DRAFT

INITIAL STUDY
MITIGATED NEGATIVE DECLARATION

MILL CREEK ACQUISITION
FOREST ECOSYSTEM RESTORATION and
PROTECTION PROJECT

June, 2006

State of California
DEPARTMENT OF PARKS AND RECREATION

MITIGATED NEGATIVE DECLARATION

PROJECT: Mill Creek Acquisition
Forest Ecosystem Restoration and Protection Project

LEAD AGENCY: California Department of Parks and Recreation

AVAILABILITY OF DOCUMENTS:
This Initial Study/Mitigated Negative Declaration is available for review at:

California Department of Parks & Recreation
Northern Service Center
One Capitol Mall - Suite 410
Sacramento, California 95814

California Department of Parks & Recreation
North Coast Redwoods District
3431 Fort Avenue
Eureka, California 95503

Del Norte County Library
190 Price Mall
Crescent City, CA 95531

Department of Parks and Recreation website
http://www.parks.ca.gov/default.asp?page_id=981

PROJECT DESCRIPTION:
DPR proposes to make the improvements described herein to the Mill Creek Acquisition (MCA) watersheds located within Del Norte Coast Redwoods State Park. The purpose of these improvements is to help meet the primary goal of the acquisition, which is the restoration of late-successional forest characteristics by removing the underlying causes of poor forest health associated with high tree densities established by the former management system. The following is a summary of the planned improvements:

Forest Restoration – Young (average stand age <25 years), unnaturally dense forest plantations would be thinned (using chainsaws) to (a) maintain the growth of desirable trees and (b) adjust stand structure and species composition to conditions that resemble historical, old-growth forests for the area. Thinning prescriptions would be tailored to meet both interim and long-term objectives related to enhancing wildlife habitat, natural forest processes and aesthetic values. Thinning would occur on a maximum of 1,418 ha (3,503 ac) and would be coordinated with ongoing road-decommissioning projects. Retained trees would be spaced using a variety of patterns (i.e. random, dispersed, aggregated) and target densities (i.e. 30-80 trees per hectare [75 – 200 trees per acre]) reflecting specific project objectives and future access. Prescriptions would be modified when necessary to protect sensitive resources such as rare plants, wetland habitats and mass wasting areas. Riparian prescriptions have been designed to maintain or enhance desired cold water environments for the benefit of fish and wildlife. Felled trees would be removed within at least 15 m (50 ft.) of drivable roads (that are not to be removed) to mitigate the short-term fire risk.

A copy of the Initial Study is incorporated into this Mitigated Negative Declaration. Questions or comments regarding this Initial Study/Mitigated Negative Declaration may be addressed to:

John E. Harris
California Department of Parks & Recreation
North Coast Redwoods District
P.O. Box 2006
Eureka, CA 95502-2006

Pursuant to Section 21082.1 of the California Environmental Quality Act, the California Department of Parks and Recreation (DPR) has independently reviewed and analyzed the Initial Study and Negative Declaration for the proposed project and finds that these documents reflect the independent judgment of DPR.

John E. Harris Date
District Environmental Coordinator

DPR, as lead agency, also confirms that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Negative Declaration.

Steve Horvitz Date
Superintendent, North Coast Redwoods District

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CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Mill Creek Forest Ecosystem Restoration and Protection Project (FERPP) at the Mill Creek Acquisition (MCA), Del Norte Coast Redwoods State Park, Del Norte County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq*., and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq*.

An Initial Study is conducted by a lead agency to determine if a proposed project may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the projects or proposals made by or agreed to by the applicant [or the lead agency itself] mitigate the potentially significant effects to a less-than-significant level, a Mitigated Negative Declaration (MND) may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

1.2 LEAD AGENCY

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines §15051(b)(1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is DPR. The contact person for the lead agency is:

John E. Harris Senior Environmental Scientist North Coast Redwoods District 3431 Fort Avenue Eureka, California 95503 Phone: (707) 445-6547 x-19 Or P.O. Box 2006 Eureka, California 95502	Lathrop Leonard Forest Ecologist California Department of Parks and Recreation Redwoods Coast Sector 1111 Second St Crescent City, California 95531 Phone: (707) 464-6101 ext 5115

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed Mill Creek Forest Ecosystem Restoration and Protection Project in the MCA. Mitigation measures have also been incorporated into the project to eliminate any potentially significant adverse impacts or reduce them to a less-than-significant level.

This document is organized as follows:

Chapter 1 - Introduction

This chapter provides an introduction to the project and describes the purpose and organization of this document.

Chapter 2 - Project Description

This chapter describes the reasons for the project, scope of the project, and project objectives.

Chapter 3 - Environmental Setting, Impacts, and Mitigation Measures

This chapter identifies potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the significance of potential impacts identified in the CEQA Environmental Checklist. Mitigation measures are incorporated, where appropriate, to reduce potentially significant impacts to a less than significant level.

Chapter 4 – Mandatory Findings of Significance

This chapter identifies and summarizes the overall significance of any potential impacts to natural and cultural resources, cumulative impacts and impacts to humans, as identified in the Initial Study.

Chapter 5 - Summary of Mitigation Measures

This chapter summarizes the mitigation measures incorporated into the project as a result of the Initial Study.

Chapter 6 - References

This chapter identifies the references and sources used in the preparation of this IS/MND, and includes a list of report preparers.

1.4 SUMMARY OF FINDINGS

Chapter 3 of this document contains the Environmental Checklist that identifies the potential environmental impacts (by environmental issue) and a brief discussion of each impact resulting from implementation of the proposed project. Based on the Environmental Checklist and the supporting environmental analysis provided in this document, the proposed Mill Creek FERPP at the MCA will result in less than significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems, and cumulative impacts.

In accordance with §15064(f) of the CEQA Guidelines, a MND shall be prepared if the proposed project will not have a significant effect on the environment after the inclusion of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project will have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted in accordance with the CEQA Guidelines.

Chapter 2

Project Description

2.1 Summary of Findings

This IS/MND evaluates the environmental effects of the proposed Forest Ecosystem Restoration and Protection Project. This project will thin approximately 1,418 ha (3,503 ac) of 11- to 24-year old forests over the next 5 years. The stands to be thinned have much higher than natural tree densities and a far greater proportion of Douglas-fir trees than under historic conditions. The proposed restoration activities will promote forest health and accelerate the development of the old-growth conditions that were present before European settlement in the area. The failure to act quickly in these areas will inhibit the ability of these areas to develop late-successional forest characteristics in a timely manner. The stands are spread throughout the MCA and are part of the Mill Creek, Rock Creek, Wilson Creek, Hunter Creek and Turwar Creek Watersheds. The activities under this proposal will incorporate the best available science and use adaptive management to learn from earlier management actions and improve the effectiveness and efficiency of future projects.

2.2 Project Location

The Mill Creek Acquisition is part of Del Norte Coast Redwoods State Park and is located in the coastal mountains of northwestern Del Norte County, approximately 8 km (5 mi) southeast of Crescent City. The project will incorporate work sites spread throughout the 10,118 ha (25,000 ac) MCA. Highway 101 runs along the western edge of the present park boundary. The MCA is within the North Coast Redwoods District (NCRD) of California State Parks (Appendix A, Figure 1).

The proposed work will take place in Rock Creek and Mill Creek watersheds, which drain into the Smith River; Wilson Creek watershed, which drains into the Pacific Ocean; and Hunter Creek and Turwar Creek watersheds, which drain into the Klamath River (Appendix A, Figure 2). The legal description for the project area is (T 15 N, R 1 W, Section 1; T 15 N, R 1 E Sections 1, 2, 3, 4, 5, 6, 7,8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 35, 36; T 15 N, R 2 E, Sections 7, 18, 19, 30, 31; T 16 N, R 1 W, Section 36; and T 16 N, R 1 E, Sections 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, Humboldt Meridian) USGS 7.5' Child's Hill, CA and Hiouchi, CA quadrangles. Access to the proposed action from Eureka is via Highway 101 north. The main access to the MCA, Hamilton Road, is located 3 km (2 mi) north of the Mill Creek Campground on Highway 101. Due to safety concerns, the property is currently accessible to the public only via prior arrangement. The access roads within the MCA are closed seasonally and may not be drivable during winter due to wet and muddy road surfaces.

2.3 Background and Need for the Project

The Mill Creek property has experienced logging operations since the early part of the 20th century and was intensively managed for timber production from the 1950's until the Save-the-Redwoods League facilitated the property's transfer to DPR in June of 2002. By that time almost the entire property had been converted from old-growth to young coniferous forests. There are about 40 ha (100 ac) of old-growth redwood and Douglas-fir forests that remain in the MCA today. The State's primary goal for the forested areas is to accelerate the restoration of late-successional characteristics to the second-growth forests.

Shortly after the property transfer, Save the Redwoods league contacted Stillwater Sciences to develop an interim management recommendations report (IMR) that would synthesize existing information and provide management recommendations to DPR for maintaining MCA lands and improving degraded habitat. The IMR identified 567 ha (14,000 ac) of forested land that was likely to have the highest need for attention to promote late-successional forest characteristics and reduce fire danger. The IMR also helped identify the 11-20 year old age class of unthinned forests as likely to have the highest need for restoration work to allow late-successional characteristics to develop rapidly and maintain forest health. While the IMR was a good starting point, it was limited by the lack of information about the current condition of individual stands. As a result, perhaps the most important recommendation to emerge from the IMR was to survey the conditions of stands within the MCA in order to prioritize areas for restoration and determine the scope of the restoration needs.

Two approaches were initiated to document the current conditions of the MCA and prioritize restoration needs. One approach was to use satellite imagery to classify vegetation cover types for the entire MCA. Dr. Larry Fox, a Remote Sensing Consultant and professor at Humboldt State University, was contracted to combine a spectral analysis of IKONOS satellite imagery taken in 2003 with ground survey plots to illustrate the relative abundance and canopy closure of various hardwoods, conifers and other vegetation throughout the MCA. This approach was effective in providing the general condition of all parts of the MCA in a timely manner. Maps generated by this project are currently being used to help identify areas that lack their historic species composition.

The second approach was to inventory the current conditions of the forests within the acquisition using industry standard field surveys. Phase 1 of the inventory was to focus on the 10-20 year old unthinned stands identified in the IMR as high priority for restoration. Early reconnaissance of young stands convinced managers to increase the age of the stands surveyed to 11-24 years due to the slow growth rates occurring on some of the lower quality sites. Over 1,100 points were systematically placed over all 11-24 year stands >4 ha (10 ac) for a total of 2005 ha (4,954 ac) surveyed. All points were surveyed using variable and fixed radius plots and initial data analysis is complete.

Survey results of trees over 4 cm (1.5”) diameter at breast height (dbh) show that 62 stands totaling 1,418 ha (3,503 ac) have over 202 trees per hectare (tph) (500 trees per acre [tpa]) and 261 of those ha (644 ac) have more than 405 tph (1,000 tpa). Old-growth redwood forests by comparison average around 13 tph (32 tpa) (Guisti 2004). The trees in stands with over 202 tph (500 tpa) have (or will shortly) form closed canopies and will lose a large portion of their crown foliage to shading from neighboring trees. As the crowns of these trees shrink so does their ability to grow quickly even if more resources are made available by removing competing vegetation. Untreated stands may even stagnate and forest health could be compromised. By failing to manage these forests immediately, managers may slow the growth of all trees and delay the development of late-successional conditions by decades. This project proposes to reduce tree densities within the 1,418 ha (3,503 ac) of forest that survey results show has more than 202 tph (500 tpa).

In addition to having too many trees, most stands currently have a different mix of tree species than existed historically. In many areas 80% of the trees were redwoods. Survey results show that only 115 ha (284 ac) of the 11-24 year old stands are made up of more than 50% redwood trees, and the most common tree species is Douglas-fir. Because Douglas-firs are fast–growing, long-lived trees, failing to act would prevent the historical species mix from occurring for centuries.

A prioritization matrix was created using the survey results to determine which of the 62 stands have the greatest need for treatment. Each stand was given a score based on four criteria: 1) how common the most common tree species is; 2) the number of trees per acre; 3) the percentage of trees that are redwoods; and 4) the average live-crown ratio of Douglas-firs within the stand. Stands with a large number of trees per acre, a low percentage of redwoods, a low live-crown ratio and were dominated by a single species were given the highest scores, and are considered a higher priority for thinning than those stands with low scores.

A map showing all stands and their priority ranking was then overlaid with the road decommissioning schedule for the MCA (CA Dept Parks and Rec 2005) (Appendix A, Figure 2). Stands were then chosen for thinning based on if and when access would become more difficult, how much access would be affected, the number of trees per hectare within each stand and the stand's ranking within the priority matrix.

2.4 PROJECT OBJECTIVES

The primary objective of the proposed project is to protect Park resources by promoting forest health and to accelerate the development of old forest characteristics (late successional) in formerly harvested stands. Within this framework there are four major objectives:

- Release trees in young stands to allow for vigorous growth and progression towards late-successional forest habitat
- Adjust species composition to promote historic species mix
- Reduce the short term fire risk generated by restoration activities
- Protect rare habitats within the MCA

2.5 PROJECT DESCRIPTION

Variable Density Thinning

The proposed prescriptions will use variable density thinning as the primary tool for expediting the creation of late successional forest characteristics and promote historic species composition. Variable density thinning encourages natural forest development by promoting uneven spacing between trees (Carey 2003, Carey et al. 1999). The prescriptions for this project will create widely spaced trees (as compared to traditional thins) in pockets scattered throughout the stand. The trees selected to remain within these wide spaces will be the larger, healthier trees and tree species that are underrepresented in the stand. The extra space created between selected trees will reduce competition and free up additional light, nutrients and water for remaining trees. Trees with less competition can then attain fuller crowns, grow larger with more complex structures over a shorter period of time, and develop larger branches without losing the lower branches to shading.

The wide spacing will also prevent or delay the stand from entering the stem exclusion (or competitive exclusion) stage of stand development. This stage is characterized by low levels of biodiversity within the stand and slowed progress towards the development of late successional characteristics (Franklin et al. 2002, Oliver and Larson 1996). Wide spacing also encourages the establishment of subdominant conifers (adding habitat and complexity to the mid canopy) and the retention of understory plants (providing habitat and food for additional organisms) as seen in old-growth.

Interspersed among the areas with fewer trees will be clumps where higher tree densities will be retained. High density areas will add to the heterogeneity of tree spacing and increase the

complexity of the forest as a whole. Trees in the clumps will grow more slowly, thereby adding to the variety of tree sizes within a stand. The tree clumps will also allow us to retain more trees which will provide more options for future management.

Multiple Objectives

Other thinning prescriptions (i.e. thinning from below or thinning for spacing) may be used to achieve multiple objectives. For example uniform, light thinnings may be used when maintaining dense canopy cover to discourage exotic plant establishment, protect sensitive habitats or reduce the visual impact of a project on scenic vistas. Alternate prescriptions may in some cases better facilitate moving stands towards their historic species composition.

A Conservative Approach

Old growth forests in the redwood region vary greatly in structure, but generally have between 8 and 61 tph (20 and 150 tpa) in the upper canopy (Dagley and O'Hara 2003), and average around 13 tph (32 tpa) >20 cm (8") dbh (Guisti 2004). Our prescriptions will take a conservative approach and generally leave at least 40 – 81 tph (100 – 200 tpa) but never fewer than 30 tph (75 tpa). By retaining more trees than are often present in the overstory, healthy forest growth is more likely to continue if a stand experiences high mortality due to bear damage, wind storms or other random, natural events. Extra trees can also be used to create snags and course woody debris once the trees are of appropriate size. Most trees within stands to be treated are <25 cm (10") dbh and are therefore not yet large enough to become snags or logs that would significantly enhance wildlife habitat. A fundamental goal of our proposed prescriptions is to grow large trees quickly. All prescriptions therefore will prohibit cutting trees 30 cm (12") dbh and greater.

Adaptive Management

The scientific literature is sufficient for us to proceed with confidence that our prescriptions will aid the forests in developing late successional characteristics more quickly than if we took no action. But the literature is not complete. We must remain flexible so that our prescriptions can change in response to new information that may become available through scientific research. We will also learn through the process of carrying out the prescriptions and monitoring the results. Prescriptions are likely to change over time as we evaluate the effectiveness and efficiency of earlier thinning operations.

2.6 PROJECT IMPLEMENTATION

Thinning operations will be carried out by crews using chain saws. The majority of the work will generally be scheduled for the drier months, but work may carry on as conditions allow. All vehicles will be restricted to maintained roads.

Trees and other vegetation cut from within 15 – 46 m (50 – 150') of roads that will remain drivable will be chipped, piled and burned or removed from this strip to reduce fire danger. No heavy equipment will be allowed off of existing roads, but winches may be used to pull trees (whole trees to minimize disturbance) to roads for chipping or burning. All management activities will be coordinated with road decommissioning work to avoid overlap and promote worker safety.

2.7 VISITATION TO THE MILL CREEK ACQUISITION

Public access to the MCA is restricted due to safety concerns with the road system and abandoned industrial buildings, a lack of facilities to accommodate visitors, and the limited availability of rangers and visitor services staff. The Department's long-term goals for the property include obtaining funding to develop facilities, and increase staffing to expand public access. Further planning and implementation of these goals will be dependent upon the findings of a (yet to be completed) General Plan amendment. Visitation is currently allowed by guided tour and for approved research and resource management purposes.

2.8 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The proposed Forest Ecosystem Restoration and Protection Project at the Mill Creek Acquisition is consistent with local plans and policies. The implementation of this project is consistent with other projects conducted or planned by the County of Del Norte, Six Rivers National Forest, and Redwood National and State Parks. See Chapter 3, Section IX, Land Use and Planning, for a complete discussion of local plans and polices.

2.9 DISCRETIONARY APPROVALS

DPR has approval authority for the proposed FERPP at the Mill Creek Acquisition. The U.S. Fish and Wildlife Service (USFWS) will review the planned project sites with regard to the northern spotted owl and both the USFWS and the California Department of Fish & Game (DFG) will be consulted with regarding the marbled murrelet. Prior to operations, a letter of Technical Assistance will be obtained from the USFWS and/or a consultation from the DFG, identifying any temporal or spatial operating restrictions to avoid impacting these species.

2.10 RELATED PROJECTS

DPR has conducted two small-scale forest restoration pilot projects within the MCA. Both were very similar to the work proposed here, except the scale of this project is larger. In 2003 three stands totaling 40 ha (100 ac) were thinned and 12 adjacent ha (30 ac) were left unthinned to provide a control for comparative growth measurements. In 2004 work began on 9 stands totaling 166 ha (409 ac) and as before control areas were retained. Work was completed on the 2004 project in August 2005. Both were considered pilot projects that helped identify the implementation challenges and line item costs used to prepare this proposed project.

DPR plans to remove/recontour approximately 150 km (93 mi) of undriveable and erosive logging roads within the MCA to prevent future catastrophic erosion and improve wildlife habitat and the aesthetic quality of the acquisition. Implementation of the six year Landscape Stabilization and Erosion Prevention Plan (LSEPP) (CA Dept Parks and Rec 2005) that addresses this road removal will be coordinated with this project so that existing roads may be used to access priority stands before they are removed.

As part of the LSEPP conifers will be planted along some of the stream crossings that are being rehabilitated. Other conifers may be planted in riparian areas that were historically dominated by conifers, but were converted to hardwood stands during previous logging operation. A nursery will be established within the MCA to raise native plant material to support these projects.

CHAPTER 3
ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION	
1. Project Title:	Forest Ecosystem Restoration and Protection Project
2. Lead Agency Name & Address:	California Department of Parks and Recreation 1416 Ninth Street P.O. Box 942896 Sacramento, CA 94296-0001
3. Contact Person & Phone Number:	John E. Harris (707) 445-6447 x-19 or (fax) 441-5737
4. Project Location:	MILL CREEK ACQUISITION, Del Norte Coast Redwoods State Park
5. Project Sponsor Name & Address:	California Department of Parks & Recreation North Coast Redwoods District 3431 Fort Ave. Eureka, California 95503
6. General Plan Designation:	New Acquisition
7. Zoning:	Federal and State Land(Del Norte County – General Plan)

8. Description of Project:

DPR proposes to make the improvements described herein to the Mill Creek Acquisition (MCA). The following is a summary of the planned improvements:

Forest Restoration – Young (average stand age <25 years), unnaturally dense forest plantations would be thinned (using chainsaws) to (a) maintain the growth of desirable trees and (b) adjust stand structure and species composition to accelerate the development of conditions that resemble historical, old-growth forests for the area. Thinning prescriptions would be tailored to meet both interim and long-term objectives related to enhancing wildlife habitat, natural forest processes and aesthetic values. Thinning would occur on a maximum of 1,418 ha (3,503 ac) and would be coordinated with ongoing road-decommissioning projects. Retained trees would be spaced using a variety of patterns (i.e. random, dispersed, aggregated) and target densities (i.e. 75 – 200 trees per acre) reflecting specific project objectives and future access. Prescriptions would be modified when necessary to protect sensitive resources such as rare plants, wetland habitats and mass wasting areas. Riparian prescriptions have been designed to maintain or enhance desired cold water environments for the benefit of fish and wildlife. Felled trees would be removed adjacent to drivable roads to mitigate the short-term fire risk.

9. Surrounding Land Uses & Setting: Refer to Chapter 3 of this document (Section IX, Land Use Planning)

10. Approval Required from Other Public Agencies: California Department of Fish and Game.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

If implemented as written, this project could result in a "Potentially Significant Impact" involving at least one area of the environmental factors checked below, as indicated in the Initial Study on the following pages.

☒ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☒ Hazards & Hazardous Materials	☒ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☒ Noise	☐ Population/Housing
☒ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	☐ None

DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment and a **NEGATIVE DECLARATION** will be prepared. ☐

I find that, although the original scope of the proposed project **COULD** have had a significant effect on the environment, there **WILL NOT** be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒

I find that the proposed project **MAY** have a significant effect on the environment and an **ENVIRONMENTAL IMPACT REPORT** or its functional equivalent will be prepared. ☐

I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the impacts not sufficiently addressed in previous documents. ☐

I find that, although the proposed project could have had a significant effect on the environment, all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project. Therefore, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required. ☐

Original Signature on File – North Coast Redwoods District Office

John E. Harris — Date:

District Environmental Coordinator/Senior Environmental Scientist

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.

4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:

   a) Identify the earlier analysis and state where it is available for review.

   b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.

   c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.

6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.

7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.

8. Explanation(s) of each issue should identify:

   a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
   b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

ENVIRONMENTAL ANALYSIS

The Environmental Analysis (Initial) Checklist was prepared to assess the proposed project's impact on the environment. The environmental setting for each topic describes the conditions currently existing at the project site. Potential environmental impacts, identified by checklist point, are addressed in the discussion section. For each impact identified as "less than significant with mitigation", mitigation measures have been specified to reduce the impact to a less than significant level.

ENVIRONMENTAL ISSUES

I. AESTHETICS.

ENVIRONMENTAL SETTING

The Mill Creek Acquisition, which has been included within Del Norte Coast Redwoods State Park lies within the coastal mountains of northwestern Del Norte County. The area has served as a commercial timber property for more than a century. The property is covered with even-aged coniferous forest and has a dense network of timber hauling roads. Numerous recent clearcuts are still visible within and surrounding the project area. Road scars are ubiquitous and dissect all the subwatersheds within the acquisition. Numerous road-related landslides are visible within the project area surrounding subwatersheds.

The treatment area of the proposed project is located throughout the MCA as defined by the Park boundaries in 2002. The Park property is approximately 8km (5 mi) southeast of Crescent City.

The proposed restoration is intended to enhance, among other values, the long term aesthetic quality of the Mill Creek Acquisition by facilitating redevelopment of old-growth forests. Adjacent reserves (i.e. Del Norte Coast Redwoods State Park, Jedediah Smith Redwoods State Park) provide a good approximation of the visual characteristics of old-growth, the most striking of which of course is the presence of large diameter, widely spaced redwood trees (Giusti 2003). The visual qualities of old-growth redwood forests are accentuated by a diverse understory of one or more native plant species including rhododendron (*Rhododendron macrophyllum*), California huckleberry (*Vaccinium ovatum*), western sword fern (*Polystichum munitum*) and salmon berry (*Rubus spectablis*) (Mahony and Stuart 2000). The core project objectives related to accelerating growth rates and adjusting species composition will in time facilitate the redevelopment of large, widely spaced trees and a diverse understory. In the near term, spaces between trees and decomposing slash will be visible for 5 – 10 years following the thinning treatments and the overstory canopy cover will re-attain near 100% closure.

IMPACT	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
WOULD THE PROJECT:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

DISCUSSION

a. The project sites are not visible from any vista point or scenic highway. The sites are located in remote backcountry portions of the acquisition and along old timber hauling roads. No impact.

b. None of the proposed project sites are within a state scenic highway easement or viewshed. The restoration sites are confined to areas previously disturbed by clear-cut logging practices. The work will help improve the scenic resource of the second growth forest. Larger diameter trees (30 cm [12”] dbh and greater) will not be cut. No impact.

c. The MCA is not open to the public at this time due to problems with the road system and because Park staffing is insufficient in the area to provide for visitor safety. Therefore, the general public will not view temporary visual effects as the work is progressing. As Park facilities are added and the MCA is opened to the public, visitors will be able to view the thinned stands. The most obvious visual features of a thinned area are the spaces between the retained trees and the decomposing leaf, branch and bole material lying on the forest floor (collectively-termed “slash”). The spacing of retained trees is designed to maintain a relatively continuous canopy, with intermittent gaps that will not exceed 1/5th acre. From a distance, most treatment areas will closely resemble the visual character and quality of the surrounding landscape. Thinned areas close to and/or highly visible (direct line of site) from newly added or approved Park facilities will provide valuable interpretive opportunities but may be considered an aesthetic impact by some Park visitors. Where such aesthetic impacts are anticipated, modified spacing and slash disposal treatments will be used to lessen the aesthetic impact to a level that is less than significant. Visual screening techniques (using existing vegetation) may also be used in conjunction with a staged thinning prescription to lessen visual impacts (See Aesthetics-1, below).

d. The project will not create glare because all larger trees, which moderate light intensities and provide shade to the site will be preserved within treatment area. Lighting is not an element of this project and no new light sources will be introduced into the landscape. All restoration work will be limited to daylight hours, eliminating the need for work lights. This project will create no new source of light or glare and, therefore, will have no impact in this area.

MITIGATION MEASURES AESTHETICS-1
• Treatment areas within 61 m (200 ft.) and/or highly visible (e.g. direct line of site) from any proposed high use Park facility will be reviewed by a qualified landscape architect to assess potential visual impacts and an interpretive specialist to assess interpretive opportunities. Both assessments shall be completed prior to finalizing the intended thinning prescription. • Where aesthetic impacts are anticipated by the landscape architect, the thinning prescription(s) shall be modified in accordance with the professional recommendations to: (a) reduce the spacing between retained trees to maintain a visually more continuous canopy; (b) reduce the quantity of slash and/or manipulate its arrangement to mimic more natural forest conditions or (c) stagger the intended thinning prescription over a longer period of time (e.g. years) to screen larger canopy openings. Measures a – c may be used individually or in combination as needed to mitigate aesthetic impacts.

II. AGRICULTURAL RESOURCES

ENVIRONMENTAL SETTING

The MCA is now part of the California State Park System. Commercial timber operations were discontinued as part of the transition of the property from private timber holdings to public parkland. The adjoining land to the east and south of the Acquisition is Six Rivers National Forest and commercial timberland, respectively. Land to the north and west of the MCA is within Redwood National and State Parks.

IMPACT WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

* In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland.

DISCUSSION

a) No land adjoining the project site in any direction is zoned as agricultural land or used for agricultural purposes, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California. Therefore, this project will have no effect on any category of California Farmland, conflict with any existing zoning for agricultural use or Williamson Act contract, or result in the conversion of Farmland to non-agricultural use. No impact.

b) As noted in the Environmental Setting above, the MCA is part of the California State Park System and does not support any agricultural operations or farmland. No impact.

c) Departmental policies and practices, deed restrictions, and other constraints related to acquisition of designated agricultural lands and the impacts of continued agricultural use on the Park's operational and resource management needs, do not allow for agricultural uses in the MCA. No impact to agricultural resources.

III. AIR QUALITY

ENVIRONMENTAL SETTING

The project site is in Del Norte County, which is part of the North Coast Air Basin (Basin), under the jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD or District) and the United States Environmental Protection Agency (USEPA) Region IX. NCUAQMD is the regional agency that regulates sources of air pollution within Del Norte County. The Districts boundaries include Humboldt, Trinity, and Del Norte counties. The NCUAQMD's main purpose is to enforce local, state, and federal air quality laws and regulations. The following determinations were based on current significance criteria established by the NCUAQMD and the USEPA.

Del Norte County has relatively clean air due to frequent rains, ocean winds, low levels of commuter traffic, and a small industrial base. Because of these conditions, Del Norte County is currently in attainment with all California standards including: carbon monoxide, hydrogen sulfide, lead, ozone, nitrogen dioxide, sulfur dioxide, and sulfides. An area is designated in attainment if the state standard for the specified pollutant was not violated at any site during a three-year period.

The District is in non-attainment with California standards for particulate matter (PM_{10}, or particles with an aerodynamic diameter of 10 microns or less). The major sources of PM_{10} are combustion (e.g., wood smoke; emissions from industry, automobiles, and diesel engines); and dust (e.g., airborne soil, road dust caused by vehicle travel). An area is designated in non-attainment if there was at least one violation of a state standard for the specified pollutant within the area boundaries. With respect to Federal standards, the North Coast Air Basin is in attainment of all Federal standards and is undetermined for $PM_{2.5}$ pollutants (CA Air Resources Board, North Coast Unified Air Quality Management District http://www.ncuaqmd.org/).

Some of the roads within the project area may contain serpentine soils. Serpentine soils can contain naturally occurring asbestos minerals, some of which pose a hazard to human health. All of the roads within the project area are greater than one mile from a sensitive receptor; however workers may be exposed to asbestos dust minerals.

Groups of trees (stands) designated for treatment support high tree densities (800 – 1,000+ trees per acre) and thinning such stands will result in a correspondingly high quantity of fuels delivered to the forest floor. Large quantities of surface fuels can present an unacceptable fire hazard, which may be partially alleviated by burning piles of slash during the winter months. Pile burning is anticipated to occur principally within narrow corridors (15 – 46 m [50 – 150 ft.] wide) along mainline drivable roads to facilitate fire fighting efforts in the event of a wildfire.

IMPACT	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
WOULD THE PROJECT:				
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

DISCUSSION

a) Work proposed in this project is not in conflict with or will not obstruct implementation of any applicable air quality plan for Del Norte County, the North Coast Air Basin, MCAQMD, or USEPA Region IX. No diesel portable equipment will be used during the project. No impact.

b, c) The proposed project will not emit air contaminants at a level that, by themselves, will violate any air quality standard, or contribute to a permanent or long-term increase in any air contaminant. However, restoration work will generate short-term emissions of fugitive dust and ash (PM_{10}) and involve the use of equipment and materials that may emit ozone precursors (i.e., reactive organic gases [ROG] and nitrogen oxides, or NOx). Increased emissions of PM_{10}, ROG, and NOx could contribute to existing non-attainment of PM_{10} conditions and interfere with achieving the projected attainment standards. Under unfavorable meteorological conditions (i.e. inversions), smoke from the burning of slash could be delivered to populated areas. Consequently, burning slash piles and running chain saws could have a significant short-term adverse impact. Implementation of Mitigation Measure Air-1 (below) will reduce this to a less than significant level.

d) The project will not expose sensitive receptors to substantial pollutant concentrations. The MCA is not open to the public. There are no developments or public use facilities within one mile of the project area. No impact.

e) The proposed work will not result in the generation of objectionable odors that will affect a substantial number of people. The MCA is not open to the public. There are no developments or public use facilities within one mile of the project area. No impact.

MITIGATION MEASURE AIR-1

- All equipment engines will be maintained in good mechanical condition (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Traffic speed on unpaved roads will be limited to 15 miles per hour (mph).
- Mechanized removal of downed material will be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or when dust from construction might obscure driver visibility on public roads.
- Pile burning shall be conducted in accordance with Rule 207 (Wildland Vegetation Management Burning) as described by the North Coast Unified Air Quality Management District (NCUAQMD). Prior to burning, a burn permit shall be secured from this agency as well as from the California Department of Forestry and Fire Protection (CDF).
- All burnable material shall be arranged so that it will ignite as rapidly as practicable within the applicable fire control restrictions (NCUAQM Regulation II) and burn with a minimum of smoke.
- Burnable material shall not be ignited when the wind direction is such that smoke from the burning of such material would be blown or carried into a nearby populated area and could create a public nuisance.

IV. BIOLOGICAL RESOURCES

ENVIRONMENTAL SETTING

PLANTS

At least 15 vegetation series (Sawyer and Keeler-Wolf 1995) are present on the Mill Creek property according to the Mill Creek Property Interim Management Recommendations prepared by Stillwater Associates (2002), which is the source of information for this section. Vascular plant species diversity is high with possibly over 300 species present. The following tree-dominated vegetation series are found on the property (listed in the order of their abundance): 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 good growing conditions for fast-growing conifers such as the coast redwood (*Sequoia sempervirens*). Douglas-fir (*Pseudotsuga menziesii*) is found in 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 even-aged, monospecific forest stands of various ages.

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.

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.

Several rare and/or endangered plant species are present or can be potentially found on the Mill Creek property. Two special 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 endangered, and Western lily is listed as endangered in California and federally endangered. Previous surveys have found four rare 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) and California pitcherplant (*Darlingtonia californica*) (Stillwater Sciences 2002). 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.

Tree species of particular interest found within the Mill Creek property include knobcone pine (*Pinus attenuata*), Port-Orford-cedar (*Chamaecyparis lawsoniana*), 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. Such reproduction is unusual within the species' range due to past fire suppression and absence of timber management in knobcone pine stands in general.

The second tree species of special interest is the Port-Orford-cedar (POC), which occurs throughout the property. POC 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 (*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 property. 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 forth site has since been confirmed approximately 400 m (0.25 miles) from one of the Bummer Lake Creek sites (Appendix A, Figure 3).

A third tree of interest is the 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 a small area in the northeast corner of the property. It is unlikely that these species will be found at most planned project sites.

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 pardilinum* 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. More 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 (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 (1.5miles) 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 (*Hierochloe odorata*) and great burnet (*Sanguisorba officinalis*) could be present in the east half of the Mill Creek property. Although it is unlikely that plant species of the Fen series will be found at the planned project sites the botanical surveys should detect their presence and appropriate mitigation measures will be applied.

ANIMALS

Based on the number of plant communities and variety of habitat types found on the property, it is likely that wildlife diversity is relatively high. Although reptile diversity is low, 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 (DFG) 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 boylii*). The southern torrent salamander, which occurs in perennial and ephemeral seeps, springs, and lower order streams that contain clean gravels with interstitial spaces, is common on the property. 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. Small mammals adapted to forest habitats in this area include deer mice (*Peromyscus maniculatus*), dusky-footed woodrats (*Neotoma fuscipes*), northern flying squirrels (*Glaucomys sabrinus*), California red tree voles (*Arborimus longicaudus*) (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 on the Six Rivers National Forest. The Pacific fisher (*Martes pennanti pacifica*), another SSC mustelid has been documented on the acquisition.

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 threatened, whereas the marbled murrelet is federally threatened and state endangered. An additional listed species that is known to occur on the property is the bald eagle (*Haliaeetus* leucocephalus) which is currently federally proposed for federal de-listing but is still state endangered. No known bald eagle nests occur on the property. The closest known nest is

located approximately 1.6 km (1 mile) west of the northwestern portion of the acquisition on Redwood National Park. Due to the distance from the nest site and topographic relief the proposed action should not impact this nest. Bald eagle use on the property is primarily restricted to winter foraging along the fish bearing streams during the salmonid runs. The proposed action should not affect this species as no operations will be located within the riparian area of fish bearing streams. Marbled murrelets are thought to use what little old-growth remains on the MCA. Recent observations of this species have been made near the "Paragon" grove, the largest of the remaining old growth stands. The proposed action will not occur within 400 m (0.25 miles) of marbled murrelet habitat during the critical nesting period for this species [See Mitigation Measure Bio-3]. In addition, second growth stands will not be modified within 91 m (300 ft.) of suitable marbled murrelet habitat to avoid affecting existing marbled murrelet habitat (Appendix A, Figure 4). Additional habitat for the murrelet may occur in other areas of the MCA where residual old-growth trees are present. Prior to restoration activities these areas will be identified and mitigation measures stipulated above will be implemented.

Northern spotted owls are known to nest in the Mill Creek Acquisition. One pair has been observed rearing a pair of nestlings on the property as recently as this summer. Nesting and roosting habitat for the northern spotted owl is limiting on the MCA given the lack of large trees and multi – tiered stands. Significant prey items of the owl are known to occur on the property and include the dusky footed woodrat, northern flying squirrel, and California red tree vole. The northern flying squirrel is not expected to inhabit stands of the type proposed for treatment.

Streams within the MCA 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 listed as state threatened from Punta Gorda to the Oregon border. Other anadromous salmonids known to occur in Mill Creek include fall 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.

IMPACT	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
WOULD THE PROJECT:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, the U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands, as defined by §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?	☐	☐	☐	☒
d) 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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

DISCUSSION

a) A long-term goal of forest restoration is to improve the habitat for, and protect rare, threatened, and endangered species. The project will be conducted in compliance with all applicable State and federal threatened and endangered species protection laws and regulations. Work under this project incorporates all relevant recommendations DFG has made to avoid and/or minimize impacts to rare, threatened or endangered species in consultations on this and past projects. DFG will be provided with information about all upcoming restoration activities and invited to conduct a field review of each year's work prior to implementation. DPR will request a Letter of Technical Assistance from the US Fish and Wildlife Service for the northern spotted owl and the marbled murrelet. This document would be appended to the MND. It may be necessary to update this Letter of Technical Assistance on an annual basis.

Plants

As indicated in the Environmental Setting above, several sensitive plant species exist in the MCA. Activities conducted as part of this project have the potential to cause a

significant impact to one or more of these sensitive species. Implementation of the mitigation measures listed below will reduce any potential impact to a less than significant level.

MITIGATION MEASURES BIO-1 (PLANTS)

1. Prior to operations botanical surveys shall be conducted by a qualified botanist within the project boundaries (all areas of proposed operations and adjacent areas that could be impacted where sensitive plant habitat is present). Surveys shall be conducted in conformance with the DFG "Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities" (www.dfg.ca.gov/whdab/pdfs/guideplt.pdf and Appendix C). Results of the survey effort shall be submitted to the Senior Environmental Scientist (DPR) and the DFG for approval at least 10 business days prior to commencing operations to allow sufficient time for review of the survey effort.
2. DPR's primary means of mitigation for plants listed as Rare, Threatened, and Endangered, or which occur on the CNPS Lists 1A, 1B or 2 shall be avoidance (see below). These measures are dependent on the species natural history and the potential for adverse affects or the potential for take. CNPS List 3 and 4 plants will be avoided when feasible; however, such action will not be required. DPR reserves the right to develop site specific measures in consultation with the DFG. Such measures will be amended into the MND.

Species Name	Common Name	CNPS List Status	Mitigation
			Wetland Shade Associated Species
Lilium occidentale	western lily	1B.1	The overstory canopy shall not be altered or removed nor shall the hydrology associated with the habitat be altered within 23 m (75 ft.) of any plants.
Mitella caulescens	leafy-stemmed miterwort	2.3	
Pinguicula vulgaris spp. macroceras	horned butterwort	2.2	
Smilax jamesii	English Peak greenbriar	1B.3	
Viola primulifolia spp. occidentalis	western bog violet	1B.2	
			Wetland Associated Species
Carex leptalea	flaccid sedge	2.2	Trees shall be directionally felled away from the population or left standing if they threaten to impact the population. The hydrology associated with this habitat shall not be altered.
Carex praticola	meadow sedge	2.2	
Carex viridual var. viridula	green sedge	2.3	
Castilleja miniata spp. oregano	Siskiyou indian paintbrush	2.2	
Epilobium oreganum	Oregon fireweed	1B.2	

Gentiana setigera	Mendocino gentian	4.3	
Lathyrus palustris	marsh pea	2.2	
Lewisia oppositifolia	opposite-leaved lewisia	2.2	
Montia howellii	Howell's montia	2.2	
Sagittaria sanfordii	Sanford's arrowhead	1B.2	
Sanguisorba officinalis	great burnet	2.2	
			Forest Shade Associated Species
Asarum marmoratum	marbled wild ginger	2.3	The overstory canopy shall not be altered or removed nor shall the hydrology associated with the habitat be altered within 23 m (75 ft.) of any plants.
Erythronium hendersonii	Henderson's fawn lily	2.3	
Erythronium howellii	Howell's fawn lily	1B.3	
Monotropa uniflora	indian-pipe	2.2	
Saxifrage nuttallii	Nuttall's saxifrage	2.1	
			Forest and Scrub Associated Species
Arabis koehleri var. stipitata	Koehler's stipitate rock cress	1B.3	Trees shall be directionally felled away from the population or left standing if they threaten to impact the population.
Arabis macdonaldiana	McDonald's rock cress	1B.1	
Arienium trichomanes ssp. trichomanes	maidenhair spleenwort	2.3	
Arctostaphylos hispidula	Howell's manzanita	4.2	
Boschniakia hookeri	small groundcone	2.3	
Cardamine nuttalii var. gemmata	yellow-tubered toothwort	1B.3	
Minuartia howellii	Howell's sandwort	1B.3	
Pyrrocoma racemosa var. congesta	Del Norte pyrrocoma	2.3	
Senecio bolanderi var. bolanderi	Seacoast ragwort	2.2	
Sidalcea malachroides	Maple-leaved checkerbloom	1B.2	
Sidalcea malviflora spp. patula	Siskiyou checkerbloom	1B.2	
Sidalcea oregana spp. eximia	Coast checkerbloom	1B.2	
Streptanthus howellii	Howell's jewelflower	1B.2	
Thermopsis robusta	Robust false lupine	1B.2	

3. Trees shall be directionally felled away from all fens, ponds, marshes and other wetlands or trees will be left standing if they threaten to impact the feature.

Fish

Impacts to salmonids associated with the proposed action could occur due to increases in erosion or increases to stream temperature. These are discussed below. Direct impacts to salmonid habitat are not anticipated to occur as no operations will occur within 30 m (100 ft.) of a fish bearing stream.

Erosion: Motorized vehicles will be restricted to use on established roads. Short span cabling hooked to an All Terrain Vehicle (ATV) or winching device may be used to pull material to an established road. Trees can significantly improve soil stability because their complex root structure can help bind the earth together. Cutting trees can therefore have a short term negative impact on slope stability. Implementation of the following mitigation measures will reduce any potential impact to a less than significant level.

Canopy Cover: The MCA is on a path to recovery. Canopy cover on the property will increase annually barring catastrophic fire or significant insect/disease outbreaks. Restoration thinning prescriptions will temporarily reduce canopy cover at the stand level for a period of 5 - 10 years but these reductions will be more than off-set by the increased light and heat attenuation gained by untreated, recovering forest. Recall that the project proposes to treat <15% of the MCA over the next five years.

Because canopy cover is important to many cold water and old forest adapted species for which the restoration of the MCA is intended, conservative measures have been designed to maintain shade over streams. Implementation of the mitigation measures listed below will reduce any potential impact to a less than significant level.

Mitigation Measures Bio-2 (Fish)

- All vehicles will be restricted to existing roads.
- All restored areas will maintain a minimum of 30 tph (75 tpa). Additional trees will be retained along cut banks and slopes greater than 100% (the equivalent of a 2.4 m x 2.4 m [8 x 8 ft] spacing).
- No restoration work will take place within 30 meters (100 ft.) of fish bearing streams and/or the associated channel migration zone.
- Treatment areas within 10 m (33 ft.) of non fish bearing streams and other aquatic habitat will be left with trees on a 4 m x 4 m (12 ft. x 12 ft.) spacing or closer. And all shrub layer vegetation will be cut to no lower than 1 m (3 ft.) in these areas.
- All trees adjacent (1 meter) to a stream channel and contributing to channel or bank stability will be retained.
- Trees will be felled away from all aquatic habitat whenever possible. Additional trees may be retained if felling away from sensitive areas is problematic.
- If a tree accidentally falls into aquatic habitat a DPR representative will decide if the tree needs to be lopped and/removed to minimize the impact to the sensitive feature.
- All personnel working in or near aquatic habitat will minimize foot traffic within these areas.
- Streams and other aquatic habitat boundaries will be flagged ahead of restoration workers.

Birds

The second growth stands identified for treatment are young, even-aged, dense and structurally simple (>202 tph [500 tpa] > 3.8 cm [1.5 in] dbh). Nesting and roosting habitat for the northern spotted owl (NSO) in these second growth stands is limited to very small retention areas established for streams and unstable areas under the timber harvest plan (THP) permitting process. No trees ≥30 cm (12") dbh will be felled (Bio-5) and post-thinning canopy cover will be at least 50% and is expected to re-attain 60% canopy closure within 5 years. Through its request for Technical Assistance with USFWS, DPR may modify thinning prescriptions around potential nesting and roosting habitat. Such modifications will require an amendment to the MND.

Small amounts of potentially suitable NSO foraging habitat will be modified within the area of potential effect (APE). However, this modification will not result in a loss of foraging habitat, but rather may actually result in an increase of foraging habitat as prey will be more accessible to NSO. Furthermore, foraging habitat is not considered a limiting factor for NSO on the Mill Creek Acquisition. No operations associated with this project will occur until a valid USFWS letter of technical assistance reflecting the current survey data has been obtained and appended.

Old-growth stands supporting high quality nesting habitat for the marbled murrelet are located within the MCA. Residual old-growth trees located in a predominantly second growth forest may provide nesting platforms for the marbled murrelet, which nests in large-limbed trees (Paton et al. 1987). Anecdotal observations suggest that nesting in residual trees in this setting is more likely when residual trees are surrounded by tall, mature second growth forest, though the phenomenon has not been thoroughly studied. For the purposes of evaluating nest site suitability, DPR will evaluate each project that contains residual structure and perform the measures stipulated in Bio-3 to protect known or potential nesting habitat for the marbled murrelet.

Significant impacts to other sensitive avian species are not anticipated as their habitat will not be affected. For example, Vaux's swifts nest in trees with basal hollows, a habitat element that will not be impacted. Similarly, yellow warblers inhabit riparian areas dominated by alder and willow, another habitat for which operations are not proposed.

MITIGATION MEASURES BIO-3 (BIRDS)

- Northern Spotted Owl
  1. Absent Northern Spotted Owl Surveys – If northern spotted owl surveys are not conducted then the following measures shall apply.
     a. No trees 30 cm dbh (12") or greater shall be removed except where such trees pose a hazard to an existing facility or worker safety (Bio-5).
     b. No operations shall occur from February 1 through July 31 (depending on the proposed action the July 31 date may be modified to July 10 through a request for Technical Assistance from the U.S. Fish & Wildlife Service).
  2. If operations are proposed between February 1 through July 31.
     a. No operations shall occur unless a valid NSO letter of technical assistance has been obtained from the U.S. Fish & Wildlife Service (Service). The results of the technical assistance may result in modification of the standard protection measures stipulated under Item c below.
     b. Surveys for the NSO shall be conducted in conformance with accepted Service approved NSO survey protocols. A map showing the location(s) (if any) of known

NSO activity centers during the past 3 years shall be provided. An activity center is defined as a site(s) identified through surveys conducted to protocol resulting in either the presence of nesting, pair status, or resident single status as defined in the northern spotted owl protocol (USFWS 1992). The final determination of an activity center is at the discretion of the Service.

c. If any known activity centers occur within 305 m (1,000 ft.) of the proposed action then the following standard protection measures shall apply (these measures may be subsequently changed through technical assistance with the Service).
   i. A buffer zone for NSO's shall be established within a 305 m radius of a tree or trees containing a nest or supporting an activity center during the NSO's critical nesting period which occurs from February 1 through July 31.
   ii. No operations shall occur within a 152 m (500 ft.) radius of an activity center. Within the 152 – 305 m spatial buffer the minimum habitat requirements of functional roosting habitat (minimum 60% canopy, avg. stand trees >28cm [11 inches] dbh shall be maintained).
   iii. A temporal buffer out to 400 m (0.25 miles) shall be established around any active activity center during the NSO's critical period which occurs from February 1, through July 31. During the critical period no operations shall occur within the temporal buffer.

- Marbled Murrelet
  1. Where residual trees are located within a project area or within 91 m (300 ft.) of treatment area boundaries, DPR shall consult with the California Department of Fish & Game (DFG) and the Service to determine if the trees constitute potential marbled murrelet nesting habitat.
  2. No operations shall occur within 91 m (300 ft.) of occupied or suitable marbled murrelet nesting habitat.
  3. No operations shall occur within 400 m (0.25 miles) of areas known to be occupied by marbled murrelets during the critical nesting season (March 24 – September 15).
  4. No operations shall occur within 400 m (0.25 miles) of potential marbled murrelet habitat during the critical nesting season unless surveys conducted to protocol have determined that the area is not utilized or occupied by marbled murrelets. This will also trigger consultation with the DFG and technical assistance with the Service.
  5. DPR reserves the right to consult with the DFG and the Service on site-specific mitigation measures. Any such changes will be amended into the MND if necessary.

There is potential habitat for a variety of raptors within the project area however the potential for occupancy is relatively low. The following mitigation measures will be implemented to reduce any potential impacts to a less than significant level.

MITIGATION MEASURES BIO-3 (BIRDS CONT.)

- Raptors

  Pursuant to Fish & Game Code 3503.5 it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Therefore a biologist or a forester who will be trained by the District's Senior Environmental Scientist or his designee in raptor nest identification and raptor breeding identification will be responsible for surveying

for raptor nests prior to operations. During operations the forester shall be responsible for assuring that no raptor nests are impacted by the proposed treatments by implementing the following measures:

a. If an unoccupied raptor nest is detected (during the generic critical period of January 15 through August 31, the nest tree and surrounding screen trees shall not be disturbed and the location shall immediately be reported to the Senior Environmental Scientist.
b. If an unoccupied raptor nest is detected outside of the generic critical period then operations shall cease in the vicinity of the nest and its location shall be reported immediately to the Senior Environmental Scientist. The Senior Environmental Scientist or his designee will then attempt to determine the species of raptor that constructed or used the nest and then implement the measures in Item C, below, (based on species).
c. If an occupied raptor nest is detected in the project area, then the DPR inspector will cease operations within 400 m (0.25 mile) of the raptor nest (unless it is known to be a peregrine falcon aerie or bald eagle nest then a 1.6 km (1 mile) buffer shall be applied) and immediately notify the Senior Environmental Scientist. The Senior Environmental Scientist or his designee will then determine the species of raptor and then the following measures which were developed in concert with DFG (Scott Osborn, DFG pers comm. 04/13/05) will be applied (based on species)(see table below).

Species[1]	Critical Nesting Period	Temporal (Disturbance) Buffer	Spatial (Habitat) Buffer
Accipitridae			
Bald Eagle	January 15- August 15	1.6 km (1 mile)	150 m (500 ft.)
Northern Goshawk	March 1 – August 31	400 m (0.25 mile)	50m (165 ft.)
Cooper's Hawk	March 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Sharp-shinned Hawk	March 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Osprey	February 15 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Redtail Hawk	February 1 – August 31	400 m (0.25 mile)	15 m (50 ft.)
Red-shoulder Hawk	February 1 – August 31	400 m (0.25 mile)	15 m (50 ft.)
Falconidae			
Peregrine Falcon	January 15 – August 31	1.6 km (1 mile)	150 m (500 ft.)
Strigiformes			
Great Horned Owls	February 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Cavity Nesting Owls	February 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)

[1] Mitigation measures for the northern spotted owl are covered above. Other species of raptors such as the golden eagle, northern harrier, or long-eared owl are not expected to occur within the project area due to lack of habitat and are therefore not addressed.

d. DPR reserves the right to consult with the DFG on site-specific and species-specific mitigation measures. Any such changes will be amended into the MND if necessary.

Amphibians

The removal of canopy cover can result in both direct and indirect impacts to stream dwelling amphibians. The significance of these impacts depends on numerous factors including the species present and the extent of habitat disturbed (both instream and riparian). Canopy removal may warm forest conditions and/or water beyond upper tolerance levels for sensitive species. Forest warming is believed to be a short lived impact however it is important to evaluate the scale of these impacts in the context of past impacts.

To address these concerns measures have been implemented into the project design that will assure or reduce the potential of dewatering (Bio-1), protect recovering riparian habitat (Bio-6), reduce erosion hazard (Geo-1) and manage road-related sediment sources (Hydro-1). By designing canopy retention measures for the most sensitive aquatic species (the southern torrent salamander), the required cover for fish and aquatic amphibians will be retained.

Forest restoration projects also have the ability to adversely affect terrestrial amphibians. Of primary concern for this project will be impacts to the Del Norte salamander. The Del Norte salamander inhabits closed canopy multistory mixed coniferous-hardwood forests which provide cool microclimates with moss and fern ground cover, a deep litter layer, and rocky substrates dominated by cobble (Welsh and Lind 1995). This species is generally considered to be an old-growth associate; however it has been documented in younger forests or in rocky embankments along open road cuts within the marine-influenced coastal belt (Diller and Wallace 1994). As this species can be very susceptible to actions that disrupt the microclimate or physically remove or disrupt their environment measures are warranted (Bio-4).

MITIGATION MEASURES BIO-4 (AMPHIBIANS)
• Areas that provide potential habitat for the Del Norte salamander shall be identified and mapped prior to operations. Spatial buffers that retain the microhabitat of the sites shall be established around areas identified as potential habitat for the Del Norte salamander. The minimum buffer for these sites shall be 15 m (50 ft); however, site specific measures can be developed through consultation with the District's Senior Environmental Scientist and the California Department of Fish & Game provided that the measures are then amended into the MND.

Trees

In meeting the short term, time sensitive objectives of this project, DPR will have made progress toward the longer term objective of restoring big trees as an integral part of the forest. To not impede this long-term goal, all trees ≥ 30 cm dbh (12") will be retained unless they pose a hazard to an existing facility or worker safety.

In select settings, where forest species composition is highly altered relative to desired reference conditions, planting under-represented tree species may be used as a restoration tool. To ensure the long term viability of these trees and the associated ecosystem, all revegetation activities shall be in conformance with the District's Genetic Integrity Guidelines (Appendix D).

While using chainsaws and other equipment, care will be taken by equipment operators to not strike retained trees.

MITIGATION MEASURES BIO-5 (TREES)
• All trees ≥30 cm dbh (12") and greater will be retained unless they pose a hazard to an existing facility or worker safety. Hazard trees will be identified by a qualified DPR Environmental Scientist using the Department's assessment procedures. Where hazard trees are identified within a thinning treatment area and do not threaten an existing facility or pose a hazard to worker safety, every reasonable effort will be made to retain the tree and operate around it. Where an identified hazard tree is to be felled, DPR will seek the appropriate sensitive species consultations with CDFG and/or USFWS. • Reforestation utilizing the NCRD genetic integrity guidelines (Appendix D) shall be implemented where tree planting is used to adjust forest composition.

a,b) Canopy retention standards have been designed to maintain a high degree of shade over streams (Bio-2) and will prevent any overheating or drying of the riparian environment. The quantity of felled trees and associated branch and leaf material (slash) can be large in dense stands like those being treated and sufficient to bury recovering riparian habitat. Introducing small quantities of bole and branch material in the stream in contrast can be ecologically beneficial. Trees adjacent to streams designated for thinning will be felled away from the stream channel. The project with the aforementioned mitigations and following measures will have a less than significant impact to any riparian habitat or other sensitive natural community.

MITIGATION MEASURES BIO-6 (RIPARIAN)
• Trees shall be felled away from streams. Trees that cannot reliably be felled away from the stream shall be left standing. • Where every effort has been made to directionally fall a tree away from the stream but a portion of the tree nevertheless enters the stream's bed or bank, the supervising DPR official shall be notified. The DPR official will determine whether the tree can be bucked or moved to improve in-stream aquatic habitat.

c) No vehicles will be allowed off of established roads and no excavation or grading will take place. Therefore, this project will have no impact on any federally protected wetlands. No Impact.

d) This project will have less than significant impact on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. Downed slash may temporarily impede the movement of larger terrestrial mammals, but this impact is short-term and highly localized. The relatively small area under restoration at one time will allow migration around construction sites.

e) No local policies protecting biological resources currently exist. No impact.

f) The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because none exist for any project location. No impact.

V. CULTURAL RESOURCES.

ENVIRONMENTAL SETTING

The Crescent City area is home to the Tolowa Indians. The Tolowa occupied an area of approximately 640 square miles in four different natural habitats, though they primarily lived in the coastal area based on the time of first contact with Europeans in 1828. European sailors noted that the Tolowa lived in eight villages along the coast for nine to ten months per year, though some people remained behind to maintain the villages. Seven of the villages had populations of as many as 300 people each (Gould 1978: 128).

While most of their time was spent along the coastal strip that gave them access to rock clinging shellfish, ocean mammals and various fish, they spent some time in the three other areas that include a belt of 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 habitats to the three months they did not live on the coast. These areas were hard to access due to the terrain and they lacked the stable resources the marine environment provided.

The Mill Creek Acquisition falls within the forested areas. Because the redwood forest immediately inland from the coastal strip generally lacked food sources, the Tolowa used it primarily 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. It is possible that seasonal camps and acorn processing areas could be present within the Mill Creek Watershed project area.

HISTORIC BACKGROUND

The Mill Creek Acquisition property is located in Del Norte County, California. Like most counties in California, Del Norte had its start in the gold rush, though in this case as part of Klamath County which no longer exists in California. In 1850 a schooner from San Francisco attempted to land a crew near the mouth of the Klamath River but the small boat capsized killing all the crew except one man. In 1851, another schooner successfully landed a crew effectively establishing the first permanent settlement in the county. While this settlement, founded mainly to search for gold, was short-lived, it led to the founding of Crescent City in 1852. Initially used as a staging area for gold exploration along the Klamath, Crescent City soon became a small commerce center. By 1853 a schooner brought the first sawmill to town, establishing the lumber industry in the county (Bledsoe1881: 9-16).

With the opening of the mill in Crescent City, the Mill Creek basin provided a convenient source for lumber. By the mid 1850s, men were harvesting the timber from the basin and transporting 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).

In 1920 Hobbs, Wall and Company established a logging camp on Mill Creek near the site of Miller-Rellim Redwoods Company's nursery within the current Mill Creek Acquisition. 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 but they went out of business in 1939. While 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).

In 1954 Miller Rellim Redwood Company (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 Acquisition property. This mill operated until 1993 when it was closed. All logging operations ceased in 2001 and in 2002 Save the Redwoods League acquired the Mill Creek property, transferring the title to California State Parks soon thereafter (Madej et al 1986: 15 and Dan Porter personal communication 2006).

In order to understand the historic landscape features created by the logging industry, it is important to understand timber harvesting practices that occurred during this time period. Before the late 1930s and 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 clear-cut 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 clear cutting. By the late 1960s clear cutting 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 less roads and minimal ground disturbance, it could only be used in clear-cut logging (Madej et al 1986: 16-19).

IMPACT	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

DISCUSSION

a) Based on the history of the property, there is a chance that historic features are present throughout the property. These features could include logging roads, skid trails and landings, abandoned steam donkeys and associated cables as well as the changed landscape due to the historic logging activities.

   The proposed tree thinning project restricts all vehicles to existing roads. Tree removal from a potentially historic logging landscape would not be considered an impact because their removal promotes the healthy growth of the remaining trees and therefore continues the historic use of the property. Therefore, the tree removal is not an impact to any potential logging landscape because the proposed methods are similar to the historic methods and the overall look and feel of the logged area will not be significantly altered. The placing of burn piles on potentially historic skid trails or roads will not impact them. However, pile burning on or near any historic buildings, structures or objects is a potentially significant impact. The implementation of Mitigation Measure Cult-1 below will reduce the potential impact to a less than significant level.

b) Archaeological surveys have not been performed in advance of this project. Most trees will be dropped and left in place causing no ground disturbance. In the areas where trees will be dragged to existing roads, the dragging would only disturb accumulated duff. The burn piles have a potential to impact unknown archaeological features depending on their location. The implementation of Mitigation Measure Cult-1 below will reduce impacts to a less than significant level.

MITIGATION MEASURE CULT-1
• Prior to commencement of operations in a given year, any areas where slash piles will be burned (except piles on existing roads) will be surveyed by a DPR qualified archaeologist. The archaeologist will flag the boundaries of any prehistoric or historic archaeological sites providing a 50-foot buffer zone to protect the site. These areas will be avoided during this project. • In the event that previously undocumented cultural resources are encountered during project activities (including but not limited to dark soil containing shell, bone, flaked stone, groundstone, or deposits of historic trash) work within the immediate vicinity of the find will be temporarily halted or diverted until a DPR-qualified cultural resource specialist has been contacted to evaluate the find and implement appropriate treatment measures and disposition of artifacts.

c) No human remains or burial sites have been documented in the immediate vicinity of the project area. However, because Native American use in the region is documented, there is a potential of inadvertently discovering previously unknown burials. If any human remains or burial artifacts are identified, implementation of Mitigation Measure CULT-2 would reduce the impact to a less than significant level.

MITIGATION MEASURE CULT-2

- In the event that human remains are discovered, work will cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate DPR personnel. Any human remains and/or funerary objects will be left in place or returned to the point of discovery and covered with soil. The DPR Sector Superintendent (or authorized representative) will notify the Country Coroner, in accordance with 7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (or Tribal Representative). If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the appropriate Native American authorities.

- If the coroner or tribal representative determines the remains represent Native American interment, the NAHC in Sacramento and/or tribe will be consulted to identify the most likely descendants and appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete (PRC 5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination.

- If it is determined the find indicates a sacred or religious site, the site will be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the Native American Heritage Commission/Tribal Cultural representative will also occur as necessary to define additional site mitigation or future restrictions.

VI. GEOLOGY AND SOILS

ENVIRONMENTAL SETTING

The MCA 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 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). The Coast Range and Klamath mountain provinces are separated by the coast range thrust fault.

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. Moderate to high seismic activity can be expected in this area, with associated ground shaking, block-falls, and liquefaction of saturated sediments.

The soils of MCA are derived from the Franciscan Formation with some occurrence of Tertiary fluvial deposits along Childs Hill and Little Bald Hills. The Franciscan Formation includes primarily sedimentary rock, along with some igneous and metamorphic rock material. The principal rock material is greywacke, highly variable sandstone with angular medium-sized grains, mixed with shale and siltstone. Igneous and metamorphic rocks are also combined in the substrate in some areas. The shale has a high proportion of angular mineral and rock fragments, with only a small amount of clay materials.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) 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?	☐	☒	☐	☐

d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	☐	☐	☐	☒
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems, where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☐	☒

DISCUSSION

a) While the chance of the rupture of a known earthquake fault, strong seismic ground-shaking, seismic-related ground failure, or landslides are certainly possible in this area, this project will not substantially increase the exposure of people or structures to risk of loss, injury, or death as a result of these events. The proposed project will not add any element or structure that will increase public exposure. Although those working on the project will be exposed to any event that might occur, the MCA lies within a seismically active region. Workers will be briefed on the locations of potentially unstable slopes based on existing geologic mapping of the watershed. The location of more stable roads and evacuation routes will be identified. Self sustainability in the event of a catastrophic event will also be reviewed. Due to the remote location of the restoration project, the seismic effects on the project area are unlikely to affect park visitors or staff not directly involved at the site. Less than significant impact.

b) A temporary increase in surface erosion may occur at some locations as bare mineral soil is re-exposed as part of the restoration, but the loss should not be substantial. Best Management Practices designed to reduce surface erosion, and implementation of Mitigation Measure Bio-2 will reduce any potential impact to a less than significant level. Over the long term, the action will reduce the risk of stand replacing fire and thereby lessen the surface erosion that follows such events. The restoration will also stabilize soils in the long term by promoting the growth of larger trees with more extensive root systems than would develop quickly without intervention.

c) The project is located within a geologic unit with unstable soil. The general public and most DPR employees will not be exposed to any additional geologic hazard as a result of this proposed project. The project will have a less than significant impact on geologic instability and, with implementation of the following mitigation, adverse impacts to worker safety due to existing geologic instability will be reduced to a less than significant level.

MITIGATION MEASURE GEO-1

- All workers shall be advised of high-risk areas and cautioned to use extreme care while working in those areas.
- No work will take place within active slide areas.
- No vehicles will be used off of existing roads.
- Contractors will be given instructions as to alternative escape routes in case primary route becomes blocked.

d) Expansive soils do not exist in the project area. No structures are being constructed. No impact.

e) No septic tanks or waste disposal systems will be constructed or impacted for this project. No waste disposal systems exist at the project sites. No impact.

f) There are no known unique paleontological and one unique cutbank exposure of geologic significance in the project area but it is not within any of the treatment areas, so the project will not have an effect on it. No impact.

VII. HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL SETTING

There are no known hazardous materials within the project area. During timber operations of the previous landowners, hazardous materials were used and stored near the mill site. No fuel storage facilities exist within or adjacent to the project area. Park employees and contractors will be filling chainsaws with fuels during operations. No airports are located within 3 km (2 miles) of the project site.

Physical hazards in the MCA 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 Park or adjacent to park property. Helicopter landing locations have been identified and geo-referenced throughout the Park. U.S. Coast Guard helicopters patrol the coastline on a regular basis.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?	☐	☐	☐	☒
e) Be 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? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Be located in the vicinity of a private airstrip? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

DISCUSSION

a) The proposed project does not involve the disposal of hazardous materials. However, the project does involve the routine transportation of small amounts of chain saw fuel mix, bar oil, and diesel fuel to the work site. Construction activities will require the use of certain potentially hazardous materials, such as fuels, oils, and solvents. These materials are generally used for equipment and will be contained in vessels engineered for safe storage, transportation, and transfer. Large quantities of these materials will not be stored at the project site(s). Spills, upsets, or other operation-related accidents could result in a release of fuel or other hazardous substances into the environment. The mitigations indicated in HAZMAT-1 below will reduce the potential for adverse impacts from these incidents to a less than significant level.

MITIGATION MEASURES HAZMAT- 1

- All equipment including chain saws and vehicles will be inspected for leaks immediately prior to the start of daily operations and regularly inspected thereafter until equipment is removed from Park premises. Leaks that develop will be repaired immediately in the field or work with that equipment will be suspended until repairs have been completed.
- To avoid spills during transport, fuel containers must be secured when vehicles are moving.
- The contractor(s) will prepare an emergency spill response plan prior to the start of operations. DPR will ensure that the contractor maintains a spill kit on-site throughout the life of the project, or provides multiple sets of cleanup materials to each crew, if sharing will prevent timely implementation of cleanup plans. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to the project sites or within the MCA during operations, the contractor will immediately notify the appropriate DPR staff (e.g., project manager or supervisor). Appropriate agencies will be notified in the event of significant spillage.
- No maintenance or fueling activities shall be permitted within 61 m (200 ft.) of a watercourse, spring, seep or wet area.
- Equipment will be cleaned and repaired (other than emergency repairs) outside the Park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside Park boundaries, at a lawfully permitted or authorized designation.

b) Failure of, or leakage from, vehicles could result in the release of hazardous substances (primarily petroleum based products) to the ground or water, (see VII(a) discussion above). Mitigation measure Hazmat-1 will reduce the potential for adverse impacts to a less than significant level. Discarded barrels may be discovered in the work area and may contain unknown potentially hazardous substances. Abandoned vehicles may also be found within the planned project sites.

Chainsaws will be filled with fuel and bar oil at the worksite daily. The potential to degrade water quality with these products through spills is small because of the comparatively small volumes used at one time. Implementation of the following mitigation measures, in conjunction with Hazmat-1, will reduce any potential impacts related to these activities to a less than significant level.

MITIGATION MEASURES HAZMAT-2

- Chainsaws must be filled on a level surface large enough so the saw can be placed on the bare ground and the sawyer will have stable footing. Chainsaws shall not be filled within 61 m (200 ft.) of a watercourse, seep or spring.
- Containers (1 gallon or larger) for refueling saws must be filled on a road surface within 8 m (25 ft.) of a spill kit. Containers can not be filled within 8 m (25 ft.) of a watercourse, seep, or spring.
- If there is evidence of spillage from or free product discovered on or adjacent to the project sites, work will be halted or diverted from the immediate vicinity of the find and the Sector's hazardous materials coordinator will be contacted (Jeff Bomke 707-464-6101 ext 5130). Hazardous materials, if present, will be contained and removed from the site prior to resumption of work. Removal of all contaminants, including sludge, spill residue, or containers, will be conducted following established DPR procedures and in compliance with all local, state, and federal regulations and guidelines regarding the handling and disposal of hazardous materials.
- Abandoned vehicles located within the project sites will be removed and disposed of under the supervision of the hazardous materials coordinator.

c) The project area is not located within one-quarter mile of any school and no schools are proposed for this area. No impact.

d) The treatment sites in the MCA are not included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5. Therefore, no impact will occur with project development.

e) The planned treatment areas are not located within two miles of a public use airport. Therefore, no impact will occur as a result of this project.

f) The planned project sites are not located within the vicinity of a private air strip. Therefore, no impact will occur as a result of this project.

g) All operations associated with the project will occur within the boundaries of the MCA and work will not restrict access to or block any public road. Access to the project sites is limited and the roads proposed for treatment are not part of any emergency response or evacuation plan. A general safety protocol for backcountry operations has been adopted by the NCRD for use within State Parks, including the MCA, and will be implemented as part of this project. This protocol outlines broad safety issues common to all projects and presents guidelines on how to address those issues. It also requires project managers to develop a project specific safety plan for each restoration project within the plan, including the identification of any existing emergency response plans. The project is designed and will be implemented to avoid any conflicts with existing plans or increase in emergency response time. Emergency response requirements for this project will be no greater than for any other backcountry activities.

Workers spend most of their work hours in remote wildland settings and may be exposed to natural hazards consistent with that environment (e.g., wild animals, insects, noxious plants, lightning, wind, etc.). However, all State Park vehicles contain first aid kits and employees are trained how to respond to anticipated and unanticipated incidents. Employees are also asked to disclose any sensitivity that might affect their employment

tasks or increase the potential need for emergency medical care. Therefore, the impact of this project on an emergency response or evacuation plan will be less than significant.

h) Passenger vehicles can get very hot during the warmer part of the work season and are sometimes in close proximity to flammable vegetation. Improperly outfitted exhaust systems could generate sparks. The safety plan developed for each project is reviewed by all project staff and includes job site characteristics to reduce the potential for fire. The following mitigations will reduce the potential for adverse impacts from these incidents to a less than significant level.

MITIGATION MEASURES HAZMAT-3

- A fire safety plan will be in place prior to the start of any operations, including availability of identified fire suppression equipment and any required employee training.
- Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all equipment.
- Crews will be required to park vehicles away from flammable material such as dry grass and brush.
- Park staff will be required to have a State Park radio on site, which allows direct contact to California Department of Forestry and Fire Protection and centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.
- Surface fuels within 15 m (50 ft.) of drivable roads will either be chipped and scattered onsite or piled for subsequent burning at an appropriate time.
- DPR will consult with CDF regarding stopping operations during extreme fire danger conditions including ceasing operations when fuel moisture readings drop below 8%. The DPR representative will monitor fuel moisture readings to assure that operations do not occur with fuel moisture drop below 8%. A log of the fuel moistures will be kept to document compliance with this measure.
- Prior to the commencement of operations in any given year DPR will consult with CDF to identify potential staging areas to be used in case a fire starts within a treatment area. Staging areas will be identified on the ground and on maps which will be provided to DPR staff, representatives, and contractors. All staging areas will be subject to the same measures (e.g. natural and cultural resource surveys, vegetation removal, or other mitigation measures) as stipulated in this document.

VIII. HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL SETTING

Water quality in the MCA ranges from extremely clear and free of any pollutants, in streams that drain from old growth forests, to turbid, poor quality in areas previously impacted by humans. The North Coast Regional Water Quality Control Board (RWQCB) regulates water quality in the area of California where the park is located.

Precipitation in the MCA 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.

Groundwater in the MCA is relatively free of pollutants and considered very high quality because very few potential pollution sources exist. The groundwater table in the MCA 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.

IMPACT WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) 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 that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through 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 on- or off-site flooding?	☐	☐	☒	☐
e) 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?	☐	☐	☐	☒
f) Substantially degrade water quality?	☐	☐	☒	☐

g)	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?	☐	☐	☐	☒
h)	Place structures that would impede or redirect flood flows within a 100-year flood hazard area?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam?	☐	☐	☐	☒
j)	Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

DISCUSSION

a,f) The project will be in compliance with all applicable water quality standards and waste discharge requirements (See Section VII, Hazards and Hazardous Materials, above, regarding potential impacts from accidents, spills, or upset.). Project work will generally be completed before October 15 of any year to take advantage of the dry season, but work may need to extend into the rainy season to finish projects. Workers will be required to follow the rules outlined in the Backcountry Driving Policy (Appendix H) which prohibits driving on any road that is sufficiently wet so that "surface displacement and rutting occurs beneath the weight of the vehicle's tires." The project scope does not include waste discharge work or water drafting of any kind. Project location, design, and timing, in combination with the Hazmat mitigation measures indicated above for accidental hazardous material exposure, will result in a less than significant impact to water quality and waste discharge.

b) The project will not create or contribute runoff water in amounts that will exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff (See Discussion VIII (d) above.). No water will be drafted for this project. No impact.

c,d,e) No vehicles will travel off designated roads. No alterations of stream courses will occur. No impact.

g,h) The project does not involve housing or construction of any structure designed for human occupation. No impact.

i) The project will not expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam. There are no levees or dams within or adjacent to areas to be restored. No adverse impact.

j) The project will not result in inundation by seiche, tsunami, or mudflow because the sites are located above 122 m (400 ft.) in elevation, and are inland from any water body. Work will occur during dry periods to limit workers exposure to mudflow. Less than significant impact.

IX. LAND USE AND PLANNING

ENVIRONMENTAL SETTING

The proposed project is located within the boundaries of the Mill Creek Acquisition, which is unclassified at this time. The intended purpose the MCA is to preserve outstanding natural, scenic, and cultural values, and indigenous aquatic and terrestrial fauna and flora. No General Management Plan currently exists for the acquisition, but DPR's Departmental Operations Manual, Section 0300 defines the goals and objectives of restoration of natural resources. The area is zoned for recreation in Del Norte County. In addition to resource preservation, the MCA will eventually be used for public recreation. The project sites are located in areas that are undeveloped and not currently used by visitors.

The Mill Creek property is a 103 km^2 (40 mi^2) area located approximately 10 km (6 miles) southeast of Crescent City in Del Norte County. The property directly links large areas of old-growth coast redwood forest within Redwood National and State Parks with National Forests located in the western Klamath-Siskiyou Mountains. The acquisition is bordered by Jedediah Smith Redwoods State Park to the north, Del Norte Coast Redwoods State Park to the west, Six Rivers National Forest to the east, and private industrial timber lands to the south (Figure 1). Officially the MCA is included within Del Norte Coast Redwoods State Park. The property encompasses a large portion of the Mill Creek watershed (60 km^2 [23 mi ^{2}]) tributary to the Smith River, a large portion of the Rock Creek watershed (31 km^2, 12 mi^2) tributary to the South Fork Smith River, and small headwater portions of the Terwar (2.6 km^2, 1.0 mi^2), Hunter (1.1 km^2, 0.4 mi^2), and Wilson (5.3 km^2, 2.0 mi^2) creek watersheds.

The Miller Timber Company bought the Mill Creek tract from Hobbs, Wall, & Company in the early 1940s and the Rock Creek tract from Jones Timber Company around 1965. Between 1954 and 2000, the property was intensively managed for commercial timber harvest that included constructing an extensive road network and converting most of the property from old-growth to early-successional coniferous forest. Approximately 40.5 ha (100 ac) of old-growth redwood and Douglas-fir forest presently occur in five separate stands. In 2001, the Save-The-Redwoods-League negotiated an option to purchase the 103 km^2 (40 mi^2) Mill Creek property from Stimson Lumber Company (Stimson) which was formally known as the Miller Timber Company and or the Rellim or Miller-Rellim Timber Company. Sale of the property was finalized in June 2002, at which time the entire property transferred to State ownership under stewardship of the California Department of Parks and Recreation (DPR).

Following acquisition, Stillwater Sciences, under contract to SRL and the California Coastal Conservancy, developed the Interim Management Recommendations (IMR) to guide protection, restoration, and public use of the Mill Creek property until DPR adopts a General Management Plan amendment for the area. The IMR for the MCA describes specific interim management objectives and recommended actions for attaining these objectives. Objectives and recommendations were developed to prioritize future management actions and provide information necessary to comply with CEQA and related legislation required for implementation of site-specific projects.

Several past and present plans address natural resource management of the Mill Creek property or adjacent public lands. These plans were reviewed during the development of these IMR and are described briefly below.

Stimson Lumber Company prepared a Draft Multi-Species Habitat Conservation Plan (MSHCP) for timberlands in Del Norte County in support of an application for an Incidental

Take Permit under the Endangered Species Act and a 2081(b) permit under California Endangered Species Act (Beak Consultants 1998). The draft HCP summarized existing physical and biological information for the property, as well as potential impacts to threatened, endangered, and other special-status species that could result from timber harvest activities. The draft HCP did not undergo a public review process and was not finalized by Stimson or federal and state agencies.

The Smith River National Recreation Area (SRNRA) was established as part of the Six Rivers Land and Resource Management Plan (SRLRMP) to "ensure the preservation, protection, enhancement, and interpretation of the Smith River's wild and scenic rivers, ecological diversity, and recreational opportunities while providing for wise use and sustained productivity of its natural resources" (USDA Forest Service 1995). The SRLRMP provides management guidance for a 10- to 15-year interim period.

The Smith River Anadromous Fish Action Plan was prepared by the Smith River Advisory Council to maintain and enhance anadromous fish populations in the Smith River (SRAC 2002). The project addresses anadromous salmonid habitat quality and quantity, watershed conditions, and public land management in the Mill Creek area. Goals established in the plan include (1) assessing watershed conditions in the Smith River estuary and tributaries, (2) identifying existing data gaps, (3) formulating management and monitoring recommendations, (4) maintaining natural resource-based economies, and (5) community participation in natural resources management and restoration.

Redwood National Park, Jedediah Smith Redwoods State Park, Del Norte Coast Redwoods State Park, and Prairie Creek Redwoods State Park are cooperatively managed under a Memorandum of Understanding (MOU) between the NPS and DPR (RNSP 1996). The MOU includes lands within the congressionally authorized boundary of Redwood National Park, now collectively referred to as Redwood National and State Parks. Joint state and federal management is intended to enhance protection of Park resources and improve public service using combined state and federal resources. A General Management Plan and Environmental Impact Statement/Environmental Impact Report were prepared by the Redwood National and State Parks to provide "a defined, coordinated direction for resource preservation and visitor use and a basic foundation for decision making and managing for the following 15 to 20 years" (RNSP 1999). The joint plan, approved in 2000, covers approximately 427 km^2 [165 mi^2] and focuses on park establishment, cooperative management of park resources, and the visitor experience.

Throughout the Redwood National and State Parks, second-growth conifer forests have established following timber harvest that occurred prior to state and federal acquisition (RNSP 1996). Late-successional forest characteristics and associated ecological values are generally lacking and develop slowly in these dense second-growth forests. RNSP is developing Second-Growth Forest Recovery Plan with the goal of accelerating recovery of late-successional characteristics in these areas through silvicultural treatments. The draft plan assesses the benefits and potential impacts of vegetation management alternatives, including a no treatment alternative.

The Del Norte county General Plan presents the Mill Creek Acquisition as Federal and State Land but does not specifically address activities or management goals for the property.

IMPACT		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
WOULD THE PROJECT:					
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

DISCUSSION

a) The project will not physically divide an established community because no community exists within the project boundary. No impact.

b) The project will not conflict with any land use plan, policy, or regulation of any agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. In general, this project is designed to meet a critical resource protection need, and no land use plans have been implemented to regulate forest restoration. State and federal laws regulate environmental and worker safety aspects of the operation; however, the project will be consistent with all applicable laws and regulations. The area is zoned for recreation, but the project will not impact recreational uses because the MCA is currently closed to the public. Improving the aesthetic qualities of the site will enhance recreation. No impact.

c) The project will not conflict with any applicable habitat conservation plan or natural community conservation plan because no such plans have been adopted. No impact.

X. MINERAL RESOURCES

ENVIRONMENTAL SETTING

No significant mineral resources have been identified within the boundaries of the MCA. Mineral resource extraction is not permitted within State Park property.

		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:					
a)	Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

DISCUSSION

a) The project will not result in the loss of availability of a known mineral resource because no known mineral resources exist within the Park. No impact.

b) The project will not result in the loss of availability of a locally important mineral resource recovery site because none exist within the Park. No impact.

XI. NOISE

ENVIRONMENTAL SETTING

The MCA is located in rugged forested terrain in northern California, surrounded by steep mountains and the Pacific Ocean.

Ambient noise associated the project area results from administrative use on Park roads and occasional air traffic consisting of small private planes, Coast Guard helicopters, and CDF firefighting aircraft.

This Park contains special status wildlife species that can be adversely affected by excessive noise during their nesting and breeding seasons. The USFWS has developed guidelines for eliminating noise impacts to threatened and endangered wildlife species in this area. These guidelines include seasonal restrictions on the use of noise-generating equipment in potential habitat and/or during periods of nesting or the early phase of rearing of young. These restrictions apply to any use of noise generating equipment throughout the region. The USFWS will provide technical assistance on this project regarding noise impacts prior to project implementation. The USFWS staff has visited recent forest restoration projects proposed by the North Coast Redwoods District and has been consulted regarding this project.

IMPACT **WOULD THE PROJECT**:		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a)	Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☒	☐	☐
b)	Generate or expose people to excessive ground borne vibrations or ground borne noise levels?	☐	☐	☐	☒
c)	Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	☐	☐	☐	☒
d)	Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	☐	☒	☐	☐
e)	Be 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? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

DISCUSSION

a,d) Noise levels associated with restoration activities at and near the planned project areas will fluctuate, depending on the type and number of chain saws operating at any given time. There are no noise-sensitive human land uses located in the vicinity of the project site that will be substantially affected by the proposed restoration activities and no known noise standards applicable to this area (other than species-related noise restrictions - see Mitigation Measure Bio-3 for project constraints related to endangered and threatened species). However, depending on the specific restoration activities being performed, short-term increases in ambient noise levels could result in speech interference near the project site. Implementation of the following mitigations, in conjunction with BIO-3, will reduce any potential adverse impacts to a less than significant level.

MITIGATION MEASURES NOISE-1
• Restoration activities will generally be limited to the hours between 6 a.m. and 6 p.m. (0600 and 1800 hours). • Internal combustion engines used for any purpose at the job site will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for operations will utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary. • All individuals operating or working in the vicinity of chain saws will be required to wear ear protection. • Stationary noise sources and staging areas will be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources will be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.

b) See Discussion XI(a) above. The project sites will be closed to the public during restoration work and only workers will be affected by the equipment noise. Because the sites are primarily in thick second growth forests, noise will travel only a short distance before it becomes muffled by vegetation and wind. The work sites are well away from campgrounds and visitor use areas. Implementation of the mitigations indicated in Mitigation Measure BIO-3 and NOISE-1 will reduce any potential impacts to a less than significant level.

c) Project-related noise will only occur during operations. Once operations are completed, all noise-generating equipment will be removed from the site. The project will not create any source that will contribute to a substantial permanent increase in ambient noise levels in the vicinity of the project. No impact.

e,f) The project is not within an airport land use plan and is not within two miles of an airport or private air strip; therefore, the project will have no impact.

XII. POPULATION AND HOUSING

ENVIRONMENTAL SETTING

No housing exists within the project area and no housing development is planned. The entire project area is owned by State Parks.

Construction and State Park staff generally live in nearby Crescent City. Occasionally, contract workers may camp on-site during the operation phase in travel trailers. The trailers are required to be self-contained and are located on existing roads, landings, or other areas used by seasonal work crews.

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION

a,b,c) The project will not induce substantial population growth because the project does not involve housing or new businesses. The project will be restoring degraded second growth forests and will have no direct or indirect effect on population growth. Employees will either commute to the work site on a daily basis or stay in temporary encampments. No replacement housing will be required, because all workers already maintain housing in the region or provide their own temporary facilities. No people will be displaced because the project only involves restoring forests that have no building potential. All work will take place within the confines of the Park boundaries, with no additions or changes to the existing local infrastructure. Therefore, the project will have no impact on population growth or housing requirements in the area.

XIII. PUBLIC SERVICES

ENVIRONMENTAL SETTING

The watersheds proposed for restoration are on steep hill slopes, covered in thick brush and second growth forest. The current age distribution of the property is skewed towards young, even-aged stands (<30 years old) that characteristically support high tree densities and abundant ladder fuels. The quantity of surface fuels will be increased in the project area for a period of 5 – 15 years when cut trees are left on the forest floor to decompose. Given the area's high annual rainfall totals, highly flammable material (e.g. leaves, small diameter twigs and branches) are expected to decompose and become relatively inflammable within five years. Larger diameter branches and boles are known to become rotten and inflammable within 15 years. Thinning will reduce the quantity of both ladder fuels and standing fuels.

The California Department of Forestry and Fire Protection (CDF) provides fire protection for the project areas. CDF maintains a fire station in Crescent City, approximately 32 km (20 miles) from the project location. The CDF Air Attack base is located in Rohnerville, approximately 80 km (50 air miles) from the MCA.

No established trails currently exist and unsupervised public use of old logging roads is prohibited for safety reasons. The NCRD maintains a network of service roads for use by Park staff such as fire suppression crews, ranger patrol, and for access to a few power lines traversing the Park.

Although there is no staff permanently assigned to this Park, DPR conducts routine peace officer ranger patrols and road monitoring patrols. In addition, State Park resource management staff conduct resource assessments and monitoring within the Park.

No schools exist within the project area and the nearest school is over 16 km (10 miles) away from the work sites, in Crescent City.

IMPACT WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire protection?	☐	☒	☐	☐
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

DISCUSSION

a. Fire hazard on the Mill Creek Acquisition is currently high given the predominance of young, dense forests and steep topography. Restoration thinning will reduce the quantity of standing fuels and ladder fuels in the short term and will decrease fire hazard long-term by facilitating the development of larger, more fire resistant trees and a cool, moist forest environment in which ground fires predominate. Temporary increases in surface fuels are expected to result from the thinning. Highly flammable material is expected to decompose within five years. Fuels within 15 – 46 m (50 – 150 ft.) from drivable roads will be removed or chipped in conjunction with thinning operations to reduce the probability of roadside ignitions. The roadside fuels reduction zone width will depend on the area's ignition potential. There is a possibility of accidental ignitions caused by thinning operations. DPR will consult with CDF regarding stopping operations during extreme fire danger conditions. DPR will also consult with CDF to identify potential staging areas to be used in case a fire starts in a stand being restored.

   The CDF Air Attack Base in Rohnerville is approximately 80 km (50 air miles) from the MCA, reducing response time in case of a fire. During operations, DPR staff will have park radios on site at all times to ensure immediate direct contact to CDF fire dispatchers and crews.

   The mitigation measures described in Hazmat-3 will reduce potential adverse impacts to fire protection performance to a level that is less than significant.

   No additional demands on rangers or local police are expected as a result of this project.

   No schools exist within or adjacent to the project area. No changes will occur that would affect existing schools or require additional schools or school personnel. No impact.

   Since no public use areas will be closed or access limited as a result of this project, no other parks in the area should show a related increase in use. No adverse impact will occur at the MCA or any other public facilities as a result of this project.

XIV. RECREATION

ENVIRONMENTAL SETTING

The MCA is not open to the public at this time. Occasional guided tours are provided to allow public access to the acquisition. The scheduling of any public tours or special use permits will be coordinated with project managers to assure that the public is not allowed in the vicinity of operations. Eventually the acquisition will be opened to the public for a variety of recreational uses. The areas that will be affected by the proposed project are undeveloped, relatively inaccessible, and rarely used by visitors.

		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:					
a)	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?	☐	☐	☐	☒
b)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

DISCUSSION

a). The project will not increase existing uses of the Park, and will not accelerate the deterioration of any facility. Nor will the project lead to increased use of other nearby facilities. No impact.

b). The project does not include the construction of recreational facilities or the expansion of any facility; therefore, no impact will occur.

XV. TRANSPORTATION/TRAFFIC

ENVIRONMENTAL SETTING

The MCA currently contains over 483 km (300 miles) of roads and associated skid trails that were built to facilitate timber extraction by the previous owner (LSEPP). Roads are currently only accessible to the public via guided tours. The project does not propose to modify any existing road surface or otherwise affect transportation and traffic on the MCA. Seasonal dirt roads that are currently blocked by mounds of dirt may be temporarily opened to facilitate access by work crews but will be closed again immediately after activities at the work site are finished. The project will not result in increase visitation to the MCA.

IMPACT **Would the project:**		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a)	Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☒
b)	Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c)	Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☒
d)	Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?	☐	☐	☐	☒
e)	Result in inadequate emergency access?	☐	☐	☐	☒
f)	Result in inadequate parking capacity?	☐	☐	☐	☒
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

DISCUSSION

a) The project will not increase the traffic on any public street system. No impact.

b) The project will not cause traffic levels to exceed, individually or cumulatively, the level of service standards for designated roads or highways; the number of vehicles and frequency of travel related to this project is insignificant No impact.

c) The project sites are not located within an airport land use project, within three km (two miles) of a public airport, or in the vicinity of a private air strip, and do not serve as a normal reporting point for air traffic in the area. Nothing in the proposed project will in any way affect or change existing air traffic patterns; therefore, no impact will occur as a result of this project.

d) The project does not contain a design feature or incompatible uses that will substantially increase traffic hazards. No impact.

e) The project will not result in an adverse impact on emergency access because no access routes will be modified in a way that significantly affects transportation. Cut trees will fall on roads. Felled trees that block traffic flow will be removed from the road before the feller cuts additional trees so that the operations will not disrupt normal emergency access to any portion of the MCA.

MITIGATION MEASURES TRANSPORTATION-1
• Felled trees that impede road traffic will be removed before the feller cuts additional trees so that the operations will not disrupt emergency access to any portion of the MCA. • Crews will be required to keep the road open for emergency traffic.

f) The project will not result in inadequate parking capacity because it does not involve public access or public uses. The workers on this project will park service vehicles close to the work site and move the vehicle down the road a few hundred feet every couple of hours as work progresses. No impact.

g) The project will not conflict with adopted policies, plans, or programs supporting alternative transportation because it does not reduce or increase transportation uses. No impact.

XVI. UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL SETTING

There are no water or sewage facilities within the project area and there are no transmission lines within or adjacent to any of the treatment areas (Appendix A, Figure 3). The area is a second growth forest in a remote wildland setting.

		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:					
a)	Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?	☐	☐	☐	☒
	Would the construction of these facilities cause significant environmental effects?	☐	☐	☐	☒
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?	☐	☐	☐	☒
	Would the construction of these facilities cause significant environmental effects?	☐	☐	☐	☒
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	☐	☐	☐	☒
e)	Result in a determination, by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g)	Comply with federal, state, and local statutes and regulations as they relate to solid waste?	☐	☐	☐	☒

DISCUSSION

a-b) No wastewater will be produced by this project. No impact.

c) The project will not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities because no stormwater facilities are needed. No impact.

d) No outside source of water is required during construction; therefore, no impact.

e-g) No impact; no wastewater or solid waste will be generated by this project. Waste from construction workers will be deposited in existing facilities or hauled off site and disposed of in a facility designed for waste.

CHAPTER 4
MANDATORY FINDINGS OF SIGNIFICANCE

IMPACT **WOULD THE PROJECT**:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?	☐	☒	☐	☐
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
c) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	☐	☒	☐	☐
d) Have environmental effects that would cause substantial adverse effects on humans, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION

a) The proposed plan was evaluated for potential significant adverse impacts to the environment. Though the plan will temporarily reduce canopy cover and therefore have the potential to increase temperatures in wetland habitat mitigation measures have been designed to account for these short term difficulties. These young stands will also grow quickly and return to a near closed canopy in a short time. Likewise measures are incorporated into this plan to assure that the action does not result in significant adverse impacts or take to state and federally listed species or sensitive species. Full implementation of all mitigation measures incorporated into this project will avoid or reduce these potential impacts to a less than significant level.

b) The proposed plan has been evaluated for potential significant impacts to cultural resources. It has been determined that the only ground disturbing activity that may take place is the burning of slash piles. Measures within this plan will reduce the potential this impact to a less than significant level.

c) The LSEPP project will occur concurrently with this project. There is not likely to be any additional adverse impacts resulting from the combined effects of these two activities. Coordination between this and the LSEPP will ensure that cumulative impacts of the two projects will not have a significant impact on resources.

d) This plan will occur in remote areas where the public has no access and will have no adverse impacts on humans.

CHAPTER 5
SUMMARY OF MITIGATION MEASURES

The following mitigation measures will be implemented by DPR as part of the Forest Ecosystem and Restoration and Prevention Plan in the MCA.

AESTHETICS

MITIGATION MEASURES AESTHETICS-1

- Treatment areas within 61 m (200 ft.) and/or highly visible (e.g. direct line of site) from any proposed high use Park facility will be reviewed by a qualified landscape architect to assess potential visual impacts and an interpretive specialist to assess interpretive opportunities. Both assessments shall be completed prior to finalizing the intended thinning prescription.
- Where aesthetic impacts are anticipated by the landscape architect, the thinning prescription(s) shall be modified in accordance with the professional recommendations to: (a) reduce the spacing between retained trees to maintain a visually more continuous canopy; (b) reduce the quantity of slash and/or manipulate its arrangement to mimic more natural forest conditions or (c) stagger the intended thinning prescription over a longer period of time (e.g. years) to screen larger canopy openings. Measures a – c may be used individually or in combination as needed to mitigate aesthetic impacts.

AIR QUALITY

Mitigation Measures AIR-1

- All equipment engines will be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Traffic speed on unpaved roads will be limited to 15 miles per hour (mph).
- Mechanized removal of downed material will be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or when dust from construction might obscure driver visibility on public roads.
- Pile burning shall be conducted in accordance with Rule 207 (Wildland Vegetation Management Burning) as described by the North Coast Unified Air Quality Management District (NCUAQMD). Prior to burning, a burn permit shall be secured from this agency as well as from the California Department of Forestry and Fire Protection (CDF).
- All burnable material shall be arranged so that it will ignite as rapidly as practicable within the applicable fire control restrictions (NCUAQM Regulation II) and burn with a minimum of smoke.
- Burnable material shall not be ignited when the wind direction is such that smoke from the burning of such material would be blown or carried into a nearby populated area and could create a public nuisance.

BIOLOGICAL RESOURCES

MITIGATION MEASURES BIO-1 (PLANTS)

- Prior to operations botanical surveys shall be conducted by a qualified botanist within the project boundaries (all areas of proposed operations and adjacent areas that could be impacted where sensitive plant habitat is present). Surveys shall be conducted in conformance with the DFG "Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities" (www.dfg.ca.gov/whdab/pdfs/guideplt.pdf and Appendix C). Results of the survey effort shall be submitted to the Senior Environmental Scientist (DPR) and the DFG at least 10 business days prior to commencing operations to allow sufficient time for review of the

survey effort.

- DPR's primary means of mitigation for plants listed as Rare, Threatened, and Endangered, or which occur on the CNPS Lists 1A, 1B or 2 shall be avoidance (see below). These measures are dependent on the species natural history and the potential for adverse affects or the potential for take. CNPS List 3 and 4 plants will be avoided when feasible; however, such action will not be required. DPR reserves the right to develop site specific measures in consultation with the DFG. Such measures will be amended into the MND.

Species Name	Common Name	CNPS List Status	Mitigation
			Wetland Shade Associated Species
Lilium occidentale	western lily	1B.1	The overstory canopy shall not be altered or removed nor shall the hydrology associated with the habitat be altered within 23 m (75 ft.) of any plants.
Mitella caulescens	leafy-stemmed miterwort	2.3	
Pinguicula vulgaris spp. macroceras	horned butterwort	2.2	
Smilax jamesii	English Peak greenbriar	1B.3	
Viola primulifolia spp. occidentalis	western bog violet	1B.2	
			Wetland Associated Species
Carex leptalea	flaccid sedge	2.2	Trees shall be directionally felled away from the population or left standing if they threaten to impact the population. The hydrology associated with this habitat shall not be altered.
Carex praticola	meadow sedge	2.2	
Carex viridual var. viridula	green sedge	2.3	
Castilleja miniata spp. oregano	Siskiyou indian paintbrush	2.2	
Epilobium oreganum	Oregon fireweed	1B.2	
Gentiana setigera	Mendocino gentian	4.3	
Lathyrus palustris	marsh pea	2.2	
Lewisia oppositifolia	opposite-leaved lewisia	2.2	
Montia howellii	Howell's montia	2.2	
Sagittaria sanfordii	Sanford's arrowhead	1B.2	
Sanguisorba officinalis	great burnet	2.2	
			Forest Shade Associated Species
Asarum marmoratum	marbled wild ginger	2.3	The overstory canopy shall not be altered or removed nor shall the hydrology associated with the habitat
Erythronium hendersonii	Henderson's fawn lily	2.3	
Erythronium howellii	Howell's fawn lily	1B.3	
Monotropa uniflora	indian-pipe	2.2	

Saxifrage nuttallii	Nuttall's saxifrage	2.1	be altered within 23 m (75 ft.) of any plants.
			Forest and Scrub Associated Species
Arabis koehleri var. stipitata	Koehler's stipitate rock cress	1B.3	Trees shall be directionally felled away from the population or left standing if they threaten to impact the population.
Arabis macdonaldiana	McDonald's rock cress	1B.1	
Arienium trichomanes ssp. trichomanes	maidenhair spleenwort	2.3	
Arctostaphylos hispidula	Howell's manzanita	4.2	
Boschniakia hookeri	small groundcone	2.3	
Cardamine nuttalii var. gemmata	yellow-tubered toothwort	1B.3	
Minuartia howellii	Howell's sandwort	1B.3	
Pyrrocoma racemosa var. congesta	Del Norte pyrrocoma	2.3	
Senecio bolanderi var. bolanderi	Seacoast ragwort	2.2	
Sidalcea malachroides	Maple-leaved checkerbloom	1B.2	
Sidalcea malviflora spp. patula	Siskiyou checkerbloom	1B.2	
Sidalcea oregana spp. eximia	Coast checkerbloom	1B.2	
Streptanthus howellii	Howell's jewelflower	1B.2	
Thermopsis robusta	Robust false lupine	1B.2	

- Trees shall be directionally felled away from all fens, ponds, marshes and other wetlands or trees will be left standing if they threaten to impact the feature.

MITIGATION MEASURES BIO-2 (FISH)

- All vehicles will be restricted to existing roads.
- All restored areas will maintain a minimum of 30 tph (75 tpa). Additional trees will be retained along cut banks and slopes greater than 100% (the equivalent of a 2.4m x 2.4 m [8 ft. x 8 ft.] spacing).
- No restoration work will take place within 30 meters (100 ft.) of fish bearing streams and/or the associated channel migration zone.
- Treatment areas within 10 m (33 ft.) of non fish bearing streams and other aquatic habitat will be left with trees on a 4 m x 4 m (12 ft. x 12 ft.) spacing or closer. And all shrub layer vegetation will be cut to no lower than 1 m (3 ft.) in these areas.
- All trees adjacent (1 meter) to a stream channel and contributing to channel or bank stability will be retained.
- Trees will be felled away from all aquatic habitat whenever possible. Additional trees may be retained if felling away from sensitive areas is problematic.

- If a tree accidentally falls into aquatic habitat a DPR representative will decide if the tree needs to be lopped and/removed to minimize the impact to the sensitive feature.
- All personnel working in or near aquatic habitat will minimize foot traffic within these areas.
- Streams and other aquatic habitat boundaries will be flagged ahead of restoration workers.

MITIGATION MEASURES BIO-3 (BIRDS)

- Northern Spotted Owl
  1. Absent Northern Spotted Surveys (NSO) – If northern spotted owl surveys are not conducted then the following measures shall apply.
     a. No trees 30cm dbh (12") or greater shall be removed except where such trees pose a hazard to an existing facility or worker safety (Bio-5).
     b. No operations shall occur from February 1 through August 31 (depending on the proposed action the August 31 date may be modified to July 10 through a request for Technical Assistance from the U.S. Fish & Wildlife Service).
  2. If operations are proposed between February 1 through August 31.
     a. No operations shall occur unless a valid NSO technical assistance has been obtained from the U.S. Fish & Wildlife Service (Service). The results of the technical assistance may result in modification of the standard protection measures stipulated under Item c below.
     b. Surveys for the NSO shall be conducted in conformance with accepted Service approved NSO survey protocols. A map showing the location(s) (if any) of know NSO activity centers during the past 3 years shall be provided. An activity center is defined as a site(s) identified through surveys conducted to protocol resulting in either the presence of nesting, pair status, or resident single status as defined in the northern spotted owl protocol (USFWS 1992). The final determination of an activity center is at the discretion of the Service.
     c. If any known activity centers occur within 305 meter (1,000 ft.) of the proposed action then the following standard protection measures shall apply (these measures may be subsequently changed through technical assistance with the Service).
        i. A buffer zone for NSO's shall be established within a 305 m radius of a tree or trees containing a nest or supporting an activity center during the NSO's critical nesting period which occurs from February 1 through August 31.
        ii. No operations shall occur within a 152 m (500 ft.) radius of an activity center. Within the 152 – 305 m spatial buffer the minimum habitat requirements of functional roosting habitat (minimum 60% canopy, avg. stand trees >28cm dbh (11") shall be maintained.
        iii. A temporal buffer out to 400 m (0.25 miles) shall be established around any active activity center during the NSO's critical period which occurs from February 1, through August 31. During the critical period no operations shall occur within the temporal buffer.

- Marbled Murrelet
  1. Where residual trees are located within a project area or within 91 m (300 ft.) of treatment area boundaries, DPR shall consult with the California Department of Fish & Game (DFG) and the Service to determine if the trees constitute potential marbled murrelet nesting habitat.
  2. No operations shall occur within 91 m (300 ft.) of occupied or suitable marbled murrelet nesting habitat.
  6. No operations shall occur within 400 m (0.25 miles) of areas known to be occupied by marbled murrelets during the critical nesting season (March 24 – September 15).
  7. No operations shall occur within 400 m (0.25 miles) of potential marbled murrelet habitat during the critical nesting season unless surveys conducted to protocol have determined that the area is not utilized or occupied by marbled murrelets. This will also trigger consultation with the DFG and technical assistance with the Service.
  8. DPR reserves the right to consult with the DFG and the Service on site-specific mitigation measures. Any such changes will be amended into the MND if necessary.

- Raptors

  Pursuant to Fish & Game Code 3503.5 it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Therefore a biologist or a forester who will be trained by the District's Senior Environmental Scientist or his designee in raptor nest identification and raptor breeding identification will be responsible for looking searching surveying for raptor nests prior to operations. During operations the forester shall be responsible for assuring that no raptor nests are impacted by the proposed treatments by implementing the following measures:

  a) If an unoccupied raptor nest is detected (during the generic critical period of January 15 through August 31, the nest tree and surrounding screen trees shall not be disturbed and the location shall immediately be reported to the Senior Environmental Scientist.
  b) If an unoccupied raptor nest is detected outside of the generic critical period then operations shall cease in the vicinity of the nest and its location shall be reported immediately to the Senior Environmental Scientist. The Senior Environmental Scientist or his designee will then attempt to determine the species of raptor that constructed or used the nest and then implement the measures in Item C, below, (based on species).
  c) If an occupied raptor nest is detected in the project area, then the DPR inspector will cease operations within 400 m (0.25 mile) of the raptor nest (unless it is known to be a peregrine falcon aerie or bald eagle nest then a 1.6 km (1 mile) buffer shall be applied) and immediately notify the Senior Environmental Scientist. The Senior Environmental Scientist or his designee will then determine the species of raptor and then the following measures which were developed in concert with DFG (Scott Osborn, DFG pers comm. 04/13/05) will be applied (based on species)(see table below).

Species[1]	Critical Nesting Period	Temporal (Disturbance) Buffer	Spatial (Habitat) Buffer
Accipitridae			
Bald Eagle	January 15- August 15	1.6 km (1 mile)	150 m (500 ft.)
Northern Goshawk	March 1 – August 31	400 m (0.25 mile)	50m (165 ft.)
Cooper's Hawk	March 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Sharp-shinned Hawk	March 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Osprey	February 15 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Redtail Hawk	February 1 – August 31	400 m (0.25 mile)	15 m (50 ft.)
Red-shoulder Hawk	February 1 – August 31	400 m (0.25 mile)	15 m (50 ft.)
Falconidae			
Peregrine Falcon	January 15 – August 31	1.6 km (1 mile)	150 m (500 ft.)
Strigiformes			
Great Horned Owls	February 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Cavity Nesting Owls	February 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)

[1] Mitigation measures for the northern spotted owl are covered above. Other species of raptors such as the golden eagle, northern harrier, or long-eared owl are not expected to occur within the project area due to lack of habitat and are therefore not addressed.

d. DPR reserves the right to consult with the DFG on site-specific and species-specific mitigation measures. Any such changes will be amended into the MND if necessary.

MITIGATION MEASURES BIO-4 (AMPHIBIANS)

- Areas that provide potential habitat for the Del Norte salamander shall be identified and mapped prior to operations. Spatial buffers which retain the microhabitat of the sites shall be established around areas identified as potential habitat for the Del Norte salamander. The minimum buffer for these sites shall be 15 m (50 ft); however, site specific measures can be developed through consultation with the District's Senior Environmental Scientist and the Department of Fish and Game provided that the measures are then amended into the MND.

MITIGATION MEASURES BIO-5 (TREES)

- All trees ≥30 cm dbh (12") and greater will be retained unless they pose a hazard to an existing facility or worker safety. Hazard trees will be identified by a qualified DPR ecologist using the Department's assessment procedures. Where hazard trees are identified within a thinning treatment area and do not threaten an existing facility or pose a hazard to worker safety, every reasonable effort will be made to retain the tree and operate around it. Where an identified hazard tree is to be felled, DPR will seek the appropriate sensitive species consultations with CDFG and/or USFWS.
- Reforestation utilizing the NCRD genetic integrity guidelines (Appendix D) shall be implemented where tree planting is used to adjust forest composition.

MITIGATION MEASURES BIO-6 (RIPARIAN)

- Trees shall be felled away from streams. Trees that cannot reliably be felled away from the stream shall be left standing.

- Where every effort has been made to directionally fall a tree away from the stream but a portion of the tree nevertheless enters the stream's bed or bank, the supervising DPR official shall be notified. The DPR official will determine whether the tree can be bucked or moved to improve in-stream aquatic habitat

CULTURAL RESOURCES

MITIGATION MEASURES CULT-1

- Prior to commencement of operations in a given year, any areas where slash piles will be burned (except piles on existing roads) will be surveyed by a DPR qualified archaeologist. The archaeologist will flag the boundaries of any prehistoric or historic archaeological sites providing a 50-foot buffer zone to protect the site. These areas will be avoided during this project.

- In the event that previously undocumented cultural resources are encountered during project activities (including but not limited to dark soil containing shell, bone, flaked stone, groundstone, or deposits of historic trash) work within the immediate vicinity of the find will be temporarily halted or diverted until a DPR-qualified cultural resource specialist has been contacted to evaluate the find and implement appropriate treatment measures and disposition of artifacts.

MITIGATION MEASURES CULT-2

- In the event that human remains are discovered, work will cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate DPR personnel. Any human remains and/or funerary objects will be left in place or returned to the point of discovery and covered with soil. The DPR Sector Superintendent (or authorized representative) will notify the Country Coroner, in accordance with 7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (or Tribal Representative. If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the appropriate Native American authorities.

- If the coroner or tribal representative determines the remains represent Native American interment, the NAHC in Sacramento and/or tribe will be consulted to identify the most likely descendants and appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete (PRC 5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination.

- If it is determined the find indicates a sacred or religious site, the site will be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the Native American Heritage Commission/Tribal Cultural representative will also occur as necessary to define additional site mitigation or future restrictions.

GEOLOGY AND SOILS

MITIGATION MEASURES GEO-1

- All workers shall be advised of high-risk areas and cautioned to use extreme care while working in those areas.
- No work will take place within active slide areas.

- No vehicles will be used off of existing roads.
- Contractors will be given instructions as to alternative escape routes in case primary route becomes blocked.

HAZARDS AND HAZARDOUS MATERIALS

MITIGATION MEASURES HAZMAT-1

- All equipment including chain saws and vehicles will be inspected for leaks immediately prior to the start of daily operations and regularly inspected thereafter until equipment is removed from Park premises. Leaks that develop will be repaired immediately in the field or work with that equipment will be suspended until repairs could be made.
- To avoid spills during transport fuel containers must be secured when vehicles are moving.
- The contractor(s) will prepare an emergency spill response plan prior to the start of operations. DPR will ensure that the contractor maintains a spill kit on-site throughout the life of the project, or provides multiple sets of cleanup materials to each crew, if sharing will prevent timely implementation of cleanup plans. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to the project sites or within the MCA during operations, the contractor will immediately notify the appropriate DPR staff (e.g., project manager or supervisor). Appropriate agencies will be notified in the event of significant spillage.
- No maintenance or fueling activities shall be permitted within 61 m (200 ft.) of a watercourse, spring, seep or wet area.
- Equipment will be cleaned and repaired (other than emergency repairs) outside the Park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside Park boundaries, at a lawfully permitted or authorized designation

MITIGATION MEASURES HAZMAT-2

- Chainsaws must be filled on a level surface large enough so the saw can be placed on the bare ground and the sawyer will have stable footing. Chainsaws can not be filled within 61 m (200 ft.) of a watercourse, seep or spring.
- Containers (1 gallon or larger) for refueling saws must be filled on a road surface within 8 m (25 ft.) of a spill kit. Containers can not be filled within 8 m (25 ft.) of a watercourse, seep, or spring.
- If there is evidence of spillage from or free product discovered on or adjacent to the project sites, work will be halted or diverted from the immediate vicinity of the find and the Sector's hazardous materials coordinator will be contacted (Jeff Bomke 707-464-6101 ext 5130). Hazardous materials, if present, will be contained and removed from the site prior to resumption of work. Removal of all contaminants, including sludge, spill residue, or containers, will be conducted following established DPR procedures and in compliance with all local, state, and federal regulations and guidelines regarding the handling and disposal of hazardous materials.
- Abandoned vehicles located within the project sites will be removed and disposed of under the supervision of the hazardous materials coordinator.

MITIGATION MEASURES HAZMAT-3

- A fire safety plan will be in place prior to the start of any operations, including availability of identified fire suppression equipment and any required employee training.

- Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all equipment.
- Crews will be required to park vehicles away from flammable material such as dry grass and brush.
- Park staff will be required to have a State Park radio on site, which allows direct contact to California Department of Forestry and Fire Protection and centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.
- Surface fuels within 15 m (50 ft.) of drivable roads will either be chipped and scattered onsite or piled for subsequent burning at an appropriate time.
- DPR will consult with CDF regarding stopping operations during extreme fire danger conditions including ceasing operations when fuel moisture readings drop below 8%. The DPR representative will monitor fuel moisture readings to assure that operations do not occur with fuel moisture drop below 8%. A log of the fuel moistures will be kept to document compliance with this measure
- Prior to the commencement of operations in any given year DPR will consult with CDF to identify potential staging areas to be used in case a fire starts within a treatment area. Staging areas will be identified on the ground and on maps which will be provided to DPR staff, representatives, and contractors. All staging areas will be subject to the same measures (e.g. natural and cultural resource surveys, vegetation removal, or other mitigation measures) as stipulated in this document.

NOISE

MITIGATION MEASURES NOISE-1

- Restoration activities will generally be limited to the hours between 6 a.m. and 6 p.m (0600 and 1800 hours).
- Internal combustion engines used for any purpose at the job site will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for operations will utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.
- All individuals operating or working in the vicinity of chain saws will be required to wear ear protection.
- Stationary noise sources and staging areas will be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources will be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.

TRANSPORTATION /Traffic

MITIGATION MEASURES TRANSPORTATION -1

- Felled trees that impede road traffic will be removed before the feller cuts additional trees so that the operations will not disrupt emergency access to any portion of the MCA.
- Crews will be required to keep the road open for emergency traffic.

Chapter 6
Monitoring Plan

Two types of monitoring will be carried out in conjunction with the activities proposed under the FERPP. One type of monitoring will consist of establishing permanent plots to measure the long term effectiveness of the restoration activities and is outlined in Appendix E.

The other type of monitoring will take place during restoration operations to ensure that work is carried out in compliance with the terms of this MND. If DPR determines that work is not in compliance then the contractors and the Senior Environmental Scientist will be notified so that corrective measures can be taken. If problems continue work will cease while the project is reevaluated and workers are instructed on measures necessary to improve work standards. Persistent difficulties will result in termination of the contract.

Reports will be filed annually with DPR district headquarters and will summarize the quality and quantity of work accomplished. Any difficulties regarding compliance with the terms of the FERPP will be noted along with recommendations to improve future efforts.

Chapter 7
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REPORT PREPARATION

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AC	Acre
ATV	All Terrain Vehicle
APE	Area of Potential Effects
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CDF	California Department of Forestry and Fire Protection
DBH	Diameter at Breast Height
DFG	California Department of Fish and Game
DPR	California Department of Parks and Recreation
EIR	Environmental Impact Report
FERPP	Forest Ecosystem Restoration and Protection Project
HA	Hectare
IMR	Interim Management Recommendations
IS/MND	Initial Study/Mitigated Negative Declaration
FERPP	Forest Ecosystem Restoration and Protection Plan
LSEPP	Landscape Stabilization and Erosion Prevention Plan
MCA	Mill Creek Acquisition
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
NCRD	North Coast Redwoods District
NCUAQMD	North Coast Unified Air Quality Management District
NOx	Nitrogen Oxides
NSO	Northern Spotted Owl
PM_{10}	Particulate Matter with a diameter of 10 microns or less
POC	Port-Orford-cedar
ROG	Reactive Organic Gases
SSC	Species of Special Concern
THP	Timber Harvest Plan
TPA	Trees Per Acre
TPH	Trees Per Hectare
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

Fen	A type of wetland fed by groundwater and run-off
Girdle	To remove a band of bark and cambium from the circumference of (a tree), usually in order to kill it.
Late-successional	A mature or maturing stand of trees that has developed many characteristics generally associated with old-growth. Functional characteristics of late-successional forests include large decadent trees, a multi layered canopy, snags, and large down logs.
Late Seral	The stage in forest development that includes mature and old-growth forests.
Mass Wasting	All geological processes in which large masses of earth materials, such as rock and soil, move downslope by gravitational forces.
Thinning	Girdling or cutting down selected trees within a stand.
Silviculture	The branch of forestry dealing with the development and care of forests.
Snag	A standing dead or mostly dead tree.
Stand Replacing Fire	A high intensity fire that kills the majority of trees within a stand.
Ultramafic soil	Soils with a high level of heavy metal compounds (for example, nickel, chromium, iron and magnesium) that kills or prevents the growth of many plants.
Understory	Vegetation (trees and shrubs) growing under the canopy of larger trees.

BACKCOUNTRY ROAD DRIVING POLICY

Backcountry roads shall not be driven on with vehicles during or immediately after inclement weather. The exception to this policy is an emergency situation requiring vehicle access. Backcountry roads are defined as dirt and gravel surfaced roads used for administrative access that are not designated for public vehicle use. Inclement weather is defined as precipitation sufficient to saturate and soften the road base to the point where surface displacement and rutting occurs beneath the weight of the vehicle's tires. Emergencies are defined as medical assistance, search and rescues, law enforcement responses, fires and other immediate threats to the public or park resources.

During periods of inclement weather ATVs can be driven on these roads if the road surface is not saturated to the point where the vehicle's tires displace the surface soils and cause ruts. Backcountry roads that have been re-engineered during the previous dry season and not treated with base rock shall not be driven on by any vehicle or ATV during the following rainy season unless there is an emergency. These roads require a full winter to cure or firm up before being driven on. The rainy season is defined as November through May or the beginning of the prolonged stormy weather pattern to the beginning of the prolonged dry weather pattern on the North Coast.

As a general practice vehicles driven on backcountry roads should have four wheel drive and be engaged in four wheel drive. Tire chains shall not be used as a means to improve traction in order to gain access and should only be employed in emergencies or situations when extrication is not possible through mechanical assistance (e.g., winch, griphoist, come-along, or towing by another vehicle).

Mill Creek Acquistion - Del Norte Coast Redwoods State Park

California State Parks
North Coast Redwood District

Smith River
Crescent City
Happy Camp
Klamath
Orick
Orleans

Area Highlighted Shown at Left

Legend

- Mill Creek Acquisition
- Del Norte Coast Redwoods State Park
- California
- Pacific Ocean
- Six Rivers National Forest
- Major Highways
- Cities

0 10 20 Kilometers
0 5 10 Miles

1:357,157

Del Norte Coast Redwoods State Park
Mill Creek Acquisition

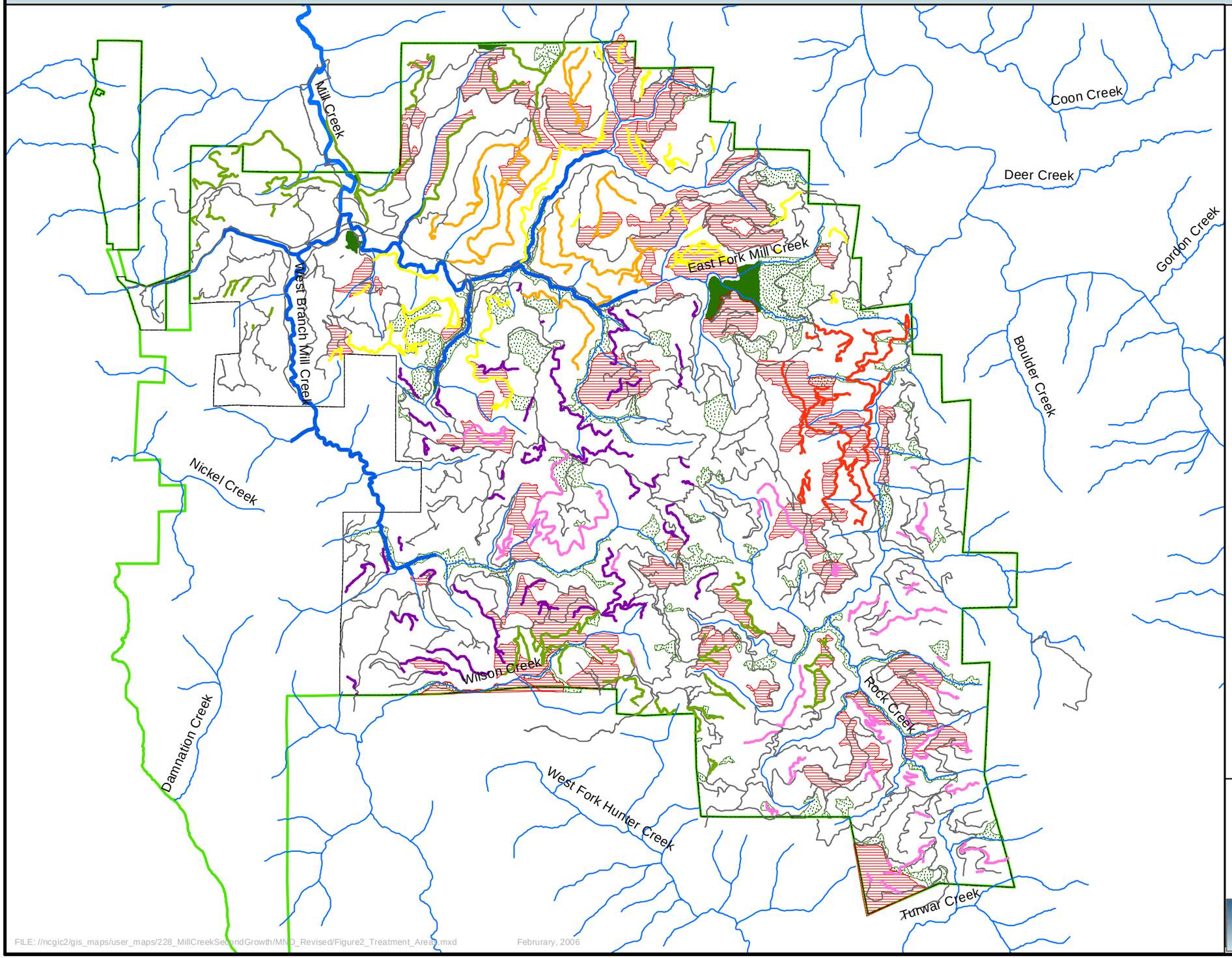
FIGURE 1
Mill Creek Regional Map

FILE: //ncgic2/gis_maps/user_maps/228_MillCreekSecondGrowthMND_Revised/Figure_1_Regional_Map.mxd

Februrary, 2006

Mill Creek Acquistion - Del Norte Coast Redwoods State Park

California State Parks
North Coast Redwood District



Legend

- Proposed Treatment Areas
- Anadromous Streams
- Non-Anadromous Streams
- Roads
- Conifer old-growth
- Scattered Conifer old-growth
- Del Norte Coast Redwoods State Park
- Mill Creek Acquisition

Road Decommissioning Schedule

- 2004-2005
- 2005-2006
- 2006-2007
- 2007-2008
- 2008-2009
- 2009-2010

0 0.5 1 2 3 Kilometers

Miles
0 0.5 1 2

1:60,000

Del Norte Coast Redwoods State Park

Mill Creek Acquisition

FIGURE 2
Treatment Areas Map

FILE: //ncgic2/gis_maps/user_maps/228_MillCreekSecondGrowth/MND_Revised/Figure2_Treatment_Areas.mxd

Februrary, 2006

Mill Creek Acquistion - Del Norte Coast Redwoods State Park

California State Parks
North Coast Redwood District

AREA ENLARGED
SHOWN
HIGHLIGHTED
AT LEFT

Legend

- Stands To Be Treated
- Mill Creek Acquisition
- Del Norte Coast Redwoods State Park

Rare Plants & Sensitive Features

- D — Arctostaphylos nortensis
- D — Arnica cernua
- E — Castilleja hispida ssp. brevilobata
- E — Darlingtonia Fen
- ^ — Horkelia serricata
- ^ — Iris innominata
- # — Lathyrus delnorticus
- # — Lilium bolanderi
- . — Listera cordata
- ! — Lomatium howellii
-) — Oxalis suksdorfii
-) — Piperia candida
- X — Pleuropogon refractus
- X — Port Orford Cedar root disease

0 1 2 Miles

0 1 2 3 Km

1:60,000

Del Norte Coast Redwoods State Park

Mill Creek Acquisition

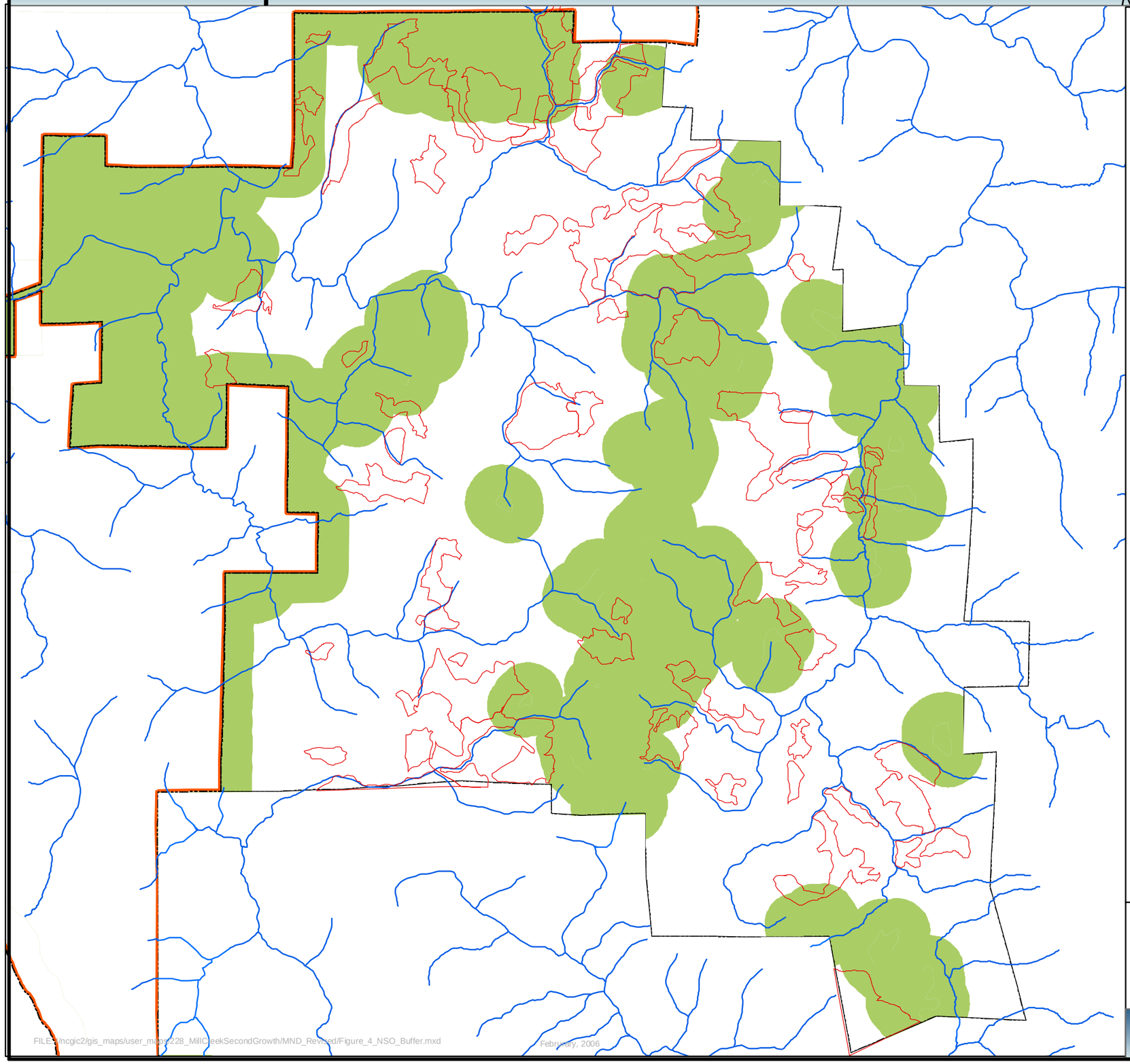
FIGURE 3
Rare Plants and Sensitive Features

FILE: //ncgic2/gis_maps/user_maps/228_MillCreekSecondGrowth/MND_Revised/Figure_3_Rare_Plants.mxd

February 2006

Mill Creek Acquistion - Del Norte Coast Redwoods State Park

California State Parks
North Coast Redwood District



Legend

- Streams
- Mill Creek Acquisition
- RNSP Boundary (pre-Mill Crk.)
- Proposed Treatment Areas
- Northern Spotted Owl Habitat Buffer

0 1 2 3 Kilometers

Miles 0 1 2

1:54,000

FILE: //ncgic2/gis_maps/user_maps/228_MillCreekSecondGrowth/MND_Revised/Figure_4_NSO_Buffer.mxd

February, 2006

Del Norte Coast Redwoods State Park
Mill Creek Acquisition

Figure 4
Northern Spotted Owl Habitat Buffer

Special-status species and additional species of interest occuring or potentially occuring on the Mill Creek Property

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS [1]	PRESENT [3]
Fish				
Oncorhynchus kisutch	Coho salmon	T	CE	
Oncorhynchus tshawytscha	Chinook salmon	NW	CSC	
Oncorhynchus mykiss irideus	Steelhead	NW	None	
Oncorhynchus clarki clarki	Coastal cutthroat trout	NW	CSC	
Oncorhynchus keta	Chum salmon	NW	None	
Acipenser medirostris	Green sturgeon	C2	None	
Lampetra ayresi	River lamprey	C2	CSC	
Lampetra tridentate	Pacific lamprey	C2	None	

[1] T Threatened
NW Not warranted for listing
CSC California Department of Fish and Game and/or California Board of Forestry Species of Concern
C2 Species formerly classified as Category 2 candidates by the USFWS; these species no longer have a legal federal status
CE Candidate to be listed as endangered pursuant to the California Endangered Species Act.

Amphibians				
Plethodon elongatus	Del Norte salamander		P, CSC	P
Rhyacortriton variegatus	Southern torrent salamander		P, CSC	P
Rana boylii	Foothill yellow-legged frog		P, CSC	P
Rana aurora aurora	Northern red-legged frog		P, CSC	P
Ascaphus truei	Tailed frog		P, CSC	P
Insects				
Polites mardon	Mardon skipper	C		nearby
Birds				
Phalacrocorax auritus	Double-crested cormorant		CSC	
Ardea alba	Great egret		O	
Accipiter gentilis	Northern goshawk		CSC	
Accipiter striatus	Sharp-shinned hawk		CSC	
Acipiter cooperii	Cooper's hawk		CSC	
Aquila chrysaetos	Golden eagle		CSC	
Haliaeetus leucocephalus	Bald eagle	T	E,P	R (W)
Bonasa umbellus	Ruffed grouse		CSC	
Brachyramphus marmoratus Marmoratus	Marbled murrelet	T	E,P	P
Strix occidentalis caurina	Northern spotted owl	T	O	P
Falco peregrinus	Peregrine falcon		P	
Progne subis	Purple martin		CSC	
Chaetura vauxi	Vaux's swift		CSC	
Dendroica petechia	Yellow warbler		CSC	
Icteria virens	Yellow-breasted chat		CSC	
Mammals				
Ursus americanus	Black bear			P
Arborimus pomo	California red tree vole		CSC	

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS [1]	PRESENT [3]
Martes Americana humboldtensis	Humboldt marten		CSC	nearby, report has not been confirmed
Martes pennanti pacifica	Pacific fisher		CSC	R
Cervus elaphus rooseveltis	Roosevelt elk			P

[2] T Threatened
E Endangered
P Protected by the State of California
CSC Species of Concern
O Species classified as Species of Concern by California Dept. of Fish and Game and/or California Board of Forestry

[3] P = Present based on Stimson Lumber Company (1998), CDFG (2000)
R = Rare
W = overwintering only

Rare and endangered plants, preferred habitat, and probability of occurrence within the Mill Creek property.

(Sources: Interim Management Recommendations, Stillwater Sciences and CNDDB Database)

Scientific Name	Common Name	Preferred Habitat	CNPS List [1]	Probability of Occurrence [2]	Listed in USGS Quad by CNPS [5]
Antennaria suffrutescens	evergreen everlasting	Serpentine rockfields and grasslands	4	L	
Arabis koehleri var. *stipitata*	Koehler's stipitate rock cress	Jeffrey pine/ grassland; open serpentine	1B	L	H
Arlenium trichomanes ssp. *Trichomanes*	maidenhair spleenwort	Lower montane coniferous forest and rock outcrops	2	U	H
Arabis macdonaldiana	McDonald's rock cress	Jeffrey pine/ grassland, serpentine	FE, SR	L	
Arctostaphylos hispidula	Howell's manzanita	Ultramafics in genl, knobcorne pine and scrub	2	P [3]	
Asarum marmoratum	marbled wild ginger	Ultramafics in genl, forest and scrub	2	P [3]	
Boschniakia hookeri	small groundcone	Mixed evergreen forest	2	L	
Cardamine nuttalii var. *gemmata*	Yellow- tubered toothwort	Serpentine rockfields and grasslands	1B	L- M	
Carex leptalea	flaccid sedge	Wet marsh	2	L	CHM
Carex praticola	meadow sedge	Wet marsh	2	L	CC
Carex viridual var. *viridula*	green sedge	Wet marsh	2	NA	CC, SR
Castelleja miniata spp. elata	Siskisyou Indian paintbruch	Darlingtonia fens, ultramafics	2	L	H
Darlingtonia californica	California pitcherplant	Darlingtonia fens, ultramafics	4	P [3]	
Dicentra formosa spp. *oregana*	Oregon bleeding heart	Serpentine rockfields, grasslands, scrub	4	P [4]	
Epilobium oreganum	Oregon fireweed	Ultramafics, Darlingtonia fens	1B	L	
Epilobium rigidum	Siskiyou Mountains willowherb	Ultramafics, streamsides	4	M	
Erigeron cervinus	Siskiyou daisy	Rock outcrops, streamsides	4	M	
Erythronium hendersonii	Henderson's fawn lily	Lower montane coniferous forest	2	U	H
Erythronium howellii	Howell's fawn lily	Lower montane forest, North Coast coniferous forest	1B	U	H
Gentiana setigera	Mendocino gentian	Ultramafics, Darlingotnia fens	1B	L	
Horkelia sericata	Howell's horeklia	Serpentine rockfields, grasslands, and scrub	4	H	
Lathyrus delnorticus	Del Norte pea	Ultramafics, streamsides	4	H	
Lathyrus palustris	marsh pea	Coastal bogs, fens, marshes and swamps	2	U	CC,SR
Lewisia oppositifolia	opposite- leaved lewisia	Seasonally wet serpentine flats	2	L-M	H
Lilium bolanderi	Bolander's lily	Serpentine rockfields, grasslands, scrub	4	P[4]	
Lilium occidentale	western lily	Coastal marsh, coastal terrace, Sitka spruce/ reedgrass association	FE, SE	L	CC, SR
Lilium pardilinum spp. vollmeri	Vollmer's lily	Ultramafics Darlingtonia fens, streamsides	4	P[3]	
Lilium rubenscens	Redwood lily	Redwood and mixed evergreen scrub, forest	4	H	
Lilium washingtonianum	Purple- flowered Washington lily	Mixed evergreen scrub, coniferous forests	4	P[3]	
Lomatium howellii	Howell's lomatium	Serpentine rockfields, grasslands, scrub	4	H	
Minuartia howellii	Howell's sandwort	Lower montane coniferous forest	1B	U	H
Mitella caulescens	Leafy-stemmed mitrewort	Lower montane coniferous forest	2	U	CH
Monotropa uniflora	Indian- pipe	North Coast coniferous forest	2	U	CC,H,CH
Montia howellii	Howell's monita	Wet forest openings, seasonally wet, compact soil	1B	L- M	
Pinguicula vulgaris spp. *Macroceras*	horned butterwort	Moist ultramafics, streamsides, wet rocks, Darlingtonia fens	2	M	CC, H
Pyrrocoma racemosa var. *congesta*	Del Norte pyrrocoma	Lower montane forest, serpentine	2	U	H
Salix delnortensis	Del Norte willow	Moist ultramafics, streamsides	4	M	
Sagittaria sanfordii	Sanford's Arrowhead	Marshes and swamps	1B	L	CC

Scientific Name	Common Name	Preferred Habitat	CNPS List [1]	Probability of Occurrence [2]	Listed in USGS Quad by CNPS [5]
Sanguisorba officinalis	great burnet	Darlingtonia fens, costal marsh	2	H	
Sanicula peckiana	Peck's sanicle	Serpentine rockfields, grasslands, scrub	4	H	
Saxifraga nuttallii	Nuttall's saxifrage	North Coast coniferous forest	2	U	H
Sedum laxum spp. *flavidum*	Pale yellow stonecrop	Rock outcrops, serpentine or other	4	L-M	
Sedum laxum spp. *heckneri*	Heckner's stonecrop	Rock outcrops, serpentine or other	4	L-M	
Senecio bolanderi var. *bolanderi*	seacoast ragwort	Coastal shrub, North Coast coniferous forest	2	U	H
Senecio macounii	Siskiyou Mountains ragwort	Serpentine rockfields, grasslands, scrub	4	M	
Sidalcea malachroides	maple- leaved checkerbloom	Disturbed roadsides, disturbed redwood forests	1B	L	CC, CH
Sidalcea malviflora spp. *patula*	Siskiyou checkerbloom	Disturbed roadsides, moist meadows	1B	L	
Sidalcea oregana spp. *eximia*	coast cherckerbloom	Disturbed roadsides, moist meadows	1B	L	CC
Smilax jamesii	Emglish Peak greenbriar	Streamside, often ultramafics	1B	L	
Streptanthus howellii	Howell's jewelflower	Serpentine rockfields, grasslands, scrub	1B	L	CC
Tauschi glauca	Glaucous tauschia	Serpentine rockfields, grasslands, scrub	4	H	
Thermopsis robusta	Robust false lupine	Open scrub, genl. disturbed	1B	L-M	
Vancouveria crysantha	Siskiyou inside- out- flower	Serpentine rockfields, grasslands, scrub	4	P[3]	
Viola primulifolia spp. *Occidentalis*	western bog violet	Darlingtonia fens	1B	L	H

[1] CNPS (= California Native Plant Society) plant categories:
1B = rare, threatened, or endangered in California and elsewhere
2 = rare, threatened, or endangered in Calif., but more common elsewhere
3 = plants about which more information is needed
4 = plants of limited distribution; a watch list
FE = federally endangered
SE = endangered under California State Law
SR = rare under California State law

[2] L = Low, H = High, M = Medium, P = Present, U= Unknown
[3] SHN 2000
[4] PNB 1999
[5] USGS quads:
CC = Crescent City, CH = Childs Hill, CHM = Canthook Mountain
SR = Sisters Rock, H = Hiouchi

Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities

State of California
THE RESOURCES AGENCY
Department of Fish and Game
December 9, 1983
Revised May 8, 2000

The following recommendations are intended to help those who prepare and review environmental documents determine **when** a botanical survey is needed, **who** should be considered qualified to conduct such surveys, **how** field surveys should be conducted, and **what** information should be contained in the survey report. The Department may recommend that lead agencies not accept the results of surveys that are not conducted according to these guidelines.

1. Botanical surveys are conducted in order to determine the environmental effects of proposed projects on all rare, threatened, and endangered plants and plant communities. Rare, threatened, and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, can be shown to be rare, threatened, and/or endangered under the following definitions:

A species, subspecies, or variety of plant is "endangered" when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease. A plant is "threatened" when it is likely to become endangered in the foreseeable future in the absence of protection measures. A plant is "rare" when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens.

Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. The most current version of the California Natural Diversity Database's List of California Terrestrial Natural Communities may be used as a guide to the names and status of communities.

2. It is appropriate to conduct a botanical field survey to determine if, or to the extent that, rare, threatened, or endangered plants will be affected by a proposed project when:

a. Natural vegetation occurs on the site, it is unknown if rare, threatened, or endangered plants or habitats occur on the site, and the project has the potential for direct or indirect effects on vegetation; or
b. Rare plants have historically been identified on the project site, but adequate information for impact assessment is lacking.

3. Botanical consultants should possess the following qualifications:

a. Experience conducting floristic field surveys;
b. Knowledge of plant taxonomy and plant community ecology;
c. Familiarity with the plants of the area, including rare, threatened, and endangered species;
d. Familiarity with the appropriate state and federal statutes related to plants and plant collecting; and,
e. Experience with analyzing impacts of development on native plant species and communities.

4. Field surveys should be conducted in a manner that will locate any rare, threatened, or endangered species that may be present. Specifically, rare, threatened, or endangered plant surveys should be:

a. Conducted in the field at the proper time of year when rare, threatened, or endangered species are both evident and identifiable. Usually, this is when the plants are flowering.

When rare, threatened, or endangered plants are known to occur in the type(s) of habitat present in the project

area, nearby accessible occurrences of the plants (reference sites) should be observed to determine that the species are identifiable at the time of the survey.

b. Floristic in nature. A floristic survey requires that every plant observed be identified to the extent necessary to determine its rarity and listing status. In addition, a sufficient number of visits spaced throughout the growing season are necessary to accurately determine what plants exist on the site. In order to properly characterize the site and document the completeness of the survey, a complete list of plants observed on the site should be included in every botanical survey report.

c. Conducted in a manner that is consistent with conservation ethics. Collections (voucher specimens) of rare, threatened, or endangered species, or suspected rare, threatened, or endangered species should be made only when such actions would not jeopardize the continued existence of the population and in accordance with applicable state and federal permit requirements. A collecting permit from the Habitat Conservation Planning Branch of DFG is required for collection of state-listed plant species. Voucher specimens should be deposited at recognized public herbaria for future reference. Photography should be used to document plant identification and habitat whenever possible, but especially when the population cannot withstand collection of voucher specimens.

d. Conducted using systematic field techniques in all habitats of the site to ensure a thorough coverage of potential impact areas.

e. Well documented. When a rare, threatened, or endangered plant (or rare plant community) is located, a California Native Species (or Community) Field Survey Form or equivalent written form, accompanied by a copy of the appropriate portion of a 7.5 minute topographic map with the occurrence mapped, should be completed and submitted to the Natural Diversity Database. Locations may be best documented using global positioning systems (GPS) and presented in map and digital forms as these tools become more accessible.

5. Reports of botanical field surveys should be included in or with environmental assessments, negative declarations and mitigated negative declarations, Timber Harvesting Plans (THPs), EIR's, and EIS's, and should contain the following information:

a. Project description, including a detailed map of the project location and study area.
b. A written description of biological setting referencing the community nomenclature used and a vegetation map.
c. Detailed description of survey methodology.
d. Dates of field surveys and total person-hours spent on field surveys.
e. Results of field survey including detailed maps and specific location data for each plant population found. Investigators are encouraged to provide GPS data and maps documenting population boundaries.
f. An assessment of potential impacts. This should include a map showing the distribution of plants in relation to proposed activities.
g. Discussion of the significance of rare, threatened, or endangered plant populations in the project area considering nearby populations and total species distribution.
h. Recommended measures to avoid impacts.
i. A list of all plants observed on the project area. Plants should be identified to the taxonomic level necessary to determine whether or not they are rare, threatened or endangered.
j. Description of reference site(s) visited and phenological development of rare, threatened, or endangered plant(s).
k. Copies of all California Native Species Field Survey Forms or Natural Community Field Survey Forms.
l. Name of field investigator(s).
m. References cited, persons contacted, herbaria visited, and the location of voucher specimens.

North Coast Redwoods District
Genetic Integrity Guidelines
For Revegetation, Seed Collection and Propagation

Prepared By

John Neef
Park Maintenance Worker I

Stephen Underwood
Associate State Park Resource Ecologist

Approved By:

Original signed on April 13, 2003

John A. Kolb
North Coast Redwood District Superintendent

April 13, 2003

California State Parks and Recreation Commission Statement of Policy
Policy 11.4
Preservation of Vegetative Entities
(Amended 5-4-94)

"In order to maintain the genetic integrity and diversity of native California plants, revegetation or transplant efforts in the State Parks System will be from local populations, unless shown by scientific analysis that these populations are not genetically distinct from populations being proposed for use. If local populations have been decimated, the closest, most genetically similar population(s) to that State Park System unit will be used."

District Policy:

Locality of Collection:

In order to maintain the genetic integrity and diversity of native California plants, all transplant and propagation in the North Coast Redwoods District will be from **local populations** (preferably from within the same stand). For the purpose of this policy, local is defined as being from the immediate project area (as close as possible, but generally less than one mile). Local populations will be considered decimated, and therefore not available for collection, only if there are not enough plants remaining to accomplish propagation and/or seed collection.

If the plant material or seed **cannot** be collected from **local populations** because:

- plants are not available or accessible;
- there is not enough time to collect and propagate material prior to the planting deadline;

then collection can occur within the **same CalWater Planning Watershed Unit, or park unit or seed zone** provided the planting area is within an elevation of + or – 800 feet of the collection site.

Collection Diversity:

If available seed and propagation collection should come from a minimum of 10-15 different plants for larger projects to insure that sufficient genetic variability is obtained.

Emergencies:

In emergencies (large fires, emergency slope stability projects etc.) consideration of the use of commercial stock will be given provided that the stock meets the location and elevation constrains outlined above.

Monitoring the Effectiveness of Early-Stage Forest Restoration Techniques – Mill Creek Redwoods

Background

The Mill Creek Acquisition (MCA) was transferred to California Department of Parks and Recreation (DPR) on June 4th, 2002. In 2003-4 DPR and its partners planned and implemented two forest restoration projects to protect and restore the property's natural resources. The projects were consistent with guidance provided by the Mill Creek Interim Management Recommendations (IMR) and the Mill Creek Advisory Committee (MCAC). 505 acres of young (11 – 24 years), overly dense and unbalanced forest was thinned using Variable Density Thinning (VDT) prescriptions developed with input from UC Berkeley, Humboldt State University, and other forest experts. Permanent forest monitoring plots were installed in a portion of this project area in 2004.

In parallel with the development of initial projects, forest inventory data was collected to refine and prioritize the pool of high priority projects identified in the IMR (Figure 1). This decision making process was designed and modified to generate a manageable project area (3,500 acres), spatially prioritized based on the degree of impaired conditions likely to persist absent intervention. The *Forest Ecosystem Restoration and Protection Project* (FERPP) focuses on interim restoration (2006 – 2011), bridging initial projects to the watershed scale planning anticipated to begin with the approval of a General Plan Amendment.

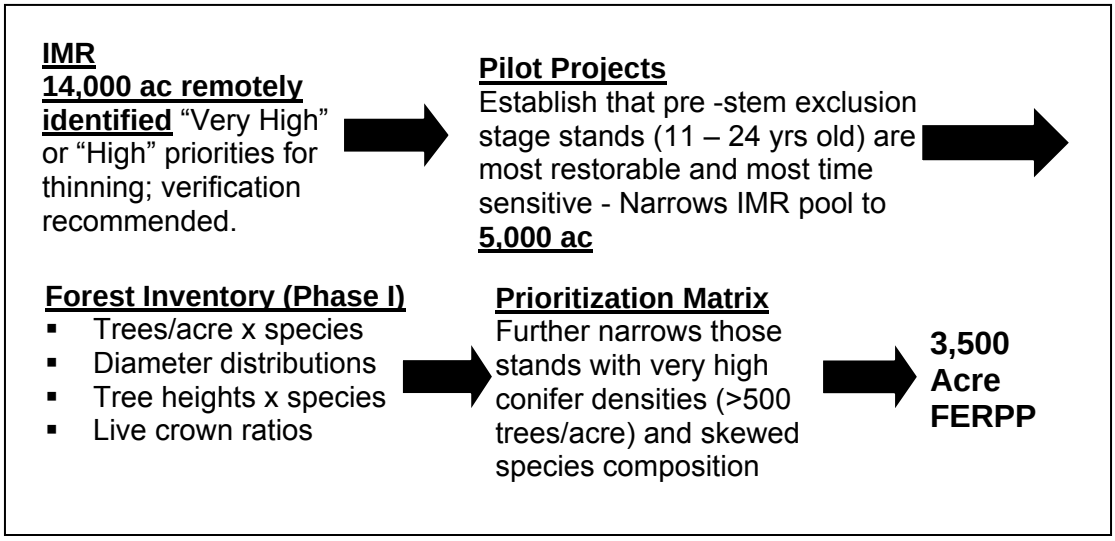


Figure 1. Tiered prioritization process used to define the scope of the five-year, 3,500 acre *Forest Ecosystem Restoration and Protection Project (FERPP).*

The FERPP is intended to help meet the primary goal of the property, which is the restoration of late-successional forest characteristics - by removing the underlying causes of poor forest health associated with high tree densities established by the former management system. DPR proposes to mechanically thin young forest plantations to reduce tree densities and adjust forest **composition**.

Purpose & Timeline

The purpose of this monitoring plan is to:

- Evaluate the effectiveness of three distinctly different early-stage mechanical restoration prescriptions (thinning) in removing threats posed by existing conditions. These threats include:

    - Widespread, suppressed growth rates of desired tree species - also referred to as '**stand** stagnation' or 'stand **suppression**'
    - Elevated and persistent **fuel loads**, which increase the likelihood of catastrophic wildfire
    - Persistent, poor quality wildlife habitat (prolonged **stem-exclusion stage**) related to slow growth and altered forest composition.

The monitoring period is expected to be a minimum of 15 years, at which time the treated stands will be 26 – 39 years of age. At this point in time, baring catastrophic disturbance, the stands of interest will have reached a mid-successional developmental stage, which will require revisiting the monitoring purpose and design. The current plan is designed to be compatible with mid-successional monitoring techniques.

Plan Overview

A system of randomized and replicated permanent monitoring plots will be established to monitor changes in tree growth, **mortality**, **ingrowth**, fuel loading and habitat over time as affected by three restoration prescriptions. Hemispherical canopy photos will be taken to monitor changes in **canopy openness** over time and relate these changes to individual tree performance and wildlife habitat suitability. The presence of *California Wildlife Habitat Relationships* (CWHR) habitat elements (i.e. trees, coarse woody debris, snags) will be recorded to track changes in habitat suitability associated with each of the restoration prescriptions. Mid-successional patterns of biodiversity related to restoration treatments will be modeled using the *Habitat Utilization Guilds Software* (HUGS) (CDFG 2004). This software combines forest size class and cover class data with species specific habitat suitability rankings (reproduction, cover and feeding) to predict changes in wildlife **guilds** over time. Restoration treatments are expected to eventually benefit wildlife guilds that depend on larger trees and more structurally complex forests (see Carey 1999 & Carey 2003). However such changes are not expected to manifest until after the current monitoring period.

With respect to restoring **old forest conditions**, each restoration prescription presents certain advantages in achieving structural, compositional and functional objectives and disadvantages related to costs and/or the probability of needing future intervention (Table 1). The precise nature of the tradeoffs betweens growth, mortality and future competition (ingrowth) are poorly understood because few long-term studies have attempted to characterize the effects of early stand treatments. The best available long-term study of redwood thinning response suggests that wider spacings facilitate the development of larger trees (Lindquist 2004) - a pattern that will likely be observed at Mill Creek. However, Lindquist's study was conducted using a small number of plots (18) at a site located >150 aerial miles south of the Mill Creek Acquisition, in a redwood dominated stand. Existing conditions at Mill Creek are Douglas-fir dominated and the stand objectives (restoration focus) are sufficiently different that property-specific data is needed to make informed decisions. An additional 2,700+ acres (not included in the FERPP) exist in the 0 – 10 year age class and may benefit from similar restoration actions in the next 5 – 15 years. This monitoring plan is consistent with large-scale silvicultural studies initiated throughout the Pacific Northwest region (Lindenmayer & Franklin 2002, Reutebuch et al. 2004) designed to test the effectiveness of forest restoration techniques.

The monitoring plan will test several working hypotheses regarding stand development as affected by three early-age restoration prescriptions. At the end of the monitoring period (or before as needed), the data will be analyzed to accept or reject each working hypothesis. As appropriate, new working hypotheses will be generated to test assumptions based on new information.

Working Hypotheses

#1 (Growth): Average tree diameters are largest in the most heavily thinned plots.

#2 (Growth): The average diameter of the largest 30 trees per acre will be highest in the low density treatment and lowest in the control. There will be no difference between the localized release and the high density treatments but their values will be intermediate to the other treatments.

#3 (Composition): Changes in the composition of dominant and co-dominant tree species are the largest in the most heavily thinned plots.

#4 (Mortality): Overall tree mortality (mostly from competition) will be highest in the control, followed by the localized release prescription. Mortality due to bear damage and wind throw will be inversely related to tree density, but will not exceed 50% in any prescription.

#5 (Ingrowth): The densities of ingrowth (trees >1.5" d.b.h) are higher in prescription plots with larger **residual** densities.

***#6 (Ingrowth*):** The rate ingrowth (trees >1.5" d.b.h.) basal area increase will level sooner (lower average slope) during the monitoring period than the same rate for retained trees. The portion of stand basal area attributable to ingrowth will be less in prescription areas with wider spacings.

#7 (Fuels): The residence time of surface fuels is inversely related to post treatment stand densities.

#8 (Habitat): Canopy openness is inversely related to the density of retained trees. CWHR habitat elements are more conducive to late-successional wildlife species in treated areas compared to untreated controls.

Table 1. Variable density thinning prescriptions monitored in the Mill Creek *Forest Ecosystem Restoration and Protection Project (FERPP*)

Prescription	Spacing	Sources of Variability	Advantages	Disadvantages
Low Density Variable Thin	21-ft x 21-ft - bole on center	1. ± 4-ft off pacing - tallest tree 2. redwood sprout clumps retained entirely when they contain the tallest tree	1. Prolongs the period of competitive free growth 2. Increases horizontal complexity across the entire stand 3. Expected to be most effective at changing composition 4. May be an effective low cost 'single entry' prescription	1. Quantities of surface fuels high 2. Expensive to treat the entire stand 3. Abundant in-growth expected, may compete with retained trees
High Density Variable Thin	16-ft x 16-ft - bole on center	1. ± 4-ft off pacing - tallest tree 2. redwood sprout clumps retained entirely when they contain the tallest tree	1. Provides sufficient growing space to establish dominance 2. Increases horizontal complexity across the entire stand 3. Rapid re-attainment of canopy closure inhibits in-growth	1. Quantities of surface fuels high 2. Expensive to treat the entire stand 3. Relatively brief period of competitive free growth = smaller trees over time 4. Probability of needing a second entry to achieve long-term structural and compositional objectives higher
Localized Release	25-ft radius gaps around retained trees (2-4 trees/gap)	1. no set spacing for retained trees in gaps and unthinned areas between gaps 2. redwood sprout clumps retained entirely when they contain the tallest tree(s)	1. Provides sufficient growing space for selected trees to establish dominance 2. Cost - effective; fewer trees removed 3. Rapid re-attainment of canopy closure inhibits in-growth	1. Standing fuel load remains high 2. May facilitate bear damage of desirable trees 3. Douglas-fir persists as an over-represented species for decades, though long-term composition approach the restoration target

For all three prescriptions, species retention priorities are generally as follows: 1. redwood; 2. any conifer except Douglas-fir, red alder; 3. tanoak, Douglas-fir, other hardwoods.

Sampling Design

Approximately 400 permanent, fixed radius plots will be established to sample 700 representative acres of the 3,500 acres proposed for restoration (20%). Plots will be distributed evenly over three different levels of spacing (prescriptions) and in untreated controls (Table 2). Monitored treatment blocks will be selected to minimize the possible affects of slope and aspect on the growth, mortality and ingrowth (stratified random sampling). Based on an inspection of the preliminary data, additional plots may be established in untreated controls to more accurately characterize baseline conditions. The sampling strategy described below will generate the minimum data necessary to describe differences in growth, mortality and ingrowth as affected by three prescriptions.

Table 2. Sampling design and plot dimensions for the Mill Creek Monitoring Plan

Prescription Name	Spacing	Target Trees per Acre	Plot Size (ac)	Plot Radius (ft)	Est. No. Trees per Plot	No. of Plots
Low Density Variable Thin	20-ft x 20-ft ± 4-ft	109	1/3	58.9	36	100
High Density Variable Thin	16-ft x 16-ft ± 4-ft	170	1/5	52.7	34	100
Localized Release	variable	200-500	1/5	52.7	40-100	100
Control	NA	>500	1/20	26.3	>25	100

Plot sizes were chosen to include a minimum of 30 trees in each plot. Repeated monitoring measurements of managed plantations in New Zealand suggest the 30-tree rule of thumb (a) facilitates meaningful statistical comparisons between treatments, (b) provides sufficient room for small trees to become large trees and (c) anticipates the gradual attrition that accompanies stand development (P. Berrill, personal communication).

For the 700 acres sampled, the sampling intensity will equal 10%. This level of sampling should provide opportunities to delineate one or more replicates within each treatment block.

Plot locations will be randomly assigned, except in the localized release prescription where at least a portion of the plots will be centered on the created canopy gaps. Randomly locating plots will be located by dividing the stand into small cells, assigning each cell a number, and then drawing a random number to determine the plot location. Plot centers will be permanently marked by placing a small piece of rebar covered by a tall (≥4-ft) PVC pipe in the ground. The PVC will be labeled so plots can be identified in the future.

Plot Measurements

Plot measurements are based on a system of monitoring plots established by Dr. Kevin O'Hara and Christa Dagley (UC Berkeley) in 2003 (unpublished data).

Tree Measurements

The diameter and height of each tree that is above 4.5 feet (1.37 meters) in height will be measured. Trees ≥ 2 inches d.b.h (5 centimeters) will have a permanent tag nailed in at breast height on the uphill side of the tree. Smaller trees will have tag tied with a cable lock near breast height. Trees should be tagged in a consistent manner (i.e. starting from north and working clockwise), and noted on the plot data sheet. In addition, trees will be painted at breast height. Total tree height and height to base of live crown will be recorded for each tree. The bottom of the live crown will be determined by the presence of the lowest live branch. Only tree limbs containing green needles will be considered living. These measurements will be taken prior to the next growing season after thinning treatments are completed and every five years thereafter.

Wildlife Habitat Measurements

Native trees, shrubs, plants and wildlife all respond to changing light conditions as the forest develops. Reliably documenting these changes is now possible using hemispherical canopy photography. Hemispherical canopy photography is an indirect optical technique that has been widely used in studies of canopy structure and forest light transmission. Photographs taken skyward from the forest floor with an 180° hemispherical (fisheye) lens produce circular images that record the size, shape and location of gaps in the forest overstory. Image processing software is used to classify individual pixels into either 'sky' or 'non – sky' classes and corresponding brightness values (Figure 2). These estimates are further analyzed to produce estimates of growing-season light transmission, leaf area and the frequency of small shafts of light (sun – flecks).

Hemispheric canopy photos will be taken from the center of each permanent plot to record light conditions during each monitoring cycle. Images will be processed using *Gap Light Analyzer (Version 2.0)* to calculate canopy openness values (inverse of canopy cover). The orientation of canopy gaps will be registered relative to retained trees to describe fine-scale patters of ingrowth and lateral branch expansion over time. Hemispherical photos may be used in conjunction with CWHR habitat element data to refine species-habitat relationships for the Mill Creek Property.

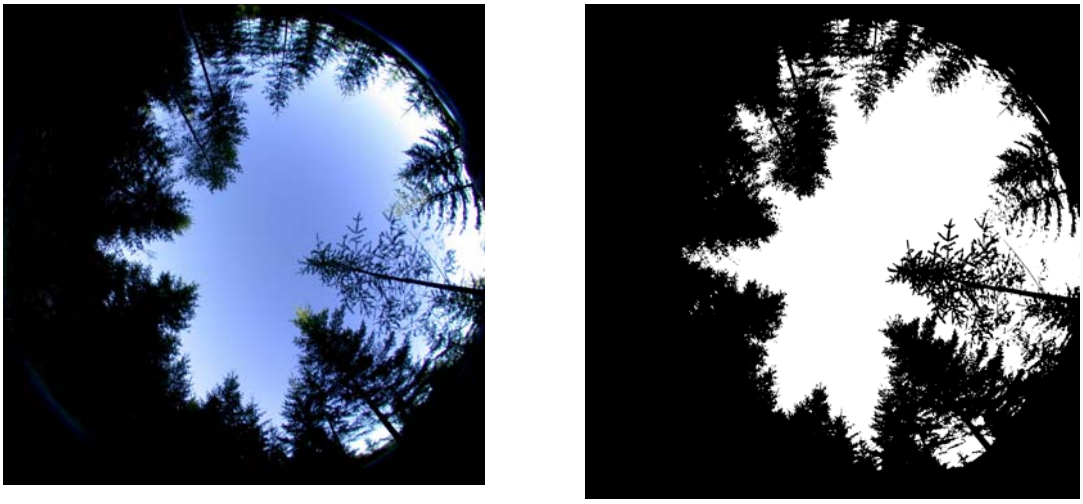


Figure 2. Hemispherical canopy photo (left) and processed image (right) of the First Gulch restoration site in 2005. The First Gulch site is ca. 16 years old and was thinned using a 16-ft x 16-ft ± 4-ft spacing (170 trees per acre). Post treatment canopy cover equals 57%.

A subset of stage-appropriate habitat elements listed in the *California Wildlife Habitat Relations* (CWHR) model will be recorded within each plot. Structural characteristics such as average tree size and canopy cover are expected to affect species richness over time (Figure 3).

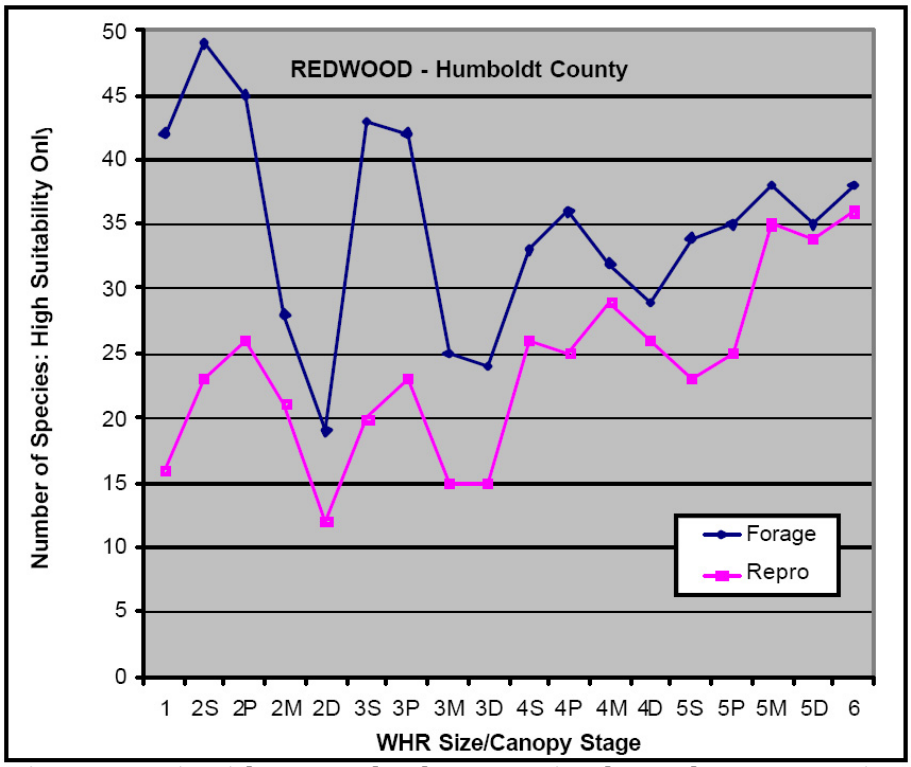


Figure 3. Species richness as related to WHR size class and canopy stage in coast redwood forests, Humboldt County (Furnas 2004)

Slash Measurements

Slash height will be measured in each plot. Four measurements will be taken 3 meters away from the plot center (~ North, South, East, West directions). Slash height will be recorded to the nearest $1/10^{th}$ meter on the side of the height pole facing the plot center.

Mapping

Plot location will be drawn and/or digitized onto a copy of the aerial photographs. Tree location within each plot will be mapped on a separate clean sheet of paper. Measures of stand-level heterogeneity may be calculated using some form of dispersion index (i.e. Clark and Evans 1954). Stem mapping and dispersion patterns may be extrapolated to the stand level using stand visualization software (SVS) for illustrative purposes only.

Analysis

Pre-treatment inventory data may be augmented as needed to facilitate future comparisons. Data will be collected before the first growing season following treatment and every five years thereafter. At the end of each data collection period, descriptive and parametric statistics will be used to describe response variables and differences between treatments. Analysis of variance (ANOVA) procedures including Tukey's Test and the Scheffe's Multiple Contrast procedure will be used to describe potential differences between treatments and untreated controls.

Ongoing Planning for Monitoring Design

DPR is seeking input on the monitoring protocol from several sources and is attempting to standardize methods with those used by other agencies conducting forest restoration activities in the redwood region. As a result of this collaboration with other agencies, the sampling design section above may be modified. DPR does commit to monitoring three prescriptions and a control with at least 15 plots per prescription and a minimum of 30 trees per plot. The monitoring plan will be initiated no later than 2007. The number of plots established in 2007 and subsequent years will be at a minimum proportional to the acreage treated each year (i.e. if 20% of the 3500 acres is treated in 2007 then 20% of the plots to be established under this plan will be established in 2007).

The Plot Measurements section represents the minimum amount of information that will be collected at each plot. This sampling intensity should enable the monitoring to detect differences between prescriptions so that future prescriptions can be adjusted to better achieve stated goals.

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Glossary

basal area - the cross-sectional area of a single stem (tree) or stand (group of trees) including the bark, measured at breast height (4.5 ft or 1.37 m above the ground).

canopy cover (inverse of canopy openness) – the proportion of ground or water covered by a vertical projection of the outermost perimeter of the natural spread of foliage or plants, including small openings within the canopy.

composition - the proportion of each tree species in a stand expressed as a percentage of the total number, basal area, or volume of all tree species in the stand.

co – dominant – a tree whose crown helps to form the general level of the main canopy in even-aged stands.

dominant – a tree whose crown extends above the general level of the main canopy or even – aged stands.

fuel load – the oven-dry weight of fuel per unit area.

gap – the space occurring in forest stands due to individual or group tree mortality or blowdown. In the context of this project, gaps are created artificially to release the growth of desirable trees.

guild – a group of wildlife species that exploit the same class of environmental resources in a similar way.

ingrowth – the volume, basal area, or number of those trees in a stand that were smaller than a prescribed minimum diameter or height limit at the beginning of any growth-determining period and that, during that period, attained the prescribed size.

mortality - trees dying from natural causes, usually by size class in relation to sequential inventories or subsequent to incidents such as storms, wildfire, or insect and disease epidemics.

old forest conditions – for old coast redwood forests, such conditions include but are not limited to a prolonged life-span (several centuries), large quantities of standing and wind thrown biomass, multi-layered canopies, a low density of large diameter trees, complex crown structures, and record heights.

residual – a tree or snag remaining after an intermediate or partial cutting of a stand.

silviculture - the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

stand - a contiguous group of trees sufficiently uniform in age-class distribution, composition and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

stand structure (or structure) - the horizontal and vertical distribution of components of a forest stand including the height, diameter, crown layers, and stems of the trees, shrubs, herbaceous understory, snags, and down woody debris.

stem exclusion stage – the stage of even-age forest development in which trees start to compete with each other; the more vigorous usurp growing space of weaker ones that die, usually from lack of light or soil moisture in a process called suppression.

suppression – the process whereby a tree or other vegetation loses vigor and may die when growing space is not sufficient to provide photosynthate or moisture to support adequate growth.

Notice of Completion & Environmental Document Transmittal

Appendix C

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: Mill Creek Acquisition Forest Ecosystem Restoration & Protection Project

Lead Agency: California Department of Parks and Recreation — Contact Person: John E. Harris

Mailing Address: PO Box 2006 — Phone: 707 445-6547 ext 19

City: Eureka — Zip: 95502-2006 — County: Humboldt

Project Location:

County: Del Norte — City/Nearest Community: Crescent City

Cross Streets: Highway 101 and Hamilton Road — Zip Code: 95531

Assessor's Parcel No.: see attached — Section: _____ Twp.: _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: 101 — Waterways: Mill Creek

Airports: NA — Railways: NA — Schools: NA

Document Type:

CEQA: ☐ NOP ☐ Draft EIR
☐ Early Cons ☐ Supplement/Subsequent EIR
☐ Neg Dec (Prior SCH No.)_____
☒ Mit Neg Dec ☐ Other _____

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other_____

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan
☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan
☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.)
☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☐ Other_____

Development Type:

☐ Residential: Units_____ Acres_____
☐ Office: Sq.ft._____ Acres_____ Employees_____
☐ Commercial: Sq.ft._____ Acres_____ Employees_____
☐ Industrial: Sq.ft._____ Acres_____ Employees_____
☐ Educational _____
☐ Recreational _____
Total Acres (approx.)_____

☐ Water Facilities: Type_____ MGD_____
☐ Transportation: Type_____
☐ Mining: Mineral _____
☐ Power: Type_____ MW_____
☐ Waste Treatment: Type_____ MGD_____
☐ Hazardous Waste: Type_____
☐ Other:_____

Project Issues Discussed in Document:

☒ Aesthetic/Visual
☐ Agricultural Land
☒ Air Quality
☒ Archeological/Historical
☒ Biological Resources
☐ Coastal Zone
☒ Drainage/Absorption
☐ Economic/Jobs
☐ Fiscal
☐ Flood Plain/Flooding
☒ Forest Land/Fire Hazard
☐ Geologic/Seismic
☐ Minerals
☒ Noise
☐ Population/Housing Balance
☐ Public Services/Facilities
☐ Recreation/Parks
☐ Schools/Universities
☐ Septic Systems
☐ Sewer Capacity
☒ Soil Erosion/Compaction/Grading
☐ Solid Waste
☐ Toxic/Hazardous
☐ Traffic/Circulation
☒ Vegetation
☐ Water Quality
☐ Water Supply/Groundwater
☐ Wetland/Riparian
☒ Wildlife
☐ Growth Inducing
☐ Land Use
☐ Cumulative Effects
☐ Other _____

Present Land Use/Zoning/General Plan Designation:

Park Land

Project Description: *(please use a separate page if necessary)*

Young (average stand age <25 years), unnaturally dense forest plantations would be thinned (using chainsaws) to (a) maintain the growth of desirable trees and (b) adjust stand structure and species composition to conditions that resemble historical, old-growth forests for the area. Thinning prescriptions would be tailored to meet both interim and long-term objectives related to enhancing wildlife habitat, natural forest processes and aesthetic values. Thinning would occur on a maximum of 1,418 ha (3,503 ac) and would be coordinated with ongoing road-decommissioning projects. Retained trees would be spaced using a variety of patterns (i.e. random, dispersed, aggregated) and target densities (i.e. 30-80 trees per hectare [75 – 200 trees per acre]) reflecting specific project objectives and future access. Prescriptions would be modified when necessary to protect sensitive resources such as rare plants, wetland habitats and mass wasting areas. Riparian prescriptions have been designed to maintain or enhance desired cold water environments for the benefit of fish and wildlife. Felled trees would be removed within at least 15 m (50 ft.) of drivable roads (that are not to be removed) to mitigate the short-term fire risk.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2004

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

_____ Air Resources Board
_____ Boating & Waterways, Department of
_____ California Highway Patrol
_____ Caltrans District # _____
_____ Caltrans Division of Aeronautics
_____ Caltrans Planning (Headquarters)
_____ Coachella Valley Mountains Conservancy
__x__ Coastal Commission
_____ Colorado River Board
_____ Conservation, Department of
_____ Corrections, Department of
_____ Delta Protection Commission
_____ Education, Department of
_____ Energy Commission
__x__ Fish & Game Region # __1__
_____ Food & Agriculture, Department of
__x__ Forestry & Fire Protection
_____ General Services, Department of
_____ Health Services, Department of
_____ Housing & Community Development
_____ Integrated Waste Management Board
__x__ Native American Heritage Commission
_____ Office of Emergency Services
__x__ Office of Historic Preservation
_____ Office of Public School Construction
_____ Parks & Recreation
_____ Pesticide Regulation, Department of
_____ Public Utilities Commission
_____ Reclamation Board
_____ Regional WQCB # __5__
_____ Resources Agency
_____ S.F. Bay Conservation & Development Commission
_____ San Gabriel & Lower L.A. Rivers and Mtns Conservancy
_____ San Joaquin River Conservancy
_____ Santa Monica Mountains Conservancy
_____ State Lands Commission
_____ SWRCB: Clean Water Grants
_____ SWRCB: Water Quality
_____ SWRCB: Water Rights
_____ Tahoe Regional Planning Agency
_____ Toxic Substances Control, Department of
_____ Water Resources, Department of

_____ Other _____
_____ Other _____

Local Public Review Period (to be filled in by lead agency)

Starting Date _____ Ending Date _____

Lead Agency (Complete if applicable):

Consulting Firm: _____
Address: _____
City/State/Zip: _____
Contact: _____
Phone: _____

Applicant: _____
Address: _____
City/State/Zip: _____
Phone: _____

Signature of Lead Agency Representative: _____ **Date:** _____

County Assessor Parcel Numbers for the Mill Creek Acquisition.

126-060-01	126-100-01
126-060-03	126-100-03
126-060-04	126-100-04
126-060-05	126-100-05
126-060-06	126-100-09
126-060-08	126-100-10
126-060-09	126-100-12
126-070-04	126-100-13
126-070-05	126-110-01
126-070-06	126-110-02
126-070-07	126-110-03
126-080-01	126-110-04
126-080-02	126-110-05
126-080-03	126-110-08
126-080-04	126-110-10
126-080-05	126-110-11
126-080-06	126-110-12