in writing. In reaching its decision, NPS will take all comments from the other parties into consideration. The NPS decision regarding resolution of the objection will be final.

D. Biennial reporting requirement for this Agreement

NPS will report to the SHPO biennially on progress made toward the completion of the requirements of this Agreement. The report will be included in the biennial report required by Section VIII of the 2008 Nationwide Programmatic Agreement between NPS, the National Conference of State Historic Preservation Officer, and the Council.

E. Duration of this Agreement

Unless terminated pursuant to Stipulation III.B, the duration of this Agreement is ten (10) years from the date of its execution or until this project is complete, whichever is shorter.

F. Effective Date of this Agreement

This Agreement will take effect on the date that it is executed by NPS, the SHPO, and the Council.

IV.

EXECUTION of this MOA by NPS and implementation of its terms shall be considered evidence that NPS has taken into account the effects of this Undertaking on historic properties and has afforded the Council, SHPO, and Tribes an opportunity to comment.

SIGNATORIES

National Park Service

Don L. Neubacher
Superintendent, Yosemite National Park

Date

California State Historic Preservation Officer

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

Date

Advisory Council on Historic Preservation

John M. Fowler, Executive Director
Advisory Council on Historic Preservation

Date

CONCURRING PARTIES

For the American Indian Council of Mariposa County (Southern Sierra Miwuk):

_____	_____	_____
Name	Title	Date

For the Bishop Paiute Tribe:

_____	_____	_____
Name	Title	Date

For the Bridgeport Paiute Indian Colony:

_____	_____	_____
Name	Title	Date

For the Mono Lake Kutzadika^a Paiute Tribe:

_____	_____	_____
Name	Title	Date

For the North Fork Rancheria of Mono Indians:

_____	_____	_____
Name	Title	Date

For the Picayune Rancheria of Chukchansi Indians:

_____	_____	_____
Name	Title	Date

For the Tuolumne Band of Me-Wuk Indians:

_____	_____	_____
Name	Title	Date

Appendix B: Impairment Determination

Definition of Impairment

NPS *Management Policies 2006*, section 1.4.5: *What Constitutes Impairment of Park Resources and Values*, and section 1.4.6: *What Constitutes Park Resources and Values* provides the following explanation of impairment:

Impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. The need to analyze and disclose impairment impacts originates from the National Park Service Organic Act. The Organic Act established the National Park Service with a mandate “to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

An impact would be less likely to constitute impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values, and it cannot be further mitigated. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park;
- Identified in the park’s General Management Plan or other relevant NPS planning documents as being of significance.

Per NPS *Management Policies 2006*, section 1.4.6, park resources and values that may be impaired include:

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

According to guidance provided by the National Park Service Associate Director for National Resource Stewardship and Science in July 2010 (NPS 2010c), impairment findings are not necessary for the following impact topics: visitor experience, socioeconomics, public health and

safety, environmental justice, land use, park operations, etc., because these impact topics are generally not considered to be park resources or values according to the Organic Act. In addition, impairment is only evaluated for the preferred alternative.

Impairment Determination

The evaluation of impairment of park resources and values below was based on the type and intensity of impacts and the types of resources affected. Overall, beneficial impacts would not constitute impairment. With respect to the intensity of impacts, negligible and minor adverse impacts are not of sufficient magnitude to constitute impairment. Moderate and major adverse impacts may constitute impairment but do not automatically do so. Rather, these impacts must be analyzed with respect to the bulleted criteria above.

The following resources were evaluated for impairment on park resources and values resulting from implementation of the Curry Village Rockfall Hazard Zone Structures Project preferred alternative:

- Wildlife
- Special status species
- Historic sites, buildings, and cultural landscapes
- Archeological resources

Wildlife

The park supports a diverse and abundant assemblage of wildlife. The project area contains previously disturbed habitat and the constant presence of people in Curry Village results in a reduced habitat value compared to other areas in the park where people are not present, or are present only occasionally. Wildlife species would be affected by short-term disturbance resulting from project implementation; in the long-term habitat value may increase due to naturalization of the area. Therefore, implementation of the preferred alternative would not impair wildlife, because disturbance would be localized, short-term, and minor and the long-term impact would be beneficial.

Special Status Species

Despite the richness of high-quality habitats in the park, 38 wildlife species currently have special status under either California or federal endangered species legislation, two of which are believed extirpated from the park. Many plants endemic to the Sierra Nevada are considered rare within the park and are given special protection. These species would be considered key to the natural integrity of the park, and are by their rare nature considered significant. There are no special status plant species in the project area; special status wildlife (birds and bats) may use the project area for foraging. Special status bat species may be roosting in structures proposed for removal. There would be short-term disturbance to these species, and bat colonies may be affected by structure removal.

With mitigation, which includes: (1) scheduling construction activities after bird nesting seasons, and (2) removing structures between August and October (when maternal and hibernating bat colonies would not be present) *or* checking every structure for bat occupancy just prior to removal, the preferred alternative is not likely to adversely affect special status species. Therefore, with mitigation, implementation of the preferred alternative would not impair special status species.

Historic Sites, Buildings, and Cultural Landscapes

The preferred alternative proposes the removal of 72 structures at Curry Village that were permanently closed to use after the October 2008 rockfall events. Sixty-nine of these structures contribute to the Yosemite Valley Historic District, which was listed on the National Register of Historic Places in 2006. These resources are part of Yosemite's cultural heritage; their removal would constitute an adverse effect, as defined in the National Historic Preservation Act (NHPA) section 106 implementing regulations (36 CFR 800).

Pursuant to 36 CFR 800, a Memorandum of Agreement between the National Park Service, State Historic Preservation Officer, and the Advisory Council on Historic Preservation (attached in draft form as Appendix A), governs this undertaking. The Memorandum of Agreement, developed in consultation with the State Historic Preservation Officer, includes measures to resolve the adverse effect, including photo and written documentation of the structures prior to their removal, salvage of materials for potential re-use, interpretation of the site, site clean-up, and national register reevaluation.

Much of the significance of the contributing structures in the project area is related to their arrangement and placement and their function of providing low-cost accommodations. However, these structures cannot be used as accommodations in their current location because they are in an active rockfall hazard zone. These structures are not being maintained and are deteriorating. Due to the terms of the 2009 Settlement Agreement regarding the Merced River Plan, the National Park Service is not able to relocate these structures within Yosemite Valley until a Record of Decision for the Merced River Plan is signed. Because these structures can no longer be used as visitor accommodations and cannot be relocated at this time, their removal would not result in a loss of opportunities for public enjoyment of the park.

In addition, the park's *General Management Plan* calls for the removal of some structures within the rockfall hazard zone at Curry Village. Removal of structures that contribute to the Yosemite Valley Historic District would not alter resources or values necessary to fulfill specific purposes identified in the establishing legislation for Yosemite National Park. These structures were built after the park was established; similar structures (e.g., hard-sided cabins) remain outside of the rockfall zone and would still be available for use as guest accommodations.

Because the removal of historic structures within the active rockfall hazard zone at Curry Village would not result in a loss of opportunities for public enjoyment of the park; was called for in the park's *General Management Plan*; would not alter resources or values specific to establishing legislation for the park; and because mitigation measures to resolve the adverse effect on the Yosemite Valley Historic District are being developed in consultation with the State Historic Preservation Officer; the preferred alternative would not impair the cultural integrity of the park, including historic sites, buildings, and cultural landscapes.

Archeological Resources

Archeological resources are considered key to the cultural integrity of Yosemite National Park. Yosemite Valley includes over 100 archeological sites that evidence thousands of years of human occupation. There two archeological sites in the project area, one of which contributes to the Yosemite Valley Historic District. The other site does not contribute to any national register districts and is unlikely to be affected by the project.

Ground disturbing activities under the preferred alternative would have the potential to affect the archeological site that contributes to the historic district. As agreed to with the California State

Historic Preservation Officer (see Appendix A for a draft Memorandum of Agreement) the National Park Service would make every reasonable effort to avoid adverse effects to archeological sites. With avoidance measures listed in Appendix D, and additional measures listed in the Memorandum of Agreement (e.g., monitoring), there would be no adverse effect to archeological sites. Therefore, implementation of the preferred alternative would not impair archeological resources.

Appendix C: Cumulative Plans and Projects

This appendix presents a summarized list and subsequent detailed descriptions of past, present, and reasonably foreseeable projects that have been evaluated in conjunction with the impacts of an alternative to determine if they have any additive effects on a particular resource. These projects were included in the cumulative effects analysis presented in Chapter 3 of this document.

Summary

Reasonably Foreseeable Actions

- Rehabilitate Historic Cabins with Bath Structures
- Curry Village Removal of Rockfall Destroyed Structures
- Merced Wild and Scenic River Comprehensive Management Plan
- Curry Village Tent Cabins Future Disposition

Current Actions

- None

Past Actions

- Curry Village Temporary Guest Showerhouse
- Curry Village Huff House Temporary Housing
- Yosemite Valley Ahwahnee Temporary Employee Housing
- Yosemite Village Lost Arrow Temporary Employee Housing
- Boys Town Utility Corridor Temporary Employee Housing
- Curry Village Registration Building, Guest Lounge and Amphitheater Rehabilitation

Reasonably Foreseeable Actions

Agency Name: National Park Service/park concessioner

Project Name: Rehabilitate Historic Cabins with Bath Structures

Description: This project will address a rehabilitation program for the twenty-six (26) guest cabins with baths (24 duplex and 2 quadplex Bungalows, or WIBs) that are still being used for guest accommodations on the western side of Curry Village just north of the rockfall hazard zone. Built from 1918 to 1922 by Curry Company, these 26 bungalow structures have deteriorating and failing foundations. The structures were originally built using rocks as piers where practical, but most often with wood piers set directly on the ground. Perpetual shade of the southern cliffs, the flow of water off of the Glacier Point cliffs, and seasonally deposited silt on the upslope side are rotting out many softwood piers, rim joists, sub and finish floor, and exterior vertical base sheathing. This project is currently in the design stage and would be implemented as practicable in the near future.

Agency Name: Delaware North Companies Parks and Resorts at Yosemite, Inc.

Project Name: **Curry Village Removal of Rockfall Destroyed Structures**

Description: This project would remove two historic guest cabins (a single unit and a duplex unit, both without baths) that were damaged beyond repair by the 2008 Curry Village rock fall. This action would minimize health and safety risks and deter curious onlookers from entering the rock fall hazard zone. Non-salvageable material would be taken to a government approved landfill outside the park. No underground utilities would be removed. The propane lines would be capped at or within six inches of the surface, as appropriate, and flagged.

This project would also relocate the non-historic laundry hut and three public telephone booths to support ongoing operations and visitor services. The laundry hut is a small (approximately 10' x 12') structure located among the cabins-with-bath area. It would be moved to the western edge of the cabins-with-bath area north of the designated rock fall zone. The three public telephone booths along the wall of the Terrace Restroom would be moved to the wall of the pool's shower house beyond the rockfall zone.

The project is scheduled for completion in 2011.

Agency Name: National Park Service

Project Name: **Merced Wild and Scenic River Comprehensive Management Plan**

Description: In 1987, the U.S. Congress designated 122 miles of the Merced River—from the headwaters in the Yosemite Wilderness to the impoundment at Lake McClure—as a Wild and Scenic River. The National Park Service manages 81 miles of the Merced River, encompassing both the main stem and the South Fork in Yosemite National Park and the El Portal Administrative Site.

Pursuant to the Wild and Scenic Rivers Act requirements, the National Park Service prepared and issued the *Merced Wild and Scenic River Comprehensive Management Plan/Final Environmental Impact Statement* in June 2000. After litigation, a *Revised Merced River Plan/Supplemental Environmental Impact Statement* was completed in June of 2005 and a Record of Decision was signed in July of 2005. Subsequent court proceedings culminated in a 2006 U.S. District Court decision that invalidated the park's Merced Wild and Scenic River Comprehensive Management Plan and ordered the National Park Service to prepare a new comprehensive management plan. The outstanding lawsuit against these plans was settled, and a legally binding Settlement Agreement was executed between National Park Service and former plaintiffs in September 2009.

Pursuant to the terms of the Settlement Agreement, the National Park Service is preparing a new Merced Wild and Scenic River Comprehensive Management Plan (Merced River Plan) that will inform land uses and land management decisions in the Merced Wild and Scenic River corridor within Yosemite National Park, including in the vicinity of Curry Village. Until the Record of Decision for the Merced River Plan is signed, the Settlement Agreement constrains actions that may be undertaken in much of Yosemite Valley, and therefore limits certain potential actions at Curry Village.

Agency Name: Delaware North Companies Parks and Resorts at Yosemite, Inc.

Project Name: Curry Village Tent Cabins Future Disposition

Description: Guest tent cabins currently infringing on the rockfall hazard zone are no longer in use. This project would determine whether the tent cabins could be relocated and put back into operation.

Past Actions

Agency Name: Delaware North Companies Parks and Resorts at Yosemite, Inc.

Project Name: Curry Village Temporary Guest Shower House

Description: This project installed a temporary guest shower house in the Curry Village area to help offset the loss of guest bathroom facilities resulting from rockfall events in October 2008. The guest shower house consists of two 40' modular units which house men's, women's, and two accessible shower and restroom services. The two modular buildings are connected by a shared pitched roof over an 8' wide center breezeway which allows access to the facilities in inclement weather with minimal snow removal needed. The building in its entirety is approximately 40' long, 32' wide and 15' tall at the center roof line. This project includes the installation of a covered accessibility compliant ramp at the western side of the structure, and stairs at the eastern side of the building. Additionally, this project proposed to improve the adjacent paved pathway for improved accessibility from the Curry Village parking area.

This project was completed in summer 2009.

Agency Name: Delaware North Companies Parks and Resorts at Yosemite, Inc.

Project Name: Curry Village Huff House Temporary Employee Housing

Description: Of the 293 Curry Village employee beds lost to closure or conversion as a result of the October 2008 rockfall, relocation of housing for concessioner employees was essential to support visitor use. DNC needed to replace approximately 243 to 273 employee beds. This proposed temporary solution to a housing shortage was developed in consultation with former litigants as part of a settlement agreement concerning the Merced River Plan.

This action provided temporary lodging for 102 employees, and was needed to help meet immediate short-term housing needs for the concessioner until permanent employee housing is available.

The Huff House housing area includes the historic Huff House, and is located within the Yosemite Valley Historic District and the Camp Curry cultural landscape. This project installed 51 temporary, portable kiosk-like hard-sided cabins without baths (WOBs) and/or canvas tent cabins, and 2 modular shared facilities at infill and peripheral locations at the existing Huff House temporary employee housing area at Curry Village in Yosemite Valley. The 21 temporary structures placed in infill locations were tent cabins salvaged from the closed areas of Curry Village.

Installation of 30 additional temporary tent cabins or WOBs along the northern edge of the Huff House housing area, plus installation of the 2 shared modular facilities, and relocation of one WOB to an infill location were also accomplished under this project.

This project was completed in fall 2009.

Agency Name: Delaware North Companies Parks and Resorts at Yosemite, Inc.

Project Name: Yosemite Valley Ahwahnee Temporary Employee Housing

Description: Of the 293 Curry Village employee beds lost to closure or conversion as a result of the October 2008 rockfall, relocation of housing for concessioner employees was essential to support visitor use. DNC needed to replace approximately 243 to 273 employee beds. This proposed temporary solution to a housing shortage was developed in consultation with former litigants as part of a settlement agreement concerning the Merced River Plan.

This action provided temporary lodging for 12 employees, and was needed to help meet immediate short-term housing needs for the concessioner until permanent employee housing is available.

This project was completed in fall 2009.

Agency Name: Delaware North Companies Parks and Resorts at Yosemite, Inc.

Project Name: Yosemite Village Lost Arrow Temporary Employee Housing

Description: Of the 293 Curry Village employee beds lost to closure or conversion as a result of the October 2008 rockfall, relocation of housing for concessioner employees was essential to support visitor use. DNC needed to replace approximately 243 to 273 employee beds. This proposed temporary solution was developed in consultation with former litigants as part of a settlement agreement concerning the Merced River Plan.

This project temporarily located 6 units of portable housing for concessioner employees from Curry Village to the existing 40 units of Lost Arrow temporary employee housing area at Yosemite Village, which was created subsequent to the 1997 flood that destroyed existing employee housing at other valley locations. This proposed temporary solution to a housing shortage was developed as part of a settlement agreement concerning the Merced River Plan.

This project was completed in 2009.

Agency Name: Delaware North Companies Parks and Resorts at Yosemite, Inc.

Project Name: **Boys Town Utility Corridor Temporary Employee Housing**

Description: This project temporarily located 24 concessioner employee housing units, 1 manager/office unit, and 2 shared support structures within/adjacent to the recently disturbed utility corridor along the northwest side of Boys Town at Curry Village in Yosemite Valley. This proposed temporary solution was developed as part of a settlement agreement concerning the Merced River Plan.

This project was completed in 2009.

Agency Name: Delaware North Companies Parks and Resorts at Yosemite, Inc.

Project Name: **Curry Village Registration Building, Guest Lounge and Amphitheater Rehabilitation**

Description: This project included the rehabilitation of the Curry Village registration, lounge, and amphitheater structures. The lounge project included the complete rehabilitation of the building's architectural, structural, mechanical, and electrical systems. Included in the project were repairs and improvements to the outdoor amphitheater on the south end of the lounge building. The registration building project included the complete rehabilitation of the building's architectural, structural, mechanical, and electrical systems. All rehabilitation work was constructed in compliance with the Secretary of the Interior's *Standards for Rehabilitation of Historic Properties*.

This project corrected the structural deficiencies of these buildings by rehabilitating building foundations and roof trusses to meet current loads. The project provided an adequate HVAC system, electrical wiring that meets the current National Electric Code, and a fire alarm and suppression system for each building. The building's exteriors were restored, including siding, windows, doors and all building trim to a level where cyclic maintenance can be performed without significant restoration. Federal accessibility standards were incorporated into the project.

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Appendix D: Mitigation Measures Common to all Action Alternatives

The National Park Service places a strong emphasis on avoidance, minimization, and mitigation of impacts. To help ensure that field activities associated with the Curry Village Rockfall Hazard Zone Structures Project protect natural, cultural, and social resources and the quality of the visitor experience, mitigation measures have been developed. The following section discusses mitigation measures that would occur prior to, during, and after construction of the proposed improvements.

Mitigation Measure	Responsibility	Critical Milestones
CONSTRUCTION MITIGATION MEASURES		
Prior to entry into the park, steam-clean heavy equipment to prevent importation of non-native plant species, tighten hydraulic fittings, ensure hydraulic hoses are in good condition and replace if damaged, and repair all petroleum leaks.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Inspect the project to ensure that impacts stay within the parameters of the project area and do not escalate beyond the scope of the environmental assessment, as well as to ensure that the project conforms with all applicable permits or project conditions. Store all construction equipment within the delineated work limits.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Implement compliance monitoring to ensure that the project remains within the parameters of National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) compliance documents.	Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Provide a project orientation for all construction workers to increase their understanding and sensitivity to the challenges of the special environment in which they will be working.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
If deemed necessary, demolition/construction work on weekends or federal government holidays may be authorized, with prior written approval of the Superintendent.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Remove all tools, equipment, barricades, signs, surplus materials, and rubbish from the project work limits upon project completion. Remove all debris from the project site	Yosemite National Park, Project Manager; Contractor	Upon completion of project activities
The Construction Contractor shall prepare a Health and Safety Plan to address all aspects of Contractor health and safety issues compliant with OSHA standards and other relevant regulations. The Plan shall be submitted for park review and approval prior to construction.	Contractor	Prior to and concurrent with project activities
A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the Construction Contractor and implemented for construction activities to control surface run-off, reduce erosion, and prevent sedimentation from entering water bodies during construction. The SWPPP shall be submitted for park review and approval prior to construction.	Contractor	Prior to and concurrent with project activities
Develop and implement a comprehensive Spill Prevention/Response Plan that complies with federal and state regulations and addresses all aspects of spill prevention, notification, emergency spill response strategies for spills occurring on land and water, reporting requirements, monitoring requirements, personnel responsibilities, response equipment type and location, and drills and training requirements. The spill prevention/response plan will be submitted to the park for review/approval prior to commencement of construction activities.	Contractor	Prior to project activities
A construction work schedule shall be prepared by the Construction Contractor for the project that minimizes effects on wildlife in adjacent habitats and peaks in visitation. The work schedule shall be submitted for park review and approval prior to construction.	Contractor	Prior to and concurrent with project activities
Supervisory construction personnel shall attend an Environmental Protection briefing provided by the park prior to working on site. This briefing is designed to familiarize workers with statutory and contractual environmental requirements and the recognition of and protection measures for archeological sites, sensitive habitats, water resources, and wildlife habitats.	Contractor	Prior to and concurrent with project activities

Mitigation Measure	Responsibility	Critical Milestones
CONSTRUCTION MITIGATION MEASURES (CONTINUED)		
The park shall develop a Communications Strategy Plan to alert necessary park and concessioner employees, residents and visitors to pertinent elements of the construction work schedule.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
HYDROLOGY AND WATER QUALITY		
Where working areas are adjacent to or encroach on live streams, barriers shall be constructed that are adequate to prevent the discharge of turbid water in excess of specified limits.	Contractor	Prior to and concurrent with project activities
All disturbed soil and fill slopes shall be stabilized in an appropriate manner.	Contractor	Prior to and concurrent with project activities
Store equipment and materials away from all waterways.	Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Wastewater contaminated with silt, grout, or other by-products from construction activities shall be contained in a holding or settling tank to prevent contaminated material from entering watercourses.	Contractor	Concurrent with project activities
Remove hazardous waste materials generated during implementation of the project from the project site immediately.	Contractor	Concurrent with project activities
Dispose of volatile wastes and oils in approved containers for removal from the project site to avoid contamination of soils, drainages, and watercourses. Keep absorbent pads, booms, and other materials onsite during projects that use heavy equipment to contain oil, hydraulic fluid, solvents, and hazardous materials spills.	Contractor	Concurrent with project activities
Use silt fencing at drainages to prevent construction materials from escaping work areas.	Contractor	Concurrent with project activities
Material from construction work shall not be deposited where it could be eroded and carried to the stream by surface runoff or high stream flows.	Contractor	Concurrent with project activities
VEGETATION		
Ensure that all earth moving equipment and hand tools enter the park free of mud or seed-bearing material to prevent the introduction of non-native plants. The NPS will inspect all equipment prior to use on the project. Map and treat noxious weeds prior to construction. Certify all seeds and straw material as weed-free. Ensure that imported top-soil is weed-free. The NPS will approve sources of imported fill material that will be used within the top 12 inches of the finished grade. Monitor and treat invasive plants for three years post-construction.	Yosemite National Park, Project Manager; Contractor	Prior to, concurrent with and following project activities
Install temporary fencing (black silt fencing or orange construction fencing) around the entire project area to protect natural surroundings (including trees, and root zones) from damage. Avoid fastening ropes, cables, or fences to trees.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Use native seed mix or seed-free mulch to minimize surface erosion and the introduction of noxious weeds.	Contractor	Concurrent with project activities
While not expected with this project, the Park Botanist shall be notified if any special status plant species are identified in the project area. If special-status plant species are identified within the project area, the Park Botanist will work with the project manager to avoid impacts.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities

Mitigation Measure	Responsibility	Critical Milestones
WILDLIFE (INCLUDING SPECIAL STATUS WILDLIFE)		
Provide information to the contractor regarding wildlife concerns at the project briefings, and provide contractor specifications and Best Management Practices to avoid activities that are destructive to wildlife and habitats. Project Manager will consult with the park biologist to schedule construction activities with seasonal consideration of wildlife lifecycles to minimize impacts during sensitive periods (i.e., after bird nesting seasons, when bats are neither hibernating nor have young, etc)	Yosemite National Park, Project Manager, Contractor	Concurrent with and following project activities
Limit the effects of light and noise on adjacent habitat through controls on construction equipment. No outdoor construction activities are to occur between dusk and dawn (7am) to eliminate the need for outdoor construction lighting, and to avoid disruption of mating, nesting, or foraging owls.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Prior to project activities, particularly any tree trimming activities, a qualified wildlife biologist will screen the area for bat roosts, nesting birds, and other features that are important to wildlife habitat. If found, the biologist will provide mitigation or direction for avoidance (e.g., flagging or avoiding the area, advise as to whether the activity must be delayed to ensure that sensitive species such as nesting migratory birds are protected and not disrupted.)	Yosemite National Park, Project Manager working with the park wildlife biologist	Prior to project construction activities
For bats: Removal of structures should occur between the end of August and the end of October in order to avoid adverse impacts on maternal or hibernating bat colonies. If work must occur outside this window, every structure should be checked for bat occupancy just prior to removal and the park wildlife biologist should be consulted (see next measure). A qualified bat biologist will conduct surveys prior to structure removal or stabilization/mothballing activities to determine whether habitat that will be affected by the proposed action provide hibernacula or nursery colony roosting habitat for bat species. If bats are detected during reproduction or hibernation periods, disturbance of potential habitat will be delayed until the bats can be excluded from the area in a manner that does not adversely affect their survival or that of their young. If surveys conducted immediately prior to structure removal or stabilization/mothballing activities do not reveal any bat species present within the project area, then the action will begin within three days to prevent the destruction of any bats that could move into the area after the survey.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
For bird species: Beginning in early spring, a park wildlife biologist will conduct bird surveys and review current owl reports to determine whether special status species are present and may be mating, nesting, or foraging in the project vicinity. If nesting species are found, the Project Manager will work with the biologist; construction will be delayed until fledged or August 1st. If nesting birds are observed (e.g., discovered by workers) that are not special status species, the project manager will notify the park wildlife biologist who will recommend steps to avoid undesirable impacts to the nest or young.	Yosemite National Park, Project Manager	Prior to project construction activities
FEDERAL AND STATE PERMIT REQUIREMENTS		
The NPS will apply for and comply with all federal and state permits required for construction-related activities.	Yosemite National Park, Project Manager	Prior to project activities
AMERICAN INDIAN TRADITIONAL CULTURAL RESOURCES AND PRACTICES		
Culturally associated tribes will be given notice prior to ground disturbing activities at the project site and may be present at the project site to monitor ground disturbance during construction.	Yosemite National Park, Project Manager, Contractor	Prior to and concurrent with project activities
The NPS would continue to consult with culturally associated American Indian tribes and groups throughout the project to avoid or mitigate damage to American Indian traditional resources.	Yosemite National Park, Project Manager	Prior to, concurrent with and following project activities

Mitigation Measure	Responsibility	Critical Milestones
HISTORIC PROPERTIES		
The Park will adhere to the <i>Park Programmatic Agreement Among the National Park Service at Yosemite, the California State Historical Preservation Officer, and the Advisory Council on Historic Preservation Regarding Planning, Design, Construction, Operations, and Maintenance, Yosemite National Park, California</i> (1999 PA) or other agreement as determined necessary through consultation (e.g., Memorandum of Agreement) to resolve adverse effects. Standard mitigation measures, as defined in the draft Memorandum of Agreement attached as Appendix A, include documentation, salvage, interpretation, site clean-up, and national register reevaluation.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
All treatments within historic landscapes will be in keeping with the <i>Secretary of The Interior's Standards for the Treatment of Historic Properties</i> .	Yosemite National Park, Project Manager	Prior to project activities
Archeological sites will be fenced off with orange hazard fencing by a professional archeologist. All project personnel would be briefed to stay out of areas with sensitive archeological resources.	Yosemite National Park, Project Manager, Contractor	Prior to project activities
The possibility of inadvertent discovery of archeological resources would be addressed through monitoring and discovery stipulations as defined in the draft Memorandum of Agreement with the California State Historic Preservation Officer (Appendix A)	Yosemite National Park, Project Manager, Contractor	Prior to and concurrent with project activities
DUST ABATEMENT MEASURES		
Cover and/or seal truck beds and stockpiles to minimize blowing dust or loss of debris.	Contractor	Concurrent to project activities
Limit truck and related construction equipment speeds in active construction areas to a maximum of 15 miles per hour and strictly adhering to park regulations and posted speed limits in other areas while inside park boundaries.	Contractor	Concurrent to project activities
Maintain adequate dust suppression equipment and using clean water to control excess airborne particulates at staging areas, active construction zones, and unpaved roads leading to/from active construction areas.	Contractor	Concurrent with project activities
EMERGENCY NOTIFICATION MEASURES		
Develop an emergency notification plan that complies with park, federal, and state requirements and allows contractors to properly notify park, federal, and/or state personnel in the event of an emergency during construction activities. This plan will address notification requirements related to fire, personnel, and/or visitor injury, releases of spilled material, evacuation processes, etc. The emergency notification plan will be submitted to the park for review/approval prior to commencement of construction activities.	Yosemite National Park, Project Manager	Prior to project activities
Notify utilities prior to construction activities. Identify locations of existing utilities prior to removal activity to prevent damage to utilities. The Underground Services Alert and NPS maintenance staff will be informed 72 hours prior to any ground disturbance. Construction-related activities will not proceed until the process of locating existing utilities is completed (water, wastewater, electric, communications, and telephone lines). An emergency response plan will be required of the contractor.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
HAZARDOUS MATERIALS MEASURES		
An Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan shall be prepared by the Construction Contractor for the project to address hazardous materials storage, spill prevention and response. The Plan shall be submitted for park review and approval prior to construction.	Contractor	Prior to and concurrent with project activities
Store and use all hazardous materials in compliance with federal regulations. All applicable Materials Safety Data Sheets will be kept on site for inspection.	Contractor	Concurrent with project activities
Hazardous or flammable chemicals shall be prohibited from storage in the staging area, except for those substances identified in the Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan. Hazardous waste materials shall be immediately removed from project site in approved containers.	Contractor	Concurrent with project activities
Comply with all applicable regulations and policies during the removal and remediation of asbestos, lead paint, and polychlorinated biphenyls.	Contractor	Concurrent with project activities

Mitigation Measure	Responsibility	Critical Milestones
SOUNDSCAPES		
Ensure that all construction equipment has functional exhaust/muffler systems.	Contractor	Concurrent with project activities
Submit a construction work plan/schedule that minimizes construction-related noise in noise-sensitive areas to the park for review/approval prior to commencement of construction activities.	Contractor	Prior to project activities
Use hydraulically or electrically powered construction equipment, when feasible.	Contractor	Concurrent with project activities
Locate stationary noise sources as far from sensitive receptors as possible.	Contractor	Concurrent with project activities
Limit the idling of motors except as necessary (e.g., concrete mixing trucks).	Contractor	Concurrent with project activities
To the extent possible, perform all on-site noisy work above 76 A-weighted decibels (dBA) (such as the operation of heavy equipment) between the hours of 8:30 a.m. and 5:00 p.m. to minimize disruption to nearby park users.	Contractor	Concurrent with project activities
SCENIC RESOURCES PROTECTION MEASURES		
Fence construction staging areas and construction activity areas to visually screen construction activity and materials.	Contractor	Concurrent with project activities
Consolidate construction equipment and materials to the staging areas at the end of each work day to limit the visual intrusion of construction equipment during nonwork hours.	Contractor	Concurrent with project activities
TRAFFIC CONTROL AND VISITOR PROTECTION MEASURES		
Provide protective fencing enclosures around construction areas, including utility trenches, to protect public health and safety.	Contractor	Concurrent with project activities
WASTE MANAGEMENT MEASURES		
Require construction personnel to adhere to park regulations concerning food storage and refuse management.	Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Properly secure trash during the workday and remove all trash from site at the end of each workday.	Yosemite National Park, Project Manager	Concurrent with and following project activities

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