

General Plan Amendment/  
Draft Environmental Impact Report

# MILL CREEK

Addition

Del Norte Coast Redwoods State Park



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## ACRONYMS AND ABBREVIATIONS

AAQS	ambient air quality standard
AB	Assembly Bill
ARB	California Air Resources Board
Basin Plan	Water Quality Control Plan for the North Coast Region
BMP	Best Management Practices
CAA	Federal Clean Air Act
Cal-Fire	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CCC	California Coastal Commission
CDFG	Department of Fish and Game
CEQA	California Environmental Quality Act
CH <sub>4</sub>	methane
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
Commission	California Park and Recreation Commission
CWA	Clean Water Act
DEIR	draft environmental impact report
DPR	California Department of Parks and Recreation
EIR	environmental impact report
EPA	United States Environmental Protection Agency
FMP	Fisheries Monitoring Program
foot/feet	ft
FTA	Federal Transit Administration
GHG	greenhouse gas
GMP/GP	General Management Plan/General Plan
GPA	General Plan Amendment
HAP	hazardous air pollutant
HVAC	heating ventilation air conditioning

IMR	Interim Management Recommendations
LWD	Large woody debris
MCAC	Mill Creek Advisory Committee
meter	m
mph	miles per hour
N <sub>2</sub> O	nitrous oxide
NCAB	North Coast Air Basin
NCIC	North Coastal Information Center
NCRWQCB	North Coast Regional Water Quality Control Board
NCUAQMD	North Coast Unified Air Quality Management District
NMFS	National Marine Fisheries Service
NO <sub>2</sub>	nitrogen dioxide
NOA	naturally occurring asbestos
NOP	Notice of Preparation
NO <sub>x</sub>	nitrogen oxides
NPS	National Park Service
GPA	general plan
PM <sub>10</sub> and PM <sub>2.5</sub>	respirable and fine particulate matter
PPPC	Parks Planning, Policy, and Programming Committee
PRC	Public Resources Code
Proposed Scoping Plan	Climate Change Proposed Scoping Plan
Rellim	Miller-Rellim Redwood Company
RNSP	Redwood National and State Parks
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SO <sub>2</sub>	sulfur dioxide
SOD	Sudden Oak Death
SO <sub>x</sub>	sulfur oxides
SSC	Species of Special Concern
TAC	Toxic air contaminant
U.S. 101	U.S. Highway 101
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled

# Chapter 1

## Introduction



# 1 INTRODUCTION



Childs Hill Road winds its way through forests planted following timber harvest, EDAW 2007

Del Norte Coast Redwoods State Park is located along the northern coast of California in Del Norte County and managed by California State Parks. The first parcel of land acquired at Del Norte Coast Redwoods was purchased on October 26, 1925. The property was classified as a State Park in 1962 and encompassed approximately 6,375 acres at that time. It was significantly expanded in 2002 when a large 25,000 acre acquisition area, the Mill Creek Addition, was transferred into State Park ownership and subsequently added to the Park.

Del Norte Coast Redwoods State Park is one unit within a series of parks known as Redwood National and State Parks (RNSP) located in Humboldt and Del Norte Counties. Other Units within RNSP include Redwood National Park, Prairie Creek Redwoods State Park, and Jedediah Smith Redwoods State Park. Management of the RNSP units is guided by a joint General Management Plan/General Plan (GMP/GP). The GMP/GP was cooperatively developed by the National Park Service (NPS) and State Parks staff to provide a clearly defined, coordinated direction for resource preservation and visitor use and to serve as a basic foundation for decision making and managing RNSP over a 15 to 20 year period. The GMP/GP was approved by the California State Park and Recreation Commission on November 19, 1999 and by the Regional Director of the NPS on April 6, 2000. This document is an Amendment to the existing GMP/GP.

While the units within RNSP are managed under a single GMP/GP and NPS and State Parks often share resources and expertise, State Parks management staff is solely responsible for all management decisions and actions pertaining to State Park property, including the Mill Creek Addition to Del Norte Coast Redwoods State Park.

## **1.1 PURPOSE OF THE GENERAL PLAN AMENDMENT**

The purpose of the GPA is to develop a long term vision for the Mill Creek Addition that reflects the property's unique cultural, natural and recreational resources and desired visitor experience. The GPA also evaluates and addresses planning issues specific to the property. The GPA serves as the primary State Park management document for the Mill Creek Addition and defines a comprehensive framework that directs ongoing management activities and projects, determines appropriate public uses, and guides future development decisions in the Mill Creek Addition. It provides State Park management direction. The GPA also confirms the main purpose of the acquisition which is to restore the property to late seral forest while providing opportunities for appropriate public recreation. It is important to point out that the GPA is complementary to and to be interpreted consistent with the GMP/GP.

## **1.2 GENERAL PLANS AND THE STATE PARK PLANNING PROCESS**

General Plans are broad-based policy documents that provide management guidelines for State Parks by defining a policy framework for implementing State Park's diverse missions of resource stewardship, recreation, interpretation, and visitor use and services. By legal mandate, every State Park in California must develop a General Plan prior to approval of major development. The Plan defines the purpose, vision, and long-term goals and guidelines for the management of the Park. General planning provides opportunities to assess resource stewardship, facility development and management, and interpretation to the public. It provides guidelines for future land use management and designation, including land acquisition and the development of facilities required to accommodate expected visitation and administrative needs.

The General Plan provides a comprehensive framework that guides a Park's development, ongoing management, and public use for a period of 20 years or more.

Because it is in effect for so long, the plan must remain consistent in the vision for the Park's future, general in its scope, and flexible in its proposed approaches for solving future management problems.

### **1.3 SUBSEQUENT PLANNING ACTIONS**

Major programs and projects that will be implemented during the lifespan of the General Plan will require additional planning. Future planning efforts may include the preparation of specific resource management plans or guidelines to protect sensitive resources or the development of site-specific area development plans or guidelines for new facilities to determine how they will relate to their surrounding.

Future planning efforts also include the project-specific environmental review for implementation of management plans or guidelines and subsequent development projects. These environmental reviews may include other project-specific environmental documents that tier off the General Plan's Program Environmental Impact Report (EIR). If a subsequent management plan or guideline or project is fully within the scope of the General Plan's Program EIR, environmental review may refer back to this EIR and may not require additional document preparation. Securing any permits required for future implementation projects would also be part of subsequent planning actions.

Finally, the General Plan may need to be amended if new developments or major commitments of resources are proposed for areas not covered in the plan, or if conditions experience substantial change, making facts and findings in the plan no longer accurate.

### **1.4 GENERAL PLAN AMENDMENTS**

General Plan Amendments are prepared when changes from the conditions under which the General Plan was prepared occur. In the case of the Mill Creek Addition, the change from the circumstances under which the GMP/GP was prepared was the acquisition of a large property by State Parks and the addition of this property to Del Norte Coast Redwoods State Park. General Plan Amendments require an issue memorandum and a public hearing by the State Parks and Recreation Commission

prior to amendment approval. Amendments that reflect substantial changes to an existing General Plan require a more substantial documentation effort. However, the documentation can be at a much smaller scale than a General Plan and does not need to follow the format of a full General Plan (State Parks 2008). The amendment can focus on the specific planning issues that triggered the preparation of the amendment. A public hearing by the State Parks Commission is required for adoption of the General Plan Amendment.

This GPA for the Mill Creek Addition is being prepared to reflect the addition of a large acreage of land to Del Norte Coast Redwood State Park. The GPA focuses on planning issues unique to the Mill Creek property such as land use, circulation and facilities development, natural and cultural resources management, and unique opportunities for research and interpretation. Where the existing GMP/GP includes management provisions at a sufficient level of detail to fully cover planning and management pertaining to the Mill Creek Addition, no additional guidance is needed and the property will be managed according to guidance in the GMP/GP. Where more specific site specific guidance is needed to reflect the unique conditions on the property, the GPA provides this additional specific guidance for those management issues unique to the Mill Creek Addition.

## **1.5 SITE VISITS AND REVIEW OF EXISTING INFORMATION**

Preparation of the GPA is largely based on existing information; however planning team members also conducted limited site review with State Parks technical staff. The following information was reviewed in preparation of this GPA:

- ▶ Property Acquisition Papers and Deed (Appendix A)
- ▶ Charter of the Mill Creek Advisory Committee (MCAC) (Appendix B)
- ▶ MCAC past meeting summaries
- ▶ California Environmental Quality Act (CEQA) documentation for ongoing projects
- ▶ Redwood National and State Parks GMP/GP and supporting EIS/EIR
- ▶ Draft Redwood National Park Trails Plan and supporting Draft Environmental Assessment

- ▶ Interim Management Recommendations for Mill Creek (Stillwater Sciences 2002)
- ▶ Mill Creek Fisheries Monitoring Program Annual Reports
- ▶ PowerPoint presentations and handouts prepared in support of site specific projects
- ▶ GIS shape files
- ▶ Local soil survey
- ▶ Auditory Disturbance Guidelines for marbled murrelets (Appendix E)
- ▶ Relevant sections of Public Resources Code (Appendix F)
- ▶ Relevant State Park Departmental Notices
- ▶ State Parks Planning Handbook (2008)

Site visits by planning team members and State Parks staff were conducted on the following dates:

- ▶ April 10, 2007 – Initial site reconnaissance
- ▶ June 23, 2007 – Site tour with local experts
- ▶ September 4, 2007 – Road network tour with State Parks technical staff
- ▶ October 4, 2007 – Mill site visit
- ▶ January 10, 2008 – Reconnaissance visit focusing on management issues
- ▶ April 10, 2008 – Reconnaissance visit focusing on recreations and access issues
- ▶ June 20, 2008 – Reconnaissance visit focusing on potential lodge site

In addition, the planning team interviewed knowledgeable individuals, RNSP and State Parks North Coast Redwood District staff members, and coordinated with the State Parks Planning, Policy, and Programming Committee (PPPC) and with State Parks Planning Division General Plan unit staff.

## **1.6 PUBLIC AND STAKEHOLDER INVOLVEMENT**

Public and stakeholder input is an important component of all State Parks planning processes, including GPAs. It is sought at the very beginning and throughout the planning process for a variety of reasons. State Parks is entrusted by the people of California to manage its units for natural and cultural resources protection while at the same time providing recreational opportunities. Developing relationships with park

constituencies ensures the public's support for their local and regional State Parks. For the Mill Creek Addition, State Parks wishes to build on and enhance existing relationships with stakeholders and the local community.

Several methods such as news releases, public meetings and workshops, a planning website, post cards, public notices, and newsletters were used to identify and inform stakeholders about the Mill Creek Addition and the GPA process. In addition, State Parks management staff met monthly with Del Norte County Supervisors in a two by two (i.e., with two County Supervisors) format to inform and brief the Supervisors on the planning process, and to solicit input and feedback. For the duration of the planning process, the MCAC also discussed the GPA at their quarterly meetings and provided input and feedback at several crucial steps in the development of this GPA.

The goal of this extensive public and stakeholder outreach effort was to identify the community's ideas and desires for management of the Mill Creek Addition, and to understand their concerns for the future of the Park. Through an extensive public and stakeholder outreach effort conducted in support of the GPA, local residents and stakeholders, as well as specific user groups were able to provide important information about the Mill Creek Addition, express their ideas for appropriate public use, state their goals and concerns for resource management, and stay informed about the planning process. Designated Del Norte County Supervisors provided important input on the needs and desires of their constituents and MCAC members fulfilled their mandate to provide technical guidance and advice pertaining to management of the Mill Creek Addition pursuant to their charter.

The following is a chronological list of opportunities for public and stakeholder participation and input provided throughout the planning process for this GPA:

- ▶ June 21, 2007 – Informational public meeting, Crescent City Fire Station
- ▶ June 23, 2007 – Site tour, Mill Creek Addition
- ▶ Summer 2007 – Compilation of extensive mailing list
- ▶ September 4, 2007 – Road network tour, Mill Creek Addition
- ▶ September 17, 2007 – Notice of Preparation (NOP) published

- ▶ September 25, 2007 – Newsletter 1 mailed to stakeholders
- ▶ October 4, 2007 – Public scoping meeting, Elk Valley Rancheria
- ▶ June 19, 2008 – Alternatives presentation public meeting
- ▶ September 3, 2008 – Follow up meeting with equestrian stakeholders
- ▶ April 14, 2009 – Draft GPA (Draft Environmental Impact Report [DEIR] Circulated for public team)
- ▶ April 14, 2009 – Newsletter 2 mailed to stakeholder.

The following MCAC meetings included updates or exercises pertaining to the GPA development.

- ▶ October 5, 2007 – Initial discussion, immediately following public scoping meeting on October 4
- ▶ January 10, 2008 – focused GPA input meeting
- ▶ May 15, 2008 – preview of GPA alternatives
- ▶ October 1, 2008 – update on GPA process
- ▶ November 21, 2008 – special meeting convened to preview GPA prior to public release

At least one representative County Supervisor attended all of the MCAC meetings listed above. In addition, State Park management staff met with County Supervisors on the following dates:

- ▶ 2007 dates: 3/29; 4/27; 5/22; 7/24; 10/29; 11/26
- ▶ 2008 dates: 1/22; 3/11; 5/6; 6/9; 7/2; 9/9; 11/20; the November 20 meeting focused specifically on a preview of the draft GPA prior to public release.

All materials developed in support of site tours and public meetings have been made available on the Mill Creek Addition planning website: [http://www.parks.ca.gov/default.asp?page\\_id=24651](http://www.parks.ca.gov/default.asp?page_id=24651). The planning website also contains comment forms to download and mail in, contact information for planning team members, and summaries of comments from staff and Mill Creek Advisory Committee (MCAC) workshops.

## **1.7 STAFF AND MILL CREEK ADVISORY COMMITTEE INPUT**

To ensure that the GPA contains the most up to date information and reflects the current site conditions, several workshops with RNSP staff, State Park North Coast Redwood District staff, and the MCAC were held. On January 9, 2008 the planning team hosted an all-day workshop for District and RNSP staff. During the workshop, the planning team received input from staff on all resources and aspects of site management and community outreach relevant to the Mill Creek Addition. A similar workshop was held with members of the MCAC on January 10, 2008. On May 8, 2008 the planning team hosted a second all-day workshop for District and RNSP staff to focus on recreation and public access opportunities in the Mill Creek Addition. Information received during all workshops and the public outreach guided the development of three alternatives plus a preferred alternative for the Mill Creek Addition. All of these alternatives were presented at the June 19, 2008 public workshop. Input received during and following the public workshop was used in refining and finalizing the preferred alternative. On November 20, 2008, the planning team hosted a workshop for District and RNSP staff to review the draft GPA preferred alternative maps and policies. Summaries of workshops, the alternatives, and comments received during public meetings are available on the planning website.

## **1.8 NATIVE AMERICAN CONSULTATION**

On November 16, 2007, State Parks published Departmental Notice DN 2007-05 detailing the steps required for Native American consultation in support of General Plans. Native American consultation for the Mill Creek GPA was initiated by North Coast Redwood District Archeologist on February 2, 2008 and has been ongoing. The North Coast Redwood District Archeologist has met with local tribes on several occasions and a formal letter outlining the tribe's interest and concerns was sent by the Elk Valley Rancheria on September 3, 2008. Materials related to the Native American Consultation conducted in support of the GPA are included in Appendix D.

## 1.9 POLICY, PLANNING AND PROGRAMMING COMMITTEE REVIEW

The Policy, Planning, and Programming Committee (PPPC) is a committee of senior State Parks managers that provides policy-level review, comments, and recommendations to the State Parks Director on significant programs, policies, strategies, initiatives, and actions that have system-wide or mission-based implications. The review of unit-level general plans, amendments, certain interim use or management plans, and certain immediate public use plans are among the primary duties of the PPPC. PPPC has been involved in the development of the GPA and has received several briefings on important topics, issues, development of alternatives, and milestones of the planning process. PPPC also conducted a formal review of the draft GPA and DEIR prior to public release of the document.

## 1.10 CONTENTS OF THE GENERAL PLAN AMENDMENT

As detailed above, the GPA is the result of intensive public and stakeholder outreach; site visits; review of existing documentation; and input from District and RNSP staff, the MCAC, and PPPC. The GPA was assembled by the planning team consisting of North Coast Redwood District staff and consultants. It includes the following sections:

- ▶ **Chapter 1. Introduction.** This chapter provides a brief overview of the State Parks planning process, purpose of the GPA, public and stakeholder outreach effort, staff and MCAC input, Native American consultation and PPPC review conducted in support of the GPA preparation.
- ▶ **Chapter 2. Description of the Mill Creek Addition.** This chapter provides information about the history and nature of the Mill Creek Addition and describes interim management and ongoing projects. It also describes the roles and responsibilities of the MCAC and provides an overview of the issues and concerns to be addressed in the GPA.
- ▶ **Chapter 3. Mill Creek Addition General Plan Amendment.** This chapter describes the preferred alternative for management of the Mill Creek Addition developed through the GPA planning process. It also identifies planning issues and actions

specific to the Mill Creek Addition. It follows the outline of topics addressed in the GMP/GP, but focuses only on those planning issues unique to the Mill Creek Addition that are not addressed sufficiently in the GMP/GP. Special emphasis is given to the avoidance of adverse effects to known sensitive resources present in the Mill Creek Addition.

- ▶ **Chapter 4. Environmental Review.** This chapter presents the environmental review portion of the GPA in the form of a Draft Program Environmental Impact Report (DEIR). The environmental setting section provides detailed information about common and sensitive resources present in the Addition that were taken into consideration during development of the preferred alternative. The impacts analysis section analyzes the environmental effects resulting from implementation of the preferred alternative, as described in Chapter 3. In addition, the DEIR analyzes alternatives to the proposed GPA. The DEIR includes the following sections:
  - Introduction to the Environmental Analysis
  - Summary
  - Project Description
  - Environmental Setting
  - Environmental Effects Eliminated from Further Analysis
  - Environmental Impacts
  - Other CEQA Considerations
  - Alternatives to the Proposed Project
  
- ▶ **Chapter 5: Bibliography.** This chapter contains a complete list of all references used during the preparation of the GPA, as well as citations for personal communications.
  
- ▶ **Chapter 6: GPA Preparers.** This chapter contains a complete list of all members of the planning team.
  
- ▶ **Appendices.** The appendices are important repositories for additional information relevant to the GPA planning process. The following appendices are included:

- Appendix A: Acquisition Deed and Purchase Agreement for the Mill Creek property
- Appendix B: Mill Creek Advisory Committee Charter
- Appendix C: GPA Public Outreach Effort
  - Postcard/newsletter
  - Notice of Preparation
  - Summary of scoping comments
  - Summary of staff and MCAC input
  - Public meeting notes
  - Summary of comments received on Preliminary GPA/DEIR
  - Planning website
- Appendix D: Native American Consultation
- Appendix E: RNSP Auditory Disturbance Guidelines for Spotted Owl and Marbled Murrelet
- Appendix F: Public Resources Code: Applicable Sections Defining State Parks Use

# Chapter 2

## Description of the Mill Creek Addition



## 2 DESCRIPTION OF THE MILL CREEK ADDITION

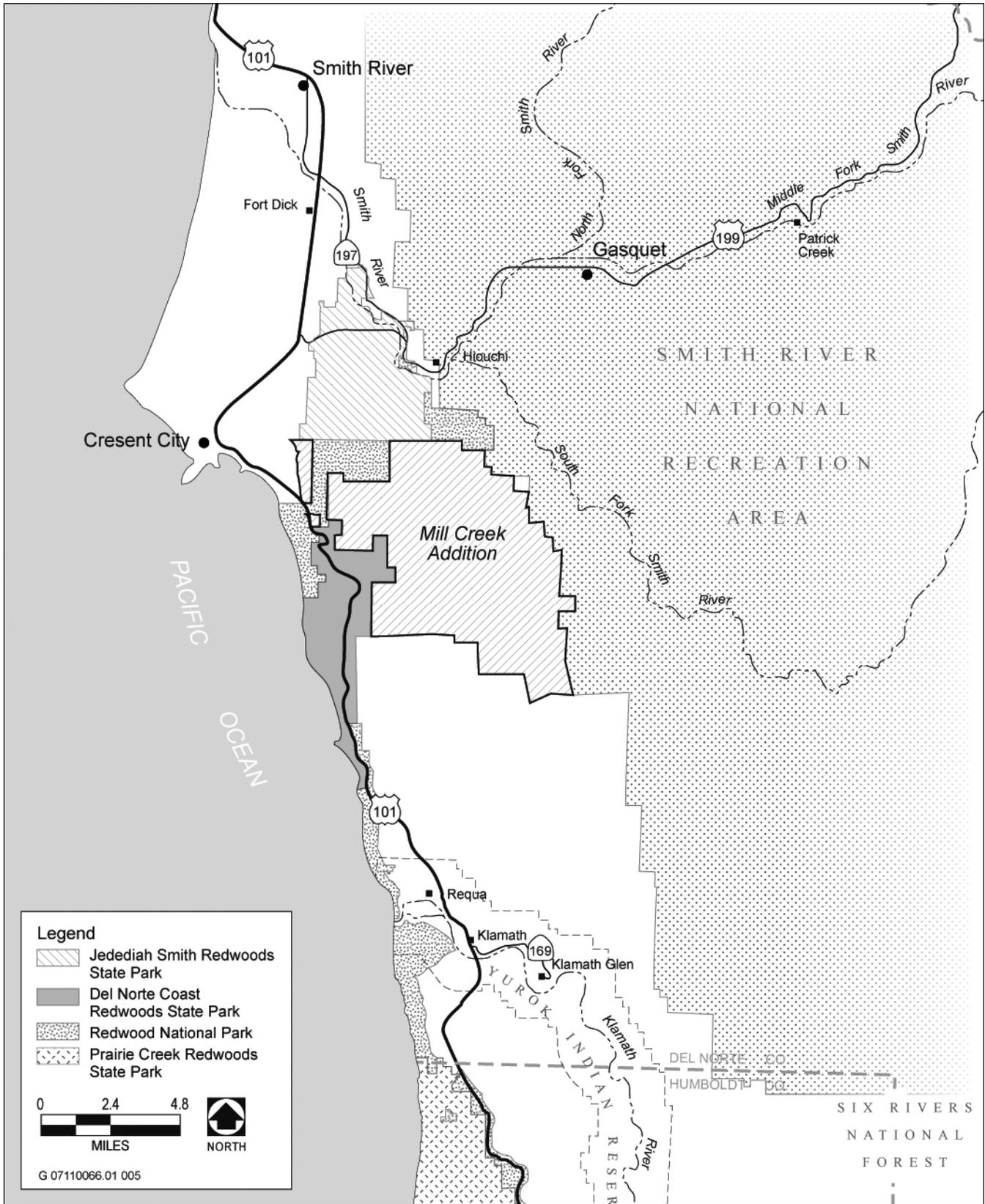


Rock Creek provides important habitat for salmonids, EDAW 2007

This chapter provides a brief overview of the history and nature of the Mill Creek Addition relevant to understanding the context and content of the General Plan Amendment (GPA). Information presented in this section draws from a variety of background reports that present more in-depth information on specific aspects of ongoing projects and site management activities. Maps of existing resources present in the Mill Creek Addition are included in chapter 3 (General Plan Amendment), and more detailed information on specific resources present in the Mill Creek Addition is included in the environmental setting sections of chapter 4 (Environmental Analysis).

### 2.1 HISTORY OF THE ACQUISITION

The Mill Creek Addition to Del Norte Coast Redwoods State Park is located in Del Norte County (Exhibit 2-1). The 25,000-acre property is bordered by Jedediah Smith Redwoods State Park and portions of Redwood National Park to the north, Six Rivers National Forest to the east, commercial timber lands to the south, and other portions of Del Norte Coast Redwoods State Park to the west. It encompasses large portions of the Mill Creek and Rock Creek watersheds. Mill Creek and Rock Creek are tributaries to the Smith River, a designated Wild and Scenic River. The property has a long history of timber harvesting dating back to the 1850s. On June 4, 2002 the State of California purchased the Mill Creek property from Stimson Lumber Company. Funding for the acquisition was provided by State Parks and Save the Redwoods League with additional grants from the State Coastal Conservancy, California Wildlife Conservation



Source: EDAW 2008

**Regional Location**

**Exhibit 2-1**

Board, and the California Department of Fish and Game. The property was acquired to restore its ecological values, enhance critical habitat connectivity between state and federal conservation area, and provide opportunities for appropriate and compatible public recreational use. Shortly after the acquisition, the property became part of Del Norte Coast Redwoods State Park and was placed under State Park ownership and management.

## **2.2 INTENT OF THE ACQUISITION**

According to the purchase agreement, the intent of the acquisition is “to provide a broad array of park and other public uses that are compatible with the primary goal that the Mill Creek property shall be restored to late seral forest characteristics and associated natural functions that maximize benefits to the salmonid species of the property’s streams and wildlife associated with late seral forest.” Please refer to Appendix A of this GPA for a copy of the Mill Creek acquisition papers and property deed.

## **2.3 DESCRIPTION OF THE PROPERTY**

Current site conditions at the Mill Creek Addition are the result of many years of timber harvesting. The property is currently characterized by mostly young forests dominated by coast redwood and Douglas-fir that were planted during reforestation efforts after timber harvesting. Approximately 121 acres of old-growth redwood forest remain in several separate stands. Scattered residual trees are present among the patchwork of young upland forests and riparian corridors along Mill Creek, Rock Creek, and their tributaries. Protecting stands of existing old growth and restoring the early-succession forests to more mature conditions are two of the main goals for the Mill Creek Addition.

Portions of five watersheds occur on the property, draining steep mountainous terrain. Elevations on the property range from 16 m (52 ft) to 685 m (2,247 ft) above sea level. Small tributaries flow through deeply incised canyons, while the larger mainstem channels in the Mill Creek basin occupy broad, flat valley bottoms. Rock Creek flows through a narrow valley for most of its length. A network of logging roads traverses the property accompanied by skid trails and log landings. Deterioration of these roads and unstable log landings, and natural erosion in steep canyons on the property have

resulted in accelerated sediment delivery to stream channels in the Mill Creek and Rock Creek watersheds. Management alternatives include maintaining and upgrading logging roads for use, converting logging roads to trails or removing logging roads and restoring streams that provide habitat for salmonid and other wildlife species.

The existing road network and facilities at the former mill site provide opportunities for site management and public use that are compatible with these management goals. Some of the day-use activities currently available on the property include hiking, mountain biking, fishing and horseback riding, as well as interpretive programs and driving tours. Buildings at the former mill site are used by State Parks staff as offices, equipment storage, maintenance sheds, a nursery, and a classroom for a charter school.

## **2.4 CURRENT MANAGEMENT**

The Mill Creek Addition is currently managed according to State Park management guidelines under the Public Resources Code (PRC). North Coast Redwoods District staff has been actively involved in assessing site conditions, prioritizing and implementing emergency actions, securing funding, and managing resources on site. Management programs initiated to date are described below and are expected to continue after adoption of the GPA.

In addition, Interim Management Recommendations (IMR) (Stillwater Sciences 2002) developed to guide protection, restoration, and public use of the property. The IMR development process included scoping meetings with resource agencies, focused working groups, and public input to define important interim management issues related to the Mill Creek Addition. Analyses focused on identifying resource protection and enhancement opportunities consistent with the goals and objectives of the acquisition; input from working groups, the public, and MCAC, and the longer-term planning objectives of State Parks. The following priority issues were identified in the IMR: (1) aquatic and terrestrial habitat protection, (2) road management, (3) second-growth vegetation management and (4) public use.

## **2.5 ONGOING PROJECTS**

### **2.5.1 IN-STREAM RESTORATION**

Mill Creek is one of the most productive salmon and steelhead streams in California. One of the objectives of the ongoing in-stream restoration projects is to improve habitat for salmonids and other aquatic species where in-stream channel structure and form may be currently lacking. Large woody debris (LWD) helps give structure to streams and provides critically important habitat for salmonids. In the 1980's, removal of LWD from streams occurred on the Mill Creek Addition as part of stream restoration practices due to the belief that logs were blocking fish migration. More thorough research has confirmed that large wood is an essential part of a healthy and productive stream ecosystem.

Additionally, over 100 years of timber harvest eliminated streamside standing conifers (especially redwood, grand fir, Sitka spruce, and hemlock) that are the source of LWD in streams on the property. State Parks, in cooperation with the California Department of Fish and Game and other organizations, has been restoring LWD to select locations in Mill Creek in an effort to re-introduce this essential habitat for salmonids and other aquatic species. A program of riparian conifer planting is also being implemented to replace the redwoods and other conifers near stream channels. It is expected that these conifers will become future sources of LWD as they senesce. As these conifers mature, they will also provide shade and cover for aquatic species, as well as terrestrial wildlife habitat.

### **2.5.2 FISHERIES MONITORING**

Data from the Mill Creek Fisheries Monitoring Program (FMP) helps to guide the in-stream restoration program. Mill Creek supports natural runs of Chinook salmon, coho salmon, chum salmon, steelhead, and coastal cutthroat trout. Problems facing anadromous salmonids include poor LWD recruitment, barriers to fish passage, degraded riparian vegetation, and sediment input from the existing road network (Howard and McLeod, 2007). The Mill Creek FMP collects data on the health and production of salmon species using 1) downstream migrant traps; 2) summer

abundance dive counts; and 3) fall-winter spawner “escapement” surveys. The downstream migrant trap captures out-migrating smolts, which are young fish that are moving toward the estuary and salt water in the spring. This monitoring was initiated in 1994, is ongoing today, and is expected to continue in the future to assess the success of restoration and other ongoing projects.

### **2.5.3 ROAD REMOVAL**

At the time of acquisition, the Mill Creek Addition included approximately 325 miles of roads that were constructed mainly for the purpose of timber extractions. Upon transfer of the property to State Parks, North Coast Redwoods District staff developed restoration prescriptions to treat a subset of these roads. Many of the roads that are being treated are in steep terrain and represent a significant threat to aquatic resources and water quality due to the high risk of erosion and road failure. Partially removed stream crossing sites also have a high potential for failure and the road segments between the crossings are susceptible to drainage diversions and fill slope failures. These failures have the potential to deliver tens of thousands of cubic yards of sediment into Mill Creek and other streams each year. To address the immediate and urgent need to prevent catastrophic road failures, the restoration prescriptions developed by staff address partial decommissioning of at-risk roads. Road removal work on the property has been underway since 2004. To date, 35 miles of partially decommissioned roads have been removed and further road removal efforts are ongoing. It is expected that by the end of the implementation of the current restoration prescriptions, 129 miles of road will have been removed.

### **2.5.4 FOREST RESTORATION**

Following timber harvesting, the forested areas in the Mill Creek Addition shifted from primarily old-growth redwood forests with a scattered mixture of other tree species to young Douglas-fir plantations with scattered young redwoods. For instance, the stands currently being restored include between 500 and 2,000 trees per acre, whereas old-growth dominated stands were characterized by average of 30 to 40 trees per acre. The majority of forests at the Mill Creek Addition consist of young, even-aged stands

characterized by tree densities that are too high to support vigorous tree growth. To restore forest habitat on the Mill Creek property to late seral characteristics, as mandated by the acquisition purchase agreement, tree densities need to be reduced. Without treatment i.e., tree thinning to reduce densities, forest health will decline, and stands may fail to progress towards old-growth conditions and will not develop a resistance to catastrophic wildfire. Treatment of forest stands for fire resistance and movement towards late seral condition needs to pre-date the removal of at-risk-roads, to ensure access for the required heavy equipment. Treatment of select stands on the property in the form of mechanical thinning has been ongoing since 2003 under the property's restoration prescriptions and in conjunction with the road removal project. 1650 acres of forest in 31 distinct stands have been treated to date. After treatment, remaining trees will be able to develop fire resistant characteristics naturally and the forests will develop old-growth characteristics more quickly. As part of the forest restoration monitoring program, changes over time will be tracked and compared with control areas where no treatment has occurred.

### **2.5.5 NATIVE PLANT NURSERY**

The former mill site on the Mill Creek Addition is home to a native plant nursery where native plants are grown to support on-site restoration projects. Current projects supported by the on-site native plant nursery include the road removal projects and the restoration of redwoods and other riparian conifers along stream corridors. Plants and seeds are collected within the Mill Creek Addition and propagated at the nursery, ensuring genetic integrity for all revegetation and restoration projects. The nursery operates as a cooperative project involving local agencies, the Del Norte Academy of Natural Resources, AmeriCorps Watershed Stewards Project, and the California Conservation Corps, with support from state and private funding sources.

### **2.5.6 PUBLIC ACCESS AND INTERPRETATION**

The Mill Creek Addition offers many opportunities for public recreational use consistent with the goals of restoring the ecological functions of late-seral forests. The property has been open to the public on weekends since June of 2007. Recreational opportunities

currently available in the Mill Creek Addition include day-use activities, such as hiking, mountain biking, fishing, and horseback riding. These activities utilize existing facilities and the existing road network. A number of designated public use loops and one-way trails of varying lengths extend from the day-use parking area at the former mill site off of Hamilton Road.

Current education and outreach programs offered on the property are provided primarily during the summers and include guided driving and biking tours of the Mill Creek watershed, astronomy events, such as viewing meteor showers and lunar eclipses, and exploring the solar system from the heart of an old-growth grove, and one-time seasonal events, such as the Berry Fest, where the public is encouraged to share berry recipes, art, and knowledge. Guided salmon tours are offered during the spawning season.

## **2.6 MILL CREEK ADVISORY COMMITTEE**

The Mill Creek Advisory Committee (MCAC) was established to advise the Redwood Coast Sector Superintendent on the development and implementation of interim and long-term management plans for the Mill Creek Addition. The MCAC provides recommendations to the Redwood Coast Sector Superintendent to ensure management of the Mill Creek Addition is consistent with the goal that the property be restored to late seral forest characteristics and associated natural functions that maximize benefits to salmonid species and late seral forest-associated wildlife. State Parks staff consults quarterly with the MCAC on management priorities and ongoing projects, and provides written justification for any decisions that deviate from the committee's advice. Members of the MCAC include representatives of the State Coastal Conservancy, Wildlife Conservation Board, California Department of Fish and Game, and Save the Redwoods League. Meetings are also attended by Del Norte County Supervisors, as well as other individuals invited as specific topics are addressed.

The planning team coordinated closely with the MCAC during the development of this GPA by providing updates on the planning process at MCAC meetings, conducting a visioning/brainstorming workshop with the MCAC specifically focused on the GPA,

providing the MCAC with previews of alternative GPA maps and plans prior to public meetings, and by providing a specific presentation on the draft GPA. Members of the planning team also solicited feedback from MCAC members by email and phone, as applicable. Results from the visioning/brainstorming workshop with the MCAC are included in Appendix C of this GPA.

# Chapter 3

## Mill Creek Addition

### General Plan Amendment



### 3 MILL CREEK ADDITION GENERAL PLAN AMENDMENT



Coastal view from the proposed lodge site, formerly used for a demonstration forest, EDAW 2008

#### 3.1 INTRODUCTION

The acquisition of the Mill Creek Addition added significant acreage to Del Norte Coast Redwoods State Park. The existing RNSP GMP/GP provides management guidance for a large geographic area, containing diverse natural, cultural, aesthetic and recreational resources that in many cases are similar in nature to those found at Mill Creek. However, in some cases the unique resources and issues found at the Mill Creek Addition require additional strategies and actions to guide management specific to this property. These additional strategies and actions are the focus of this General Plan Amendment (GPA). The GPA will provide additional guidance to State Park management staff.

#### 3.2 VISION STATEMENT

The Vision Statement provides guiding images of what the Mill Creek Addition should be like in the future, following implementation of the General Plan Amendment. The Vision Statement presented below incorporates ideas and input provided by the Mill Creek Advisory Committee and State Parks staff.

*The Mill Creek Addition encompasses a mosaic of natural communities providing habitat for a large variety of common and special-status native plant, fish and wildlife species. Mill Creek and Rock Creek provide important strongholds for steelhead, coastal cutthroat trout, coho, chum and Chinook salmon, and old*

*growth groves provide habitat for marbled murrelets and northern spotted owl. Mill Creek's habitats also serve as refuge and migration corridors for species adapting to changing conditions.*

*Park visitors pass from old growth forest present in the adjacent Jedediah Smith Redwoods State Park into the Mill Creek Addition seamlessly without noticing a difference. They are able to hike or ride along an extensive trail network, camp at remote locations, and pass among adjacent parks on a parkwide trails network.*

*Resource management practices applied in the Mill Creek Addition are tailored to promote, maintain, and restore ecological functions of the habitats to a pre-European condition. Mill Creek serves as a living laboratory for ecological research, forest and watershed restoration, and the effects of global climate change on native species and communities. Researchers from throughout California and the world use the facilities at the site to study forest and stream ecology and related disciplines.*

*The natural, cultural, and recreational resources at the Mill Creek Addition are managed according to the best available science and in cooperation with the local community and stakeholders through open communication on important issues, such as resource management, fire safety, public access, wildlife management, onsite concessions, and others as they arise.*

*Interpretation of the unique aspects of the Mill Creek Addition is provided at state-of-the art facilities at the site and focuses on natural and human history of the site, conservation, and the Park's role in adapting to issues related to global climate change.*

### **3.3 PREFERRED ALTERNATIVE DESCRIPTION**

The Draft Preferred Alternative for management of the Mill Creek Addition was developed through extensive public outreach and a series of workshops with the MCAC and staff as described in Chapter 1. The Draft Preferred Alternative is a visual depiction of the elements proposed in the GPA. The GPA calls for the continued restoration and

protection of the natural and cultural resources in the Mill Creek Addition, and for the development of facilities that provide users the opportunity to experience and enjoy the park's resources. An important consideration in the development of the GPA was the purpose of the acquisition to protect and restore the property's ecological values, enhance regional habitat connectivity between state and federal conservation areas, and provide opportunities for appropriate and compatible public recreational use.

Exhibit 3-1 – Existing Facilities shows the location of roads and the former Mill site at the Mill Creek Addition. Exhibit 3-2- Known Sensitive Resources displays the location and extent of known sensitive resources in the Mill Creek Addition, along with protective buffer zones the GPA establishes around some of these resources. The purpose of the buffers is to protect special-status species and sensitive natural communities from adverse effects of ongoing and proposed uses of adjacent areas. Allowable uses within buffer are explained in Table 3-2 below.

Exhibit 3-3 – Draft Preferred Alternative Management Zones provides a visual summary of the location of facilities and improvements proposed for the Mill Creek Addition in this GPA. These facilities were placed in the context of balancing the main purpose of the acquisition (restoring the property to late seral forest) with the unique opportunities for public access and interpretation provided on the property. The various elements proposed as part of this GPA are described in detail below.

Exhibit 3-4 – Draft Preferred Alternative Management Area Descriptions shows the management zones proposed for the Mill Creek Addition. These zones are consistent with those designated in the GMP/GP for RNSP. Exhibit 3-3 also includes brief descriptions of the various facilities included in the GPA by zone. Proposed elements of the GPA are described in detail below.

### **3.3.1 ROADS AND CIRCULATION**

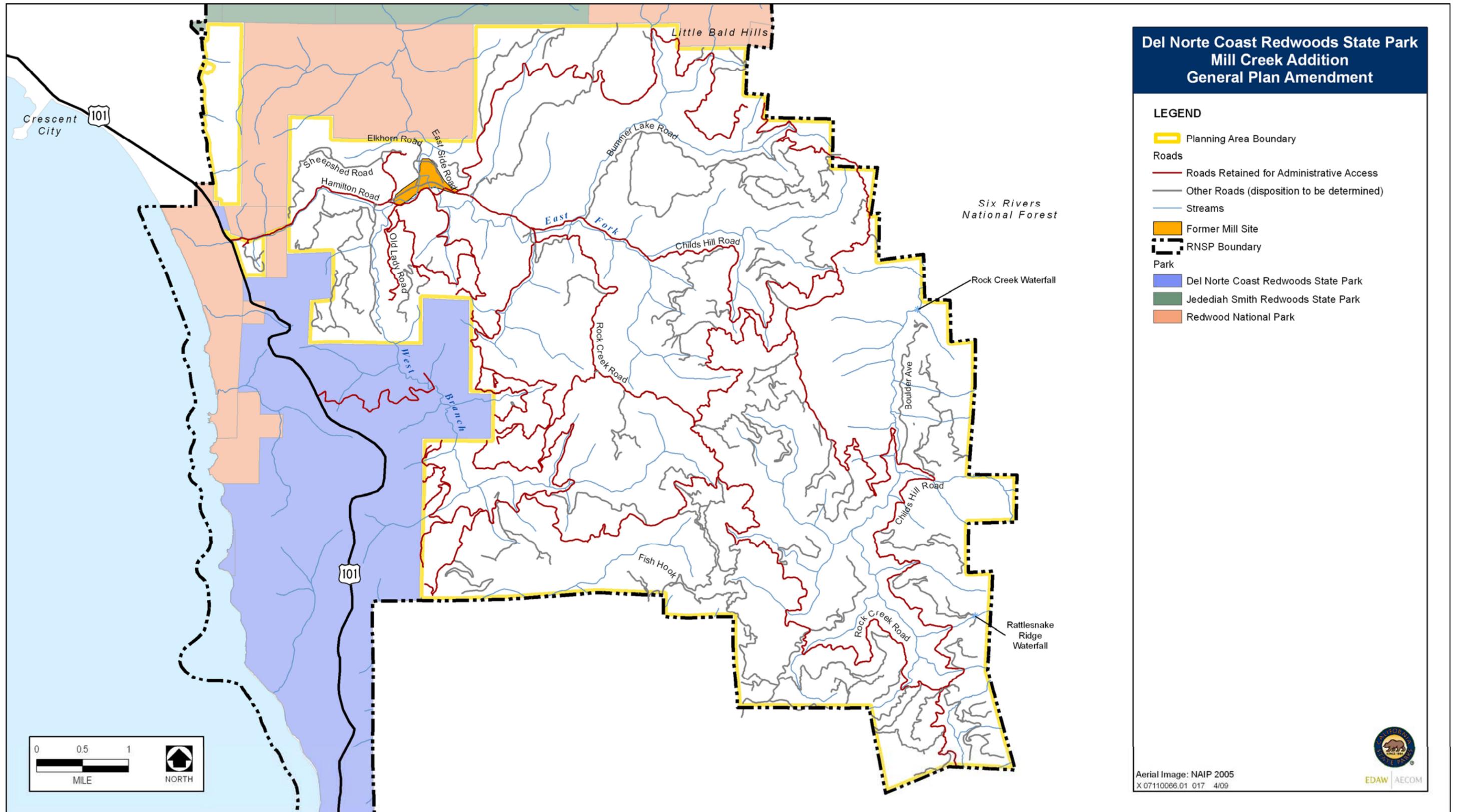
The GPA includes the development of an improved point of access to the park. New entry facilities will be developed on Hamilton Road, near U.S. Highway 101 (U.S. 101). Entry facilities will be located closer to U.S. 101 than the existing entry booth, in a

location large enough to accommodate a two-lane road, a small parking lot, an entry station with office space, restrooms, an informational kiosk, and informational signage. The entry site will be landscaped with native vegetation, and may include accent features, such as a split rail fence.

To enable Hamilton Road to function as the park's single point of user entry and exit, a new road will be constructed from Hamilton Road south to the existing Mill Creek campground. The new road will be located to avoid or minimize impacts to the park's resources, and may potentially follow the Old Lady Road alignment. Mill Creek Road will be retained for administrative and emergency use.

The GPA calls for the development of a Road and Trail Management Plan to identify a permanent road network that will ensure long-term resource protection while meeting access needs for recreation, resource management, administrative programs, research, monitoring, and emergencies, such as fire response. The Road and Trail Management Plan will also specify trail alignments throughout the property, determine the location of trailheads and parking areas, and further define any issues pertaining to circulation within the Addition and between the Addition and adjacent park units.

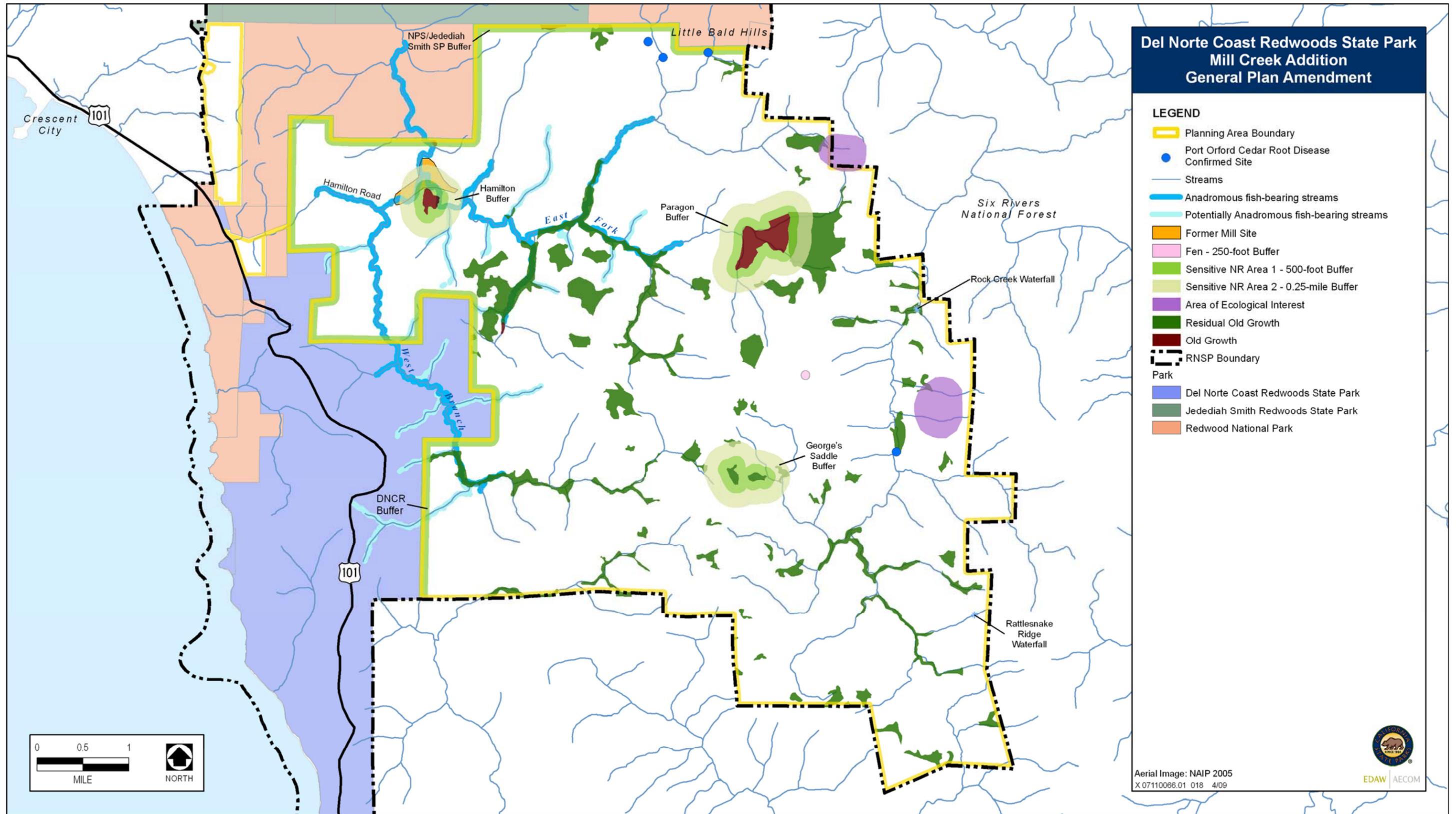
The GPA includes continuation of the road removal efforts currently underway. Only those roads that will be in place after the current road removal plan has been completed have been considered in the GPA planning effort. The GPA includes improvements to Hamilton Road, Childs Hill Road, Rock Creek Road, and small segments other existing roads to provide public access to the park's natural features and recreational facilities. Significant improvements to these roads will be needed before the property can safely be opened to travel by private vehicle. Childs Hill Road and Rock Creek Road will be designed and maintained to primarily accommodate one-way vehicle traffic due to the narrow nature of these roads. Development of a one-way looped road system will provide for improved user safety and reduce maintenance requirements. Hamilton Road and portions of Childs Hill Road, as needed, will be designed and managed to accommodate two-way traffic. Some secondary roads will be improved and maintained for public vehicle access. If sections of Hamilton Road, Childs Hill Road or Rock Creek



Source: NPS 2007 and 2008, EDAW 2009

**Existing Facilities**

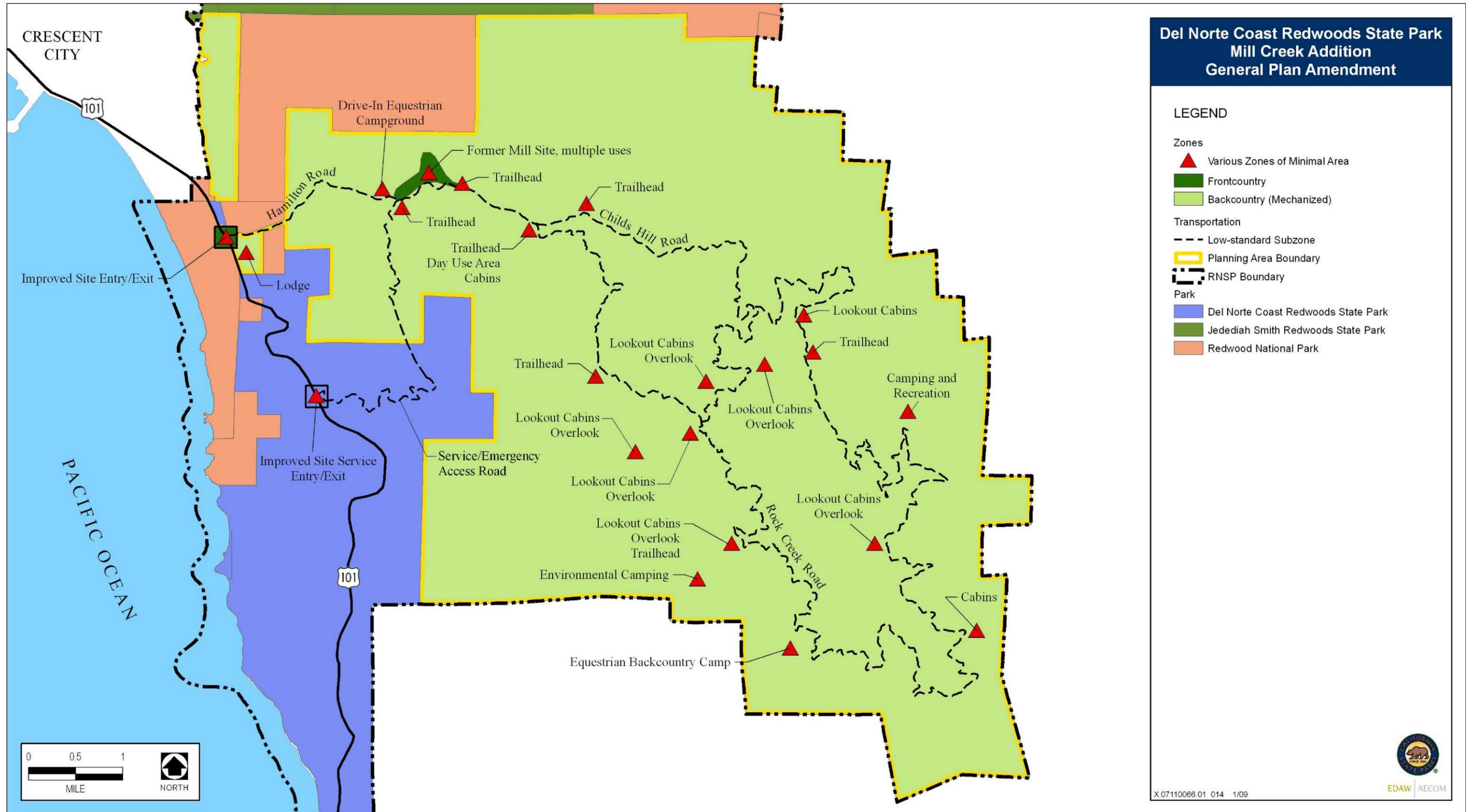
**Exhibit 3-1**



Source: NPS 2007 and 2008, EDAW 2009

**Known Sensitive Resources**

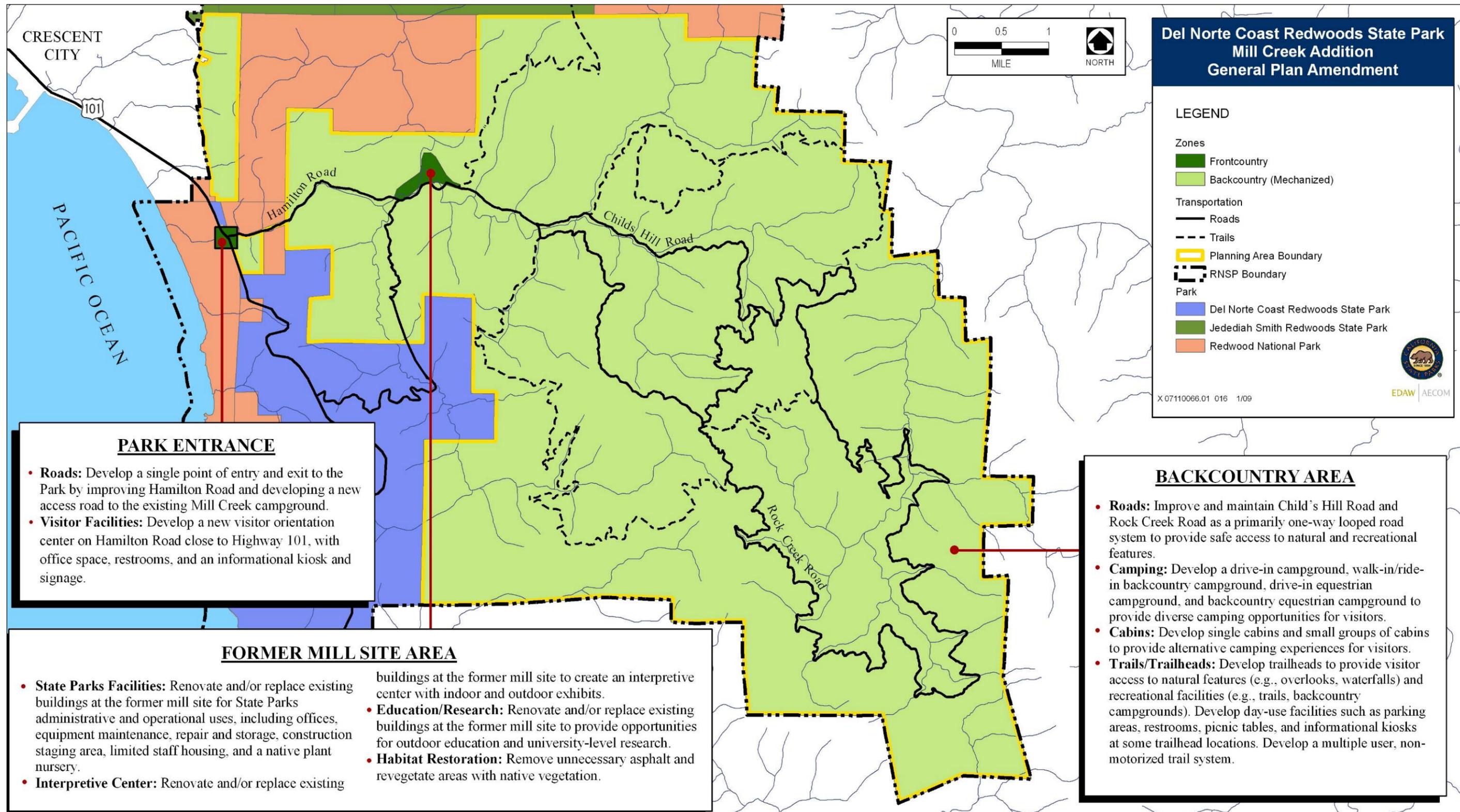
**Exhibit 3-2**



Source: NPS 2007 and 2008, EDAW 2009

**Draft Preferred Alternative Management Zones**

**Exhibit 3-3**



Source: NPS 2007 and 2008, EDAW 2009

Road are determined be unstable or unsustainable, use of other existing routes will be considered first as an alternative to new road construction. Other existing roads will be removed, converted to trails, or maintained as administrative access roads. Public use of administrative access roads will be limited to non-vehicular access.

A network of administrative roads will be maintained, as needed, to provide access to the power line traversing the property on the western edge. The GPA also includes provision for a temporary alternative route to U.S. 101, should the “Last Chance Hill” section of the highway fail temporarily and access through adjacent property become necessary for emergency access or provision of supplies.

Access to the Mill Creek Addition from the Six River National Forest on the east side of the property was explored during the planning process, but deemed infeasible due to safety concerns and the availability of alternate access routes. The alternative access along South River Road was determined to be shorter, safer, and more compatible with park management guidelines.

### **3.3.2 CAMPING**

The GPA includes development of diverse camping opportunities to accommodate a variety of user interests. Facilities called for in the GPA include a vehicle-accessible campground, a walk-in/ride-in backcountry campground, a backcountry equestrian campground, a drive in equestrian campground, and alternative camping facilities (i.e., cabins).

The GPA assumes the continued use of the existing Mill Creek campground and includes the development of a second campground facility in the eastern portion of the Mill Creek Addition, in the vicinity of the intersection of Boulder Avenue and Childs Hill Road. Due to its remote location, this campground will likely not accommodate large RVs or trailers. It will accommodate tent camping, and include a group of cabins. Other facilities will include day-use parking, a trailhead, and a picnic area. A separate walk-in/ride-in campground (i.e., environmental campground) will be developed for use by

backpackers and mountain bikers in the southern portion of the Mill Creek Addition, in the vicinity of Fish Hook Road.

Riding horses is a popular activity in the Mill Creek Addition. To support equestrian use of the Addition, the GPA proposes the development of two equestrian-specific campgrounds. One equestrian-specific campground, located off of Hamilton Road, will accommodate vehicles and RVs with trailers. This facility will also include a trailhead to accommodate day-use by equestrians. The second equestrian-specific campground will be located in the backcountry in the southern portion of the Addition. The equestrian backcountry campground will not be vehicle accessible.

The Mill Creek Addition provides a unique opportunity to develop alternative camping facilities, such as cabins or tent cabins. These are typically simple structures with minimal furnishings. The GPA includes 10 total cabin sites throughout the Mill Creek Addition, located primarily to take advantage of vistas.

### **3.3.3 TRAILS AND TRAILHEADS**

The GPA includes multiple trailheads located throughout the Mill Creek Addition. Trailheads will provide parking, picnic tables, and kiosks with information about natural features and recreational facilities. Some may include restrooms. Trailheads will provide access to natural features, such as vistas, waterfalls, and areas of ecological interest. Resources will be protected from adverse effects from recreation and managed in accordance with State Park management guidelines. Trailheads will also provide access to recreational facilities, including trails, backcountry environmental and equestrian campgrounds, and walk-in/ride-in cabins.

The GPA calls for the development of a comprehensive Road and Trail Management Plan for the Mill Creek Addition that addresses the opportunity for trail development in conjunction with road removal efforts. The GPA does not include specific trail development, with the exception of three trail segments within the Mill Creek Addition that were identified as high priority in the Draft Redwood National Park Trails Plan. The conceptual routes for these proposed trail segments are described in the Public Use,

Recreation, and Visitor Safety section below. During development of the comprehensive Road and Trail Management Plan, additional trailheads to the nine identified above will likely be designated.

### **3.3.4 FORMER MILL SITE**

The former mill site provides a unique opportunity to develop administrative, operational, interpretive, research, and educational facilities. The GPA calls for the preparation of a Site Development Plan or guidelines to evaluate and guide development of the former mill site. The GPA includes two concept alternatives (A and B) (Exhibits 3-5 and 3-6) describing potential locations for the planned uses at the site. Both concept alternatives separate public and administrative facilities at the former mill site by locating the interpretive and lodging facilities on the west side of Mill Creek and park administrative and maintenance facilities on the east side of Mill Creek. Under either scenario, several of the existing buildings will be removed and the materials recovered will be used during construction of new facilities and rehabilitation or reuse of remaining buildings. Though the GPA maintains some flexibility in choice, Alternative A is currently considered the preferred alternative.

The interpretive center will feature indoor and outdoor exhibits, focusing on various aspects unique to the Mill Creek Addition as described in more detail under “Interpretation” below. The GPA also supports the development of lodging facilities (e.g., hostel, cabins) near the interpretive center.

A large portion of the former mill site will be used for administrative, operational, research, and educational facilities. Administrative and operational facilities will include offices, an equipment maintenance/repair building, an equipment storage building/area, construction staging area, limited seasonal staff housing, and a nursery. Additionally, the outdoor school facilities may include offices, classrooms/labs, outdoor education areas, restrooms, and overnight sleeping facilities (e.g., dorms, cabins). The GPA also supports partnerships with colleges and universities that may wish to establish a research program or facility at the former mill site.

The GPA calls for the removal of asphalt and revegetation of large portions of the former mill site. Asphalt will be removed and may be processed for reuse on park roads. Disturbed areas at the former mill site will be restored to native vegetation to create a more natural and pleasant visitor experience.

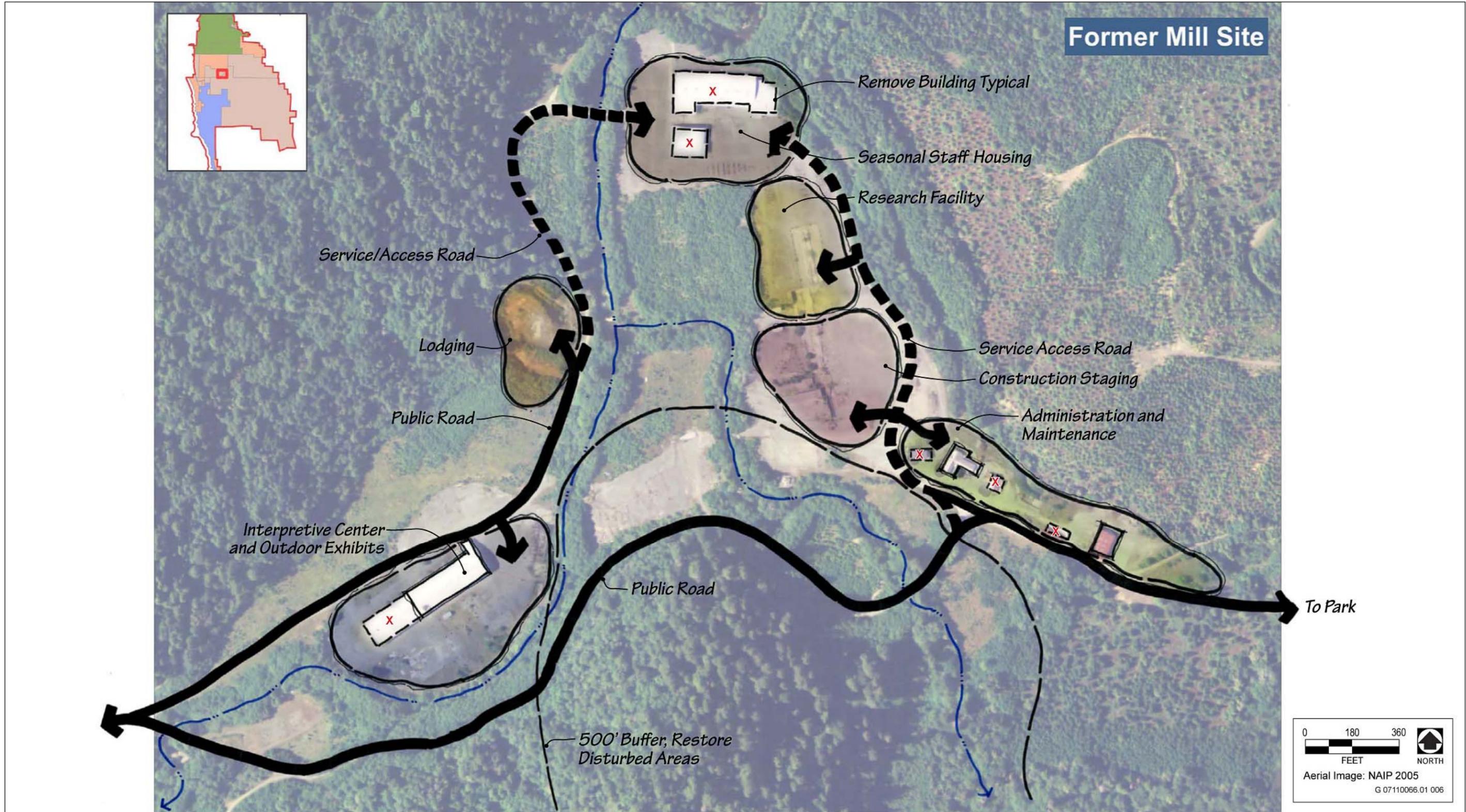
### **3.3.5 LODGE**

The GPA supports a feasibility study for the development and operation of a destination lodge including other related facilities such as a restaurant or retail business by a concessionaire within the Mill Creek Addition. The concession could include services such as equestrian or bicycle rentals. The potential location for the lodge is on a hill south of the park entrance on Hamilton Road. This site was formerly used as a demonstration forest area. The site would offer year-around access from U.S. 101 and beautiful views of the coastline, Pacific Ocean, and Crescent City to the north.

## **3.4 MANAGEMENT STRATEGIES WITH NO AMENDMENTS**

Management strategies for several management categories presented in the GMP/GP were determined to be directly applicable to the Mill Creek Addition and sufficiently comprehensive to cover issues pertaining to Mill Creek. It was thus determined, that these management strategies did not require amendment. The following management strategies fall into this group:

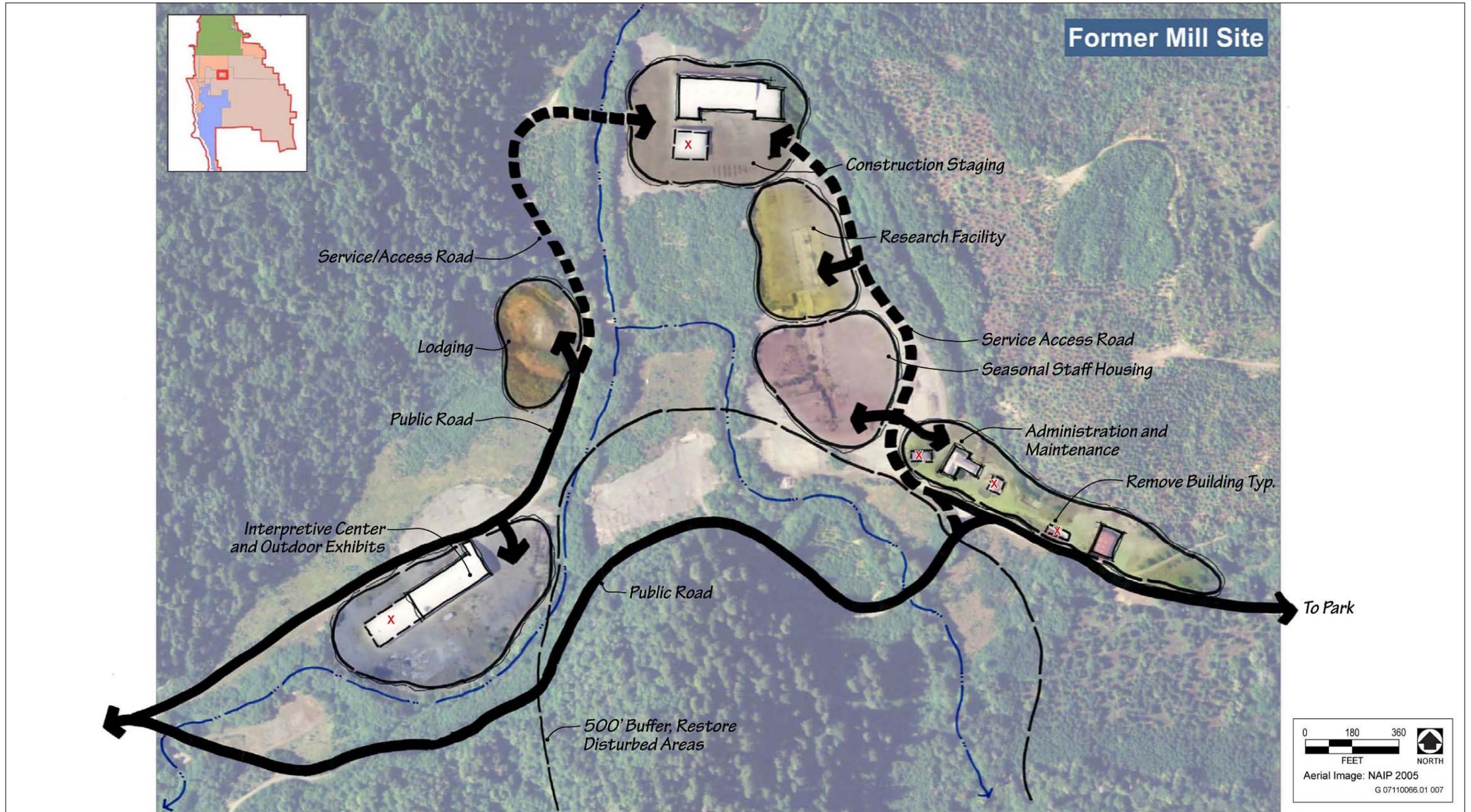
- ▶ Relationships with American Indians (pages 50–53 of the GMP/GP);
- ▶ Interdependence of Parks and Communities (pages 64–66 of the GMP/GP);
- ▶ Land Acquisition (pages 67–68 of the GMP/GP); and
- ▶ Boundary Map Adjustments (pages 68–69 of the GMP/GP).



Source: EDAW 2008

**Draft Former Mill Site Concept A – Preferred Alternative**

**Exhibit 3-5**



Source: EDAW 2008

**Draft Former Mill Site Concept B**

**Exhibit 3-6**

## **3.5 MANAGEMENT STRATEGIES WITH AMENDMENTS**

The management strategies discussed in this section of the GPA present strategies that are supplemental to the management strategies and actions in the current GMP/GP. These management strategies and actions are intended to be used in conjunction with the GMP/GP, in other words the management of Del Norte Coast Redwoods State Park, including the Mill Creek Addition, will be guided by both the GMP/GP for RNSP and this GPA. Each management strategies discussion starts with a statement of where in the GMP/GP specific information on this topic can be found. This statement is then followed by the specific amendments.

Actions presented in the GPA specifically pertain to the Mill Creek Addition, and are not applicable to other units within RNSP.

### **3.5.1 MANAGEMENT ZONES**

Please refer to pages 27–35 of the GMP/GP for a discussion of management zones within Redwoods National and State Parks.

This GPA proposes two main management zones for the Mill Creek Acquisition: frontcountry zone and backcountry zone, mechanized. The extent of these proposed zones within the Mill Creek addition is shown in Exhibit 3-3 – Draft Preferred Alternative Management Zones. Both proposed zones include Various Zones of Minimal Area indicated as small red triangles in Exhibit 3-3. The Various Zones of Minimal Area designation is restricted to the smallest area necessary to provide essential services associated with the proposed development. A description of the type of development or facility proposed for each of these minimal areas is included in Exhibit 3-3.

Developed facilities and human activity are the dominant features in the Various Zones of Minimal Area. The front-country zone encompasses the main entry to the Addition and the former mill site. Both of these areas are the main two sites a visitor to the Park would encounter first. Developed facilities and visitor services are largely located in this zone. The backcountry mechanized zone appears mostly natural, and facilities are limited and designed to harmonize with the natural environment. Ongoing management

activities such as road removal, forest management and restoration are allowed in the backcountry mechanized zone. Also allowed are visitor uses as indicated in Exhibit 3-3.

Full descriptions of the resource condition or character, targeted visitor experience, and appropriate kinds of activities or facilities for each of these management zones in RNSP can be found in Table E-1: Management Zone Definitions in Appendix E of the Final GMP/GP. Proposed activities and facilities within each management zone for the Mill Creek Addition are described in Table 3-1 below.

<b>Table 3-1 Appropriate Activities and Facilities within Management Zones</b>	
Zone	Appropriate Activities and Facilities
Frontcountry Zone	<ul style="list-style-type: none"> <li>Large parking lots</li> <li>Interpretive center</li> <li>Administrative facilities, including limited seasonal staff housing, maintenance shops, offices, and storage area</li> <li>Educational and research facilities</li> </ul>
Various Zones of Minimal Development	<ul style="list-style-type: none"> <li>Lodge</li> <li>Use of motorized equipment is permitted</li> <li>Trailhead parking and facilities</li> <li>High-standard and high-use road corridors that access natural features and park facilities</li> <li>Trails that are accessible to visitors with disabilities</li> <li>Scenic vistas off transportation corridors</li> <li>Picnic areas with limited infrastructure</li> <li>Large drive-in campgrounds and associated facilities</li> <li>Alternative camping facilities (e.g., cabins)</li> <li>Utility corridors in otherwise natural areas</li> <li>Hardened trail surfaces, interpretive facilities and signs, and limited infrastructure will be allowed</li> </ul>
Backcountry Zone, Mechanized*	<ul style="list-style-type: none"> <li>Small walk-in/ride-in or equestrian campgrounds or cabins with water and composting or vault toilets</li> <li>Small designated camping areas with no amenities</li> <li>Designated unpaved hiking, biking, or equestrian trails with bridges</li> <li>Trails with no improvements</li> <li>Walk-in picnic areas</li> <li>Small signs for visitor safety and resource protection</li> <li>Ongoing restoration activities and road removal programs will continue</li> </ul>
<p>Source: Prepared by EDAW 2008</p> <p>* mechanized refers to the allowable use of mechanized equipment within this zone for management and recreational use</p>	

### **3.5.2 NATURAL RESOURCE MANAGEMENT AND PROTECTION**

Existing management strategies for Natural Resource Management and Protection provide general guidance for vegetation management, watershed management, and restoration in RNSP. The management strategies, issues, and actions in the GMP/GP are directly applicable to the Mill Creek Addition. Please refer to pages 36–45 of the GMP/GP for a complete discussion of management strategies, issues, and actions for Natural Resource Management and Protection. The issues and actions presented below are specific to the Mill Creek Addition.

#### **ISSUES AND ACTIONS**

##### **Watershed Management and Restoration**

###### ***Issue***

Prior to acquisition, the Mill Creek Addition was commercially logged, leaving behind 325 miles of roads constructed for the purpose of timber extraction. This extensive road network is susceptible to erosion resulting in increased sedimentation of streams. Following the acquisition of the Mill Creek Addition Park management staff developed restoration prescriptions that address road removal, forest enhancement and stream restoration on the property. Guided by these protocols and the PRC, State Parks has inventoried the road network within the Mill Creek Addition and begun to treat those roads that impose the most serious threats to water quality and sensitive resources. In addition, Save the Redwoods League funded the development of Interim Management Recommendations (Stillwater Sciences 2002).

###### ***Action***

Develop a Road and Trail Management Plan as described under the Visitor Access and Circulation/Roads management category in this GPA. The Road and Trail Management Plan will provide long-term guidance for road management, including road removal and road-to-trail conversion.

## THREATENED AND ENDANGERED SPECIES

### *Issue*

Several state or federally listed or proposed threatened or endangered species occur at the Mill Creek Addition and other parts of RNSP.

### *Action*

In addition to the actions described in the GMP/GP, buffers will be established to protect sensitive wildlife species associated with old growth stands from adverse effects caused by recreational facilities development nearby. Width of the buffers around old growth groves displayed in Exhibit 3-2 is based on current U.S. Fish and Wildlife Services (USFWS) guidance for auditory disturbance to marbled murrelets. They currently include a 500-foot buffer for trails and a 0.25 mile buffer to new facilities. Should USFWS buffer recommendation change in the future, the new buffer recommendations would be used. The old growth stands in the Mill Creek Addition provide habitat for the state and federally listed marbled murrelet (*Brachyramphus marmoratus marmoratus*) and the federally listed northern spotted owl (*Strix occidentalis caurina*). The GPA also calls for 200' buffers around streams to protect sensitive salmonids and water quality.

Allowable uses within the buffers are defined in Table 3-2 below

<b>Table 3-2 Allowable Uses within Buffers Proposed in GPA</b>	
Buffer	Allowable Use
500 foot buffer around old growth	no new trails or developed facilities unless replacing an existing facility to allow similar use to continue; survey and resource management activities are allowed, ongoing road removal and restoration efforts are allowed
0.25 mile buffer around old growth	
200 foot buffer around fish bearing streams	
Source: Developed by EDAW with State Parks Natural Resource Management Staff	

## **VEGETATION MANAGEMENT**

### ***Issue***

Following commercial logging, approximately 121 acres of old growth redwood and Douglas-fir forests remained within the Mill Creek Addition. These old growth forests occur in three separate stands, with additional residual old growth consisting of single trees or tree clusters present in scattered locations throughout the property. The location and extent of old growth groves and residual old growth are shown in Exhibit 3-2. Most of the Mill Creek Addition is dominated by even-aged, early-successional conifer plantations that lack structural complexity and biological diversity. However, rare vegetation types, such as Darlingtonia fens and stands of Port-Orford-cedar occur in the Addition, and the property also supports plant communities not found elsewhere within RNSP, such as knobcone pine forests and stands of Jeffrey pine. Port-Orford-cedar root disease has been documented on the property and requires special management prescriptions.

### ***Action***

Develop a Vegetation Management Plan or guidelines that will guide the restoration of late-seral forest habitat throughout much of the property. Identify priority areas, treatment types, areas to be treated, performance standards, monitoring strategies, and adaptive management, as needed. The Vegetation Management Plan or guidelines should also address management of invasive plant species present on the property, management related to Port-Orford-cedar root disease, Sudden Oak Death (SOD) and management of rare vegetation types, such as the Darlingtonia fens to ensure their long-term protection from adverse effects of site use.

### **3.5.3 CULTURAL RESOURCE MANAGEMENT AND PROTECTION**

Existing management strategies for Cultural Resource Management and Protection provide general guidance for research, planning, and stewardship of cultural resources in RNSP. The management strategies, issues, and actions in the GMP/GP are applicable to the Mill Creek Addition. Please refer to pages 45–50 of the GMP/GP for a complete discussion of management strategies, issues, and actions for Cultural

Resource Management and Protection. The issues and actions presented below are specific to the Mill Creek Addition.

## **Issues and Actions**

### **Historic Resources – Structures**

#### ***Issue***

Numerous structures exist within the Mill Creek Addition. The need exists to evaluate these structures for their historic significance and to determine their suitability for preservation and interpretation and eligibility for protection and listing on the California Register of Historic Resources or National Register of Historic Places.

#### ***Action***

Existing structures will be identified, evaluated, and nominated, as appropriate, for listing on the California Register of Historic Resources or National Register of Historic Places. Structures suitable for rehabilitation and preservation will be evaluated for administrative and interpretive uses. Structures that are not eligible for listing and not usable for administrative and interpretive uses may be demolished.

### **Historic Resources – Cultural Landscapes**

#### ***Issue***

An inventory, evaluation, and documentation of the cultural landscapes on the Mill Creek Addition have not yet been completed.

#### ***Action***

Beginning with any areas of proposed development in the GPA, conduct a cultural landscape inventory and report to evaluate and document culturally important landscapes within the Mill Creek Addition, and to identify landscapes eligible for listing on the California Register of Historic Resources or National Register of Historic Places. The inventory and report will guide the preservation, interpretation, and management of cultural landscapes within the Mill Creek Addition.

## **Ethnographic Resources**

### ***Issue***

The Mill Creek Addition is within the aboriginal territory of the Tolowa people. An inventory, evaluation, and documentation of ethnographic resources on the Mill Creek Addition has not yet been completed.

### ***Action***

Beginning with any areas of proposed development in the GPA, conduct research, inventory, and evaluation of ethnographic resources within the Mill Creek Addition. Prepare a formal ethnographic overview, and traditional and contemporary use study for the Mill Creek Addition for inclusion in the RNSP-wide ethnographic overview and traditional use study.

## **3.5.4 EDUCATION AND INTERPRETATION**

Existing management strategies for Education and Interpretation provide general guidance for the development of orientation and interpretive facilities, programs, and materials, and outdoor schools. The management strategies, issues, and actions in the GMP/GP are applicable to the Mill Creek Addition. Please refer to pages 53–55 of the GMP/GP for a complete discussion of management strategies, issues, and actions for Education and Interpretation. Education and Interpretation issues and actions presented below are specific to the Mill Creek Addition.

### **ISSUES AND ACTIONS**

#### **Interpretation**

##### ***Issue***

The Mill Creek Addition provides the opportunity for interpretive themes not currently offered in existing facilities within RNSP or other redwood State Parks, such as the history of logging, the redwood preservation movement, forest and watershed restoration, and State Parks role in carbon sequestration and addressing issues related to global climate change. Mill Creek is one of two locations within the State Park System currently being studied under State Park's "Comprehensive Forest Management and

Carbon Initiative” project. The property is also expected to play a large role in State Park’s Cool Parks Initiative. Mill Creek thus provides many opportunities for serving as a case study for research, outreach, education, and interpretation.

***Action***

Develop an interpretive program that takes advantage of the unique natural and cultural resources at Mill Creek, the property’s unique potential to play an important role in managing for global climate change, the vistas within driving distance of a local community, and the unique history and properties of the Mill Creek Addition. Interpretive directions may include the following:

- ▶ Provide interpretation of ecological trends of regional and statewide importance such as sea level rise and global climate change and the role local parks play in providing carbon sequestration, reducing the carbon footprint, and providing biological refugia and habitat linkages on a landscape level; expand this discussion to include the linkage the Mill Creek Addition provides in terms of regional habitat connectivity between state and federal conservation areas; include a discussion of what changes are expected on the North Coast as opposed to the rest of the state and how Mill Creek serves as a case study and living laboratory;
- ▶ Provide interpretation of the history of the redwood region (e.g., early exploration, resource extraction and logging, habitat restoration, watershed management) using the mill site as a case study of past present and future management of resources;
- ▶ Provide interpretation of coastal watersheds, including the coast redwood forest and its ecosystem, and the importance of the Smith River watershed as a salmonid stronghold, especially in light of changing habitat conditions;
- ▶ Provide interpretation of the unique ecological and geological features located at or viewed from the Mill Creek Addition (e.g., fens, Port-Orford-Cedar groves, the United Nation Biosphere Reserve, the Klamath Knot geological formation and associated biodiversity hotspot);

- ▶ Provide interpretation of the history and culture of the indigenous Tolowa people whose ancestral territory includes the Mill Creek Addition; interpretation may include a reconstructed traditional Tolowa village;
- ▶ Provide an opportunity for the public to understand the history of the environmental movement and the principles of park stewardship as exemplified by the partnership between State Parks and the National Park Service; expand on this partnership by discussion the link to local communities and Native American groups;

### ***Action***

Provide opportunities for service-learning programs, such as scientific monitoring and research to expand environmental awareness and teach forest restoration and watershed management concepts and skills.

### **Information, Orientation, and Interpretive Centers**

#### ***Issue***

The acquisition of the Mill Creek Addition provides the opportunity for a new entrance to Del Norte Coast Redwoods State Park via Hamilton Road. The current entry booth and informational kiosk will need to be relocated to meet future visitor needs.

#### ***Action***

Develop a visitor orientation area on Hamilton Road at the entrance/gateway to Del Norte Coast Redwood State Park. The visitor orientation center will include an entry booth, office space, restrooms, informational kiosks, visitor parking, and vehicle turnaround.

#### ***Issue***

The former mill site provides opportunities to develop an interpretive center and other interpretation facilities focused on resource management in the redwood region and on the unique features of the Mill Creek Addition.

### ***Action***

Develop an interpretive center at the former mill site. Reuse existing buildings or recycle materials from existing buildings at the former mill site to create a modern, sustainable interpretive center. Explore the potential for relocating the equipment at Fort Humboldt State Historic Park, or other sources to create a logging exhibit.

### **Outdoor Schools**

#### ***Issue***

The former mill site provides the opportunity to develop outdoor school facilities.

#### ***Action***

Conduct a feasibility study to explore reuse of existing buildings or recycled materials from existing buildings at the former mill site to create an outdoor school facility that can accommodate overnight use. The outdoor school facilities could include offices, classrooms/labs, outdoor education areas, cooking facilities, restrooms, and overnight sleeping facilities (e.g., dorms, cabins).

### **Research Facility**

#### ***Issue***

The former mill site provides the opportunity to develop a scientific research facility for regional watershed and forest research within the State Park and adjacent lands.

#### ***Action***

Consider creating a regional scientific research facility for watershed and forest related research in partnership with northern California colleges and universities. A research facility could include offices, laboratories, meeting rooms, restrooms, cooking and overnight facilities (e.g., dorms, cabins).

## **3.5.5 PUBLIC USE, RECREATION, AND VISITOR SAFETY**

Existing management strategies for Public Use, Recreation, and Visitor Safety provide general guidance for understanding visitation patterns, developing facilities to accommodate diverse recreational activities, and managing visitor use in RNSP. The

management strategies, issues, and actions in the GMP/GP are applicable to the Mill Creek Addition. Please refer to pages 55–61 of the GMP/GP for a complete discussion of management strategies, issues, and actions for Public Use, Recreation, and Visitor Safety. The issues and actions presented below are specific to the Mill Creek Addition.

## **ISSUES AND ACTIONS**

### **Visitor Use Levels**

#### ***Issue***

Public use of the Mill Creek Addition, if not managed carefully, has the potential to damage natural and cultural resources.

#### ***Action***

Track visitor use and composition at the Mill Creek Addition. Use the results of the analysis to locate, design, and develop facilities at an appropriate level to accommodate use and avoid adverse impacts to sensitive resources. These actions should focus on visitor use in the frontcountry zone and Various Zones of Minimal Development, limit access to sensitive ecological areas and cultural sites, and take into consideration the limitations of the backcountry, such as seasonally restricted access, narrow one-way roads, and remoteness of the area.

### **Recreational Activities**

#### ***Issue***

The acquisition of the Mill Creek Addition provides opportunities for new and expanded recreational activities and associated facilities, including campgrounds accessible by vehicle, backcountry campgrounds, equestrian campgrounds, cabins, trails (hiking, biking, and equestrian), vistas, picnic areas, and fishing access.

#### ***Action***

New facilities will be designed and built to meet visitors' needs and avoid or minimize impacts to sensitive natural and cultural resources, as described below.

### Campgrounds with Access by Vehicle

Develop a new entrance to the existing Mill Creek Campground. The new entrance will provide access to the campground from Hamilton Road by way of a new road to be built in the vicinity of the Old Lady Road alignment. This will support a single point of entry to Del Norte Coast Redwoods State Park located on Hamilton Road. Develop a new vehicle accessible campground in the vicinity of the intersection of Upper Childs Hill Road and Boulder Ave, near the eastern boundary of the park.

### Backcountry Camping

Develop backcountry camping facilities to provide for walk-in, backpacking, equestrian, and bicycle camping opportunities in areas where camping is consistent with the applicable management zone.

### Equestrian Camping

Develop vehicle accessible equestrian camping facilities in areas where camping and horses are consistent with the applicable management zone. The vehicle accessible equestrian camping facility will be developed to provide for equestrian day-use and easy access to trail networks. An additional ride-in equestrian camp will be provided in the backcountry.

### Alternative Camping (i.e., Cabins, Tent Cabins)

Develop cabins or tent cabins to provide visitors an alternative to tent and RV camping, and to extend overnight use of the park during the shoulder seasons. Some of these alternative camping facilities will be vehicle accessible, while others will be accessible only by bicycle, or on foot. Alternative camping facilities will be developed as single, dispersed units or in clusters. Single units will be located to take advantage of natural features (e.g., vistas) and other park facilities. Clustered units will be developed to accommodate group or family use.

### Hiking, Biking, and Equestrian Trails

Develop a Road and Trail Management Plan for the Mill Creek Addition that provides connections to other Parks and addresses the opportunity for trail development in

conjunction with road removal efforts. Trails will provide recreational opportunities for hikers, mountain bikers, and equestrians. Motorized vehicles will not be permitted on trails. Because they provide connections to other existing trails, three trail segments within the Mill Creek Addition were identified as possible linkages to Redwood National Park. Conceptual alignments for these trail segments are described as follows:

- 1) Develop a route by converting existing roads where practical (from west to east following Sheepshed Road to Sheepshed Reservoir link to Elkhorn Road) within the Mill Creek Addition as a hiking, biking, and equestrian trail. Where existing road segments do not provide opportunities for road-to-trail conversion, new trail routes may be considered to provide significant linkages. This segment will connect the existing NPS Rellim Ridge Trail with the NPS West Side Trail, which is part of the NPS Mill Creek Horse Trail system.
- 2) Develop a hiking, biking, and equestrian trail to connect the proposed NPS East Side Trail with the existing U.S. Forest Service portion of the Little Bald Hills Trail (a short connection will also need to be constructed on USFS lands). This route will primarily utilize existing roads within the Mill Creek Addition, including portions of East Side Road, Childs Hill Road, and Bummer Lake Road.
- 3) Develop a new hiking trail connecting a proposed NPS trail originating at Crescent Beach Education Center and the existing NPS Rellim Ridge Trail (Coastal Trail to Pacific Crest Trail connector) that would cross a parcel of the Mill Creek Addition east of Crescent Beach.

#### Trailheads, Day-use Areas, Vista Points

Develop trailheads and day-use areas to meet visitors' needs. Develop and maintain vista points to take advantage of existing vistas. Trailheads, day-use areas, and vista points may include features such as parking, bathrooms, information kiosks, interpretation, picnic facilities, and access to trails.

### **3.5.6 VISITOR ACCESS AND CIRCULATION/ROADS**

Existing management strategies for Visitor Access and Circulation/Roads provide general guidance for administration, maintenance, and development of roads within RNSP. The management strategies, issues, and actions in the GMP/GP are applicable to the Mill Creek Addition. Please refer to pages 61–64 of the GMP/GP for a complete discussion of management strategies, issues, and actions for Visitor Access and Circulation/Roads. The issues and actions presented below are specific to the Mill Creek Addition.

#### **ISSUES AND ACTIONS**

##### **Del Norte Coast Redwoods State Park Entrance**

###### ***Issue***

Hamilton Road, within the Mill Creek Addition, provides a new point of access to Del Norte Coast Redwoods State Park from U.S. 101.

###### ***Action***

Develop Hamilton Road to support a new single point of entry/exit for Del Norte Coast Redwoods State Park. This will require the development of a new entrance to the existing Mill Creek campground.

##### **Road and Trail Management Plan**

###### ***Issue***

The existing road network in the Mill Creek Addition was originally developed and used for logging. Many of the roads are unmaintained and unsuitable for vehicular use. State Parks has identified the roads that have a high risk of erosion and resource degradation, and is implementing road upgrading and road removal projects on roads with high erosion or catastrophic failure potential. In addition, dust generated by driving on the unimproved roads has the potential to adversely affect water quality and sensitive natural vegetation.

### **Action**

Develop a Road and Trail Management Plan to identify a permanent road network that will ensure long-term resource protection while meeting access needs for recreation, resource enhancement, administrative programs, research, and monitoring. This plan will require a complete inventory and assessment of existing road conditions, including geomorphic conditions throughout the Mill Creek Addition. The long-term plan will also include a plan for continuing the road upgrading and road removal efforts currently underway. The long-term plan will identify how the roads will be managed, what their surfaces will be composed of, and how dust will be managed to prevent or limit potential adverse effects from dust on sensitive resources from those roads that will remain unpaved. The Road and Trail Management Plan will also identify the total miles of roads to remain on site after road removal and will consider appropriate uses and management for the following roads.

#### Hamilton Road

Develop Hamilton Road to be the single point of entry and exit to Del Norte Coast Redwoods State Park. Hamilton Road will be improved to provide two-way vehicular access to the former mill site.

#### Childs Hill Road

Develop Childs Hill Road or other nearby routes to provide visitor access to park facilities and natural features in backcountry areas. Consider administering Childs Hill Road as a one-way road that will connect with Rock Creek Road to create a drivable loop.

#### Rock Creek Road

Develop Rock Creek Road or other nearby routes to provide visitor access to park facilities and natural features in backcountry areas. Consider administering Rock Creek Road as a one-way road that will connect with Childs Hill Road to create a drivable loop. Maintain Section 31-1 Road as an administrative road to provide emergency access through adjacent property.

Bummer Lake Road

Bummer Lake Road will be converted into a non-mechanized, multi-use trail.

### **U.S. Highway 101**

#### ***Issue***

In the event of a massive road failure on U.S. 101 at “Last Chance Grade,” a realignment of U.S. 101 through State Park property to avoid the “Last Chance Grade” could impact park resources.

#### ***Action***

If a major realignment of U.S. 101 is proposed, State Parks will work with the California Department of Transportation (Caltrans), the Federal Highway Administration, and Del Norte County to ensure proper protection of the values and resources of the Park while determining, designing, and constructing a safe new travel corridor for Highway 101.

### **3.5.7 ADMINISTRATIVE FACILITIES**

Existing management strategies for Administrative Facilities provide general guidance for the design, development, and maintenance of facilities that support park employees within RNSP. The management strategies, issues, and actions in the GMP/GP are applicable to the Mill Creek Addition. Please refer to pages 66–67 of the GMP/GP for a complete discussion of management strategies, issues, and actions for Administrative Facilities. The issues and actions presented below are specific to the Mill Creek Addition.

#### **ISSUES AND ACTIONS**

##### **Operations Facilities (Maintenance, Ranger Activities, Fire Protection)**

#### ***Issue***

Several structures are currently located at the former mill site. Some of the structures can be used for administrative, maintenance, education, and interpretive facilities; however, some of the structures present safety risks to visitors and employees, and potentially impact natural resources.

**Action**

Develop a site development plan or guidelines for the former mill site. The plan or guidelines will evaluate and identify which structures are suitable for rehabilitation and which structures should be removed. The plan or guidelines will address protection of significant natural and cultural resources and present a strategy for the reuse and recycling of materials from the structures that are to be removed. Visitor activities will be separated from administrative and maintenance facilities at the former mill site. Visitor facilities (e.g., interpretive center, trailheads, picnic areas) will be located on the northern portion of the former mill site, outside the Hamilton Buffer. The southern portion of the former mill site is suitable for supporting administrative and maintenance facilities, including administrative offices, equipment storage buildings, contractor staging areas (for road removal, restoration, and forest thinning projects), limited seasonal staff housing, and a native plant nursery. Buildings that have been determined to be unsuitable for future use and are not considered historic structures may be removed. The remaining structures will be evaluated for potential rehabilitation in the site development plan or guidelines. The current native plant nursery will be expanded to include a greenhouse, headhouse, shadehouse, outdoor planting areas, and a water storage tank. The nursery should include an interpretive component if visible to visitors.

**Issue**

Water supply and wastewater treatment will be important considerations when preparing the site development plan. There currently is no reliable, developed water supply on the property that would support the proposed facilities. This site is not connected to a sewer system.

**Action**

Explore opportunities and constraints for water supply and wastewater treatment options at the site and include findings and recommendations in the site development plan or guidelines.

## **Housing**

### ***Issue***

The former mill site provides the opportunity to develop limited staff housing.

### ***Action***

Determine the feasibility for providing seasonal staff housing at Del Norte Coast Redwoods State Park. The site development plan or guidelines should evaluate existing structures at the former mill site for potential use as limited staff housing. The site development plan or guidelines should consider dormitory-type housing for seasonal staff. Providing staff housing at the former mill site could enhance security for the facilities at the former mill site as an added benefit.

## **3.5.8 WILDERNESS**

Existing management strategies for Wilderness provide general guidance for the evaluation and designation of lands within RNSP that are eligible for inclusion in the state wilderness system. The management strategies, issues, and actions in the GMP/GP are applicable to the Mill Creek Addition. Please refer to page 69 of the GMP/GP for full discussion of Wilderness designation issues and actions. Wilderness designation issues and actions presented below are specific to the Mill Creek Addition.

### **ISSUES AND ACTIONS**

#### ***Issue***

The California Wilderness Act of 1975 directs State Parks to consider roadless areas within State Parks units for inclusion in the state wilderness system.

#### ***Action***

While the GPA establishes a zone where visitors can enjoy a backcountry experience, no wilderness areas are proposed for the Mill Creek Addition. Some roads that are part of the existing network of logging roads within the Addition will be improved to provide public and administrative roads. Existing logging roads that will not be improved for public and administrative use will be decommissioned or restored. It is anticipated that

for the life of the GPA road improvement and restoration activities will require use of heavy equipment by State Parks throughout the Addition. These activities are inconsistent with wilderness designation.

### **3.5.9 FUTURE ACTION PLANS NEEDED**

The development of the GPA sets the overall vision and direction for management of the Mill Creek Addition. The GPA also identifies the following future planning needed to fully implement the plan: Vegetation Management Plan or guidelines, Road and Trail Management Plan, and a Former Mill Site Development Plan or guidelines. This list is not intended to show priority order or exclude other planning needs that might be identified in the future.

# Chapter 4

## Environmental Analysis



## 4 ENVIRONMENTAL ANALYSIS



Office building at the former mill site, Source: EDAW 2008

### 4.1 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

#### 4.1.1 PURPOSE OF THE EIR

This General Plan Amendment (GPA) for the Mill Creek Addition, with all its sections, constitutes an environmental impact report (EIR), as required by Public Resources Code (PRC) §§5002.2 and 21000 et seq. The GPA amends the General Management Plan/General Plan (GMP/GP) for Redwood National and State Parks (RNSP) which underwent environmental review prior to its approval. The GPA is subject to approval, and the EIR is subject to certification, by the California Park and Recreation Commission (Commission). Following certification of the EIR and approval of the GPA by the Commission, the Department will prepare specific management plans and area development plans or guidelines as staff and funding become available. Future projects within the Mill Creek Addition based on the proposals in this GPA are subject to further environmental review and permitting, and may require approval by other agencies, such as Caltrans, California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Regional Water Quality Control Board (RWQCB), and the California Coastal Commission (CCC).

#### 4.1.2 NOTICE OF PREPARATION (FOCUS OF THE EIR)

The Notice of Preparation (NOP) for this GPA was circulated to the appropriate federal, state, and local planning agencies on September 17, 2007. Based on known issues affecting the long term management of the Mill Creek Addition and comments received during the planning process, the GPA and DEIR were prepared to address potential

environmental impacts that may result from the implementation of the proposed facilities and proposed management issues and actions. Emphasis is given to significant environmental impacts that may result from all future park management, development, and uses within the Mill Creek Addition that are consistent with these issues and actions.

### **4.1.3 TIERING (SUBSEQUENT ENVIRONMENTAL REVIEW PROCESS)**

Tiering in an EIR prepared as part of a General Plan (or GPA) allows agencies to consider broad environmental issues at the general planning stage, followed by more detailed examination of actual development projects in subsequent environmental documents. These later documents incorporate, by reference, the general discussions from the broader EIR in the General Plan (or GPA) and concentrate solely on the issues specific to the projects [California Public Resources Code Section 21093; State CEQA Guidelines Section 15152]. This document represents the first tier environmental review, consistent with California Public Resources Code Sections 21093 and 21094 and State CEQA Guidelines Sections 15152 (Tiering) and 15168 (Program EIR). This program-level or “programmatically” analysis evaluates implementation of all proposed elements of the GPA and considers the broad environmental effects of the overall GPA. Future specific projects that implement certain elements called for in the GPA will be subject to review to determine their consistency with the GPA and EIR, and, if needed, completion of subsequent environmental documents. Subsequent environmental documents may not be necessary, depending on the nature of the action and whether environmental impacts are within scope of this EIR.

As a first-tier document, this GPA covers parkwide management zones and management issues and actions for natural resource management and protection, cultural resource management and protection, education and interpretation, public use, recreation, and visitor safety, visitor access and circulation/roads, and administrative facilities. When necessary, second-tier review will provide more detailed information and environmental analysis. For example, each future management plan and area development plan will be subject to further environmental review to determine if it is

consistent with the GMP/GP and to identify any significant environmental impacts and mitigation measures that may be specific to the area of development.

When necessary, mitigation requires resource specialists to evaluate the scope of work, identify the cause of the impacts, and specify measure to avoid or reduce the impacts to a less-than-significant level. More comprehensive environmental review will be possible at the more specific levels of planning, when facility size, location, and capacity can be explicitly delineated, rather than at the General Plan level.

#### **4.1.4 CONTENTS OF THE EIR**

The enclosed program EIR includes the following sections:

**Introduction:** This section includes a brief overview of the environmental review process, legal requirements, and approach to the environmental analysis.

**EIR Summary:** The EIR summary represents a summary of environmental impacts associated with the proposed GPA, an overview of the environmental effects of alternatives considered to the preferred GPA, and a description of any areas of controversy and/or issues that need to be resolved.

**Project Description:** This section provides an overview of the GPA, which is the focus of the program EIR.

**Environmental Setting:** This section provides a brief description of the environmental conditions in the vicinity of the Mill Creek Addition from a local and regional perspective. The environmental setting constitutes the baseline physical conditions to determine whether an impact is significant. Additional resource information for the Mill Creek Addition and vicinity is available in other documents, such as the Interim Management Recommendations (Stillwater Sciences 2002) and the General Management Plan/General Plan for Redwood National and State Parks (1999/2000).

**Environmental Effects Eliminated from Further Analysis:** This section describes those environmental topics that did not warrant detailed environmental analysis and the supporting rationale.

**Environmental Impacts and Mitigation:** This section analyzes potential environmental impacts associated with implementation of the GPA.

**Other CEQA Considerations:** This section contains information on other CEQA-mandated topics, including significant and unavoidable impacts, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts.

**Alternatives to the Proposed Project:** The alternatives analysis describes the various alternatives to the GPA that are considered in this EIR and the associated environmental effects of these alternatives relative to the proposed project.

## **4.2 EIR SUMMARY**

### **4.2.1 SUMMARY OF IMPACTS AND MITIGATION**

Implementation of the GPA is not expected to result in significant impacts on the environment. Implementation of the management issues and actions contained in Chapter 3 along with issues and actions in the GMP/GP and compliance with federal and state laws and regulations avoid potential significant effects or maintain them at a less-than-significant level. Additional mitigation measures are, therefore, not necessary.

### **4.2.2 SUMMARY OF ALTERNATIVES CONSIDERED**

Five alternatives were considered in this EIR, including the Proposed Project Alternative (the GPA), the Minimal Access and Development Alternative, the Medium Access and Development Alternative, the Maximum Access and Development Alternative, and the No Project Alternative. The Proposed Project Alternative is the environmentally superior alternative among the alternatives considered. Descriptions of the alternatives are provided in Section 4.8.

### **4.3 PROJECT DESCRIPTION**

Chapter 3 of the GPA provides the project description and establishes the overall long-range purpose and vision for the Mill Creek Addition. Management issues and supporting actions in Chapter 3 are designed to address critical planning issues and to mitigate the adverse environmental effects of uses that would be permitted in the Mill Creek Addition. In accordance with the issues and actions, site-specific surveys for sensitive resources would be conducted to guide further site design to avoid adverse environmental impacts resulting from future developments and improvements, to the extent feasible within the boundaries of the Mill Creek Addition.

The GPA identifies management zones (frontcountry zone, backcountry mechanized zone, various zones of minimal area) that will also help guide future use and management of the site. Please refer to Chapter 3 and Exhibit 3.3 for a complete description and depiction of the zones. The GPA also calls for the development of additional plans, such as a Road and Trail Management Plan, Vegetation Management Plan or guidelines, and Site Development Plan or guidelines for the former mill site, as described in Chapter 3.

### **4.4 ENVIRONMENTAL SETTING**

Existing conditions that characterize the Mill Creek Addition as relevant to the environmental analysis of the GPA are provided below, in the respective resource sections. Additional information in resources present on the property is included in the Interim Management Recommendations (Stillwater Sciences 2002) for the Mill Creek Addition. Extensive information of regional resources and the surrounding parklands is included in the GMP/GP for Redwood National and State Parks.

### **4.5 ENVIRONMENTAL EFFECTS ELIMINATED FROM FURTHER ANALYSIS**

The following topics were eliminated for future analysis in the EIR because there is no potential for significant environmental effects resulting from implementation of the GPA. A brief reason for their elimination is provided for each respective topic.

### **4.5.1 AGRICULTURAL AND TIMBER RESOURCES**

Commercial extraction of timber is not allowed in State Parks per California Public Resources Code (PRC 5001.65). No agricultural operations are present on the property. The GPA is not expected to result in any impacts on agricultural and timber resources, thus they are not further addressed in the EIR.

### **4.5.2 ENERGY AND MINERAL RESOURCES**

The Mill Creek Addition does not contain important mineral or energy resources and has not been designated as such by the Department of Conservation. Mineral resource extraction is not permitted within State Park property. The GPA is not expected to result in any impacts on energy and mineral resources, thus they are not further addressed in the EIR.

### **4.5.3 POPULATION AND HOUSING**

No housing currently exists within the Mill Creek Addition. Construction and State Park staffs generally live in nearby Crescent City. Occasionally, contract workers may camp on-site in travel trailers during work operation phases. The trailers are required to be self-contained and are placed on existing roads, landings, or other areas used by seasonal work crews. While the potential to establish limited seasonal staff housing at Mill Creek is included in the GPA, this is not expected to affect housing and population trends in the local or regional community. The GPA does not include proposals for infrastructure that would induce additional growth in the immediate vicinity. No impacts are expected and population and housing is thus not further addressed.

## **4.6 ENVIRONMENTAL ANALYSIS**

The following sections analyze potential impacts by resource topic.

### **4.6.1 AESTHETICS**

#### **INTRODUCTION**

This section analyzes impacts related to aesthetic resources that could result from the implementation of the GPA.

## **ENVIRONMENTAL SETTING**

The Mill Creek Addition is part of the Del Norte Coast Redwoods State Park and is located in the coastal mountains of northwestern Del Norte County. The Mill Creek Addition is an inland forested park with year-around access from U.S. 101. The landscape appearance of the Addition has been heavily altered from its natural condition because of a long history of commercial logging that has resulted in a dominance of young forest stands. The property is traversed by a dense network of timber hauling roads and associated skid trails and log landings. Revegetated clearcuts and landslides, as well as other logging-related impacts on the land, are visible within the Mill Creek Addition. However, the property also features a diverse mosaic of natural communities including riparian woodland associated with the Mill Creek and Rock Creek drainages and their tributaries, a few remaining old growth redwood stands, Douglas-fir forest and tan-oak forest. The largest of the remaining old-growth stands, the “Paragon” grove, covers approximately 90 acres, and is located in the central portion of the property. Another intact 14-acre grove, the “Hamilton Buffer” is located immediately south of the former mill site. “George’s Saddle” is a 29-acre stand of old growth located in the south-central part of the property. The visual qualities of old-growth redwood forests are accentuated by a diverse understory of native plant species.

The Mill Creek and Rock Creek watersheds in the Mill Creek Addition provide many interesting viewing opportunities. Tributaries to Mill Creek and Rock Creek and other drainages that cut through the coastal ridges on their way to the ocean provide additional visual interest and seasonal variation to the landscape of the Mill Creek Addition. Sweeping coastal and inland vistas are available from several high elevation vantage points on the property. These overlooks award views of the Pacific Ocean, Crescent City to the north, and of the “Klamath Knot”, a mountain range of ecological interest to the north, in southern Oregon. Unlike any of the other units within RNSP, the Mill Creek Addition offers scenic mountain vistas within an easy driving distance from a gateway community (Crescent City).

## THRESHOLDS

The analysis of aesthetic impacts uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant aesthetic impact if it would:

- ▶ Have a substantial adverse effect on a scenic vista.
- ▶ Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- ▶ Substantially degrade the existing visual character or quality of the site and its surroundings.
- ▶ Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

## IMPACT ANALYSIS

**Adverse Effect on Scenic Vistas.** Watershed rehabilitation and forest restoration are currently ongoing on the property and will continue throughout the lifetime of the GPA. These activities will in the long term restore the scenic nature of the site and enhance scenic vistas. The GPA would allow for the development of improved access and management and recreation facilities on the property. The improved access would include vehicle and non-motorized access to overlooks on the property. The GPA also calls for the development of several single and small groups of cabins throughout the Mill Creek Addition, located primarily to take advantage of vistas. The GPA also supports a feasibility study for the development and operation of a destination lodge in an area of the property that would offer year-around access from U.S. 101 and beautiful views of the coastline, Pacific Ocean, and Crescent City to the north. Any new infrastructure or facility that would be built as a result of the GPA would be sited and designed to blend in with the natural environment and the historic nature of the site and to not obstruct viewsheds. Providing improved access to existing scenic vistas would be considered a beneficial impact to aesthetic resources.

**Damage to Scenic Resources Within a State Scenic Highway.** The Mill Creek Addition is accessed via U.S. 101, a State Scenic Highway. Most of the property is not visible from U.S. 101. Except for entrance signage providing direction to the property, none of the improvements proposed under the GPA would be visible from Highway 101; therefore, there would be no scenic impact related to the highway.

**Degradation of Existing Visual Character.** Implementation of the management actions in Chapter 3 of the GPA is expected to enhance the existing visual character and quality of the Mill Creek Addition and its surroundings. For example, development and implementation of a Vegetation Management Plan or guidelines will guide the restoration of the existing second-growth forest to a late-seral forest habitat throughout much of the site, which will improve the natural appearance of the landscape over time. As part of the site development plan or guidelines for the former mill site, some of the existing old buildings and asphalt would be removed or restored and new buildings would be constructed, which would change the aesthetic quality of the site. Implementation of the Road and Trail Management Plan will include road removal, road-to-trail conversion and road re-engineering. Any development of facilities, such as campgrounds and day use areas, would be carefully sited to blend into the environment and to not obstruct exiting viewsheds or distract from the natural beauty of the site. No adverse impact to existing scenic resources would occur.

**New Sources of Light and Glare.** Implementation of developments included in the GPA, such as the potential construction of a lodge or improvements to the former mill site would result in a minimal increase in light. The additional light would be limited to small areas where new buildings and developed uses are proposed. The vast majority of the park would experience no change in lighting. A requirement to minimize light pollution would also be applied to any new light features as part of specific site development plans. Therefore, there would be no substantial adverse impact due to light or glare issues.

## **4.6.2 AIR QUALITY**

### **INTRODUCTION**

This section analyzes impacts related to air quality that would result from the implementation of the GPA.

### **ENVIRONMENTAL SETTING**

#### **Existing Air Quality**

The Mill Creek Addition is located in Del Norte County, in the North Coast Air Basin (NCAB), which is under the jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD), California Air Resources Board (ARB), and the United States Environmental Protection Agency (EPA). NCUAQMD is the local agency that regulates sources of air pollution within Humboldt, Trinity, and Del Norte Counties. The NCUAQMD's main purpose is to enforce local, state, and federal air quality laws and regulations.

Ambient concentrations of air pollutants are determined by the amount of emissions released by pollutant sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate in addition to the amount of emissions released by existing air pollutant sources. Each factor is discussed separately below.

#### ***Climate, Topography, and Meteorology***

The dominant features of the NCAB are the mountains of the Coast Range and proximity to the Pacific Ocean. The Coast Range runs from north to south in the District and reaches heights of approximately 9,000 feet. The Coast Range creates a barrier to moisture and wind for areas on the east side of the crest.

Climate of the NCAB varies depending on proximity to the Pacific Coast. Inland climate of the NCAB comprises hot, dry summers and cool, snowy winters. Coastal NCAB

climate comprises cool summers and rainy winters. Winds vary seasonally with predominant winds from north to northwest in the summer and from the south in the winter.

The predominant wind direction and speed, measured at the Jack McNamara Field Airport in Crescent City, the closest meteorological station to the Addition, is from the south at 8.6 miles per hour (mph) (WRCC 2008a, b).

Climate data from Crescent City covering the period of January 1893 through December 2007 (WRCC 2008c) indicate the following:

- ▶ Average maximum monthly temperatures range from 54°F in January to 67°F in July
- ▶ Average minimum monthly temperatures range from 40°F in January to 50°F in July
- ▶ Average annual rainfall is approximately 70 inches, occurring mostly from November through April
- ▶ Average annual snowfall is less than one inch.

### **Criteria Air Pollutants**

Concentrations of the following air pollutants are used as indicators of ambient air quality conditions: ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), respirable and fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health, and extensive health-effects criteria documents are available, they are commonly referred to as “criteria air pollutants.”

Both ARB and EPA use monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. Del Norte County is currently designated nonattainment for the state PM<sub>10</sub> ambient air quality standard (AAQS), and is either in attainment or unclassified for all remaining state and federal AAQS (ARB 2008a).

PM<sub>10</sub> concentrations are measured at the 880 Northcrest Drive, Crescent City station. Other criteria pollutants are not currently monitored because of their attainment status. In general, the ambient air quality measurements from this station are representative of the air quality in the project area. No exceedances of ambient air quality standards occurred at the Crescent City monitoring station for PM<sub>10</sub> during the period from 2005 to 2007 (ARB 2008b).

According to Del Norte County's emissions inventory, mobile sources are the largest contributor to the estimated annual average air pollutant levels of nitrogen oxides (NO<sub>x</sub>) and sulfur oxides (SO<sub>x</sub>), accounting for approximately 98%, and 93%, respectively, of the total emissions. Areawide sources account for approximately 67%, 86%, 95%, and 92% of the County's reactive organic gases (ROG), CO, PM<sub>10</sub> and PM<sub>2.5</sub> emissions, respectively (ARB 2008c).

### **Toxic Air Contaminants**

Toxic air contaminants (TACs), or in federal terms, hazardous air pollutants (HAPs), are defined as air pollutants that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

In addition, naturally occurring asbestos (NOA), which was identified as a TAC in 1986 by ARB, is located in many parts of California and commonly associated with serpentine rock formations. Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Certain areas within the Addition are known to contain serpentine or ultramafic rock, which is common to coastal mountain areas of Del Norte County. According to the California Division of Mines and Geology, naturally occurring asbestos (NOA) may be present in the Mill Creek area (Division of Mines and Geology 2000). A survey of portions of the Addition has already been conducted in support of ongoing management activities (Micro Analytical Laboratories 2004) and the survey confirmed that soils derived from

serpentine substrates in the northeast corner of the Addition contain chrysotile asbestos.

## **Odors**

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The occurrence and severity of odor impacts is subjective and depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they still can be unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. There are no major odor sources (e.g., waste water treatment plants, landfills, and confined animal operations) within two miles of the Addition.

## **Greenhouse Gases**

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), contribute to the trend of warming observed in the earth's climate, known as global warming or climate change. Prominent GHGs contributing to climate change are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated compounds. Emissions of GHGs contributing to global climate change are attributable in large part to human activities including industry/manufacturing, electricity generation, transportation, agriculture, construction, and land use change.

## **Sensitive Receptors**

Sensitive receptors are identified land uses that would be occupied by persons most sensitive to the effects of air pollution, such as the very young, the elderly, or people weak from illness or disease. These receptors are generally residential land uses, schools, hospitals, and retirement homes. Sensitive receptors located in and around the Addition would include recreational users and any permanent staff residences (e.g., campground hosts). The Mill Creek Addition is surrounded by other federally and state own

conservation lands and private timberlands, and there are no nearby off-site sensitive receptors.

## **REGULATORY SETTING**

### **Criteria Air Pollutants**

At the federal level, the EPA implements national air quality programs. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (CAA), which was enacted in 1970 and most recently amended in 1990. The ARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA).

NCUAQMD is the primary local agency with respect to air quality oversight for Del Norte County. NCUAQMD attains and maintains air quality conditions in Del Norte County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of NCUAQMD includes the preparation of plans and programs for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. NCUAQMD also inspects stationary sources, responds to citizen complaints; monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA, CAAA, and CCAA. All projects are subject to adopted NCUAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the proposed project may include, but are not limited to: Rules 104 (Prohibitions) and 207 (Wildland Vegetation Management Burning).

### **Odors**

Neither the state nor the federal governments have adopted any rules or regulations for the control of odors sources. However, the NCUAQMD has adopted Rule 104 that specifically addresses nuisance associated with odors.

## Greenhouse Gases

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (see Statutes 2006, Chapter 488, enacting Health & Safety Code, Section 38500–38599.) AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. In October of 2008, ARB published its *Climate Change Proposed Scoping Plan (Proposed Scoping Plan)*, which is the State’s plan to achieve GHG reductions in California required by AB 32 (ARB 2008e). According to the *Proposed Scoping Plan*, forests in California sequester carbon. ARB expects that approximately 5 million metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) emissions can be reduced annually through sustainable forestry measures. The *Proposed Scoping Plan* was approved by the ARB on December 12, 2008.

## THRESHOLDS

The air quality analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant air quality impact if it would:

- ▶ Conflict with or obstruct implementation of the applicable air quality plan.
- ▶ Violate any air quality standards or contribute substantially to an existing or projected air quality violation.
- ▶ Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- ▶ Expose sensitive receptors to substantial pollutant concentrations.
- ▶ Create objectionable odors affecting a substantial number of people.

## IMPACT ANALYSIS

**Short-Term Construction-Generated Criteria Air Pollutant Emissions.** Construction-related emissions are described as short term or temporary in duration and have the potential to represent a significant impact with respect to air quality. Implementation of the GPA would take place over time with the implementation of various projects and plans (e.g., Vegetation Management Plan or guidelines, Road and Trail Management Plan, and Former Mill Site Development Plan or guidelines). Most projects require minor construction activity, such as trail construction, road management, or vegetation management, and would not result in substantial temporary emissions. A limited number of projects could involve more extensive construction, such as development at the former mill site. For these plans or projects, State Parks would include standard control measures to limit emissions to less-than-significant levels. Each individual plan and project would go through separate environmental review to ensure that the necessary standard control measures are included. Therefore, implementation of the GPA would not result in short term construction-generated impacts to air quality.

**Long-Term Operational Criteria Air Pollutant Emissions.** Implementation of the GPA is not expected to result in a significant increase in vehicle traffic on local and regional roadways, because the number of visitors that would be expected to be drawn to the site – while increased from current weekend-only levels would not be expected to be of a magnitude that would alter general traffic patterns on local roadways. Emissions associated with this number of vehicle trips (existing and new users) would be similar to current uses. Thus, operation of the project would not result in a substantial increase in long-term regional ROG, NO<sub>x</sub>, PM<sub>10</sub>, or CO emissions associated with increases in vehicle trips, recognizing that fugitive dust issues associated with driving on unimproved roads are addressed as part of a Road and Trail Management Plan, or through implementation of interim measures for fugitive dust management. In addition, implementation of the project would not substantially increase vehicle miles traveled (VMT), because the overall number of visitors to RNSP is expected to remain moderate as a result of the remote location of the parks and limited local population density.

Consequently, implementation of the GPA would not conflict with or obstruct implementation of NCUAQMD's air planning efforts.

It is possible that the additional campground facilities could result in increased number and frequency of campfires and associated emissions. However, State Parks would prohibit campfires during burn bans established by the California Department of Forestry and Fire Protection (Cal-Fire) and/or NCUAQMD in the zone applicable to the GPA area as it currently does in other units of RNSP.

**Exposure to Toxic Air Contaminants.** Implementation of the land uses in the GPA would not result in the generation of TAC emissions. With respect to long-term operational TAC emissions, implementation of the GPA would not result in an increase of long-term operation-related emissions compared with existing conditions. Specifically, implementation of the GPA would not result in a substantial increase in the number of motor vehicle trips when compared with current conditions, which include use of heavy equipment for road removal and forest restoration programs. The overall number of visitors to RNSP is expected to remain moderate, because of the remote location of the parks and limited local population density. Furthermore, implementation of the GPA would not result in the operation of any new major stationary emission sources that could be a source of TAC. Thus, implementation of the GPA would not expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be less than significant.

**Exposure to Asbestos.** If soil containing NOA is disturbed as part of project construction activities, nearby sensitive receptors, employees, or visitors could be exposed to airborne NOA. People exposed to low levels of asbestos may be at elevated risk (e.g., above background rates) of lung cancer and mesothelioma. The risk is proportional to the cumulative inhaled dose (number of fibers), and also increases with the time since first exposure. Although there are a number of factors that influence the disease-causing potency of any given asbestos (such as fiber length and width, fiber type, and fiber chemistry), all forms are carcinogenic. NOA disturbance from the GPA would be reduced to the levels required by NCUAQMD for a less-than-significant

designation with implementation of an NCUAQMD-required survey and control measures. Known locations of asbestos laden soil are limited to the northeast corner of the Addition. Appropriate measures to prevent the exposure of staff and visitors will be taken into consideration during preparation of the Road and Tails Management Plan. Exposure risk resulting from implementation of the GPA is, therefore, less than significant.

**Objectionable Odors.** Implementation of the GPA would result in diesel exhaust emissions from on-site equipment. The diesel exhaust emissions would be intermittent and temporary and would dissipate rapidly from the source. No other existing odor sources are located in the vicinity of the proposed project site and the project would not include the long-term operation of any new sources. Thus, the construction and operation of the GPA would not result in exposure of sensitive receptors to objectionable odors. As a result, this impact is considered less than significant.

**Greenhouse Gas Emissions.** The GPA is expected to result in GHG emissions from short-term construction equipment exhaust. GHG emissions would also be generated by mobile and area sources associated with long-term operation of the GPA. Mobile-source emissions of GHGs would include employee and visitor trips to the park in passenger vehicles. Stationary-source emissions would be approximately the same as under existing conditions (i.e., negligible).

GHG emissions generated by the proposed project would predominantly be in the form of CO<sub>2</sub>. Project implementation would result in a slight increase in vehicle trips to the site on a daily basis, and slight increase in area-source emissions associated with the increased recreational uses proposed for the Mill Creek Addition. However, the Mill Creek Addition is forested and would remain a managed forest that involves restoration with concomitant increase in carbon capture as the trees mature. The forest would continue to naturally sequester carbon from the atmosphere in a manner that results in greater carbon capture over time, offsetting any slight net increase resulting from increased visitor use. Thus, the project would not result in a net increase in GHG emissions. As a result, the proposed project would not result in a cumulatively

considerable incremental contribution to global climate change. This cumulative impact is less than significant.

### **4.6.3 BIOLOGICAL RESOURCES**

#### **INTRODUCTION**

This section analyzes potential impacts to biological resources that could result from implementation of the GPA. The following documents and additional information were used to assess potential impacts on vegetation, wildlife and fisheries resources: Mill Creek Property Interim Management Recommendations (Stillwater 2002), Redwood National and State Park General Management Plan/General Plan, the Final Mitigated Negative Declaration, Mill Creek Acquisition Forest Ecosystem Restoration and Protection Project (DPR 2006); California Natural Diversity Database (NDDDB 2007); California Native Plant Society (CNPS) Online Inventory.

#### **ENVIRONMENTAL SETTING**

##### Plants

At least 15 vegetation series classified by Sawyer and Keeler-Wolf (1995) are present on the Mill Creek property (Stillwater Sciences 2002). Vascular plant species diversity on the property is high with possibly over 300 species present. The following tree-dominated vegetation series are found on the property: Redwood, Red Alder, Western White Pine, Knobcone Pine, Sitka Spruce, and Jeffrey Pine. Herbaceous-plant dominated series on the property include Bulrush, Bulrush-Cattail, California Annual Grassland, Introduced Perennial Grass, and Pampas grass. Shrub-dominated series include the Blue Blossom and Huckleberry Oak series. Other series present include the Darlingtonia and Fen series.

The coastal fog belt provides ideal growing conditions for fast-growing conifers, such as the coast redwood (*Sequoia sempervirens*). Douglas-fir (*Pseudotsuga menziesii*) is found in natural association with redwoods, particularly in the eastern portion of the property, where coastal influence is diminished. Sitka spruce (*Picea sitchensis*), grand fir (*Abies grandis*), western hemlock (*Tsuga heterophylla*), western redcedar (*Thuja*

*plicata*), Port-Orford-cedar (*Chamaecyparis lawsoniana*), red alder (*Alnus rubra*), and tan oak (*Lithocarpus densiflorus*) are found as minor components of the coastal forest on the property. Past management of the property has resulted in primarily younger, even-aged forest stands of various ages (Stillwater Science 2002, DPR 2006).

The composition of riparian stands along fish-bearing streams on the property differs depending on whether the stands border high-gradient, confined channels or lower-gradient, less-confined channels. Riparian communities along high-gradient, confined channels are currently dominated by sapling or multi-layered stands <50 years old. Most stands along these channels consist of pole-size, second-growth trees, with trees >61 cm (24 in) dbh accounting for less than 25% of the canopy cover (Stillwater Sciences 2002).

Hardwoods, particularly red alder and big-leaf maple (*Acer macrophyllum*), are an important component of riparian stands along the lower-gradient, less-confined channels found on the property. Forty-nine percent of the riparian area along low gradient channels consists of hardwoods, with most of these stands being pole-size trees <50 years of age with a few scattered large-diameter old-growth redwoods in the overstory. Hardwoods generally dominate riparian areas along large, unconfined channels because these trees quickly colonize gravel bars that become stable following large floods or channel avulsions. Redwood and Douglas fir trees <28 cm (11 in) dbh and <30 years of age dominate the riparian stands along the remaining streams (Stillwater Sciences 2002).

Several special-status plant species are known or have potential to occur in the Mill Creek Addition (DPR 2006). Two listed plant species that have the potential to occur are McDonald's rock cress (*Arabis macdonaldiana*) and Western lily (*Lilium occidentale*). McDonald's rock cress is listed as rare in California and federally listed as endangered. Western lily is state and federally listed as endangered. Previous surveys conducted on the property in support of site specific projects have documented occurrences of seven special-status species on the property: heart-leaved tway blade (*Listera cordata*), Del Norte County iris (*Iris innominata*) (Bummer Switchback Botanical Survey Report 2004),

Suksdorf's wood sorrel (*Oxalis suksdorfii*) (Natural Resources Management Corp. 2004), California pitcherplant (*Darlingtonia californica*) (Stillwater Sciences 2002), maple-leaved checkerbloom (*Sidalcea malachroides*), leafy-stemmed mitrewort (*Mitella caulescens*) and nodding semaphore grass (*Pleuropogon refractus*) (Mulligan 2008a, 2008b, 2008c). All are CNPS List 4 species (plants of limited distribution; a watch list). Species potentially present in the project area include 16 CNPS List 1B species (plants that are rare, threatened, or endangered in California and elsewhere), 17 CNPS List 2 species (plants that are rare, threatened, or endangered in California, but more common elsewhere), and 37 CNPS List 4 species (Table 1).

Tree species of particular interest found within the Mill Creek Addition include knobcone pine (*Pinus attenuata*), Port-Orford-cedar, western white pine (*Pinus monticola*), and Jeffrey pine (*Pinus jeffreyi*). Knobcone pine is a serotinous (fire-adapted) species that can be a climax species on poor soils or an early successional species in redwood and Douglas-fir. Knobcone pine is abundant in old harvest areas of various ages, due to the extensive timber management and broadcast burning. Recently harvested and burned plantations on the property are characterized by an abundance of regenerating knobcone pines. Port-Orford-cedar occurs throughout the property. This species generally occupies coastal ranges in a 40-km (25-mi) wide zone extending from Reedsport, Oregon south to central Humboldt County. Port-Orford-cedar is generally uncommon across its range, although it is locally abundant in some areas of the property. This species is suffering substantial mortality due to an exotic, fatal root disease called Port-Orford-cedar root disease caused by a fungus (*Phytophthora lateralis*) that is spreading readily throughout its range. Although the disease is common in the nearby South Fork of the Smith River drainage and the Smith River National Recreation Area, until recently there had been no indication that the disease was present within the Mill Creek Addition. In fact, the Mill Creek watershed had been reported to be one of the few unaffected watersheds in Del Norte County. Lack of the disease was probably due to the absence of through traffic and the relatively isolated watersheds. In addition, Stimson did not use heavy equipment brought from off-site, which decreased the potential for the disease to be introduced from other areas. In 2002, the root disease was confirmed by U.S. Forest Service plant pathologists at two

locations in upper Bummer Lake Creek area and one location in the Rock Creek drainage. A fourth site has since been confirmed approximately 400 m (0.25 miles) from one of the Bummer Lake Creek sites (see baseline map, section 3) (Stillwater Sciences 2002). The GPA call for this issue to be addressed in the Vegetation Management Plan or guidelines to be developed.

A third tree of interest is Jeffrey pine, which occurs on serpentine and periodite soils and under environmentally harsh conditions. This pine has a deep root system and is found at elevations between 1,000 and 3,100 m (3,281 and 10,171 ft). The rare Koehler's stipitate rock cress (*Arabis koehleri* var. *stipitata*) and the federally endangered McDonald's rock cress (*Arabis macdonaldiana*) may occur in association with this species. Within the Mill Creek property, the Jeffrey pine series is only found in the northeast corner of the property.

At least two *Darlingtonia* fens occur east of Childs Hill on ultramafic soils. One fen is approximately 12 by 24 m (40 ft by 80 ft) and dominated by California pitcherplant (*Darlingtonia californica*), Labrador-tea (*Ledum glandulosum*), Sitka alder (*Alnus viridus* var. *sinuata*), salal (*Gaultheria shallon*), slough sedge (*Carex obnupta*), and western azalea (*Rhododendron occidentale*). In addition, a small population of the relatively rare Vollmer's lily (*Lilium pardalinum* spp. *vollmeri*) is located on the site. *Darlingtonia* fens are often associated with other sensitive plant species. A second fen was documented by Stimson personnel on the lower slope of Rattlesnake Mountain. Additional fens may be present on the east slope of Childs Hill, in the northeast portion of the property and on the west slope of Rattlesnake Mountain (Stillwater Sciences 2002 - Appendix A, Figure 3).

The Fen series is similar to the *Darlingtonia* Fen series, except that *Darlingtonia californica* and a few other species are absent. Fen series occur in a few areas on the property. One site is approximately 12 m by 70 m (40 ft by 70 ft) and dominated by Nootka reedgrass (*Calamagrostis nutkaensis*), Sitka alder, deer fern (*Blechnum spicant*), Labrador tea, salal, bog St. John's wort (*Hypericum anagalloides*), and peat moss (*Sphagnum* spp.). Similar fens are exceedingly rare in northern California, making

this fen significant. It is similar to a fen located in the Crescent City Marsh Wildlife Area, approximately 2.4 (1.5 miles) to the north, which supports the largest known population of the federally endangered western lily (*Lilium occidentale*). Thus, the fen series on the Mill Creek property provides a transitional stage between the coastal habitat of the western lily, and the more inland Darlingtonia fens. Additional representatives or species at the southern limits to their distributions such as sweet grass (*Hierochloa odorata*) and great burnet (*Sanguisorba officinalis*) could be present in the east half of the Mill Creek property (DPR 2006).

### Fish and Wildlife

Based on the number of plant communities and variety of habitat types found on the Mill Creek Addition, wildlife diversity is relatively high. Shaded seeps and streams and old-growth forest habitats on the property provide habitat for a variety of amphibians, including five species listed by the California Department of Fish and Game (CDFG) as Species of Special Concern (SSC): southern torrent salamanders (*Rhyacotriton variegatus*); Del Norte salamander (*Plethodon elongatus*); tailed frogs (*Ascaphus truei*); northern red-legged frogs (*Rana aurora aurora*) and foothill yellow-legged frogs (*Rana boylei*). The southern torrent salamander, which occurs in perennial and ephemeral seeps, springs, and small streams that contain clean gravels with interstitial spaces, is common on the property (DPR 2006). This species and the larval form of the tailed frog are both susceptible to increased sediment loads and increased water temperatures. The Del Norte salamander is known to occur in many of the talus slopes located throughout the property (DPR 2006). Small mammals in the Mill Creek Addition that are adapted to forest habitats include deer mice (*Peromyscus maniculatus*), dusky-footed woodrats (*Neotoma fuscipes*), northern flying squirrels (*Glaucomys sabrinus*), Sonoma tree voles (*Arborimus Ipomo*) (SSC), and red-backed voles (*Clethrionomys californicus*). Several bat species may also occur on the property. Larger mammals known to occur in Del Norte County include gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), black bear (*Ursus americanus*), river otter (*Lutra canadensis*), bobcat (*Felis rufus*), mountain lion (*Felis concolor*), black-tailed deer (*Odocoileus hemionus*), and Roosevelt elk (*Cervus elaphus rooseveltis*). Humboldt marten (*Martes Americana humboldtensis*)

(SSC) which were believed to be extinct have been documented east of the property within the Six Rivers National Forest (DPR 2006). The Pacific fisher (*Martes pennanti pacifica*), also a species of Special Concern has been documented in the Addition (DPR 2006).

Bird species on the property include neotropical migrants, such as purple martin (*Progne subis*), yellow warbler (*Dendroica petechia*), and Vaux's swift (*Chaetura vauxi*), northern spotted owls (*Strix occidentalis caurina*) and old-growth-associated species such as the marbled murrelet (*Brachyramphus marmoratus*). The northern spotted owl is federally listed as threatened, and the marbled murrelet is federally listed as threatened and state listed as endangered. Bald eagle (*Haliaeetus leucocephalus*) was federally delisted in August 2008. The species is still listed as endangered in CA, though its status is currently under review (DFG 2008). No known bald eagle nests occur on the property. The closest known Bald Eagle nest is located approximately 1.6 km (1 mile) west of the northwestern portion of the acquisition on Redwood National Park. Bald eagle use of the Mill Creek Addition is primarily restricted to winter foraging along the fish bearing streams during the salmonid runs.

Marbled murrelets use the remaining old-growth in the Mill Creek Addition. Recent observations have been made near the "Paragon" grove, the largest of the remaining old growth stands (DPR 2006) and in the Hamilton Buffer grove (Amber Transou, Environmental Scientist, Calif. State Parks North Coast Redwoods District, personal observation, 2009). Although surveys have not been conducted, residual old growth trees located throughout the Addition provide potentially suitable habitat for marbled murrelets.

The Addition contains approximately 1,600 acres of suitable nesting or roosting habitat for northern spotted owl, and at least three owls have been observed during recent surveys (Transou, pers. com, 2009). Significant food sources of the owl are known to occur on the property and include the dusky footed woodrat, northern flying squirrel, and California red tree vole (DPR 2006). In recent years, northern spotted owls in RNSP have been adversely affected by the presence of the closely related barred owl (*Strix*

*varia*), which are habitat and prey generalists, require smaller home ranges, and have higher reproductive output. This relationship is currently being studied in RNSP, including in the Addition, and recent research suggests that adverse effects of barred owls may be placing stress on northern spotted owls at Mill Creek. The trend continues to be studied (Schmidt, pers. com, 2009).

Streams within the Mill Creek Addition support both anadromous and resident fish populations. The Southern Oregon/Northern California Coast Evolutionarily Significant Unit coho salmon (*Oncorhynchus kisutch*) is federally listed as threatened and is currently the only listed fish species found in the Mill Creek watershed. The coho is also state listed as state threatened from Punta Gorda north to the Oregon border. Other anadromous salmonids known to occur in the Mill Creek Addition include fall run chinook salmon (*Oncorhynchus tshawytscha*), chum salmon (*Oncorhynchus keta*), steelhead (*Oncorhynchus mykiss*), and coastal cutthroat trout (*Oncorhynchus clarkii*). Other fish species that have been reported from streams on the Mill Creek property include western brook lamprey (*Lampetra richardsoni*), river lamprey (*Lampetra ayresi*), Pacific lamprey (*Lampetra tridentate*), prickly sculpin (*Cottus asper*), riffle sculpin (*Cottus gulosus*), threespine stickleback (*Gasterosteus aculeatus*), Klamath smallscale sucker (*Catostomus rimiculus*), and American shad (*Alosa sapidissima*). Introduced fish species may be present such as black bass (*Micropterus* spp.), sunfish (*Lepomis* spp.), and catfish (*Ictaluridae* spp.) that were previously introduced into the 4.6-acre-foot reservoir located to the northwest of the Forestry Center (DPR 2006).

## **THRESHOLDS**

The biological resources analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant impact on biological resources if it would:

- ▶ Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

- ▶ Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- ▶ Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- ▶ Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- ▶ Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## **IMPACT ANALYSIS**

The GPA calls for improvements and upgrades to roads and facilities in the Mill Creek Addition, and for increased provision of recreation and interpretive resources at the site. The GPA would be implemented in accordance with the GMP/GP for Redwood National and State Park which calls for the avoidance or minimization of disturbances or losses of sensitive natural resources, including special-status plant, wildlife and fish species, and sensitive natural communities. The GPA also includes the designation of management zones (frontcountry zone and backcountry mechanized zone, various zones of minimal area) and for the establishment of buffers around sensitive natural resources such as old growth groves and streams bearing anadromous fish. It also calls for the development of a Road and Trail Management Plan that would guide long term road management, including road removal, road-to-trail conversion, and road re-engineering, all of which would benefit the biological resources on site in the long term when compared with current existing conditions. Furthermore, the GPA calls for the development of a Vegetation Management Plan or guidelines for the Mill Creek Addition that would guide the restoration of the existing second growth forest to a late-seral forest throughout much of the property. It would also address management of potential

threats to biological resources, such as Port-Orford-cedar root disease, sudden oak death, invasive species management, and management and protection of sensitive natural communities such as Darlingtonia fens.

Development or expansion of park facilities and other ground disturbance activities would be conducted in accordance with all applicable State and federal laws and regulations pertaining to the protection of biological resources. Additionally, guidance from the Interim Management Recommendations (Stillwater Sciences 2002) and existing management strategies, issues, and actions in the GMP/GP that are directly applicable to the Mill Creek Addition would ensure that direct and indirect impacts to biological resources would be maintained at a less-than-significant level. The Mill Creek Addition was purchased and added to Del Norte Coast Redwoods State Park, in part, because of its biological resources values for special-status fish and regional habitat connectivity with adjacent conservation lands.

Potential impacts resulting from implementation of the GPA by resource type are discussed in detail below.

**Impacts to Special-status Plant Species.** As discussed above, 54 special-status plant species (including state and federally listed species and CNPS List 1, 2, and 4 species) have the potential to occur in the plant communities present at the Mill Creek Addition. Four of these species have been documented during previous surveys: heart-leaved tway blade, Del Norte County iris, Suksdorf's wood sorrel and California pitcherplant. All four are CNPS List 4 species. Sufficient resource evaluation has been conducted to understand the potential for the presence of special-status plant species, although no detailed, complete inventory of special-status plants has been conducted. Focused, site-specific special-status plant surveys have been conducted in support of past and ongoing projects on the property.

To avoid adverse effects on special-status plants as a result of implementation of any of the GPA elements, site-specific, special-status plant surveys would be conducted in support of environmental review and design of facility or management proposals. The surveys would be used to guide site design and significant impact avoidance. If

complete avoidance is infeasible, the project would be modified to include resource management and/or compensatory actions that maintain short and long-term adverse effects on special-status plants to less-than-significant levels.

**Impacts to Special-status Fish and Wildlife Species.** As late-seral conditions develop within the site based on management policies and actions contained in the GPA, the Mill Creek Addition would provide gradually improving habitat, leading to higher quality habitat for special-status fish and wildlife species than exists under current conditions.

Fisheries inventories and monitoring at the site have been conducted since 1994 and the presence and abundance of common and special-status fish in Mill Creek and Rock Creek is well documented. Sufficient information about wildlife habitats on the site exists to understand the potential for special-status wildlife species to occur, although no detailed, complete inventory of special-status wildlife species has been conducted on the Mill Creek property. Focused site-specific, special-status wildlife surveys have also been conducted in support of past projects on the property. As discussed above, several special-status fish and wildlife species including state and federally listed species and Species of Special Concern have the potential to occur in the habitat types present at the Mill Creek Addition. Spotted owls have been observed on site and the old growth provides suitable habitat for the marbled murrelet.

To avoid adverse effects on special-status wildlife species as a result of implementation of the GPA elements, site specific special-status wildlife surveys or habitat assessments would be conducted in support of future environmental review and design of facility or management proposals. The surveys would be used to guide site design and avoid significant impacts. If complete avoidance is infeasible, the project would be modified to include resource management and/or compensatory actions that maintain short and long-term adverse effects on special-status wildlife at less-than-significant levels. The GPA includes buffers zones around old growth groves to avoid auditory disturbance to marbled murrelets and were developed in accordance with USFWS published guidance (RNSP 2007). The GPA also includes buffers along fish-bearing streams to avoid

adverse effects on fish. Width of proposed buffers and allowable uses within buffers are described in Section 3.

The gradual development of late-seral conditions within the site over time would be the most important consequence affecting fish and wildlife. As stated previously, the Mill Creek Addition would provide improving habitat quality, leading to higher quality habitat for special-status fish and most forest dwelling wildlife species than exist under current conditions. Overall, implementation of the GPA would result in a beneficial impact to fish and wildlife.

**Impacts to Vegetation.** Compliance with the management strategies and actions outlined in the GPA would ensure that future restoration, development and improvements within the Mill Creek Addition would not result in adverse impacts on vegetation, such as significant disturbance or losses of common and sensitive natural plant communities. In the long term implementation of the GPA would lead to the development of a late-seral forest over much of the property, a vegetation community that has been diminished in extent over much of northern CA. Thus, this impact would be beneficial to species associated with this habitat type.

**Impacts to Wetlands.** The location and extent of streams on the property are well known based on existing resource investigations and management activities and the presence of fens and other wetlands has been acknowledged. To avoid adverse effects on wetlands as a result of implementation of the GPA elements, site specific wetland surveys or habitat assessments would be conducted in support of future environmental review of facility or management proposals. As part of these site specific investigations, the location and extent of any wetlands and other waters of the United States subject to federal, state and local (under the Local Coastal Plan) jurisdiction would be inventoried. Wetlands and other waters of the United States and waters of the state or wetlands subject to local jurisdiction would be avoided during site specific design to the greatest extent feasible. The surveys would be used to guide site design and avoid significant impacts. If complete avoidance is infeasible, the project would be modified to include resource management and/or compensatory actions that maintain short and long-term

adverse effects on wetlands and associated special-status species at less-than-significant levels. No significant impact to protected wetlands would occur as a result of implementation of the GPA.

**Impacts to Riparian Areas and Other Sensitive Natural Communities.** Riparian areas have been inventoried as part of fisheries habitat assessment and the GPA calls for the establishment of buffers around anadromous fish bearing streams to avoid adverse effects on water quality and fish habitat. The road removal work ongoing on the property aims to counteract ongoing threats to water quality, prevent stream sedimentation, and ensure the long term protection of aquatic habitat. Thus, implementation of the GPA and associated improvements is expected to result in improved riparian habitat conditions.

Six of the 15 vegetation communities present at the Mill Creek Addition are of high priority for inventory by CDFG's California Natural Diversity Database (CNDDDB) and are therefore considered sensitive. They include the Redwood, Red Alder, Western White Pine, and Sitka Spruce tree-dominated vegetation series as well as the Darlingtonia and Fen series. Other sensitive habitats that are afforded specific consideration under Section 1602 of the California Fish and Game Code and Sections 404 and 401 of the Clean Water Act (CWA) and are present on the property include riparian areas and wetlands. The old growth groves and residual old growth are also considered sensitive, as are areas supporting trees of special interest, as described above.

The exact location and extent of sensitive natural communities would be inventoried during future environmental review of site-specific proposed facilities or management actions. This data will be used to guide site design, and adverse effects to sensitive natural communities will be avoided. The GPA calls for the development of Vegetation Management guidelines that specifically address issues pertaining to management and protection of Darlingtonia fens, Port-Orford-cedar root disease sites, and other issues pertaining to the management of sensitive natural communities. In the long term, restoration and resource management activities ongoing in the Mill Creek Addition are expected to have a beneficial effect on sensitive natural communities on the site.

**Impacts to Fish and Wildlife and Wildlife Movement.** As discussed above, the Mill Creek Addition supports a wide variety of common and sensitive terrestrial and aquatic fish and wildlife species, primarily due to its position along the northern California coastline. Most of the animals present are locally and regionally common, but as many as 30 special-status fish and wildlife species have the potential to occur in the Mill Creek Addition. Loss and/or disturbance of habitat and direct impacts to individuals of some of these special-status species could potentially result from implementation of certain elements of the GPA. Potential secondary impacts on fish and wildlife could result from increased visitor use, and include disturbance from visitor activities, such as hiking, biking and camping.

Implementation of GPA management strategies and actions would result in avoidance or minimization of disturbances or losses of common and special-status fish and wildlife species and their habitat. Furthermore, compliance with State and federal threatened and endangered species protection laws and regulations, and implementation of the management strategies in the GMP/GP would ensure that implementation of the GPA would not adversely affect the ability of fish and wildlife to move through the area. In addition, the GPA calls for the development of a Vegetation Management Plan or guidelines and Road and Trail Management Plan which would address habitat improvements on the site. Restoration of the forest on site to late-seral conditions would ultimately lead to improved habitat conditions and improved regional habitat connectivity, enhancing the opportunity for wildlife movement.

The GPA calls for tracking of visitor use and composition and for the use of the results of this tracking in the location, design and development of facilities. Facilities would be located to avoid indirect adverse effects on fish and wildlife resources to the greatest extent feasible.

The Mill Creek Addition provides important regional habitat connectivity to adjacent state and federal conservation lands. The addition of the property to RNSP increases the amount of protected land within the parks by 25,000 acres, providing important habitat linkages in the area and enabling the movement of species and genetic material.

This is especially important because surrounding lands continue to be managed as commercial timberlands, therefore, impacts to fish wildlife movement is expected to be beneficial in the long term.

**Conflict with Local or Regional Conservation Plans.** An important purpose of the purchase of the Mill Creek Addition was its important role in regional conservation efforts to connect inland habitats to the sea. While the Mill Creek Addition is not subject to an adopted conservation plan, the adjacent lands owned by Green Diamond Resource Company are subject to two adopted Habitat Conservations Plans (HCP), a Northern Spotted Owl HCP (Simpson Timber Company 1992) and an aquatic CCAA (Green Diamond Resource Company 2006). Because of its focus on habitat restoration and regional habitat linkage, implementation of the GPA is not expected to conflict with the provisions of these plans. Therefore, there is no impact.

#### **4.6.4 CULTURAL RESOURCES**

##### **INTRODUCTION**

This section provides a brief summary of the archaeology, ethnography, and history of the Mill Creek Addition and analyzes impacts related to cultural resources that would result from the implementation of the Preliminary GPA.

##### **ENVIRONMENTAL SETTING**

###### **Prehistoric Setting**

Research and documented evidence of the human habitation in northwest California suggests occupation spanning thousands of years. Keter (1995), and Hildebrandt and Hayes (1993) and others before them, such as Loud (1913) (Elsasser and Heizer 1964:5–120) conducted studies that greatly contributed to our understanding of north coastal archaeology.

Human occupation of this area is generally subdivided into three distinct time periods, each marked by various adaptive patterns, and geographical distributions. The oldest pattern, known as the Borax Lake Pattern (6000 B.C to 800 B.C), is characterized by Borax Lake wide-stemmed projectile points, milling slabs, hand stones, large serrated

bifaces, and cobble tools. Hildebrandt and Hayes (1993:107–119) note that the earliest known human occupants of the region utilized generalized hunting and gathering in small, mobile groups who occupied a series of temporary camps.

The Willits Pattern (800 B.C to 900 A.D) sometimes referred to regionally as the Mendocino Pattern, is marked by a variety of projectile points, bifaces, mortars and pestles, and flaked tools. The broad regional patterns of this time period suggest an adaptive shift towards the establishment of semi-sedentary villages near productive resources such acorns.

The Gunther Pattern (Post 900 A.D.) is characterized by a greater focus on the coast. Sites from this period show a greater population density and an intensified use of lowland subsistence resources (e.g., fish). Characteristic artifacts from this time period include, but are not limited to, various projectile point types (Trinity corner-notched, Trinity diamond-shaped, and Gunther series projectile points), milling tools, large obsidian ceremonial blades, steatite pipes and bowls, as well as an introduction of Euro-American manufactured materials (Hildebrandt and Hayes 1993:107–119).

Previous archaeological studies conducted near the project area are on file at various repositories including the North Coastal Information Center (NCIC) of the California Historical Resources Information System in Klamath, California, and the North Coast Redwoods District Office of State Parks in Eureka, California. Resources consulted include: the National Register of Historic Places (online database), California Inventory of Historic Resources (1976), California Historical Landmarks (Office of Historic Preservation 1996), and the Index of Historic and Archaeological Resources for Park Units and Major Properties Associated with the California State Parks System (August 2007). Recent archaeological studies conducted within or adjacent to the project area are listed below.

<b>Summary of Previously Conducted Archaeological Studies</b>		
NCIC No.	Title	Surveyor / Date
13535	Terwar West	Cox 1992
14227	First Gulch Buffer	Cox 1992

<b>Summary of Previously Conducted Archaeological Studies</b>		
NCIC No.	Title	Surveyor / Date
14275	Fish Creek	Cox 1992
14311	Wilbur End	Cox 1992
14312	Spar Pole	Cox 1992
14363	Arney	Cox 1992
14545	Sec. 5 Residual	Cox 1992
14625	Incline	Cox 1993
14675	Sheep Head	Cox 1993
14982	Bent Nose	Cox 1993
15218	Visser	Cox 1993
15253	Deep Well	Cox 1993
15254	Hound Dog	Cox 1993
15255	Low Divide	Cox 1993
15256	Maple Spur	Cox 1993
15585	Old Ship	Cox 1993
15902	THP 1-94-085 DEL – Tanoak Saddle	Dorman 1994
16038	THP 1-94-133 DEL – Violated Spur	Cox 1994
16317	THP 1-94-265 DEL	Dorman 1994
16318	THP 1-94-265 DEL – Hotel	Dorman 1994
16320	THP 1-94-287 DEL	Dorman 1994
16414	THP 1-94-305 DEL – Cross Over	Cox 1994
16431	THP 1-94-413 DEL – Scavenger	Dorman 1994
16590	THP 1-94-380 DEL – Upper Rock Creek	Dorman 1994
16750	THP 1-94-565 DEL – Rock Creek Bridge	Dorman 1994
16855	THP 1-94-380 DEL – Upper Rock Creek	Dorman 1994
20264	Assessment of the Smith River, Mill Creek, and Hunter Creek Blocks, Stimson Lumber Co.	Par Environmental Services 1998
Other surveys, identified only by a survey number, conducted within or adjacent to the project area include: 9463, 13583, 14276, 14277, 14399, 15009, 15486, 16523, 17319, 17438, 17439, 17440, 17448, 17872, 17905, 17907, 18131, 18456, 18915, 18916, 19116, 19282, 19355, 19501, 19666, 19789, 20017, 20267, 20841, 20918, 21240, 21788, 21900, 21912, 22268, 22298, 22319, 22321, 23029, 23192, 23392, 23714, 23715		

Other surveys identified, but not on file at the NCIC include:

HSU-CICD-CRF – MCA 2006	Mill Creek Culvert Repair Project	Roscoe et al. 2006
HSU-CICD-CRF – MCA 2005	2005 Cultural Resource Survey/ Mill Creek Acquisition	Roscoe et al. 2005
HSU-CICD-CRF – MCA 2004	Bummer Spurs/4th Switchback Road Project	Roscoe et al. 2004

### **Ethnographic Setting**

The Mill Creek Addition is situated within lands traditionally occupied by the Tolowa Indians. The Tolowa occupied an area of approximately 640 square miles in four different natural habitats, though they primarily lived in villages near the coast. The Tolowa differed from their neighbors, the Yurok, Karuk, Chetco, and Hupa, in the predominately coastal orientation of their villages. European sailors noted that several of the native villages had populations of as many as 300 people (Gould 1978:128–129). The Mill Creek Addition was a traditional boundary area between the territories of the Tolowa and Yurok tribes. The ethnographic boundary between the Tolowa and Yurok tribes is identified as Wilson Creek by Waterman (1920: Map 6), however the Yurok tribe disagrees with this and claims territory as far north as the mouth of Damnation Creek.

The Tolowa utilized a cyclical pattern in exploiting the natural resources that were seasonally available. While most of their time was spent along the coastal strip that gave them access to shellfish, ocean mammals and various fish, they also spent time in the redwood forest, a Douglas fir-oak flat region, and a riverine area around the Smith River. The Yurok limited the time they spent in these secondary habitats to the three months they did not live on the coast. These areas were less frequented due to access difficulty and their lack of stable resources. The Mill Creek Addition falls within the forested areas. The redwood forest immediately inland from the coastal strip is generally considered to have lacked an abundance of food sources, however there is recent evidence of habitation sites. The Tolowa primarily used this area for gathering redwood for building plank houses and ferns for basketry. Beyond the redwood forest

lay the Douglas fir-oak flat habitat that furnished an abundant supply of a variety of acorns to provide a staple food source (Gould 1978:129–130).

Tolowa society lacked definite social stratification, and their villages were without formal chiefs or councils; however, there were “headmen”, whose status was based upon the display and possession of wealth. Inter-marriage between the Tolowa and their neighbors, the Yurok, Karok, and Hupa, was common. The building methods and materials of these tribes were also similar. Like their neighbors, the Tolowa built substantial houses of redwood planks; other typical structures within a village included a sweat-house, and detached areas devoted to tool-making.

Euro-Americans first made contact with the Tolowa in 1828. Estimates of pre-contact Tolowa differ widely, ranging from 450 to 2,400. By 1910, a government census indicated a population of 120 Tolowa Indians (Kroeber 1925:125). With the arrival of the Euro-American culture and lifestyle, the Tolowa way of life was further disrupted. The influx of Euro-Americans during the gold rush led to the reduction in the population through disease and violence. By 1960, the U.S. Government Census Map indicated between 100 and 500 Native Americans, not all Tolowa, living in Del Norte County. (Gould 1978:130, 135).

### **Historic Setting**

The Mill Creek Addition is located in Del Norte County. The first permanent settlement in the county was established in 1851. While this settlement, established mainly to mine for gold, was short-lived, it led to the founding of Crescent City in 1852. This region’s development began with the gold rush, which started off at Myrtle Creek, on the South Fork of the Smith River. The Smith River basin contained some of the most prominent mining districts in the county, such as the Low Divide Mining District. By 1860 (until 1870) copper ore was being shipped from Del Norte County as far as Germany (Lowell 1915:11).

The need for supplies in the growing number of mining camps necessitated reliable supply routes. During this time several trails were forged, the most prominent being the Kelsey Trail. The Kelsey Trail was constructed ca. 1855 under the supervision of Ben

Kelsey, and was used for approximately 25 years to transport supplies to the Klamath Mountain Mining Camps (National Park Service 1983:12). Other trails in the area included, but were not necessarily limited to, the Bense Trail, and the Indian Trail.

By 1853 a schooner brought the first sawmill to town, establishing the lumber industry in the county (Bledsoe 1881:9–16). With the opening of the mill in Crescent City, the Mill Creek basin became a convenient source for lumber in the region. By the mid 1850s, timber was harvested from the basin and transported it to Crescent City for milling. Later, W. Bayse constructed a water-powered mill on Mill Creek, providing easier access for milling trees from the basin. Logging continued intermittently into the early 1900s. Between 1909 and 1930, Hobbs, Wall and Company began logging operations along the western slope of Howland Hill and the northwestern hills of the Mill Creek watershed. The Del Norte and Southern railroad hauled the timber to mills in Crescent City (Madej et al 1986:15).

By 1920, Hobbs, Wall and Company had established a logging camp on Mill Creek near the site of Miller-Rellim Redwood Company's (Rellim) nursery within the current Mill Creek Addition. A railroad spur connected the camp to Crescent City and three railways were constructed on steep slopes. These lines gave the company access to timber in the upper watershed. Hobbs, Wall and Company continued to log old growth trees until 1930, however were out of business by 1939. After the logging operations ceased, the company continued to allow cattle grazing on the property. In order to keep the harvested areas clear for grazing, the land was burned, a practice that continued from 1930 until 1954 (Madej et al 1986:15).

During this time period, before the use of crawler tractors, steam donkeys were used to log or yard the timber. The steam donkeys used a cable system to move the equipment from ridge to ridge along specially constructed rail routes. The Madej report states, "steam donkey yarding techniques resulted in large clearcut areas, heavy concentrations of slash, and intense localized ground disturbance surrounding landings and skid trails" (15). After 1930, the use of the crawler tractor allowed for selective or partial cutting. At least 70% of the volume of trees in the Mill Creek Basin was

harvested, indicating that the partial cut method was used at least until the 1950s. At that time, companies became more proficient at harvesting and restocking the redwood forests leading to a rebirth of clearcutting. By the late 1960s, clearcutting almost completely replaced partial cutting within the Mill Creek watershed. In the Mill Creek Basin, skyline cable yarding methods were used to bring logs up steep slopes to upslope logging roads. While this process led to fewer roads and minimal ground disturbance, it could only be used in clear-cut logging (Madej et al 1986:16–19).

In 1954, Rellim purchased the property and re-initiated the cutting of old growth trees. The change in ownership ended the cattle operations. In 1963, Rellim opened a mill to process the old growth trees within the current Mill Creek Addition. This mill operated until 1993. All logging operations ceased in 2001 and in 2002 the property was acquired with the help of multiple funding partners (including Save the Redwoods League, the Wildlife Conservation Board, State Parks, and the California Coastal Conservancy), and the title was transferred to California State Parks soon thereafter.

#### THRESHOLDS

The cultural resources analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the General Plan would have a significant impact on cultural resources if it would:

- ▶ Cause a substantial adverse change in the significance of historical resources.
- ▶ Cause a substantial adverse change in the significance of an archaeological resource.
- ▶ Disturb any human remains, including those interred outside of formal cemeteries.

#### **Historical Resources**

Section 15064.5 of the State CEQA Guidelines, Determining the Significance of Impacts to Historical Resources and Unique Archaeological Resources state that a project would result in a significant impact if it causes a substantial adverse change in the significance of an historical resource based on the following criteria:

(b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

(1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration in the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired.

(2) The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics [of an historical resource] that account for its inclusion in a local register of historical resources (pursuant to section 5021.1(k) of the Public Resources Code), or its identification in an historical resources survey meeting the criteria in section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

(3) Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings

(1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

## **Archaeological Resources**

CEQA protects archeological resources in the following manner:

- ▶ When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in §15064.5(a) of the CEQA Guidelines.
- ▶ If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of §21084.1 of the Public Resources Code, and this section, §15126.4 of the CEQA Guidelines, and the limits contained in §21083.2 of the Public Resources Code do not apply.
- ▶ If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archeological resource in §21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of §21083.2.

## **IMPACT ANALYSIS**

**Adverse Effects on Prehistoric and Historic-era Resources.** Compliance with Redwoods National and State Parks (RNSP) cultural resource management goals would ensure that future development and improvements within the Del Norte Coast Redwoods State Park would not cause substantial adverse effects on prehistoric and historic resources present within park property. This impact would be considered less than significant.

The existing General Plan/General Management Plan includes goals and management strategies that would ensure preservation, protection, avoidance, and interpretation of cultural resources present within park property. Limited cultural resource surveys have been conducted within the study area (Mill Creek Addition). These surveys have resulted in the identification of both prehistoric and historic-era resources, ranging from

Native American habitation and lithic sites, to historic roads and landscape features. There are also several historic-era structures associated with the historic lumber mill industry located within the Mill Creek Addition. These sites have the potential to be disturbed by recreational use or development activities.

Implementation of RNSP cultural resource management strategies included in the GMP/GP would protect these resources, and maintain any impacts of implementation of the General Plan Amendment at a less-than-significant level. Specifically, RNSP goals require the research, planning, and stewardship of cultural resources within park property. With implementation of these management strategies, substantial adverse impacts to cultural resources within the Mill Creek Addition would not occur; thus maintaining any impacts of GPA implementation at a less-than-significant level.

#### **4.6.5 GEOLOGY, SOILS, SEISMICITY, AND PALEONTOLOGICAL RESOURCES**

##### **INTRODUCTION**

This section analyzes impacts related to geology, soils, seismicity, and paleontological resources that would result from the implementation of the GPA.

##### **ENVIRONMENTAL SETTING**

The Mill Creek Addition is located in the Northern California Coast Range and the Western Klamath Mountains Province, expressed as northwest trending mountains and valleys formed by the convergence of the Gorda and North American tectonic plates. The coast range thrust fault runs between the Coast Range and Klamath Mountain provinces. Elevations range from 61 m (200 ft) above mean sea level to approximately 732 m (2,400 ft) at the crest of Childs Hill (DPR 2006, Stillwater Sciences 2002).

The bedrock within the Coast Range consists of Franciscan Broken Formation. These rocks are tectonically fragmented interbedded greywacke, shale and conglomerate (Blake and Jones, 1974). Highly sheared serpentinite and peridotite of the Klamath Mountains Province underlie the northeastern portion of the project area (Madej et. al., 1986). Shallow water marine deposits of the Miocene-age Wimer Formation cap the highest ridge crests in the northern portion of the property. Remnants of uplifted,

Pliocene-age alluvial terrace deposits cap ridge crests in the Childs Hill area. Alluvial terrace and floodplain deposits of Pleistocene to Holocene age occur in valley bottoms along Mill Creek, East Fork Mill Creek, West Branch Mill Creek, and Rock Creek (DPR 2006).

Soils on the Mill Creek property are highly varied due to changes in parent material, slope position, and climate. The predominate soil types in the Mill Creek basin are the Melbourne and Josephine associations. These soil series have a moderately high-to-high erosion potential (Madej et al. 1986). Serpentine and peridotite parent material common in the Rock Creek basin weather to strong alkaline soils of the Weitchpec and Cornutt series (Madej et al. 1986).

Geologic activity, soil types, and high levels of rainfall have created steep and potentially unstable slopes. Past land use and the construction of poorly designed roads have destabilized some slopes and are presently contributing to additional instability.

## **THRESHOLDS**

The geology, soils, and seismicity analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant impact related to geology, soils, and seismicity if it would:

- ▶ Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, and/or landslides.
- ▶ Result in substantial soil erosion or the loss of topsoil.
- ▶ Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

- ▶ Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- ▶ Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The paleontological resources analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant impact on paleontological resources if it would:

- ▶ Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

## **IMPACT ANALYSIS**

**Risk of Exposure to Geologic and Seismic Hazards.** Current and future facilities and infrastructure in the Mill Creek Addition could be subject to potentially hazardous geologic and soils conditions, including seismic events. Implementation of GMP/GP and GPA actions, as well as compliance with the California Building Standards Code for any future development would maintain the risks of these hazards at an acceptable level, and this impact would be less than significant.

While Del Norte County is not included on the Alquist-Priolo Earthquake Fault Zoning Map, the Mill Creek Addition is located in a seismically active area. The rupture of the coast range thrust fault, strong to moderate seismic ground-shaking, seismic-related ground failure, or landslides are possible in this area. The GPA proposes development at the former mill site and in scattered locations throughout the property to provide visitor and staff facilities. Implementation of the site development plan and feasibility study for the potential location of a destination lodge would ensure that design-specific studies or geologic review are performed prior to development that could subject property or persons to significant risks from geologic hazards. All structures developed within the Mill Creek Addition would also have to comply with the standards contained in California Code of Regulations, Title 24, also known as the California Building

Standards Code, through the Department's internal planning processes. As such all future development and improvements would include structural reinforcements and other features required by the California Building Standards Code, and any potential expansive soils would be investigated prior to development and either avoided or appropriately addressed within the design of the structure in order to minimize geologic or seismically induced structural damage. Therefore, any adverse impacts due to seismic activity would be avoided or maintained at a less-than-significant level.

As described above under the environmental settings section, soil types on the property, past land use, and the construction of poorly designed roads have contributed to the destabilization and instability of some slopes on the property. Development and implementation of the Site Development Plan, the feasibility study for the potential lodge location and a Road and Trail Management Plan would ensure that proposed facilities, including wastewater/septic systems, are environmentally compatible and that site selection criteria is evaluated to determine site suitability. Given these plans and correlating actions, the potential for soil erosion would be minimized.

The road removal work that is currently ongoing on the property and will continue through the lifetime of the GPA is being implemented to counteract existing and prevent future erosion, thus resulting in an overall beneficial impact to soils stability and erosion on the property.

There are no known unique paleontological resources or known features of geologic significances resources within the Mill Creek Addition. If present, any paleontological resources would likely be detected during site specific inventories conducted to detect cultural resources. Any features of geologic significance would be detected during site specific geotechnical investigation. If and unique resources would be detected during future surveys, adverse impacts to these resources would be avoided during site specific design. Thus, implementation of the GPA would not result in any adverse impact to any features of geologic significance on the property.

## **4.6.6 HAZARDS AND HAZARDOUS MATERIALS**

### **INTRODUCTION**

This section analyzes impacts related to hazards and hazardous materials that would result from the implementation of the GPA.

### **ENVIRONMENTAL SETTING**

There are no known Environmental Protection Agency (EPA) classified hazardous material sites within the Mill Creek Addition (EPA 2008); however hazardous materials, such as fuel and oil, may be present at the former mill site, where existing buildings were used historically as part of commercial timber operations.

Physical hazards in the Mill Creek Addition are similar to any outdoor setting and include steep slopes, rushing water, poisonous plants, wild animals, disease carrying insects, and inclement weather.

The project area is in a remote portion of Del Norte County and transportation to the nearest hospital would require an hour drive time from some locations. No airstrips exist within the Addition or adjacent to park property and the nearest public use airport is approximately 15 miles away to the north, in Crescent City. Helicopter landing locations have been identified and geo-referenced throughout the Addition. U.S. Coast Guard helicopters patrol the coastline on a regular basis.

### **THRESHOLDS**

The hazards and hazardous materials analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant impact related to hazards and hazardous materials if it would:

- ▶ Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- ▶ Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

- ▶ Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- ▶ Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- ▶ For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.
- ▶ For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- ▶ Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- ▶ Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

## **IMPACT ANALYSIS**

There are no known classified hazardous materials sites within the Mill Creek Addition. The Mill Creek Addition is not located within one-quarter mile of any schools, nor is it within 2 miles of an airport or in the immediate vicinity of an airstrip. Additionally, implementation of the GPA would not result in types of development that would be in conflict with the operation of the nearest airport.

**Risk of Exposure to Hazardous Materials and Other Hazards.** The GPA would allow ongoing and new developments and improvements that may involve the use of fuels and other potential toxic chemicals. These chemicals may be associated with ongoing management activities such as watershed restoration or with the construction of new operational and visitor serving facilities at the former mill site and other locations throughout the Addition. As part of GPA implementation, existing buildings at the former

mill site will be decommissioned or restored. These buildings may house fuels, oil and other toxic chemicals associated with former timber operations. Any of the future site specific improvements would undergo subsequent environmental review. At that point, a Phase 1 hazardous materials assessment would be completed in support of site specific development planning and review. Any hazardous materials found would be disposed of off site in a safe manner. All transport, storage, and use of hazardous materials during GPA implementation and site operations and management at the Mill Creek Addition would be in compliance with State and federal rules and regulations.

All buildings constructed on site would be designed in compliance with California Building Standards Code, which requires fire safety features in buildings. Additionally, implementation of the Site Development Plan would address safety issues with regard to building design for facilities being developed or restored at the former mill site. The GPA also calls for new buildings to be designed to green building standards and sustainability criteria.

Implementation of the GPA would not be in conflict with the emergency response plans of Del Norte County. Development and implementation of a Road and Trail Management Plan would ensure that safe roadways and emergency services are provided to visitors and would ensure adequate access for emergency vehicles.

Safety issues related to visitor activities, such as hiking, biking or horseback riding, would be the same as to those described in the current Public Use, Recreation, and Visitor Safety section of the GMP/GP and the site would be managed the same as other units within RNSP. Additionally, development and implementation of the Road and Trail Management Plan called for in the GPA would address safety issues related to trail use.

In summary, implementation of the specific facilities and uses called for in the GPA would ensure that impacts related to potential exposure to hazardous materials and other hazards at the Mill Creek Addition would be less than significant.

## **4.6.7 HYDROLOGY AND WATER QUALITY**

### **INTRODUCTION**

This section analyzes hydrology and water quality impacts that would result from the implementation of the GPA.

### **ENVIRONMENTAL SETTING**

The Mill Creek Addition encompasses a large portion of the Mill Creek watershed (60 km<sup>2</sup>, 23 mi<sup>2</sup>), a large portion of the Rock Creek watershed (31 km<sup>2</sup>, 12 mi<sup>2</sup>), and small headwater portions of the Terwar (2.6 km<sup>2</sup>, 1.0 mi<sup>2</sup>), Hunter (1.1 km<sup>2</sup>, 0.4 mi<sup>2</sup>), and Wilson (5.3 km<sup>2</sup>, 2.0 mi<sup>2</sup>) creek watersheds. Mill Creek and Rock Creek are tributaries to the Smith River, a nationally-designated wild and scenic river. Terwar and Hunter creeks are tributary to the Klamath River, and Wilson Creek flows directly into the Pacific Ocean (Stillwater Sciences 2002).

Elevations on the property range from 16 m (52 ft) to 685 m (2,247 ft). The East Fork Mill Creek and West Branch Mill Creek are classified as anadromous fish-bearing streams and join together to form the main stem of Mill Creek. The main stem of Mill Creek runs through Redwood National Park and Jedediah Smith Redwoods State Park and flows into the Smith River. Rock Creek runs along the east side of the Mill Creek Addition and is also a major tributary of the Smith River and is classified as an anadromous fish-bearing stream (DPR 2005).

The North Coast Regional Water Quality Control Board (NCRWQCB) regulates water quality in the area of California where the Mill Creek Addition is located, and is responsible for implementing the Water Quality Control Plan for the North Coast Region (2001). The Water Quality Control Plan for the North Coast Region (Basin Plan) is comprehensive in scope. It contains a brief description of the North Coast Region, and describes its water quality and quantity problems and the present and potential beneficial uses of the surface and ground waters within the Region. Water quality objectives in the plan do not allow any degradation of surface or ground waters or permit any alteration of natural conditions that result in water resource degradation. The

plan also specifies the maximum contaminant levels for point and nonpoint sources such as sediment and a variety of chemical compounds (DPR 2005).

Water quality in the Mill Creek Addition is extremely clear and free of any pollutants, in those streams that drain from old growth forests. Areas previously impacted by resource extraction can be turbid and of poor quality. Precipitation in the Mill Creek Addition occurs primarily in the six months from November through April. Summer showers are infrequent, with winter rainfall accumulations of up to 203 cm (80 in). During the summer months, a thick fog frequently blankets the coastal areas. The prevailing wind direction is northwesterly during the spring, summer, and fall and shifts to southeasterly during the winter season. Wind speed along the coast is typically 24 to 40 kph (15 to 25 mph), with gusts up to 80 kph (50 mph) during winter storms (DPR 2005).

Groundwater in the Mill Creek Addition is relatively free of pollutants and considered very high quality because very few potential pollution sources exist. The groundwater table in the Mill Creek Addition fluctuates annually, depending on rainfall and seasonal temperatures. The groundwater table varies throughout the area because of the geological or topographical influences. The area does not serve to recharge commercially available aquifers. There are no public water sources in the area impacted by the proposed project (DPR 2005).

## **THRESHOLDS**

The hydrology and water quality analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant impact related to hydrology and water quality if it would:

- ▶ Violate any water quality standards or waste discharge requirements.
- ▶ Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

- ▶ Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- ▶ Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- ▶ Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Otherwise substantially degrade water quality.
- ▶ Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- ▶ Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- ▶ Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- ▶ Inundation by seiche, tsunami, or mudflow.

## **IMPACT ANALYSIS**

**Short-term and Long-term Effects on Water Resources.** Development of facilities and allowing additional visitor uses in the Mill Creek Addition have the potential to cause short-term and long-term hydrologic and water quality impacts. The GPA calls for the development of site specific plans such as a Road and Trail Management Plan for the former Mill Site. These plans would be developed and designed in conjunction with the GMP/GP to protect water quality, manage runoff, respect floodplain processes, and address other hydrological issues. Specifically, issues related to dust generated by vehicles travelling on dirt roads would be addressed in the Road and Trail Management Plan or with interim dust management guidelines until such plan can be developed. With

implementation of these management strategies, hydrology and water quality effects resulting from implementation of the GPA would be less than significant.

Typically, the quality of surface and groundwater resources could be adversely affected by facility development and/or increased visitor use. Construction activities (e.g., clearing, grading, excavation, utility installation, trail construction) and operations of facilities (e.g., roads, buildings) within and near the Mill Creek Addition have the potential to disturb and expose soils to rain and wind. These activities can lead to increases in soil erosion and sediment discharges via stormwater runoff from disturbed sites. Contaminated runoff that enters surface waters can increase turbidity, reduce prey capture for sight-feeding organisms, and result in the sedimentation of aquatic habitats. Materials such as fuels, oils, paints, and concrete that are used during construction can also contaminate stormwater runoff. Release of hazardous substances to the aquatic environment can have potential harmful effects to fish and other aquatic life. Waste discharges associated with long-term management and visitor activities include petroleum-based contaminants from vehicles, and a variety of inorganic and organic constituents contained in pet and livestock wastes, and direct waste discharges associated with municipal wastewater treatment systems. The extent of potential environmental effects depends on the erodibility of soil types encountered, the types of construction and management practices, the extent and duration of disturbances, the timing of precipitation, and the proximity to receiving waters.

Development is likely to be minimal in park units such as the Mill Creek Addition. Conformance to GMP/GP actions related to water quality within the Mill Creek Addition would avoid and minimize the potential water resources impacts described above. In addition, any future development would be designed and constructed to avoid adverse effects on water quality. The GPA calls for buffer around anadromous fish bearing streams and specifically defines allowable uses within these buffers. Any new buildings or structures call for in the GPA would be placed outside the floodplains of the major drainages on site. Potential hydrologic and hydraulic impacts resulting from roads and trails would be minimized through careful consideration of existing hydrologic conditions, stormwater drainage design and controls, natural floodplain functions and

minimization of exposure to flood hazards, and water conservation and water supply developments. Potential surface and groundwater quality impacts would be minimized through implementation of standard waste discharge control Best Management Practices (BMPs) approved by State Parks (Merrill and Casaday 2007) or the NCRWQCB for construction and long-term runoff, as well as consideration of geologic and hydrologic resource limitations in the development of water and wastewater supply systems (e.g., onsite- septic systems). Through implementation of the protective actions, impacts related to hydrology and water quality would be maintained at less-than-significant levels.

The ongoing road removal on the Mill Creek property that will continue through the lifetime of the GPA is expected to result in overall beneficial effects on hydrology and water quality in the Mill Creek Addition because it eliminates sources of ongoing erosion, restores natural flow patterns at stream crossings, and prevents future landslides and road failures. In addition, the GPA calls for the removal of large areas of asphalt at habitat restoration at the former mill site. This will improve infiltration of precipitation and runoff. The Site Development Plan for the former mill site will evaluate options for including restoration of the floodplain and the natural confluence of the East Fork and West Branch of Mill Creek which was altered when the mill site was constructed. By incorporating current knowledge of watershed conditions, and careful design of future facilities, water quality in the Mill Creek Addition is expected to improve.

The GPA does not propose development of new structures or buildings within previously undisturbed floodplains of any streams. The Addition is located at elevations above those in danger of inundation by seiche or tsunamis. Thus, there are no potential impacts to water quality related to these thresholds.

#### **4.6.8 LAND USE AND PLANNING**

##### **INTRODUCTION**

This section analyzes land use and planning impacts that would result from the implementation of the GPA.

## ENVIRONMENTAL SETTING

The Mill Creek Addition, as part of the Del Norte Coast Redwoods State Park, lies within the coastal mountains of northwestern Del Norte County. The purpose of the acquisition of the Mill Creek Addition is to protect the diverse natural, cultural and aesthetic resources associated with the property, ensure regional habitat connectivity, and create opportunities for high-quality outdoor recreation. Forest and watershed restoration activities are currently being implemented and will continue to be implemented throughout the lifetime of the GPA to restore the Mill Creek Addition to late-seral forest characteristics. Land use concepts and objectives included in the GPA were developed in alignment with these goals.

State parks are not subject to local land use plans or policies, although, if they are located in the Coastal Zone, they are required to be consistent with the Local Coastal Plan. The Del Norte County General Plan classifies the Mill Creek Addition as Federal and State Land but does not specifically address activities or management goals for the property. While two habitat conservation plans have been adopted for the adjacent timberlands managed by Green Diamond Resource Company as discussed above under biological resources, these plans do not apply to the Mill Creek Addition. The GPA was developed to be consistent with and complimentary to the existing GMP/GP, which is the current land use and management document used by RNSP to manage all units within RNSP. The GMP/GP was developed in consistency with other regional plans.

The GPA proposes to manage the Mill Creek Addition in two distinct management zones: a frontcountry zone and a backcountry mechanized zone. Each zone further includes Various Zones of Minimal Development. The frontcountry zone would include the entry to the Mill Creek Additions and the former mill site. The majority of the Mill Creek Addition would be designated as a backcountry, mechanized zone. Both frontcountry zone and backcountry mechanized zone include Various Zones of Minimal Development that would accommodate proposed uses such as the lodge and associated concessions, parking lots, an interpretive facility, administrative facilities such as seasonal staff housing, offices and maintenance shoes, educational and

research facilities, plant nursery, day use areas, lookouts, campgrounds, cabins, unpaved hiking, biking, or equestrian trails with no improvements, and picnic areas. Watershed and forest restoration activities would be ongoing in all zones for the lifetime of the GPA.

No developed permanent housing is proposed in the GPA. The only housing on the property would be limited to seasonal staff housing and visitor accommodations, such as the lodge and cabins or a hostel.

### **THRESHOLDS**

The land use and planning analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the General Plan would have a significant impact related to land use and planning if it would:

- ▶ Physically divide an established community.
- ▶ Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the GPA, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- ▶ Conflict with any applicable habitat conservation plan or natural community conservation plan.

### **IMPACT ANALYSIS**

An established community is not present at the Mill Creek Addition; therefore, the GPA does not adversely affect any communities. As discussed under the environmental setting section above, State Parks are not subject to local or regional land use plans or policies with the exception of a local coastal plan. GPA management strategies and actions were developed to be consistent with the GMP/GP for RNSP which has been determined to be consistent with the Del Norte County Coastal Plan. Therefore, there would be no land use impacts resulting from implementation of the GPA. Finally, no

habitat conservation plan or natural community conservation plan has been adopted for the area containing the Mill Creek Addition. Therefore, there would be no impact.

#### **4.6.9 NOISE**

##### **INTRODUCTION**

This section analyzes noise impacts that would result from the implementation of the GPA.

##### **ENVIRONMENTAL SETTING**

The Mill Creek Addition is located in forested terrain surrounded by steep mountains and the Pacific Ocean in central Del Norte County, California. The property is bordered by Jedediah Smith Redwoods State Park to the north, Redwood National Park and Del Norte Coast Redwoods State Park to the west, Six Rivers National Forest to the east, additional parts of Del Norte Coast Redwoods State Park to the west, and private timberland to the south.

Existing ambient noise in the project area is associated with vehicular traffic along roads in the Addition associated with on-going watershed and forest restoration activities (e.g., road removal). On the weekends, ambient noise on the property also includes noise generated by recreational activity (e.g., hiking, biking, horseback riding), and driving up Hamilton Road to the former mill site. Occasional aircraft overpasses (e.g., small private planes, Coast Guard helicopters, and Cal-Fire firefighting aircraft) also add to the ambient noise level.

Sensitive receptors located in and around the Mill Creek Addition include recreationists. No permanent staff residences are present in the Mill Creek Addition. In addition, sensitive receptors include certain wildlife species that are subject to auditory disturbance, such as northern spotted owl and marbled murrelet.

No airstrips exist within the Mill Creek Addition or on adjacent Park property. Jack McNamara Field is the nearest airstrip and is located approximately 10 miles to the northwest in Crescent City.

The RNSP GMP/GP does not currently include noise standards or restrictions. While state-sponsored projects are not subject to county regulations, typically they attempt to adhere to local policies to the extent feasible. Del Norte County has established non-transportation related noise standards of 52 dBA hourly equivalent noise level ( $L_{eq}[h]$ ) for daytime hours (7:00 a.m. to 10:00 p.m.), and 47 dBA  $L_{eq}$  (h) for nighttime hours (10:00 p.m. to 7:00 a.m.), and transportation related noise standards of 65 dBA Community Noise Equivalent Level (CNEL) for outdoor activity areas and 45 dBA CNEL for interior spaces for sensitive land uses (Del Norte County 2003).

## THRESHOLDS

The noise analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant impact related to noise if it would:

- ▶ Cause exposure of persons to or generation of noise levels in excess of standards established in the local GPA or noise ordinance, or applicable standards of other agencies.
- ▶ Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- ▶ A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

## IMPACT ANALYSIS

**Short-term Construction Related Noise Levels.** Short-term construction related noise would result from implementation of the GPA. Noise levels would likely vary over the proposed management zones due to the different levels of activity and development proposed. Specific projects that would result in construction of new facilities would undergo additional environmental review prior to project implementation. At that time, the level of noise that would be generated by the specific activity would be determined

based on the construction equipment required and the sensitive receptors present. If it was determined during subsequent environmental review that anticipated noise levels may exceed state standards or adversely affect sensitive receptors, project specific mitigation would be adopted and implemented. Thus, short-term construction related noise levels resulting from implementation of the GPA are expected to be less than significant.

**Long-term Operational Noise Levels.** Potential sources of noise associated with future development or improvements within the Mill Creek Addition would include motor vehicle use, park administrative operations, maintenance activities, and recreational activities such as mountain biking, horseback riding, hiking, camping, and limited RV usage. Noise associated with these activities could include but is not limited to vehicle noise (e.g., tires, brakes, engine acceleration), heating ventilation air conditioning (HVAC) system operations, trail maintenance equipment (e.g., hand and power tools) and visitor-related noise (e.g., opening and closing of doors, people talking, yelling, music playing, etc.).

Future development and improvements would generate additional visitation to the Mill Creek Addition. Subsequently, traffic volumes and the associated noise volumes along roadways would increase. However, in order to increase noise levels above the 65 dBA recommended by Del Norte County, traffic would need to exceed several thousand trips per day. The overall 2007 visitor attendance for the Mill Creek Addition was approximately 560 which included only weekends which are traditionally the times of high visitation. Thus, it is unlikely that long-term traffic related noise would exceed typical noise standards related to human disturbance.

Operational noise related to maintenance, equipment operations, and visitors would occur mostly in the former mill site, potential lodge area, and developed camp sites where noise producing activities would be centralized. Noise emanating from these sites would be minimal and would mostly occur during less-sensitive daytime hours when the Addition is open for day-use recreation. State Park campsites and lodges typically

enforce quiet hours from 10:00 p.m. to 7:00 a.m. to reduce sleep disturbance to overnight visitors.

Noise from maintenance and equipment operations would also occur during daylight hours when employees are performing their duties. Thus, since noise producing activities would be limited to daylight hours and restricted during quiet hours sleep disturbance and human annoyance would be unlikely to occur.

Noise generated by site development, operation, and increased visitation also has the potential to adversely affect noise-sensitive wildlife species, such as northern spotted owls and marbled murrelets. Of particular concern would be noise at the former mill site, where the Hamilton Buffer old growth stand occurs in the immediate vicinity of areas currently developed and identified for re-use. The sensitive resource buffers established for development of the GPA and subsequent site-specific planning are based on USFWS published guidelines (Redwood National and State Parks 2007) for preventing harassment of sensitive species. The provisions of these guidelines will be followed during site specific design to avoid or minimize any potential adverse effects. In addition, future projects that have the potential to result in adverse effects on noise-sensitive federally or state-listed species will undergo consultation with the USFWS or DFG to ensure that they do not result in long-term adverse effects on these species. Thus, noise effects on sensitive wildlife species resulting from implementation of the GPA are expected to remain at less-than-significant levels.

Noise produced by long-term traffic and operational activities would be minimal and would occur mostly during less-sensitive daylight hours. This impact is less than significant.

**Land Use Compatibility.** Surrounding land uses are primarily recreational in nature. These land uses would have the same types of noise sources as the Addition consisting of dispersed recreationists, minor vehicle traffic, and minor maintenance and operational noise. These noise sources would be widely spread across large areas of land and would occur infrequently in places adjacent to sensitive receptors, and then only for short periods of time. Thus, no noise sources within the Addition would exceed

thresholds or cause disturbances in surrounding land uses and noise from surrounding land uses would not exceed thresholds or cause disturbances in the Addition. Thus, this impact is less than significant.

**Short and Long-Term Sources of Vibration.** Implementation of the GPA is not expected to include any major sources of vibration. However, construction activities could result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Using the Federal Transit Administration's (FTA) recommended procedure (FTA 2006: 12-11 to 12-13) for applying a propagation adjustment to these reference levels, predicted worst-case vibration levels would exceed 80 VdB (FTA's maximum-acceptable vibration standard with respect to human annoyance for sensitive uses) within 60 feet of vibration-sensitive receptors. It is not anticipated that sensitive receptors would be located adjacent to active construction projects. Thus this impact would be less than significant.

#### **4.6.10 PUBLIC SERVICES**

##### **INTRODUCTION**

This section analyzes noise impacts that would result from the implementation of the GPA.

##### **ENVIRONMENTAL SETTING**

The Mill Creek Addition is in a remote part of Del Norte County. Transportation to the nearest hospital, Sutter Coast Hospital, in Crescent City is approximately a 15–30 minute drive from the former mill site, and as much as a 1 hour drive from the more remote, backcountry areas of the Mill Creek Addition. No airstrips exist within or adjacent to the Mill Creek Addition. U.S. Coast Guard helicopters patrol the coastline on a regular basis.

State Parks maintains a network of service roads for use by fire suppression crews, ranger patrols, and for access to power lines traversing the park. The California

Department of Forestry and Fire Protection (CalFire) provides fire protection for the Mill Creek Addition. CalFire maintains fire stations in Crescent City, approximately 8 miles north of the property, and in Klamath, approximately 20 miles south of the property. The Cal-Fire Air Attack base is located in Rohnerville, approximately 50 air miles south of the Mill Creek Addition.

No schools exist within the Mill Creek Addition; however, the former mill site is used for environmental education activities associated with a local charter school. The nearest school is in Crescent City, approximately 8 miles away from the Mill Creek Addition.

### **THRESHOLDS**

The public services analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant impact related to public services if it would:

- ▶ Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, and other public facilities.

### **IMPACT ANALYSIS**

The GPA would allow the development of new facilities and site improvements that may generate the demand for additional fire protection, law enforcement, and emergency medical services.

Fire protection services within the Mill Creek Addition are provided by the California Department of Forestry and Fire Protection (CalFire); State Parks coordinates with the Crescent Fire Protection District located in Crescent City. Law enforcement within the Mill Creek Addition is provided by State Park rangers; in addition, State Parks coordinates with the Del Norte County Sheriff Department and California Highway Patrol for law enforcement services. Emergency medical services are provided by rangers and

by the fire districts under mutual aid agreements. Emergency ground and air transport services are also provided by Del Norte Ambulance and Cal-Ore for transport to larger hospitals in Eureka, Medford, or Redding. The nearest hospital with emergency services, Sutter Coast Hospital, is located in Crescent City, approximately 8 miles from the former mill site. The new facilities and site improvements proposed in the GPA may result in an increase in visitor use (i.e., temporary population), but would not result in a permanent population increase when compared to current conditions. This temporary population would not create new demand for schools. The GPA would result in the creation of new recreational facilities and would not result in increased demand on existing parks. The property's location makes it accessible to public services in the Crescent City vicinity.

Fire protection and emergency services and existing public services would not be adversely affected or will accommodate the small increase in demand for services, thus impacts to these services resulting from implementation of the GPA would be less than significant.

#### **4.6.11 RECREATION**

##### **INTRODUCTION**

This section analyzes potential impacts on recreation resources that could result from the implementation of the GPA.

##### **ENVIRONMENTAL SETTING**

The Mill Creek Addition added 25,000 acres to Del Norte Coast Redwoods State Park. The property is bordered by Jedediah Smith Redwoods State Park and portions of Redwood National Park to the north, Six Rivers National Forest to the east, private industrial timberlands to the south, and other portions of Del Norte Coast Redwoods State Park to the west.

The Mill Creek Addition offers many opportunities for public recreational use. The property has been open to the public on weekends since June 2007. Recreational opportunities currently available in the Mill Creek Addition include day-use activities,

such as hiking, mountain biking, fishing, and horseback riding. These activities utilize existing facilities (e.g., parking) and the existing road and trail network. A number of loops and one-way trails of varying lengths extend from the day-use parking area at the former mill site off of Hamilton Road. Buildings at the former mill site are used by State Parks as offices, equipment storage, maintenance sheds, a nursery, and a classroom for a charter school.

Current education and outreach programs offered on the property are provided during the summers only and include guided driving and biking tours of the Mill Creek watershed; astronomy events, such as viewing meteor showers and lunar eclipses, and exploring the solar system from vantage points in the park; one-time seasonal events, such as the Berry Fest, where the public is encouraged to share berry recipes, art, and local knowledge are also offered on occasion.

The recreation resource offered at Mill Creek compliment those available in the surrounding parks and public lands.

## **THRESHOLDS**

The recreation resource analysis uses criteria from the State CEQA Guidelines Appendix G. According to Appendix G, an impact on recreation resources would be significant if it would:

- ▶ Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- ▶ Include recreational facilities or require the construction or expansion of recreational facilities, which would have an adverse physical effect on the environment.

## **IMPACT ANALYSIS**

Implementation of the GPA would provide increased recreational resources and opportunities at the Mill Creek Addition. The GPA proposes the development of new and expanded recreational activities and associated facilities, including vehicle

campgrounds, backcountry campgrounds, equestrian campgrounds, cabins, trailheads, trails (hiking, biking, and equestrian), interpretive facilities, vistas, picnic areas, and fishing access.

Implementation of the GPA would ultimately result in the development of diverse camping opportunities to accommodate a variety of user interests. Facilities called out in the GPA include a vehicle-accessible campground, a walk-in/ride-in backcountry campground, equestrian-specific campgrounds, and alternative camping facilities (e.g., cabins).

Implementation of the GPA would also result in the development of numerous trailheads throughout the Mill Creek Addition. Trailheads would provide parking, and some would also provide restrooms, picnic tables, and kiosks with information about natural features and recreational facilities. Trailheads would provide access to destinations and natural features, such as vistas, waterfalls, and areas of ecological interest. Access to these features would be designed to guide the user experience in such a way that protects these important resources. Trailheads would also provide access to recreational facilities, including trails, backcountry environmental and equestrian campgrounds, and walk-in/ride-in cabins.

The GPA calls for the development of a Road and Trail Management Plan that would determine the trail network available in the Mill Creek Addition. The Road and Trail Management Plan would be complementary to the Draft Redwood National Park Trail Plan (NPS 2009, not published) to ensure regional connectivity. It would also address the opportunity for trail development in conjunction with road removal efforts by identifying roads that are suitable for road to trail conversion. Trails would provide recreational opportunities for hikers, mountain bikers, and equestrians. Motorized vehicles would not be permitted on any of the trails, but street-legal vehicles would be allowed on some designated roads. Additional roads will be available for driving only to administrative uses.

The GPA calls for the preparation of a Site Development Plan to evaluate and guide development of the former mill site. The GPA would develop separate public and

administrative facilities at the former mill site by locating the interpretive and lodging facilities on the west side of Mill Creek and park administrative and maintenance facilities on the east side of Mill Creek. The interpretive facility would feature indoor and outdoor exhibits, likely focusing on the logging history of the former mill site and the past, present, and future management of the Mill Creek Addition. The GPA also supports the development of lodging facilities (e.g., hostel, cabins) near the interpretive facility. Several of the existing buildings at the old mill site may be removed and the materials recovered may be used during construction of new facilities, and rehabilitation or reuse of remaining buildings. The GPA provides for an increase in recreational facilities available to the public. Management zone designation serves as a method to protect sensitive resources while providing recreation activities and visitor-serving facilities. Management zone designation can also restrict certain recreational activities. The GPA proposes the designation of two management zones, the frontcountry zone and the backcountry mechanized zone. Most of the recreational facilities to be developed would be located in the frontcountry zone, though the backcountry mechanized zone allows for the establishment of smaller recreational facilities such as small walk-in/ride in or equestrian campgrounds with water and composting or vault toilets, picnic areas, small interpretive kiosks, and trails. Planning zone designations associated with allowable visitor use and park development would guide and manage visitor use patterns in a manner that would not adversely impact park resources.

The establishment of buffer zones around sensitive resources is another tool used to manage potential impacts potentially resulting from increased recreational use of the site. The GPA calls for the establishment of buffer zones around old growth groves to protect habitat for the marbled murrelet and spotted owl. It also includes buffer zones around anadromous fish bearing streams to prevent adverse effects on water quality and fish habitat.

The GPA also calls for the tracking of visitor use and composition at the Mill Creek Addition. The results of visitor use and composition analysis would be used to locate, design, and develop facilities at an appropriate level to accommodate use and avoid adverse impacts to sensitive resources.

Finally, specific facilities development projects resulting from implementation of the GPA would be subject to additional project-level environmental review that would include site specific studies of sensitive resources and result in avoidance or minimization of impacts to these resources. Thus, the development of reaction facilities at the Mill Creek Addition would not result in an adverse physical effect on the environment.

## **4.6.12 TRANSPORTATION AND CIRCULATION**

### **INTRODUCTION**

This section analyzes transportation and circulation impacts that would result from the implementation of the GPA.

### **ENVIRONMENTAL SETTING**

The Mill Creek Addition is located in a remote portion of Del Norte County, approximately 8 miles south of Crescent City. The Mill Creek Addition does not include roads managed by jurisdictions other than State Parks (i.e., Del Norte County, Caltrans). There are no airports located within or adjacent to the Mill Creek Addition. The nearest airport is on the north end of Crescent City, approximately 15 miles north of the Mill Creek Addition. U.S. Highway 101 (U.S. 101) provides access to the Mill Creek Addition via Hamilton Road. Hamilton Road is a paved one lane road that travels approximately 2.5 miles from U.S. 101 to the former mill site. State Parks provides public access to the Mill Creek Addition on weekends via Hamilton Road. Visitor parking is provided at the former mill site and a several smaller pull outs along Hamilton Road. State Parks maintains a network of service roads at the Mill Creek Addition for administrative uses, such as resource management, fire suppression, ranger patrols, and access to power lines traversing the property.

A network of logging roads traverses the Mill Creek Addition. Deterioration of these roads and unstable log landings combined with natural erosion in steep canyons on the property has resulted in accelerated sediment delivery to stream channels in the Mill Creek and Rock Creek watersheds.

## **THRESHOLDS**

The transportation and circulation analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant impact related to transportation and circulation if it would:

- ▶ Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
- ▶ Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.
- ▶ Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- ▶ Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- ▶ Result in inadequate emergency access.
- ▶ Result in inadequate parking capacity.
- ▶ Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

## **IMPACT ANALYSIS**

Implementation of the GPA would be expected to increase traffic volume to and from the Mill Creek Addition compared to existing conditions that only allow weekend use; however, the GPA would allow roadway improvements to serve that traffic and would also even out traffic over an increased number of days once the Addition is open 7 days a week. Implementation of management actions in the GPA would ensure traffic safety and adequate roadway and parking capacity. The GPA also calls for the preparation of a Road and Trail Management Plan. The GPA would allow the development of new

recreation facilities and site improvements that may attract additional visitation, which could increase vehicular trips to and from the Mill Creek Addition and reduce roadway safety.

U.S. 101 provides access to Del Norte Coast Redwoods State Park in the vicinity of the Mill Creek Addition at two locations: Hamilton Road and Mill Creek Road. The GPA would allow the development of an improved single point of user entry and exit for Del Norte Coast Redwoods State Parks through the Mill Creek Addition at Hamilton Road. Development of a single point of user entry and exit would simplify visitor access to the Mill Creek Addition and may minimize unsafe traffic movement and extra trips on U.S. 101 associated with disoriented motorists (i.e., visitors spending excessive time on the roads looking for desired facilities). The improved site entry/exit at Hamilton Road would be detailed in the Road and Trail Management Plan, as called for in the GPA. Improvements to the intersection at U.S. 101 and Hamilton Road would be developed in coordination with Caltrans.

The Road and Trail Management Plan would identify a permanent road network within the Mill Creek Addition that would ensure long-term resource protection while meeting access needs for recreation, resource management, administrative programs, research, monitoring, and emergencies. The GPA would allow continuation of the road removal efforts currently underway. The GPA would allow improvements to Hamilton Road, Childs Hill Road, and Rock Creek Road to provide public access to the park's natural features and recreational facilities. Childs Hill Road and Rock Creek Road would be designed and maintained to primarily accommodate one-way vehicle traffic. Development of a one-way looped road system would provide for improved user safety and reduced maintenance requirements. Hamilton Road and portions of Childs Hill Road, as needed, would be designed and managed to accommodate two-way traffic. Some secondary roads would be improved and maintained for public vehicle access. Other existing roads would be removed, converted to trails, or maintained as administrative access roads.

Implementation of the Road and Trail Management Plan would ensure the roadways in the Mill Creek Addition would be designed to provide adequate access for emergency vehicles.

The GPA would allow the development of visitor parking facilities to accommodate increased public use of the Mill Creek Addition. Visitor parking facilities would be provided at the Hamilton Road entrance station, the former mill site, and at several day use areas and trailheads. Development of the parking facilities would be guided by the Road and Trail Management Plan and the former Mill Site Development Plan or guidelines.

Any improvements to roads and circulation made as a result of implementation of the GPA would better accommodate and manage existing and future uses, improving circulation and visitor safety and provide safe and adequate parking. As such, impacts on traffic and circulation resulting from implementation of the GPA would be less than significant.

#### **4.6.13 UTILITIES AND SERVICE SYSTEMS**

##### **INTRODUCTION**

No functioning infrastructure for potable water exists on the Mill Creek Addition. The water system that supplied the former mill site was abandoned by the former owner prior to acquisition of the property by State Parks. The water supply system, constructed around 1964, is in poor condition and nonoperational. The water supply system included a 1.5 million-gallon reservoir used for fire fighting and domestic water supply. When the water system was fully operational the reservoir was filled using water pumped from the confluence of the West Branch and East Fork of Mill Creek. Water was delivered from the reservoir to buildings at the mill site by gravity-flow through galvanized pipes. Water used in the buildings did not undergo any treatment to make it potable. The reservoir, pump house, and some distribution systems remain.

There is no functioning wastewater system on the Mill Creek Addition. The septic systems that serviced the buildings at the former mill site were dismantled, and the tanks were filled and buried prior to acquisition of the property by State Parks.

Groundwater in the park is relatively free of pollutants and considered very high quality because very few potential pollution sources exist. The groundwater table in the park fluctuates annually, depending on rainfall and seasonal temperatures. The groundwater table varies throughout the area because of the geological or topographical influences. Several groundwater test wells were drilled at the former mill site prior to acquisition by State Parks; however, none were found to produce. The area does not serve to recharge commercially available aquifers. There are no public water sources in the Mill Creek Addition.

The Mill Creek Addition receives electricity and telephone services from private providers. The above ground electrical and telephone services extend into the Mill Creek Addition from near U.S. Highway 101 to the former mill site along the Hamilton Road alignment. The Mill Creek Addition does not have a natural gas pipeline. Internet service is only available via dial up service using the telephone line.

A major transmission line that serves the community of Klamath was constructed along the western border of the Mill Creek Addition in 1993. The transmission corridor then continues along a north-trending ridge to a transfer station at the former mill site. Long-term management of the Mill Creek Addition must allow access to and maintenance of the transmission line in perpetuity.

## **THRESHOLDS**

The public services and utilities analysis uses criteria from the State CEQA Guidelines Appendix G. According to these criteria, implementation of the GPA would have a significant impact related to public services and utilities if it would:

- ▶ Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant

environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, and other public facilities.

- ▶ Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- ▶ Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- ▶ Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- ▶ Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.
- ▶ Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- ▶ Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Comply with federal, state, and local statutes and regulations related to solid waste.

### **IMPACT ANALYSIS**

The GPA would allow the development of new facilities and site improvements that would generate the demand for additional water, wastewater, electricity, propane/natural gas, solid waste, telephone, and internet services.

New water supply and water treatment, storage, and conveyance facilities would be needed for water service and would be built on site based on new demand associated with specific facility developments. The primary sources of water in the Mill Creek

Addition are groundwater and surface water. Surface water diversions would only be implemented if they would not adversely affect sensitive aquatic resources. State Parks does not draw from the creek or the reservoir for facility use at the former mill site. Groundwater test wells drilled at the mill site did not identify a useable groundwater source. New wells or surface water collection systems would be required to meet demand associated with specific facility developments. New development in the Mill Creek Addition would depend on the demonstrated availability of water supplies before facility design and construction may proceed.

New facilities would require onsite wastewater systems (e.g., septic system). Many of the soil types in the Mill Creek Addition are compatible with onsite wastewater systems. Sites that are suitable for onsite wastewater systems would be confirmed through geotechnical investigations. New development in the Mill Creek Addition must demonstrate site suitability for onsite wastewater systems before construction activities may proceed.

For electricity and telephone services, State Parks would continue to contract with private service providers (e.g., Pacific Power and Light). State Parks may explore internet service options with private providers, as necessary. For solid waste collection and disposal and road maintenance services, State Parks would provide the services or would contract with Del Norte County, or a private provider for services.

New water supply and wastewater system facilities and associated equipment would be needed to serve the future development within the Mill Creek Addition. Adverse environmental effects associated with new infrastructure and services are expected to be typical of the equipment and facility types. Sites for new infrastructure would be selected based on criteria established in this GPA and the RNSP GMP/GP that give preference to environmental compatibility and logistical convenience. If no sites within the Mill Creek Addition would meet the site selection criteria, State Parks may consider acquiring sites that are suitable to the proposed facilities development. Construction and operations of the equipment and facilities would be in compliance with state and federal rules and regulations, as well as management strategies and actions of this GPA. As

such, new infrastructure and services would be environmentally compatible with the resources within the Mill Creek Addition, and any degradation of environmental values would not be substantial. Environmental review for new development would be required. While the exact nature of the infrastructure and service needs would not be determined until the development proposals become available, any adverse effects would be mitigated to less-than-significant levels. This impact would thus be less than significant.

## **4.7 OTHER CEQA CONSIDERATIONS**

### **4.7.1 UNAVOIDABLE SIGNIFICANT EFFECTS ON THE ENVIRONMENT**

As discussed above, no unavoidable significant impacts would result from the adoption and implementation of this GPA.

### **4.7.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS**

No significant irreversible changes to the physical environment are anticipated from implementation of the GPA. Facility development, including development of structures, roads and trails, may be considered a long-term commitment of resources; however, the impacts potentially can be reversed, depending on the extent and type of habitat impacted, through removal of the facilities and discontinued access and use. The GPA does not propose new development in old growth stands or sensitive natural communities. Ongoing adverse effects on the environment, if any, should be monitored by staff through adaptive management and consideration of carrying capacity issues. State Parks staff remove, replace, or realign facilities, such as trails and campsites, where impacts have become unacceptable either from excessive use or from a change in environmental conditions.

The construction and operation of facilities may require the use of non-renewable resources. This impact is projected to be minor based on considerations of sustainable practices in site design, construction, maintenance, and operations that are generally practiced by State Parks. Sustainable principals used in design, construction, and management, such as the use of non-toxic materials and renewable resources,

resource conservation, recycling, and energy efficiency, emphasize environmental sensitivity.

### **4.7.3 GROWTH INDUCING IMPACTS**

Growth inducement itself is not an environmental effect, but may lead to environmental effects. Such environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or wildlife habitats, or conversion of agricultural and open space land to urban uses.

The GPA does not propose the development of any specific projects, so it would not have direct growth-inducing impacts. There could potentially be indirect growth-inducing impacts, however, because the GPA provides a framework for future development. The analysis of these indirect growth-inducing impacts for the GPA focuses on two main factors: (1) promotion of development and population growth, and (2) elimination of obstacles to growth.

Development of new recreational and interpretive facilities at the Mill Creek Addition would increase recreational opportunities and visitation capacity of the site. If visitation to the Mill Creek Addition increases, the demand for lodging, restaurants, and other tourism-related businesses and employment would also increase. The extent of such economic effects is unknown at this time, but could indirectly result in additional development in the region wherever permitted by established land use plans and zoning ordinances. All of the proposed facilities and the extension of the recreational facilities included in the GPA are consistent with the Goals and Actions stated in the Comprehensive Economic Development Strategy developed and adopted by the Del Norte County Board of Supervisors (Del Norte County 2006).

Additional staffing at the Mill Creek Addition to serve increased visitation may generate housing demand. However, the demand would not be substantial and would have minimal effect on overall growth in the region. Housing is available in the communities of Crescent City and Orick as well as in unincorporated area of the County.

Development of infrastructure is often cited as a way through which obstacles to growth are eliminated. Additional infrastructure may be developed for the purpose of serving new facilities in the Mill Creek Addition. The Department does not typically build infrastructure for the purpose of supporting growth, and infrastructure has not been proposed for the Mill Creek Addition. If development of infrastructure in the Mill Creek Addition is proposed, it would comply with current federal laws, State laws, LCP requirements, and subsequent environmental review would be required.

The potential to develop a lodge in the Addition presents the potential for the biggest increase in demand for employees and associated housing. Development of the lodge would be initiated through a feasibility study by any potential lodge proponent (a concession). Such a feasibility study would likely include an economic analysis to determine whether current trends in tourism and population growth in Del Norte County would support the long term viability of a lodge and associated concession.

#### **4.7.4 CUMULATIVE IMPACTS**

This EIR provides an analysis of cumulative impacts of the proposed GPA, as required in State CEQA Guidelines Section 15130. Cumulative impacts are defined in State CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from “the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time” (State CEQA Guidelines §15355[b]). By requiring an evaluation of cumulative impacts, CEQA attempts to ensure that large-scale environmental impacts will not be ignored.

To evaluate cumulative environmental impacts, other projects that could cumulatively contribute to the impacts described in this EIR need to be identified. Development along the Del Norte County Coast may contribute to cumulative impacts associated with the implementation of the GPA. Maximum development in these areas would be based on

the buildout of the Del Norte County Local Coastal Plan and the Del Norte County General Plan. However, most of the adjacent lands to the Mill Creek Addition are state or federally owned, such as Redwood National Park, the Smith River Recreation Area, and Jedediah Smith Redwoods State Park and these lands are generally considered conservation lands. Therefore, no cumulative effects from buildout of surrounding properties are anticipated.

As described above, the facility development and resource management efforts that may occur with the implementation of the GPA would not result in significant project-level environmental impacts. The management issues and actions in the GPA require management that would preserve, protect, restore, or otherwise minimize adverse effects related to biological resources, cultural resources, aesthetic quality of viewsheds, seismic hazards, water quality, etc. These management actions would also maintain the Mill Creek Addition's contribution to cumulative impacts to a less-than-significant level.

#### **4.8 ALTERNATIVES TO THE PROPOSED PROJECT**

The guiding principles for the analysis of alternatives in this EIR are provided by the State CEQA Guidelines Section 15126.6, which indicates that the alternatives analysis must: (1) describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project; (2) consider alternatives that could reduce or eliminate any significant environmental impacts of the proposed project, including alternatives that may be more costly or could otherwise impede the project's objectives; and (3) evaluate the comparative merits of the alternatives. The State CEQA Guidelines Section 15126.6(d) permits the evaluation of alternatives to be conducted in less detail than is done for the proposed project. A description of the project alternatives, including the No Project Alternative, is provided in this EIR to allow for a meaningful evaluation, analysis, and comparison of these alternatives with the Proposed Project Alternative, which is the GPA as described in Chapter 3.

## **4.8.1 ALTERNATIVES**

An important consideration in the development of the GPA was the purpose of the original acquisition of the Mill Creek Addition to protect and restore the property's ecological values, enhance regional habitat connectivity between state and federal conservation areas, and provide opportunities for appropriate and compatible public recreational use. The continued restoration and protection of the natural and cultural resources in the Mill Creek Addition is an element that is common to all alternatives. Five alternatives, including the Proposed Project Alternative, were considered during the development of the GPA. The alternatives differ in the level of public access and facilities development in the Mill Creek Addition.

### **ALTERNATIVE 1: LOW LEVEL ACCESS AND DEVELOPMENT**

#### **Description**

Under this alternative, minimal facilities development and limited public access would be included in the GPA. Expansions and improvements to existing facilities would occur, if physically possible and environmentally suitable. Under this alternative, some existing facilities would be improved and expanded to provide additional services that meet the needs of visitation increases. The existing entry booth would be improved and expanded to include a small interpretive facility. The existing nursery would be improved and expanded to accommodate ongoing restoration needs. Existing buildings at the former mill site would be improved to provide seasonal staff housing and maintenance facilities. Administrative offices would be accommodated at an off-site location. Similar to the preferred alternative, unnecessary existing facilities at the former mill site would be removed. Under this alternative, minor new facilities including signage, trailheads, day use area, and equestrian backcountry campground, would be developed on existing open space. Improvements to Hamilton Road would be made to the intersection with West Branch Road to provide public access to the park's natural features and recreational facilities. Childs Hill Road, Rock Creek Road, and some secondary roads would be designed and maintained as administrative access roads. Public use of administrative access roads would be limited to non-vehicular access. Trailheads would be developed at the former mill site, Picnic Road, West Branch Road, and the existing

Mill Creek Campground. Day use facilities would be developed at the West Branch Road trailhead. An equestrian backcountry campground would be developed in the southern portion of the Mill Creek Addition. Three trail segments within the Mill Creek Addition were identified as possible linkages to Redwood National Park. Conceptual alignments for these trail segments are included under this alternative. Otherwise, no new trails, campgrounds, alternative overnight facilities, interpretive center, vistas, or lodge would be developed. Management actions for resource protection and recreation and safety enhancement would be required similar to that required under the Proposed Project Alternative.

## **Evaluation**

Under this alternative, expansion of existing facilities and construction of new facilities would be limited when compared with the propose alternative. Thus, the capacity to accommodated additional visitors (i.e., campgrounds, trails, interpretive facilities, office space for staff etc.) would also be limited. As such, the potential for overuse of existing facilities and the related environmental effects (e.g., trail erosion) is greater than under the other alternatives. Under the low level access and development alternative, less open space would be developed, thus minimizing potential disturbances to wildlife and other environmental incompatibilities in currently undeveloped areas of the Mill Creek Addition when compared with the preferred alternative. Access to the backcountry and areas of ecological interest would be limited to those willing and able to hike or bike long distances.

## **ALTERNATIVE 2: MODERATE LEVEL ACCESS AND DEVELOPMENT**

### **Description**

Under this alternative, moderate facilities development and public access would be included in the GPA. Expansions and improvements to existing facilities would occur, if physically possible and environmentally suitable. Some existing facilities would be improved and expanded to provide additional services that meet the needs of visitation increases. The existing entry booth would be improved and expanded to accommodate the use of Hamilton Road as a primary point of entry/exit for the park; however, Mill

Creek Road would be maintained as a campground exit road. The existing nursery would be improved and expanded to accommodate ongoing restoration needs. Existing buildings at the former mill site would be improved and expanded to provide an interpretive center, administrative offices, seasonal staff housing and maintenance facilities. Similar to the preferred alternative, unnecessary existing facilities at the former mill site would be removed. Improvements to Hamilton Road, Childs Hill Road, Rock Creek Road, and some secondary roads would be made to provide public access to the park's natural features and recreational facilities. Childs Hill Road would be improved to the intersection with Boulder Ave. Rock Creek Road would be improved to provide a one-way loop route that would utilize a secondary crossover road from Childs Hill Road. Portions of Childs Hill Road, Rock Creek Road, and some secondary roads would be designed and maintained as administrative access roads. Public use of administrative access roads will be limited to non-vehicular access.

Under this alternative, several new facilities, including signage, a road, trailheads, day use areas, campgrounds, cabins, vistas, and a lodge, would be developed on existing open space. A new road would be built to access the Mill Creek campground from Hamilton Road. Eight trailheads would be developed along Hamilton Road, Childs Hill Road, and Rock Creek Road. Day use facilities would be developed at the West Branch Road trailhead, and at a new vehicle accessible campground to be developed in the vicinity of the intersection of Childs Hill Road and Boulder Ave, near the eastern edge of the park. An equestrian backcountry campground would be developed in the southern portion of the Mill Creek Addition. Cabins would be developed at seven locations in the central portion of the Mill Creek Addition. Overlooks would be developed in seven locations in the central portion of the Mill Creek Addition. A feasibility study for the development and operation of a small destination lodge by a concessionaire within the Mill Creek Addition would be supported under this alternative. Three trail segments within the Mill Creek Addition were identified as possible linkages to Redwood National Park. Conceptual alignments for these trail segments are included. Otherwise, no new trails would be developed. Management actions for resource protection and recreation and safety enhancement would be required similar to that required under the Proposed Project Alternative.

## **Evaluation**

The types of new facilities proposed under the moderate access and development alternative are similar to those proposed under the preferred alternative, though they would be slightly few in number, especially in the backcountry, as this alternative would not allow public vehicular access to the larger loop of Childs Hill and Rock Creek road. Facilities developed in the Addition would be similar, though smaller in nature. Under this alternative, the distribution of impacts may be slightly lower because less development would occur in the backcountry and the scale of development would be slightly smaller. However, the impacts mechanism and intensity during construction would be similar to the preferred alternative in those areas where construction would occur. In addition, there would be fewer day use areas and cabin site available, slightly limiting the number of visitor that could be accommodated. Overall, the impacts would be similar under the moderate access and development alternative as the preferred alternative, although no significant impacts would result under either alternative.

## **ALTERNATIVE 3: HIGH LEVEL ACCESS AND DEVELOPMENT**

### **Description**

Under this alternative, a high level of facilities development and public access would be included in the GPA. Some existing facilities would be improved and expanded in order to provide additional services that meet the needs of visitation increases. The existing entry booth would be improved and expanded to accommodate the use of Hamilton Road as a new single point of entry/exit for the park. The existing nursery would be improved and expanded to accommodate ongoing restoration needs. Existing buildings at the former mill site would be improved and expanded to provide an interpretive center, administrative offices, seasonal staff housing and maintenance facilities. Similar to the preferred alternative, unnecessary existing facilities at the former mill site would be removed. Road improvements would be the same as under the Preferred Alternative.

Several new facilities, including signage, a road, trailheads, day use areas, campgrounds, cabins, vistas, and a lodge, would be developed on existing open space

in the High Level Access and Development Alternative. A new road would be built to access the Mill Creek campground from Hamilton Road. Mill Creek Road would be retained for administrative and emergency use. Ten trailheads would be developed along Hamilton Road, Childs Hill Road, and Rock Creek Road. Day use facilities would be developed at the West Branch Road trailhead, and at a new vehicle accessible campground to be developed in the vicinity of the intersection of Upper Childs Hill Road and Boulder Ave, near the eastern edge of the park. An equestrian backcountry campground and a walk-in/ride-in campground (i.e., environmental campground) would be developed in the southern portion of the Mill Creek Addition. Cabins would be developed at ten locations throughout the Mill Creek Addition. Overlooks would be developed in seven locations throughout the Mill Creek Addition. Three trail segments within the Mill Creek Addition were identified as possible linkages to Redwood National Park. Conceptual alignments for these trail segments are included under this alternative. Otherwise, no new trails would be developed. Management actions for resource protection and recreation and safety enhancement would be required similar to that required under the preferred alternative.

## **Evaluation**

The high level access and development alternative is very similar to the preferred alternative in the level and distribution of proposed facilities and improvement. Thus, the level and intensity of any impacts is expected to be very similar, though impact would remain less than significant under both alternatives. The high level access and development alternative differs from the preferred alternative in that it does not include the feasibility study for the lodge and it also does not include the drive in equestrian campground near the former Mill Site. Thus, site specific impacts under the high level access and development alternative could be slightly lower than under the preferred alternative, as these two elements would not be included in the GPA.

## **ALTERNATIVE 4: NO PROJECT**

### **Description**

The California Environmental Quality Act requires an evaluation of the “no project” alternative and its impact (CEQA Guidelines §15126.6[e][1]). The No Project Alternative represents continuation of existing management actions, and its the analysis is based on the physical conditions that are likely to occur in the future if the project (the proposed GPA) is not approved and implemented. The purpose of describing and analyzing the No Project Alternative is to allow decision-makers to compare the impacts of approving the proposed GPA with the expected impacts of not approving the GPA. Without a GPA for the Mill Creek Addition, it is assumed that the existing patterns of operation and management would continue under this alternative and no major recreational or operational facilities would be developed. Visitation increases would be somewhat smaller than under the Proposed Project due to less recreational opportunities and visitation capacity under this alternative and the fact that the site would remain open only on weekends. However, overall use would still be expected to increase as the state-wide and regional populations grow.

### **Evaluation**

Under this alternative, State Parks would need to accommodate additional visitation with the current facilities or divert visitors to surrounding parks during weekdays. Existing adverse environmental conditions associated with existing facilities (e.g., traffic safety) may not be remedied unless required by law or regulation. Management plans and improvement associated with the preferred alternative (e.g., former Mill Site Development Plan or guidelines, Vegetation Management Plan or guidelines, Road and Trail Management Plan) would not occur. Unique and important cultural resources and sensitive and listed biological resources may not be afforded additional protection and restoration except as required by laws and regulations. Compared to the preferred alternative, this alternative would result in less of an impact related to construction air quality, traffic noise, and water supply because no new facilities would be constructed. This alternative could result in greater impacts related to traffic safety, biological resources, cultural resources, and water quality because no additional facilities to

handle increased visitor demand would be available and some of the site improvements facilitated by the preferred alternative such as asphalt removal at the former mill site and provision of visitor accommodating facilities would not occur. Therefore, the No Project Alternative may result in potentially significant impacts to these resources.

#### **4.8.2 IDENTIFICATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

State CEQA Guidelines §15126(d) (2) state that if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. Alternatives considered in this DEIR include the preferred alternative (the proposed GPA), the low access and development alternative, the moderate access and development alternative, the high level access and development alternative, and the No Project Alternative.

Under all five alternatives, increased visitation at the Mill Creek Addition would generate demand for additional facility capacities, although increase would occur at different rates for different alternatives. The limitations to facility improvements and expansions would be greatest under the No Project Alternative, followed by the low level access and development alternative, the moderate level access and development alternative, the high level access and development alternative, and finally the proposed alternative. Because the actual number of facilities developed or the amount of facility expansion under each of the alternatives cannot be determined, the extent of environmental impacts related to demolition, construction, and operational activities cannot be assessed at this time and cannot be differentiated among the alternatives. However, the nature of potential environmental impacts are known and are described above under each of the environmental topics in this chapter, and the GPA actions, when implemented in conjunction with the GMP/GP actions would render all impacts to less-than-significant level.

The preferred alternative is the environmentally superior alternative of the alternatives considered. The preferred alternative would provide for the best balance between preservation and use of natural, cultural, and recreational resources at the Mill Creek Addition by allowing most flexibility for facility improvement, redevelopment, and

relocation. For example, if existing adverse environmental conditions cannot be adequately remedied at existing sites in light of increasing visitation and usage in the future or if additional facilities must be developed to meet visitor demand and avoid overuse of existing facilities, the preferred alternative would allow a larger number of potential sites to be considered for development. Thus, the potential for selecting the most optimum sites, in consideration of minimizing environmental impacts, may be chosen.

# Chapter 5

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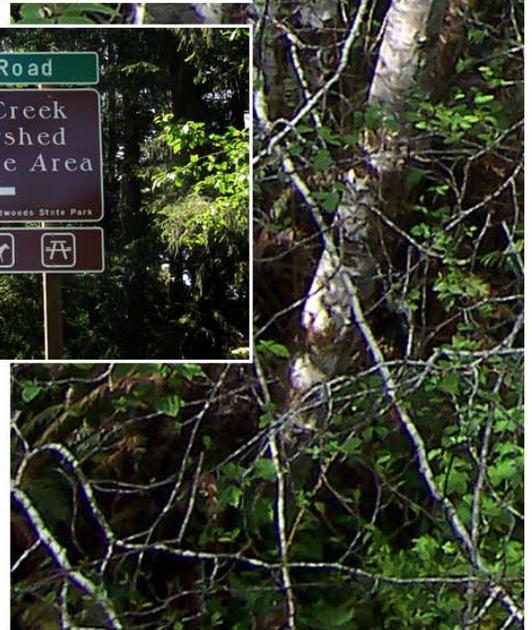
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# Chapter 6

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View from the summit of Child's Hill: Source: EDAW 2008

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