DRAFT

INITIAL STUDY
MITIGATED NEGATIVE DECLARATION

LITTLE RIVER STATE BEACH

RESTORATION AND ENHANCEMENT PLAN

February 24, 2009

State of California
DEPARTMENT OF PARKS AND RECREATION

MITIGATED NEGATIVE DECLARATION

PROJECT: Little River State Beach Restoration and Enhancement Plan

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 and Recreation
Northern Service Center
One Capitol Mall - Suite 410
Sacramento, California 95814

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

Humboldt County Library
1313 Third Street
Eureka, California 95501

Department of Parks and Recreation website
http://www.parks.ca.gov/

PROJECT DESCRIPTION:

This project proposes the restoration of approximately 60 hectares (148 acres) of beach and dune habitat, the development of a trail and sign system, and parking improvements to facilitate resource protection and enhance visitor experience at Little River State Beach (LRSB). The LRSB Restoration and Enhancement Plan (hereafter referred to as the Plan) will restore both upland and wetland habitats; provide improvements to existing facilities; create two new parking areas; and develop several trails including a new Americans with Disabilities Act (ADA) complaint trail.

Mitigation measures are incorporated to assure that restoration and enhancements will not result in the take of the federally listed western snowy plover (*Charadrius alexandrinus nivosus*) or result in significant adverse effects to other sensitive natural or cultural resources. Additional wetlands are being created to mitigate unanticipated impacts to existing wetlands. The Plan also includes monitoring to assess the response of sensitive natural resources to the restoration as well as changes in the movement of sand. In addition to the ADA compliant trail all signs, panels, and kiosks will be ADA compliant. The two new proposed parking areas will not be ADA compliant, but the Clam Beach County Park/LRSB shared parking lot will be improved and an additional ADA parking space will be added.

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

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.

Original Signature on File – North Coast Redwoods District Office

John E. Harris Date
District Environmental Coordinator/Senior Environmental Scientist

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.

Original Signature on File – North Coast Redwoods District Office

Steve Horvitz Date
Superintendent, North Coast Redwoods District

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CHAPTER 1 - INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

The 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 Little River State Beach Restoration and Enhancement Plan in Humboldt 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 plans or proposals made by or agreed to by the applicant 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 the Department of DPR. The contact person for the lead agency is:

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

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed Little River State Beach Restoration and Enhancement Plan. Mitigation measures have been incorporated into the project to eliminate any potentially significant impacts or reduce them to a less-than-significant level.

This document is organized as follows:

- **Chapter 1 - Introduction**
  This chapter is 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 the significance of potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the 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 the 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 from the Initial Study.
- **Chapter 6 - Summary of Monitoring**
  This chapter describes the monitoring that will be used to ensure that all mitigation measures are implemented as planned during project construction.
- **Chapter 7 - References**
  This chapter identifies the references and sources used in the preparation of this IS/MND.
- **Chapter 8 - Report Preparation**
  This chapter includes a list of report preparers.

1.4 SUMMARY OF FINDINGS

Chapter 3 of this document contains the Environmental (Initial Study) 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 Little River State Beach Restoration and Enhancement Plan 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 INTRODUCTION

This Mitigated Negative Declaration evaluates the environmental effects of the proposed Little River State Beach Restoration and Enhancement Plan. The Plan proposes the restoration of approximately 60 hectares (148 acres) of beach and dune habitat, the development of a trail and sign system, and parking improvements to facilitate resource protection and enhance the visitor experience.

Restoration of both upland and wetland habitats is proposed under the plan and includes the foredune and dune hummocks (28 ha), stabilized backdunes (24 hectares), herbaceous dune swales (1 hectare), woody dune swales (2 hectares), and a northern riparian wetland (4 hectares). The restoration will involve the removal of invasive exotic plant species such as European beachgrass (*Ammophila arenaria*) and the restoration of natural dune process and topography. Restoration techniques include the use of dozers and excavators (foredune and hummocks), manual removal (all areas), hot water (backdunes), and flaming (foredune, hummocks, and backdunes). Exotic plant material will be deposed of on-site through either burial or flaming, or, burning off-site at an appropriate facility. The Plan also proposes the creation of approximately 1 hectare of woody dune swales in the backdunes to increase wetland habitat and as a natural sand fence to inhibit the potential movement of sand eastward onto adjacent infrastructure. A dozer and/or excavator will be used to create the swales. Native plant material will be used to revegetate the nearshore dunes, stabilized backdunes, and the created woody dune swales. Monitoring to assess the response of sensitive natural resources to the restoration as well as changes in the movement of sand are included in the Plan. For more details relating to the restoration of the project area, refer to Appendix A.

The Plan proposes improvements to the existing and shared parking lot on the boundary between LRSB and Clam Beach County Park (CBCP) and the creation of two new parking areas located on the east side of Clam Beach Road. Both of the new parking areas will be adjacent to trailheads. Several trails will be developed including a new 1.09 km (0.68 mile) ADA compliant loop trail with three viewing platforms originating from the CBCP/LRSB parking lot, and an additional 3.88 km (2.41 miles) of pedestrian trials in a series of stacked loops that will originate from the existing and proposed parking areas. A portion of the new pedestrian trail will also provide shared access for equestrians who will have access to 2.16 km (1.34 miles) of new and existing trails. The Plan provides for the continuation of the California Coastal Trail from the LRSB southern boundary to Little River. This will provide access for pedestrians, equestrians, and cyclists. Finally, the Plan proposes improvements to regulatory and interpretative signs. Accessible (ADA) compliant interpretative and informational kiosks will be placed in the CBCP/LRSB parking area (on State Park property) and in the two proposed parking areas. In addition, a self-guided interpretive walk consisting of interpretive signs and panels will be installed along the ADA compatible trail. For more details relating to the enhancement of the project area, refer to Appendix A.

2.2 PROJECT LOCATION

Little River State Beach is centrally located within the NCRD (Appendix B), near McKinleyville, California. The Park spans from the Pacific Ocean to HWY 101 and is comprised of approximately 60 hectares (148 acres) of beach and dunes. The Little River, from which the Park derives its name, flows through the northern portion of the Park.

The proposed project is located in T7N, R1W, Sections 7 and 18 of the Crannell and Arcata North, CA, USGS 7.5' quadrangles (Appendix C). Access to the proposed project from Eureka is via HWY 101 north to the Clam Beach exit. The main access to LRSB is the Crannell Road exit on HWY 101. This provides access to the central portion of LRSB. Access to the proposed project from Trinidad is via HWY 101 south to the Crannell Road exit.

2.3 BACKGROUND AND NEED FOR THE PROJECT

Little River State Beach currently provides habitat for and or has historically provided habitat for several California and federal special status species including the western snowy plover, beach layia (*Layia carnosa*), and pink-sand verbena (*Abronia umbellata* ssp. *breviflora*). These species often occur in sand verbena-beach bursage and native dunegrass communities which are considered rare and worthy of special consideration by the California Department of Fish and Game (CDFG 2003). Since the 1930's European beachgrass has steadily displaced these communities at LRSB, contributing to the decrease and in some cases extirpation of native beach and dune species (Pickart et al. 1998). Currently, pink sand verbena (remnant occurrences) and snowy plovers are the only special status species known to occur at LRSB.

In March of 1993, the Pacific coast population of the western snowy plover was federally listed as threatened (USFWS 1993, USFWS 2007). The listing was based on a general population decline and a decrease in the number of breeding locations, which in part has been attributed to the encroachment of introduced European beachgrass (USFWS 1993, USFWS 2007). In 2007, the USFWS released the Western Snowy Plover Pacific Coast Population Recovery Plan that designated Mendocino, Humboldt, and Del Norte counties as a discrete management unit (Recovery Unit 2). Little River State Beach, combined with CBCP, comprises one of the three established snowy plover breeding sites within Recovery Unit 2.

Within Recovery Unit 2, the average reproductive success has declined since a peak year in 2003 (Colwell et al. 2005, Colwell et al. 2007). Nesting attempts at LRSB have declined from 10 in 2002, 4 in 2003, and 1 in 2004; respectively, the number of chicks fledged was 1, 1, and 2 (Forys and Transou 2004[b]). However, in 2005, after the LRSB pilot project was implemented, three snowy plover nests successfully hatched at LRSB (Colwell et al. 2005). These nests and the associated broods were all located in the areas treated during the pilot project. Furthermore, two other broods that were hatched north of the LRSB boundary that year utilized the treated areas for brooding. No further nesting attempts have been made in this area since 2005 (Transou 2007).

In June of 1992, the USFWS listed beach layia as federally endangered (USFWS 1992) and subsequently released the Recovery Plan for Seven Coastal Plants and the Myrtle's Silverspot Butterfly in 1998. The recovery plan refers to the northern most occurrence of beach layia near LRSB, which has been extirpated. The Little River occurrence is believed to have been lost to HWY101 construction and invasion of non-native plant species in the 1960's (USFWS 1998). Local recovery criteria includes; protection of habitat presently occupied by the species, long-term commitments to conserving the species, vehicle management, control of invasive non-native plants, and the establishment of new colonies of beach layia (USFWS 1998). This plan is consistent with the Federal Draft Recovery Plan for Seven Coastal Plants and the

Myrtle's Silverspot Butterfly (USFWS 1998) as the recommended management actions will fulfill components of priority 1 and 3 (Table 1.3 of Appendix A).

2.4 PROJECT OBJECTIVES

This section identifies the main objectives of the LRSB Restoration and Enhancement Plan. Specific restoration and enhancement actions resulting from the following goals and objectives are provided in Chapter 3.0 and 4.0 of Appendix A.

- Restore the ecological function and native flora of beach and dune habitat at LRSB.
- Improve educational and interpretation opportunities and experiences for park visitors at LRSB.
- Improve beach and dune access for park visitors while protecting sensitive species.
- Protect culturally significant sites during and after restoration efforts at LRSB.
- Monitor habitat and sensitive species productivity at LRSB to determine the successfulness of the restoration and enhancement efforts.

2.5 PROJECT DESCRIPTION

To facilitate restoration efforts, the project area has been separated into smaller areas based on dune morphology and vegetation growth. These areas are comprised of foredune and dune hummocks (Area A); stabilized backdunes (Area B); herbaceous dune swales, woody dune swales, and northern riparian wetland (Area C); created woody dune swales (Area D) (Figure 3.1 of Appendix A). Deflation plains and low-lying sand troughs that occur throughout the project area are not proposed for restoration due to the lack of vegetation.

Proposed restoration involves the removal of non-native plant species, the re-establishment of native vegetation, and the re-contouring of topography where appropriate. Proposed treatments vary for each area, and are based on a number of factors including the type and degree of exotic species invasion, vegetation series to be restored, site accessibility, and proximity to sensitive resources. The proposed methods for the initial exotic removal, woody dune swale creation, re-treatment, disposal, revegetation, and follow up treatment for each area can be found in Appendix A.

Little River State Beach does not have any formally designated parking lots or trails within the Park. The primary public access point is the CBCP parking lot on the south end of LRSB (a portion of this parking lot was built on LRSB and wasn't detected until a recent boundary survey). However, visitors have been using two other areas along the frontage road as primary points of access. Theses areas include a paved area near the Crannell overpass and a dirt area on the east side of the frontage road (Figure 4.1 of Appendix A). Under this plan, these two areas will be developed into two frontage road parking lots (Figure 4.1 of Appendix A).

Traditionally Park visitors have accessed the project area by a system of way trails created by the public. These way trails were created without planning, environmental review, or professional design and construction. They emanate from the CBCP day use parking lot on the south end of LRSB and from the frontage road on the east side of LRSB (Figure 4.1 of Appendix A). There are currently 5.5 km (3.4 miles) of way trails at LRSB. In addition, many of these trails traverse through sensitive wetlands, fragile native dune vegetation, and snowy plover habitat. There is also a great amount of duplicity in these. Since the soil characteristics of the dune formation on which these trails were developed lacks structure and has very low

capabilities these way trails are deeply entrenched. To correct these problems a well-planned trail system needs to be developed at LRSB that integrates the Park's long-range resource management goals and public access needs. Refer to Appendix A for specifics relating to trail improvements, parking lot improvements and the sign plan for the Park.

2.6 PROJECT IMPLEMENTATION

This project will be completed over a 7-year period. Work will occur throughout the year unless there are seasonal restrictions due to sensitive resources. Although this is only a seven-year plan, continued retreatment of exotic plants and minor monitoring will most likely occur indefinitely, depending on availability of funding. Furthermore, implementation of this project will be dependent on funding and may change over time as the project progresses. Should funding become available some phases may occur earlier than scheduled. Chapter 6 of the Plan (Appendix A) describes the implementation plan in detail.

2.7 VISITATION TO LITTLE RIVER STATE BEACH

Little River State Beach is open for day use only; camping is not permitted. There is a small, paved parking lot that is shared with Humboldt County, but no other facilities are provided. Dogs, horses, campfires, camping, and off road vehicle traffic are not allowed within the beach and dune habitat at LRSB. No written orders have been issued for this unit since the Park was created in 1952. Little River State Beach also hosts special events such as the Clam Beach Run, natural history or ecology walks by local non-profit organizations, and volunteer beach clean up and restoration events.

Visitor use data for LRSB is not available; however, as part of the Clam-Moonstone Beach Master Plan process a visitor use study was conducted by Dr. Steve Martin (Humboldt County 2006). Visitor use at LRSB is considered similar to that of CBCP with the exception that LRSB does not offer any formal facilities such as campgrounds or developed day use areas. Based on the aforementioned study, the majority of beach users are from the local area; however, LRSB is a stopover and or destination for people traveling through the area. Visitation increases during the summer months of July, August, and September (72%) followed by the spring (19%), fall (8%) and winter (<1%) (Humboldt County 2006).

2.8 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The proposed LRSB Restoration and Enhancement Plan is consistent with local plans and policies such as the North Coast Redwoods District Beach and Dunes Management Plan (NCRD-BDMP) (Transou et al. 2007[a]). Refer to Chapter 3, Section IX, Land Use and Planning, for a complete discussion of local plans and polices.

2.9 DISCRETIONARY APPROVALS

The California DPR has approval authority for the proposed Little River State Beach Restoration and Enhancement Plan. The project will require a Letter of Technical Assistance (TA) from the U.S. Fish & Wildlife Service confirming that the proposed action will not lead to the take of the federally threatened Western Snowy Plover. A copy of the TA is located in Appendix G. The Department will perform all necessary reviews and acquire all permits necessary prior to implementing any project component that may require regulatory review. Finally three permits will be obtained prior to operations; a California Coastal Development Permit, a Humboldt County Coastal Development Permit, and an US Army Corp of Engineers Nation Wide Permit.

2.10 RELATED PROJECTS

Beach and dune restoration projects of varying scope have been implemented throughout the north coast of California and Oregon. The North Coast Redwoods District (NCRD) implemented the Little River State Beach Pilot Habitat Restoration Project in the winter of 2004-2005 (Forys and Transou 2004[a], Transou et al. 2007[b]). This pilot project was designed to experimentally evaluate and determine the most successful mechanical removal technique, as it relates to sand movement patterns, removal efficacy, and cost effectiveness for a large-scale European beachgrass removal project. The Plan is based on results obtained from the pilot project (Transou et al. 2007[b], Vaughan and Fiori 2007).

Other State and local agencies have similar beach and dune habitat adjacent to the Park. Clam Beach County Park (CBCP) is located to the south of LRSB and has undergone a major habitat change in the early to mid 1990's. In 1992, a project located south of LRSB below the southbound HWY 101 vista point was implemented by the California Department of Transportation (CALTRANS). This project was designed to reduce and or stop the erosion of the bluff below the HWY 101 vista point. Multiple acres of beach and dune habitat at CBCP was modified and a large riprap wall was incorporated into dunes to prevent the mouth of the Mad River from moving farther north and continuing to erode the bluff endangering the HWY 101 infrastructure.

As part of this project multiple habitat restoration projects were created by CALTRASNS to mitigate the impacts the project caused on sensitive habitats and wetlands. As part of the mitigation CALTRANS has designed a habitat restoration project focused on the removal invasive plant species and the revegetation of the riprap impacted area. The project encompasses most of the dunes directly below the vista point and is currently underway and will last for multiple years.

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CHAPTER 3 - ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1. Project Title: Little River State Beach Restoration and Enhancement Plan

2. Lead Agency Name & Address: California Department of Parks and Recreation

3. Contact Person & Phone Number: Michelle Forys (707) 677-3109 or 707-677-9521 (Fax)

4. Project Location: LITTLE RIVER STATE BEACH

5. Project Sponsor Name & Address: California Department of Parks and Recreation
   North Coast Redwoods District
   3431 Fort Ave.
   Eureka, California 95503

6. General Plan Designation: State Park

7. Zoning: Public Lands/ Parks

8. Description of Project:

   California Department of Parks and Recreation propose the restoration and enhancement of coastal dune habitats within Little River State Beach (LRSB). The following is a summary of the proposed actions: The plan will restore the foredune and dune hummocks (28 ha); stabilized backdunes (24 hectares); herbaceous dune swales (1 hectare); woody dune swales (2 hectares); and a northern riparian wetland (4 hectares). The restoration will involve the removal of invasive exotic species such as European beachgrass (*Ammophila arenaria*) and yellow bush lupine (*Lupinus arboreus*) and the restoration of natural dune process and topography. The Plan proposes improvements to the existing parking lot on the boundary between Clam Beach County Park (CBCP) and LRSB and the creation of two new parking areas located on the east side of Clam Beach Road. Several trails will be developed including a new 1.09 km (0.68 mile) ADA compliant loop trail with three viewing platforms originating from CBCP/LRSB parking lot, and an additional 3.88 km (2.41 mile) of pedestrian trials in a series of stacked loops that will originate from the existing and proposed parking areas. A portion of the new pedestrian trail will also provide shared access for equestrians who will have access to 2.16 km (1.34 mile) of new and existing trail. The Plan also provides for the continuation of the California Coastal Trail through LRSB from the Parks southern boundary to Little River. This will provide access for pedestrians, equestrians, and cyclists. Finally, the Plan proposes improvements to regulatory and interpretative signs, and a self-guided interpretive program consisting of interpretive signs and panels will be installed along the ADA compatible trail.

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

10. Approval Required from Other Public Agencies:
    Refer to Chapter 2 of this document (Section 2.9, Discretionary Approvals)

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
District Environmental Coordinator

Date:

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.

I. AESTHETICS

ENVIRONMENTAL SETTING

Little River State Beach is located approximately 30 miles north of Eureka and next to the community of McKinleyville. For northbound travelers on HWY 101 the Park provides the first view of the ocean within northern Humboldt County. The view is of a long, relatively flat waveslope with a very heavy infestation of European beachgrass and other exotic species directly behind. At the predominately eastern edge of the Park is Clam Beach Drive which is immediately west of HWY 101, a scenic highway. The Park is currently zoned as public lands. Development within the area of potential affect is limited to the "North" parking lot at the Clam Beach County Park/LRSB boundary and at two locations along Clam Beach Drive within LRSB. Several trails will be developed including a new 1.09 km (0.68 mile) ADA compliant loop trail with three viewing platforms originating from CBCP/LRSB parking lot, and an additional 3.88 km (2.41 miles) of pedestrian trials in a series of stacked loops that will originate from the existing and proposed parking areas. All trails and parking areas will be constructed to blend into the restored landscape natural looking materials and design.

WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 Park is within a state scenic highway easement or viewshed. The ADA boardwalk associated viewing platforms and signs are designed to lessen their visual presence and blend with the native vegetation and topography. The two new proposed parking areas are currently being used by the public, without proper construction. These areas will be constructed properly and the visual appearance will be enhanced by the project. No significant impact.

b) As the project is primarily a restoration project, it will enhance the visual quality of the Park. Restoration activities will result in restoring the natural condition of the dune system resulting in no significant impacts to the viewshed.

c) The proposed project may temporarily decrease the visual appeal of the project area, however within a few years the project should result in improvements to the scenic resource by increasing the vigor, stability, and species composition of the dune system. The duration of any noticeable changes resulting from related activities would be limited to approximately 3 years; therefore, impact to the area will be less than significant.

d) Lighting is not an element of this project therefore, no new light sources will be established.

This project will create no new source of light or glare and, therefore, will have no impact.

II. AGRICULTURAL RESOURCES

ENVIRONMENTAL SETTING

Humboldt County is comprised of approximately 2,286,090 acres (3,572 square miles) with roughly 1,362.942 acres of that area in agricultural production (49,795 agricultural, 294,714 grazing/timber, and 1,018,432 timber production) (http://co.humboldt.ca.us/planning/maps/). Harvested timber is the primary agricultural product of Humboldt County and the county leads the state in both volume and value. In 2006, agricultural production ranked as follows: 1) Timber Production - $178,006,700, 2) Nursery Stock (cut flowers, ornamental and forest tree production) - $49,116,900, 3) Milk and Milk Products - $30,997,200, 4) Livestock - $24,188,200, 5) Field Crops (alfalfa, silage, range, etc.) - $10,818,100, 6) Vegetable Crops - $900,000, 7) Fruit & Nut Crops - $760,000 (Humboldt County's Crop and Livestock Report 2006). Currently, the County has approximately 273,000 acres under California Land Conservation Agreement contracts (http://co.humboldt.ca.us/planning/Williamson%20Act/Williamson _act_main.htm), and no lands classified as prime, unique, or farmland of statewide importance by the Farmland Mapping and Monitoring Program (FMMP). The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources; however, data and maps for Humboldt County have not been collected to date.

Little River State Beach is part of the California State Park System and is zoned as public lands. A few privately held smaller parcels occur in the vicinity; however, much of the land surrounding the Park belongs to governmental agencies. At this time, no lands within the boundaries of the Park are used or zoned for agricultural purposes. However, agricultural lands are readily observable from within portions of the Park. Property near the Park on the east side of Highway 101 is zoned agricultural and supports grazing. These lands are not adjacent to the Park.

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?	☐	☐	☐	☒

DISCUSSION

a) Neither the project site nor any land adjoining the project site in any direction is zoned as agricultural land or used for agricultural purposes, as defined by the Farmland Mapping and Monitoring Program. 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, LRSB is part of the California State Park System and does not support any agricultural operations or farmland. No impact.

c) The DPR 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 LRSB. No impact.

III. AIR QUALITY

ENVIRONMENTAL SETTING

The project is in the North Coast Air Basin (Basin) and 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. The NCUAQMD is the regional agency that regulates sources of air pollution. The NCUAQMD 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.

The NCUAQMD is in non-attainment with California standards for particulate matter (PM10, or particles with an aerodynamic diameter of 10 microns or less). The major sources of PM10 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 except it is undetermined for PM 2.5 pollutants.

The area including LRSB is subject to air quality planning programs required by the federal Clean Air Act of 1970 (CAA 1970), its amendments from 1990 (CCA 1990), and the California Clean Air Act of 1988 (State of California 1988). Both the federal and state statutes provide for ambient air quality standards to protect public health, timetables for progressing toward achieving and maintaining ambient standards, and the development of plans to guide air quality improvement efforts of state and local agencies.

Ambient air quality standards were developed to protect public health and welfare. Individuals or groups that are especially reactive to criteria pollutants are considered sensitive receptors such as children, the elderly, individuals susceptible to respiratory distress, and those who are acutely or chronically ill. Air standards specify the concentration of pollutants the public can be exposed to without experiencing adverse health effects. National and state standards are reviewed and updated periodically based on new health studies. Based on these standards (attainment, non-attainment, or unclassified), regional areas such as the North Coast Air Basin are given an air quality status "label" by the federal and state regulatory agencies for planning purposes.

Humboldt 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, Humboldt County is currently in attainment with most California standards including carbon monoxide, hydrogen sulfide, lead, ozone, nitrogen dioxide, sulfur dioxide, and sulfates (Table 3-1). The Basin 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). 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.

Table 3-1: Air Quality Standards Based on 2006 Humboldt County Air Quality Designations*

Pollutant	State Designation	National Designation
Ozone	Attainment	Unclassifiable/Attainment
PM_{10}	Non-Attainment	Unclassified
$PM_{2.5}$	Unclassified	Unclassifiable/Attainment
Carbon Monoxide	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide	Attainment	Unclassifiable/Attainment
Sulfur Dioxide	Attainment	Unclassifiable/Attainment
Sulfates	Attainment	NA
Lead	Attainment	NA
Hydrogen Sulfide	Attainment	NA
Visibility Reducing Particles	Unclassified	NA

*CARB 2006

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 would not be in conflict with or would not obstruct implementation of any applicable air quality plan for Humboldt County, the North Coast Air Basin, PCRSPQMD, or USEPA Region IX. No impact.

b) 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 (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. Best management practices have been incorporated into the project design that will minimize any impact to air quality to a level of less than significant. These measures include 1) requiring all diesel/gasoline-powered equipment to be maintained in good mechanical condition (according to manufacturer's specifications), and in compliance with all State and

federal requirements; 2) the suspension of mechanized treatments when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or when dust from construction might obscure driver visibility on public roads; and 3) traffic speed within the project will be limited to 15 miles per hour (mph).

c) See (b) above. Incorporation of best management practices would reduce impacts to a less than significant level.

d) The project will not expose sensitive receptors to substantial pollutant concentrations; facilities where sensitive receptors are likely to be located include schools, playgrounds, childcare centers, retirement and convalescent homes, hospitals, medical clinics, and residences. Any equipment use that could generate fugitive dust would be of limited duration, both in daily operation and as a percentage of the proposed work for this project. The project area would be closed to the public and work would generally occur during daylight hours. These conditions, combined with full implementation of the best management practices described in b) above, will result in a less than significant impact.

e) The proposed work would not result in the long-term generation of odors. Construction related emissions could result in a short-term generation of odors, including fuel or solvent vapors. However, because construction activities would be short-term, odorous emissions would be limited and dissipate rapidly in the air with increased distance from the source. Less than significant impact.

Climate Change

In California, there are no statewide significance criteria or approved mitigation methods concerning Green House Gas (GHG) emissions; therefore, this section will discuss climate change qualitatively with no significance conclusion.

In discussing climate change, three fundamental questions must be addressed:

1. How will the project affect climate change?

The primary objective of the proposed project is to protect Park resources by promoting a naturally functioning dune ecosystem comprised of native flora and fauna. The project will result in the planting of numerous herbaceous and shrubby plants, and tree species found within multiple dune vegetation types. Restoration treatment methods include the use of heavy equipment, propane torches for flaming, and generators for the Waipuna System. The equipment involves fossil fuel burning and will release minor amounts of carbon at any one time. The heavy equipment will be primarily used for initial treatment phases only, which may only last up to three months spread over the course of 7 years. The other equipment will be used only a few weeks a year intermittently throughout the year. As part of the restoration process most of the removed exotic plants will be buried within the sand dunes. The buried vegetation will decompose within the sand dunes enriching the soil with nutrients to help the newly planted native dune species colonize. Some treatment methods involve fossil fuel burning equipment that releases carbon directly into the atmosphere. This equipment includes the use of a propane torch and of gas powered motorized tools and generators. The release of the sequestered carbon from the buried vegetation, burning of vegetation, and the minor carbon released during initial treatment phases will be offset by the increased carbon sequestration of the restored dune ecosystem. The proposed restoration will not contribute to the global warming processes. No significant impact.

2. How will the project be affected by climate change?

Although there have been attempts to model the effects of global warming on vegetation the authors of this document are not aware of any accepted predictive model. However, if global

warming results in a more xeric environment within the north coast then it can be anticipated that this may result in less rainfall and higher temperatures. As such, a shift in vegetative associations could result. This would be of greatest concern in areas that are on the margin of a vegetation communities range, especially those on the southern extent. In addition, considering the proximate of the Pacific Ocean to the project location a moderate rise in ocean levels would likely affect the project area by partial to full flooding of the area.

3. If the projects contributions to climate change are considered a significant impact on the environment, what constitutes reasonable “fair share” mitigation?

As discussed above in item #1 the proposed action will not result in significant adverse effects to global warming and therefore mitigation is not required.

IV. BIOLOGICAL RESOURCES

ENVIRONMENTAL SETTING

Little River State Beach currently supports seven vegetation communities that are classified based on dominant vegetation. These series or communities include the European beachgrass series, the Yellow bush lupine series, the Coyote brush series, the Sedge series, the Hooker willow series, the Sitka spruce series (Pickart and Sawyer 1998, Sawyer and Keeler-Wolf 1995), and the Red alder series (Sawyer and Keeler-Wolf 1995). Two of these series, the European beachgrass and Yellow bush lupine series, are largely comprised of invasive, non-native plant species. The European beachgrass series is the most prevalent series found in the project area. The continuous parallel dune ridges are dominated by European beachgrass and currently there is an average of 25% European beachgrass cover in the nearshore dunes. Additional information on the plant communities, including a summary of community types and plant species found within the Plan can be found in Appendix A.

The project area has been partially stabilized by European beachgrass, yellow bush lupine, and coyote brush (*Baccharis pilularis*). Yellow bush lupine and European beachgrass were introduced many times to the Clam Beach area (Pickart and Sawyer 1998, Labanca 1993, Miller 1993, Parker 1974). These species were introduced in the early 1900's, primarily to stabilize transportation corridors (Pickart and Sawyer 1998, Pickart et al. 1998, Buell et al. 1992, Labanca 1993, Miller 1993, Parker 1974). Miller (1993) documents the introduction of yellow bush lupine through documents, personnel accounts, historic pictures, and herbarium collections. Prior to the introduction of yellow bush lupine into the Clam Beach area, a variety of native plants thrived on the beach (Miller 1993). The native plant species Miller (1993) documents prior to introduction of the invasive exotics are consistent with the species found in the Sand-verbena-beach bursage series and the Native dunegrass series, which can be found south of LRSB, along the north spit of Humboldt Bay. Remnants of these series are present in small numbers at LRSB.

To address the potential impacts to biological resources in the project area, the CDFG California Natural Diversity Database (CDFG 2008) and the CNPS Online Inventory of Rare and Endangered Plants of California (CNPS 2008) were queried. The assessment area was defined as the USGS 7.5' quadrangle in which the project is located (Crannell), as well as three adjacent coastal quadrangles (Trinidad, Arcata North, and Rodgers Peak). Results from the query are presented below under the corresponding sections and in Appendix D. Additional information used in this assessment was derived from DPR databases on file at the North Coast Redwoods District office.

SENSITIVE NATURAL COMMUNITIES AND PLANTS

Three habitat and plant communities within the project area are recognized as sensitive by resource agencies. Under Section 30107.5 of the Coastal Act, the California Coastal Commission defines "Environmentally Sensitive Habitat Area", or EHSA as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments". In addition, CDFG recognize "sensitive natural community" types that are rare and worthy of consideration due to highly limited distribution, regardless of presence or absence of rare, threatened, or endangered status species. Community types composed of invasive, exotic species may be considered sensitive in part due to its inclusion within larger, sensitive community types (Sawyer and Keeler-Wolf 1995). A summary of community types, including those designated sensitive, found within the project

area is included in Table 3.2.

Table 3-2. Plant communities found within the project area.

Formation	Plant Community	*Sensitive Natural Community or ESHA
Beach Strand	Unvegetated	1,2 (WSP nesting area)
Foredune	European beachgrass series	2
Nearshore Dune Ridges	European beachgrass series	2
Nearshore Dune Ridges	Yellow bush lupine series	2
Nearshore Dune Ridges	Coyote brush series	2
Deflation Plains	Unvegetated	2
Dune Swales	Sedge series	1,2
Dune Swales	Hooker willow series	1,2
Wetland	Red alder series	2
Stabilized Backdunes	European beachgrass series	
Stabilized Backdunes	Yellow bush lupine series	
Stabilized Backdunes	Coyote brush series	
Dune Forest	Sitka spruce series	

1-Known or believed to be of high priority in the California Natural Diversity Database (CNDDB), CDFG.
2-Environmentally Sensitive Habitat Area (ESHA) as defined by the California Coastal Commission.

A partial rare plant survey was conducted in 2008 (Appendix E). Although historically, the state and federally endangered beach layia (*Layia carnosa*) occurred near the mouth of Little River (Pickart and Sawyer et al. 1998, USFWS 1998), it has not been observed in the project area in many years. It is believed the expansion of HWY 101 along LRSB, was the primary cause for the expiration of this species in this area. However, pink sand verbena (*Abronia umbellata breviflora*), has been documented within the past 5 years within the project area. Neither the State of California nor the Federal government lists pink sand verbena as threatened or endangered, however, it is on List 1B of the California Native Plant Society (CNPS) Inventory with an R-E-D (rarity-endangerment-distribution) code of 2-3-2. List 1B species are considered rare, threatened, or endangered in California and elsewhere. The 2-3-2 R-E-D code for pink sand verbena indicates that this species is distributed in a limited number of occurrences, endangered in California, and rare outside of California. Within the project area pink sand verbena typically occurs within the beach strand and foredune area (Appendix F). In addition, a few other CNPS List 3 and 4 plants have been documented within LRSB (Appendix E).

WETLANDS

According to the USFWS definition, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (Cowardin et al. 1979). The single feature that most wetlands share is soil or substrate that is at least periodically saturated with or covered by water. The USFWS Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) defines wetlands as having at least one of three attributes: undrained hydric soil, predominately hydrophytic vegetation, or the area is saturated or covered with water at some time during the growing season of each year. Similarly, the US Army Corps of Engineers (USACE) define wetlands as areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal

circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 2006). The USACE uses three characteristics of wetlands when making wetland determinations: vegetation, soil, and hydrology (USACE 2006). Unless an area has been altered or is a rare natural situation, wetland indicators of all three characteristics must be present during some portion of the growing season for an area to be a wetland under USFWS and USACE regulations. However, the California Coastal Act Section 30121 broadly defines a wetland as lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens (California Coastal Commission 1994).

Three wetland habitat types occur within LRSB; herbaceous dune swales, woody dune swales, and an established northern riparian wetland (Pickart and Sawyer 1998, Sawyer and Keeler-Wolf 1995). Dune swales are formed when the moist conditions afforded by seasonal saturation in deflation plains result in the establishment of hydrophytic vegetation. Troughs between dune ridges in the nearshore dunes and in the stabilized backdunes can support herbaceous and woody dune swale vegetation (Pickart and Sawyer 1998). The herbaceous and woody dune swales are seasonally inundated freshwater wetlands. Herbaceous dune swales are found throughout the project area and are primarily composed of vegetation found in the Sedge series. Primarily found within the backdunes near the frontage road woody swales are described as having high cover with shrubs and tress up to 6 to 8 meters high (Pickart 1990). The Hooker willow series is the dominate vegetation community found in most of the woody dunes swales (Duebendorfer 1989). It is believed (Vaughan and Fiori 2004) that due to the proximity of Little River intersecting the dunes within the project area and the historic southern flow the river once had, a freshwater wetland has formed within the old river channel that is hydrologically linked to the current river channel. This wetland is dominated with species found within the Red alder vegetation series (Holland 1986). These three wetland types contain hydrological, vegetative and soil conditions associated with wetlands. The project contains a mitigation measure that establishes Equipment Exclusion Zones (EEZ) around these three-parameter wetlands.

In addition to the three-parameter wetlands there are numerous one-parameter wetlands that occur in the deflation plains that are seasonally inundated with water. These wetlands do not contain obligate or facultative wetland plants or they do not contain soils that are generally associated with wetlands. The extent of these one-parameter wetlands is dependent on rainfall and annual fluctuations in the topography due to sand movement. Because of this no attempt was made to map these ephemeral wetlands.

WILDLIFE

Many migrating and resident shorebirds as well as raptors and songbirds utilize the project area. These species include but are not limited to the sanderling (*Calidris alba*), dunlin (*Calidris alpina*), killdeer (*Charadrius vociferous*), osprey (*Pandion haliaetus*), white tailed kite (*Elanus caeruleus*), white crowned sparrow (*Zonotrichia albicollis*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), and merlin (*Falco columbarius*). Mammalian species such as the black-tailed jackrabbit (*Lepus californicus*) mule deer (*Odocoileus hemionus*), raccoons (*Procyon lotor*), striped skunk (*Mephitis mephitis*), river otter (*Lutra canadensis*), and many species of rodents utilize the project area. Pinnipeds (seals and sea lions) such as the harbor seal (*Phoca vitulina*) can be found hauled-out on the beach, or more commonly in the surf or in the mouth of the river, especially during salmon runs. Due to the amount of human activity the occurrence of pinnipeds on LRSB is rare. Finally, although not native, a small population of feral cats exists within the project area and surrounding habitat.

The Park provides nesting and wintering habitat for the federally threatened population of western snowy plover. In recent years the CBCP/LRSB complex has provided some of the highest reproduction rates of snowy plovers within Recovery Unit 2. Snowy plovers utilize most of the entire waveslope and nearshore dunes within the project area. Nesting occurs above the high tide line in sandy substrate and occasionally on driftwood (LeValley 1999). On LRSB nesting and brooding has occurred on the waveslope and throughout the nearshore dunes (Colwell et al. 2001, 2005). This area is undergoing rapid invasion by European beachgrass, reducing the amount of available nesting habitat and warranting restoration and European beachgrass control efforts.

The project area does contain possible habitat for three sensitive fish species and one other avian species (Appendix D). Osprey (*Pandion haliaetus*), may use the coastal waters adjacent to the project area or the river for foraging habitat. The fish species [Coho salmon (*Oncorhynchus kisutch*), coastal cutthroat trout (*Oncorhynchus clarkii clarkii*), and tidewater goby (*Eucyclogobius newberryi*)], if present, would most likely spend little time within the project area and rather pass through and continue up or down stream. Litter River runs through the project area for a very short distance and is not included in the proposed restoration or enhancement.

There are no specifically identified wildlife linkages within or connecting with the Park. It can however, be assumed that Little River serves as a wildlife linkage connecting the coastal areas with the upper Little River watershed and points beyond. Much of the upper watershed is commercial timberlands whereas the lower reaches immediately upriver of LRSB are agricultural lands supporting cattle grazing.

REGIONAL CONSERVATION PLANS & POLICY

Little River State Beach is a component of a regional planning effort known as the Humboldt County Beach and Dunes Management Plan (Humboldt County 1992). Other regional planning efforts are not know to include LRSB. There are no Natural Community Conservation Planning efforts in Humboldt County. There are several Habitat Conservation Plans (HCP) in Humboldt County; however, none include LRSB or immediately adjacent lands. Green Diamond Resource Company, which owns the upper Little River watershed, has two HCPs', one a recently approved Aquatic HCP and a Northern Spotted Owl HCP. The DPR provides policy for the management of natural resources in Section 300 of its Department Operations Manual (DOM). The DOM provides policy for the protection, restoration, and maintenance of natural resources within the State Park system. The proposed action is in conformance with DPR policy.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 primary goal of the habitat restoration and enhancement plan is the improvement of habitat for, and protection of, 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. The USFWS have provided technical assistance for the planning and implementation phases of the restoration work (Appendix G). Measures are incorporated to assure that impacts to sensitive plants such as the pink sand verbena do not occur. The plan includes measures designed to assure that take of the federally listed western snowy plover will not occur and a letter of Technical Assistance from the Arcata office of the USFWS will be attained and appended to the MND. All mitigation measures for sensitive biological resources are designed to mitigate potentially occurring impacts through avoidance.

PLANTS

As indicated in the Environmental Setting above, one sensitive plant species, pink sand verbena is known to exist within the project area. Activities conducted as part of this project such as habitat restoration and boardwalk installation have the potential to cause a significant impact to this sensitive species. Implementation of the mitigation measure Biological 1 will reduce any potential impact to plants to a less than significant level.

MITIGATION MEASURE BIOLOGICAL 1 – SENSITIVE PLANTS

- Prior to operations surveys will 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 will be conducted in conformance with the DFG "Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities". Results of the survey effort will be submitted to the Senior Environmental Scientist and the DFG at least 10 business days prior to commencing operations to allow sufficient time for review of the survey effort.
- The 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 will be avoidance. Sensitive

plant locations will be identified prior to operations and provided with a 5-meter equipment exclusion zone (EEZ) buffer. Buffer zones will be flagged with Yellow and Black Candy-striped flagging in conformance with the Districts flagging policy. No heavy equipment operation will be allowed within this zone. Restoration activities within the EEZ will be restricted to hand pulling. CNPS List 3 and 4 plants will be avoided when feasible; however, mitigation will not be required.

- Heavy equipment will enter the project area through an existing trail from the Clam Beach frontage road to the foredunes, where it will be stored at the interface of European beachgrass and Coyote brush plant series. Heavy equipment will remain onsite until the completion of each year's implementation phases, at which time that equipment will exit from where it came. Objects to obstruct the entrance to the path will be placed at the trailhead once heavy equipment moves through.
- Heavy equipment will be fueled at the start of every day at a predetermined location (western ¼ of each treatment area). Fuel will be delivered via a 4x4 truck at the start of each workday, and be administered by a fuel dispenser held in the bed of the truck. The truck carrying the fuel dispenser will enter the beach at the Clam Beach County Park vehicle entrance or through the newly created access path through LRSB. A snowy plover monitor will walk in front of the vehicle from the waveslope to/from the western ¼ of the treatment area, where heavy equipment will be fueled.

BIRDS

As indicated in the Environmental Setting above, one federally threatened animal species; the western snowy plover is known to exist within the project area. Activities conducted as part of this project such as habitat restoration have the potential to cause a significant impact this sensitive species. Implementation of the mitigation measures listed below will reduce any potential impact to snowy plovers to a less than significant level.

MITIGATION MEASURE BIOLOGICAL 2 – WESTERN SNOWY PLOVER

- Western snowy plover mitigation measures will be applied whenever operations are occurring in the nearshore dune habitat.
- Permitted snowy plover monitors will survey areas that work will be conducted in each day prior to operation. Snowy plover monitors will be onsite for the entire duration of operational hours to ensure that there are no snowy plovers present within the established spatial buffer zone and that they have not moved on site. If snowy plovers are observed within the spatial buffer zone of project activities, an alternative area where snowy plovers are not present will be picked.
- All staff and activities will remain in delineated project area in which presence/absence surveys will be conducted.
- Heavy equipment operations will be conducted outside of the WSP breeding season between September 15th and March 1st. All operations will occur during daylight hours.
- During the non-breeding season, a 50 meter (164 feet) spatial buffer zone will be maintained between WSP and restoration/enhancement operations. If the WSP monitor determines that operations are resulting in a behavioral disturbance to WSP then operations will be moved far enough away so as to eliminate the disturbance to the plovers.
- During the breeding season, a 100 meter (330 feet) spatial buffer zone will be maintained between WSP and restoration/enhancement operations. If the WSP monitor determines that operations are resulting in a behavioral disturbance to WSP then

operations will be moved far enough away so as to eliminate the disturbance to the plovers.

- All operations will occur during daylight hours.
- Vehicles driven on the beach will be limited to 10 mph, or the minimal speed required to prevent getting stuck in sand. Vehicles will remain on the wet sand until reaching the treatment area. All vehicles will be escorted by a permitted snowy plover biologist. A snowy plover monitor will walk in front of vehicles to and from the waveslope. This will be repeated in the afternoon when work is completed for the day. There will be no night driving or driving during periods of diminished visibility.
- Trash will be contained in predator-proof containers and transported off site at the end of each workday.
- Lunch and breaks will be taken at the work site to prevent workers from disturbing plovers.
- No dogs or other pets will accompany workers to the work site.

TREES

The restoration will result in the removal of approximately 74 non-native tree species from the backdunes. The trees to be removed are Monterey pine and Monterey cypress. These trees have been able to establish themselves in this area as a result of the stabilizing effects of the European beachgrass and nitrogen fixing properties of yellow bush lupine. Mitigation for the removal of these trees is being provided by the planting of willow in newly created woody dune swales and pines and spruce within the dune forest. The trees will be removed as part of restoring the native scrub community. The dune forest occurring on the south side of Little River will be retained. The number of willow trees established as part of the vegetation of the dune swales and the amount of bishop pine planted as part of the dune forest restoration will exceed the number of trees removed. Implementation of the mitigation measures listed below and planting of new trees will reduce any potential impact to a less than significant level.

MITIGATION MEASURE BIOLOGICAL 3 – TREES

- Hooker willow, obtained from plants currently growing within LRSB and surrounding areas will be planted in the newly created dune swales (approximately 1 hectare).
- Shore/Beach pine seedlings will be planted in and around the existing dune forest (approximately 1 hectare).
- Planting of native trees species will be implemented to achieve a 3:1 ratio with the amount of non-native trees removed during restoration activities.

b) All restoration activities within these wetlands will be done by hand and will not result in any significant adverse effect to the wetlands. No trail or boardwalk enhancements are proposed for either the one or three-parameter wetlands. Therefore, this project will have a less than significant affect on both state and federally protected wetlands.

c) The activity will not involve the discharge of dredged or fill material into a water of the United States, including wetlands, pursuant to Section 404 of the Clean Water Act. No fill will be placed in any type of wetland. Therefore, this project will have no impact on any federally protected wetlands.

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. Restoration activates will enhance wildlife habitats and will not result in any significant adverse impacts.

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

f) The project will not conflict with the provisions of any 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

ETHNOGRAPHIC BACKGROUND

Little River is the natural feature that separated two prehistoric Native American Tribes: the Yurok and the Wiyot. Both the Yurok and Wiyot have historically utilized both the north and south sides of Little River, respectively. Prehistoric and historic cultural sites have been documented within the project area and measures to avoid disturbance are included in the Plan (Appendix A).

WIYOT TRIBE

The Wiyot lived along the coast around Humboldt Bay extending roughly 56 km (35 miles) from Little River to the Eel River and approximately 24 km (15 miles) inland along the Eel River (Heizer and Elsasser 1980, Moratto 1973). Their population was once estimated at 3,300 (Heizer and Elsasser 1980) and they occupied at least 172 prehistoric and historic village sites around Humboldt Bay. Tragically, greed for land and resources led to brutal acts of violence against the Wiyot people. These violent clashes nearly annihilated the Wiyot and in 1860, there were only an estimated 200 remaining.

YUROK TRIBE

The Yurok inhabited the banks of the Klamath River from Bluff Creek (a few miles above the Trinity River) to the ocean, the lower most 19 kilometers (12 miles) of Redwood Creek, and a 64 km (40 miles) stretch of coast from Wilson Creek to Little River (Moratto 1973, Drucker 1937). They had over 17 villages on the coast and over 35 along the river (Waterman 1993). At the height of the Yurok civilization their population was estimated to be around 3,100 (Heizer and Elsasser 1980). In the early 1800's, the British and American trappers started to settle on the Yurok land. Soon afterwards a rush of settlers came to profit in the California Gold Rush of 1846 and Native American - European settler conflicts began.

HISTORY

Since the beginning of European settlement in the area, the beach and dunes in and around Little River were utilized for a variety of human uses such as gold mining, outdoor recreation, and as a travel corridor. Gold mining in the area began in the late 1870's (Fountain 1967). The primary site was located near Patrick's Creek, south of the project area (Labanca 1993, Parker 1974).

By the early 1900's activities in the area switched from gold mining to timber (Labanca 1993, Parker 1974). A railroad line was built from the logging town of Crannell south to Samoa where the mills were located (Labanca 1993). The railroad line ran parallel to the ocean and was located approximately where the frontage road exists today. The Little River Redwood Company completed the line in 1930 (Hole 2002, Fountain 1967).

In the early 1900's, Little River flowed north, parallel to HWY 101 before turning west and entering the ocean, much as it does today (Hole 2002). Over the next 30 years, the river slowly migrated south, and by 1930, the river flowed parallel to the frontage road (Hole 2002). In 1930, a "dam" (historical reference) was built to turn the river flow directly west (Hole 2002). This was done to prevent further erosion of sand formations supporting the Little River Redwood Company railroad (Hole 2002). The endeavor was successful and the river has not flowed in a southerly direction since. Remnants of the "dam" that redirected the Little River north again in the 1930's can still been seen during low tide.

In 1933, the Hammond Lumber Company acquired the railroad line and associated right of ways (Labanca 1993, Miller 1993, McCormick 1971). To reduce the amount of sand blowing onto the railroad tracks, European beachgrass was planted along the right of way from Mad River to Little River as early as 1933 (Labanca 1993, Miller 1993, Van Hook 1983). Five years later yellow bush lupine was planted along the right of way between Crannell and Samoa (Miller 1993, Parker 1974, McCormick 1971).

	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) A State Park Archeologist surveyed Little River State Beach in July 2004 for prehistoric and historic cultural resources. A confidential report was prepared and one potentially historically significant site was located (Gruver 2004). The one historical site within the project area is the remnants of the historic breakwater (Ca-Hum-673H). Restoration efforts focused on the backdunes and northern riparian wetland are adjacent to the historic breakwater. No restoration efforts are proposed directly in the area of the historic site and will not have a significant impact on the resource.

b) A confidential report was prepared and one culturally significant prehistoric archaeological site was located (Ca-Hum-672) (Gruver 2004). This sites date back to pre-European historical times. Restoration efforts in and around the cultural site include limited ground disturbance, using hand tools. Excavation work with heavy equipment is not expected to expose archaeological material due to the far proximity from any known cultural sites. In order to reduce potential impacts to prehistoric archaeological materials implementation of CULTURAL MITIGATION MEASURE #1 will reduce the impact to a less than significant level.

MITIGATION MEASURE CULTURAL – 1

- At least two weeks prior to operating in area(s) identified in the confidential 5024 document as potentially culturally sensitive, the project manager will contact the North Coast Redwoods District Archaeologist. The Archaeologist (or his designee) shall determine the boundaries of the sensitive area(s) and flag with black and yellow candy-stripe flagging. The Archaeologist will determine if a tribal monitor needs to be present during operations within these area(s). No heavy equipment will be allowed within designated culturally sensitive area(s).

b) Based on surveys conducted to date and a records search no human remains or burial sites have been documented or are known to exist at the proposed project sites. However, because there are archaeological sites within the project area, there is a potential for discovering undocumented human remains. No impact is anticipated.

VI. GEOLOGY AND SOILS

ENVIRONMENTAL SETTING

TOPOGRAPHY AND SETTING

Little River State Beach occurs in the northern portion of the Humboldt Bay dunes system that extends from Trinidad Head south to Centerville Beach (Pickart and Sawyer 1998, Labanca 1993, Parker 1974). The project area is characterized by a dune system comprised of beach, nearshore dunes, and backdunes (Appendix A of the Plan). In addition, a variety of wetland types, including woody and herbaceous dune swales are found within the project (Appendix B of the Plan). The project area elevations range from the mean high water (MHW) to approximately 12 meters (40 feet). Finer scaled dune formation terminology typical of the Humboldt Bay dune system can be found in Appendix A of the Plan and is graphically represented in Figure 2.2 (Appendix A).

GEOLOGY

The Park is located on a north to northeast-trending, rapidly uplifting coastline (Vaughan and Fiori 2004). The coastal strip, in which the project area is found, occupies a Holocene raised terrace between the active McKinleyville fault to the south and the active Trinidad fault to the north (Vaughan and Fiori 2004). The dunes within the project area are built of silica sand (Labanca 1993) and may be derived from river sediments and wave erosion of nearby bluffs (Parker 1974, Bascom 1964).

SOILS

Soil development occurs in response to the weathering of the parent material (rocks and alluvial deposits) and input from surface materials (vegetation), and varies depending on the topography (slope, aspect, and hydrologic conditions), underlying rock composition, and time. Wiedemann (1966) considers river transport to be the most important source of beach sand. The primary transportation of sediment occurs in the form of long shore currents and wave action (Wiedemann 1966). The beach sand source for the project area is primarily from Little River and to a lesser extant from Mad River (Labanca 1993). Sand dunes typically have poor soils with low levels of nutrients and organic matter (Wiedemann 1988). Organic litter deposited on the beach can add nutrients to the beach strand and foredune (Chapman 1976). In addition, fog and salt spray can add nutrients throughout the dune system (Wiedemann 1984).

SLOPE STABILITY

The project area is primarily within the beach and dune habitat, which depending on the area has naturally occurring slope instability. One of the Plan's goals is to restore the naturally functioning dune system, which includes moving sand in some areas.

SEISMICITY

Seismicity in the region is extremely high. The Mad River and McKinleyville faults strike northwest across the coastal bluff about 3 to 4 miles south of the project area while the Trinidad fault strikes northwest along the east side of the Little River drainage and through Moonstone beach, within ½ mile of the project site. The edge of the Cascadia Subduction Zone strikes north-northwest about 35 miles west from the project site (Table 3.4). There are other potentially active faults, and smaller active faults that are less clearly active in the immediate region. There is a high potential for liquefaction throughout the project area

because of the shallow water table, the sandy substrate and high seismic activity in the area.

Table 3-4: Faults and Parameters near Little River State Beach

Fault Name & Geometry	Slip Rate (mm/year)	Recurrence Interval (years)	Maximum Moment Magnitude	Last Known Fault Displacement
Mad River Fault (thrust)	0.7	2840-4010	7.2	No Data
McKinleyville Fault (thrust)	0.6	2770-3910	7.2	No Data
Trinidad Fault (thrust)	2.5	7650	7.5	No Data
Cascadia Subduction Zone (thrust)	40	200-800	9.0	1700 A.D.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
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, and seismic-related ground failure is 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. Conditions for a tsunami do exist because the project area is directly adjacent to the Pacific Ocean and in a seismically active area. Although those working on the project will be exposed to any event that might occur, it poses no more danger than what a regular visitor would be exposed to recreating in the Park.

b) There is a high potential for liquefaction throughout the project area because of the shallow water table, the sandy substrate and high seismic activity in the area. However, no permanent structures are proposed within the project area and if it liquefaction were to occur it would be compatible with the natural system dynamics the project is attempting to restore. No volcanic hazards exist in the project vicinity. The project will result in a less than significant impact.

c) Part of the purpose of this project is to restore the Park into a natural functioning beach and dune ecosystem. An important aspect of a naturally functioning dune system is the seasonal sand fluctuation between the ocean and the dunes. A temporary increase in surface erosion may occur during initial removal of the nearshore dunes as part of the rehabilitation, but the loss should not be substantial, as the backdunes should trap most of the possible moving sand. Treatments proposed by this project will reduce mass sand storage and increase the more natural sand movement patterns found along Pacific Northwest dune systems. Treatments are designed to restore natural sand movement, thereby increasing the stability of the restoration sites. Revegetation will occur within one growing season of the initial removal efforts, helping to decrease the potential of sand blowing. Monitoring of the project will permit additional responses and adaptive management to help keep sand on the project site; therefore the project will result in a less than significant impact.

d) Soil development occurs in response to the weathering of the parent material (rocks and alluvial deposits) and input from surface materials (vegetation), and varies depending on the topography (slope, aspect, and hydrologic conditions), underlying rock composition, and time. The soils in the park are generally not well developed because the beach has been recently active and the sand has not been sufficiently stable to develop a significant soil. One exception is a weakly developed soil on the northeast side of the park, in a slightly older dune adjacent to Little River (Appendix H). This site has a forested canopy and a weakly developed A (organic rich) horizon and some oxidation of the underlying dune sand parent material. The entire beach and dune complex within the park is mapped as a miscellaneous land type, which includes river washes, beaches and dune lands (Department of Soils and Plant Nutrition 1965). Because of the lack of clay in the soils expansive soils are not present.

e) The general public and most DPR employees will not be exposed to any additional geologic hazard as a result of this proposed project. Liquefaction could occur during periods of high soil moisture due either strong ground shaking or to vibratory and weight effects during treatment with heavy equipment; other equipment would be nearby to assist with extraction of affected equipment if necessary. However, during strong ground shaking, soils throughout the Park will be susceptible to liquefaction. The project does not create conditions that will cause subsidence because only insignificant amounts of organic materials will be buried. The project will have a less than significant impact on geologic

instability and, with implementation of the following mitigation measures impacts to worker safety due to existing geologic instability will be reduced to a less than significant level.

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

g) 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.

h) Only one unique paleontological resource or site or unique geologic feature exists in the project area. No work will occur at the paleontological site. No impact.

VII. HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL SETTING

HAZARDOUS MATERIALS

There are no known hazardous materials within the project area. However, heavy equipment and the use of a propane tank for flaming will be used on site for restoration efforts. The use of heavy equipment within beach and dune habitats requires similar safety measures as in any other project, with the exception of the sandy substrate. Sand has physical characteristics that allow fluids to penetrate into the soil quickly and create potentially dangerous situations with quick sand. Heavy equipment will be fueled at the start or the end of every day at a predetermined location (western ¼ of each treatment area). Fuel will be delivered via a fuel dispenser held in the bed of a 4 X 4 truck that will enter the beach from the CBCP vehicle entrance or through the proposed access gate at LRSB.

There are no known hazardous materials occurring within the project area. Park employees and contractors will be driving to and from the project area transporting potentially hazardous materials such as fuels, oils, or other fluids associated with the operation and maintenance of vehicles and equipment.

The Department of Toxic Substances Control's (DTSC) produces a Hazardous Waste and Substances Sites (Cortese) List that provides information about the location of hazardous materials release sites. Government Code section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Cortese List. DTSC is responsible for a portion of the information contained in the Cortese List, and other State and local government agencies are required to provide additional hazardous material release information. According to the 2007 DTSC list, there are 48 hazardous material sites in Humboldt County (http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm). There are no known sites in LRSB.

SCHOOLS AND AIRPORTS

The project area is near McKinleyville in a more populated area of Humboldt County. The closest schools are Dows Prairie Elementary and McKinleyville High School, which are located approximately 2.6 and 4.1 miles respectively from the project area. No airstrips exist within the Park or adjacent to Park property. The Arcata – Eureka Airport is approximately 2.3 miles to the southeast and planes commonly take off in a north-northwest direction.

EMERGENCY RESPONSE PLAN

The Humboldt County Emergency Operations Plan was prepared in an effort to ensure the efficient coordination with all political subdivisions of government and most effective use of all resources for maximum benefit and protection of the population in time of emergency (Humboldt County 2002). No specific project area emergency response or evacuation plans exists, however all operations associated with the project will occur within the boundaries of LRSB. Operations will occur adjacent to Clam Beach Road. Contractors and Park staff will be required to keep roads open at all times.

WILDLAND FIRES

A Wildfire Management Plan has not been prepared for LRSB. Objectives of most CSP Wildfire Management Plans is to take initial control action on all fires in any area considered threatening to Park System lands, including private or other public lands adjacent to the unit

boundary. The proposed project is located within a beach and dunes system, which tends to have fewer fuels then most of the surrounding bluff vegetation adjacent to the Park. A fire risk analysis for the Plan was completed and the proposed project will not increase the fire risk significantly. All felled trees and removed large woody vegetation will be taken off site and properly disposed off.

		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:					
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 diesel fuel to the work site. Restoration activities will require the use of certain potentially hazardous materials, such as fuels, oils, and solvents. These materials are generally used for excavation equipment, generators, and other equipment and will be contained in vessels engineered for safe storage. Large quantities of these materials will not be stored on site. Spills, upsets, or other construction-related accidents could result in a release of fuel or other hazardous substances into the environment. Best management practices (BMP's) have

been incorporated into the restoration plan that will assure that significant adverse effects to do not occur (Appendix A)

b) Failure of, or leakage from, vehicles or heavy equipment could result in the release of hazardous substances (primarily petroleum-based products) into the ground or water (see VII (a) discussion above). BMP's such as prohibiting the refueling of equipment within 100 feet of water have been incorporated into the Plan (Appendix A). These BMP's will assure that significant adverse effects will not occur.

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 project area is not included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5. Therefore, no impact will occur.

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

f) The project site is located within the vicinity of a private airstrip. Therefore, no impact will occur as a result of this project.

g) All construction activities associated with the project will occur within the boundaries LRSB and work will not restrict access to or block any public road. Access to the project sites is limited and when work occurs adjacent to the Clam Beach frontage road emergency response or evacuation plans will not be impeded upon. All road access will remain open for emergency traffic. A general safety protocol for backcountry heavy equipment operations has been adopted by the NCRD for use within State Parks 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 the project. One vehicular evacuation route from the beach exists in the middle of Clam Beach County Park, at the south end of the Clam Beach frontage road. The project is designed and will be implemented to avoid any conflicts with existing plans or increase in emergency response time.

   Workers spend most of their work hours in 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 employees are issued first aid kits and 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. All operations conducted by contractors will occur while a Park employee is on site. Therefore, the impact of this project on an emergency response or evacuation plans will be less than significant.

h) Heavy equipment can get very hot during the warmer part of the work season and is sometimes in close proximity to flammable vegetation. Improperly outfitted exhaust systems or friction between metal parts crushing rocks 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. Less than significant adverse affect.

VIII. HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL SETTING

The Water Quality Control Plan for the North Coast Region (Basin Plan) contains a brief description of the North Coast Region, and describes its water quality and quantity problems and the present and potential beneficial uses of the surface and ground waters within the Region (http://www.swrcb.ca.gov/northcoast/water_issues/programs/basin_plan/basin_plan.shtml). The restoration project occurs in the North Coastal Basin, which covers an area of approximately 8,560 square miles located along the north-central California Coast. The project area occurs in the Trinidad unit, one of nine hydrologic units of the North Coast Basin. There are no major surface water developments in Little River though Green Diamond Resource Company drafts surface water for their timber operations. The present water quality within the Region generally meets or exceeds the water quality objectives set forth by the Basin Plan. The groundwater table in the Park fluctuates annually, depending on rainfall and seasonal temperatures. The area does not serve to recharge commercially available aquifers. There are no public water sources within the area of the proposed project.

In the early 1900's, Little River flowed north, parallel to HWY 101 before turning west and entering the ocean, much as it does today (Hole 2002). Over the next 30 years the river slowly migrated south, and by 1930, the river flowed parallel to the frontage road (Hole 2002). In 1930 a "dam" (historical reference) was built to turn the river flow directly west (Hole 2002). The endeavor was a success. The potential for a southern excursion of the river may be increasing, however, due to deterioration of the "dam" and the potential for a westward migration of the river axis. A well-developed wetland now exists in the area in which Little River once flowed when taking its southerly course in the early 1900's. Remnants of the "dam" that redirected the Little River north again in the 1930's can still been seen during low tide.

Tsunamis occur when the sea floor is deformed by an earthquake. In the open ocean, tsunamis can travel as fast as 600 miles per hour. The entire project area is adjacent to the Pacific Ocean and is vulnerable to a tsunami or seich (oscillation of a body of water in a containing basin).

		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:					
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)	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?	☐	☐	☐	☒
e)	Substantially degrade water quality?	☐	☐	☒	☐
f)	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?	☐	☐	☐	☒
g)	Place structures that would impede or redirect flood flows within a 100-year flood hazard area?	☐	☐	☐	☒
h)	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?	☐	☐	☐	☒
i)	Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

DISCUSSION

a. The project would comply with all applicable water quality standards and waste discharge requirements. Based on the project description, the project would result in a less than significant impact to water quality and waste discharge. There is the potential for an accidental spillage of toxic substances (e.g., diesel fuel and hydraulic oil) during restoration efforts. Best management practices incorporated into the plan including no refueling of equipment within 100-feet of a watersource and maintenance of spill kits with equipment will reduce the project's potential impacts to a less than significant level.

b. The project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Groundwater quantity will not be changed by the project. A qualified engineering geologist will review the sites to ensure that site and offsite conditions will be enhanced by the work. Impact of the project on groundwater supplies will be less than significant.

c. The project does not propose to alter the course of a stream or river although decreased stability of the dune complex resulting from the work could increase the rate of stream migration to a more natural level. No impact.

d. The project would not create or contribute runoff water in amounts that would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. No stormwater systems are downslope from the project. No impact.

e. The proposed project does involve the routine transportation of small amounts of diesel fuel to the work site and restoration activities will require the use of certain potentially hazardous materials, such as fuels, oils, and solvents. These materials if accidentally spilled could result in degrading water quality of the Little River, the ocean or nearby wetlands. However, BMP's have been incorporated into the plan that will reduce any potential impacts to a less than significant level.

f. No housing is proposed under this plan therefore the project will result in no impact.

g. The project does not involve housing designed for human occupation. There is no housing within LRSB. No impact.

h. The project does not include any structure designed for human occupation. No impact.

i. The project could increase coastal flooding run up distances to more natural levels by lowering the foredune and making it less stable; however, back dune barriers will remain intact to help protect infrastructure. 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. No impact.

j. The project could increase tsunami run up distances on the beach to more natural levels by lowering the foredune and making it less stable; however, back dune barriers will remain intact to help protect infrastructure. Whether the project was implemented or not, a tsunami could inundate the entire Park and surrounding infrastructure. No impact.

IX. LAND USE AND PLANNING

ENVIRONMENTAL SETTING

Little River State Beach is located north of the unincorporated community of McKinleyville and is boarded by County park to the south, HWY 101 to the east, and private property and County park to the north. There are no communities within or adjacent to LRSB.

Little River State Beach does not have a general plan. It is however, covered under the District's Beach and Dune Management Plan (Transou et al. 2007[a]). This plan encourages the control or eradication of invasive exotic plants, the protection of sensitive natural and cultural resources, and increasing public awareness of regulations and sensitive resources.

Humboldt County has developed the Clam and Moonstone County Beach County Parks Access Management Master Plan (Humboldt County 2006). This plan establishes a framework for implementing measures that will provide for continued public access, use, and enjoyment of the parks while maintaining public safety and protecting sensitive resources. The plan also addresses the need to develop consistent signing and if possible cooperative projects with California State Parks.

The Green Diamond Resource Company, which owns lands adjacent to LRSB, has two approved Habitat Conservation Plans (HCP); one for the northern spotted owl and a multi-species aquatic HCP. Neither of these plans include LRSB nor would the actions proposed under this project conflict with either of these HCP's.

WOULD THE PROJECT:		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 proposed project would not physically divide an established community. No impact.

b) The project will not conflict with any land use project, policy, or regulation of any agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. 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 for LRSB. No impact.

X. MINERAL RESOURCES

ENVIRONMENTAL SETTING

The following information regarding mineral resources in Humboldt County was taken from the Humboldt County General Plan (In Draft). Humboldt County is one of the most geologically complex areas in the state. Gold mining became one of the first important industries in this area. Other minerals such as copper, chromium, silver, and zinc were also extracted from local mines. Due to high production and manufacturing costs, very little metallic mining is occurring in Humboldt County today. Current county mineral resource production is primarily limited to sand, gravel, and rock extraction. Gravel bars and deposits from the large streams and river flood plains supply most of the area gravel needs. Sand and gravel are mined primarily in-stream, with approximately 75% of all production occurring in the Eel River–Van Duzen complex. Rock production occurs in 32 active hard rock quarries that are scattered throughout the county. Currently, there are no active mineral resource extraction sites within the boundaries of the LRSB. Early 20th century attempts at mining the beach sands for gold did not prove to be economically feasible for a sustained period. Mineral resource extraction is not currently permitted on units designated as State Beach.

		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 resource extraction is not allowed in State Park units. No impact.

b) The project will not result in the loss of availability of a locally important mineral resource recovery site because resource extraction is not allowed in State Park units. No impact.

XI. NOISE

ENVIRONMENTAL SETTING

Noise currently affecting the project area comes from the Pacific Ocean; vehicles on Clam Beach Road, the waveslope and HWY 101; and air traffic consisting of propeller planes, Coast Guard helicopters and California Department of Forestry and Fire (CALFIRE) firefighting aircraft. Noise levels will temporarily increase at the work site, although the noise generally diminishes rapidly with distance. Sensitive receptors include schools, playgrounds, childcare centers, retirement and convalescent homes, hospitals, medical clinics, and residences. There are no sensitive receptors in or near the project area. Equipment operation shall be limited to daytime hours between 07:00 to 17:00 Monday through Friday. Workers in close proximity to the heavy equipment are exposed to high noise levels. Workers shall be advised to wear ear protection when in close proximity to the heavy equipment. Earplugs shall be provided to all workers and extra earplugs shall be stored in all vehicles and equipment. All operations will comply with OSHA regulations.

The Humboldt County General Plan Update (2007) lists noise compatibility levels for various land use patterns using the Day-Night Average Level (Ldn). Normally acceptable levels range from 50 to 60 Ldn and normally unacceptable levels over 90 Ldn (Humboldt County 2007). Noise levels in the immediate vicinity (330 meters) of the heavy equipment or motorized tools will most likely range between 60 and 70 Ldn (Humboldt County 2007) but will drop off rapidly due to competition with the noise from HHY 101 and the Pacific Ocean.

		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:					
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) Restoration noise levels at the project area will fluctuate, depending on the treatment type or activity 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 project or related activities and no known noise standards applicable to this area. However, depending on the specific activities being performed, short-term increases in ambient noise levels could result in speech interference near the work site. The Plan includes BMP's such as restricting hours of operations or ensuring that equipment will have adequate mufflers that will reduce any potential impacts to a less than significant level.

b) The project will not generate or expose people to excessive groundborne vibrations or groundborne noise levels because only a few relatively small pieces of heavy equipment will be operating at any one time. The sizes of the machines used will not generate excessive vibrations. No impact.

c) Project-related noise will only occur during normal business hours (0700-1700). 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. Project-related noise would only occur during actual hours of implementation and be temporary in nature. Once operations are completed, all noise-generating equipment would be removed from the site. The project would not create any source that would contribute to a substantial permanent increase in ambient noise levels near the project. No impact.

d) No more than four pieces of heavy equipment will be operating on this project at any one time. The work area will be closed to the public when heavy equipment is operating and only staff and contractors will be affected by the equipment noise. Because the project area is adjacent to the Pacific Ocean, noise from the wind, water, and waves interferes with the heavy equipment noise and can reduce the overall noise levels coming from the work location. The project area is well away from the campground at CBCP areas. Noise impacts will be limited to Clam Beach Road and the nearshore dunes for a few weeks a year. The incorporation of the aforementioned BMP's will reduce any potential impacts to a less than significant level.

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

f) The project is not within the vicinity of an airport or private airstrip; therefore, the project will have no impact.

XII. POPULATION AND HOUSING

ENVIRONMENTAL SETTING

Little River State Beach does not have any formally designated parking lots or trails within the Park. The primary public access point is the CBCP parking lot on the south end of LRSB which approximately 25% of the lot was constructed on LRSB without approval. Two unofficial areas along the frontage road have been utilized by visitors accessing LRSB. These areas include a partially paved area near the Crannell overpass and a dirt area on the east side of the frontage road (Figure 4.1 of Appendix A). Under this plan, these two areas will be developed into two frontage road parking lots that will provide for similar levels of existing parking (Figure 4.1 of Appendix A).

Traditionally Park visitors have accessed the project area by a system of way trails created by the public without planning, environmental review, or professional design and construction. These trails, many of which are redundant, are used by both hikers and equestrians. There are currently 5.5 km (3.4 miles) of way trails at LRSB. The proposed project will establish a sustainable trail system throughout the Park that will reduce impacts on sensitive resources while still providing recreational opportunities. Old way trails will be rehabilitated as part of this project. A total of 8.5 km (5.3 miles) of trail will remain and/or be created. Although this is a small increase in total trail length, a majority of the new trail length is due to the ADA compatible trail (0.8 km) and the extension of the California Coastal Trail (CCT). The CCT (0.8 km) is primarily going to remain on the existing pavement and the ADA trail will be installed as a floating boardwalk.

WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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?	☐	☐	☐	☒

DISCUSSION

a) The project would not induce substantial population growth because the project does not involve housing or new businesses. The project does include the formal development of trails and parking areas; however, it would result in only a minor net increase in the amount of trails and maintain similar levels of parking. No impact.

b) The project will not result in the loss of housing. No impact.

XIII. PUBLIC SERVICES

ENVIRONMENTAL SETTING

The Park is near the unincorporated community of McKinleyville, a more populated area of Humboldt County. The closest schools are Dows Prairie Elementary and McKinleyville High School, which are located approximately 4.26 km (2.6 miles) and 5.65 km (4.1 miles) respectively from the Park. No airstrips exist within or adjacent to the Park. The Arcata – Eureka Airport is approximately 3.68 (2.3 miles) to the southeast. Police protection is primarily provided by DPR Rangers located at Patrick's Point State Park 19.2 km (12 miles) to the northwest of the project area. Fire protection is provided by the CALFIRE with the nearest fire station located in Trinidad, California approximately 8 km (5 miles) to the northwest. The project includes the installation of a new gate and access point off of Clam Beach County Road for emergency services, administrative use and restoration activities. This gated will not be accessible to public vehicles.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
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) The project is intended to protect resources within the Park through the removal of invasive exotic plants and the enhancement of infrastructure features such as trails and parking areas.

Fire

The project is not expected to result in additional demands on fire protection. No impact.

Police Protection

No additional demands on rangers or local police are expected as a result of this project. No change in the status or usability of existing roads will result from this project. No impact.

Schools

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.

Parks

No new or altered facilities or services would be required to maintain acceptable public service as a result of this project. Some portions of the Park may be temporarily closed during work hours and for protection of newly revegetated areas. This should not affect public access as there will be open trails leading to all areas of the Park and only small portions of the Park will be closed at any given time. Since most of LRSB will remain open during the project no other parks in the area should show a related increase in use. No adverse impact will occur at the project site or any other public facilities as a result of this project. No impact.

Other Public Facilities

The project would improve LRSB by protecting the natural resources of the Park. The project will improve the aesthetic quality of the beach and dunes, improve visitor safety and recreational opportunities, and encourage natural dune vegetation. No impact.

XIV. RECREATION

ENVIRONMENTAL SETTING

Little River State Beach regulations help to provide recreational opportunities while providing for resource protection and restoration. The Park offers low impact recreational activities like fishing, surfing, beach combing, sun bathing, bird watching, and hiking.

The Park is open for day use only; camping is not permitted. There is a small paved parking lot that is shared with the County, but no other facilities exist. Dogs, horses, campfires, camping, and off road vehicle traffic are not allowed within the beach and dune habitat at LRSB.

Little River State Beach does not have any formally designated parking lots or trails within the Park. The primary public access point is the CBCP parking lot on the south end of LRSB. Two undeveloped parking areas along Clam Beach Road have are utilized by visitors for accessing LRSB. Under this plan, these two areas will be developed into improved parking lots.

Traditionally, Park visitors have accessed the project area by a system of way trails created by the public without planning, environmental review, or professional design and construction. These trails are used by both hikers and equestrians. They emanate from the CBCP day use parking lot on the south end of LRSB and from the frontage road on the east side of LRSB. There are currently 5.5 km (3.4 miles) of way trails at LRSB. Many of these trails are redundant and traverse through sensitive wetlands, fragile native dune vegetation, and snowy plover habitat. To correct this, a system of trails, some of which will be established upon existing way trails is being proposed. This new trail system will increase the total amount of trails within the Park to 8.5 km (5.3 miles). The small increase in total trail length is due to the proposed ADA compatible trail (0.8 km) and the proposed extension of the California Coastal Trail (CCT). The CCT (0.8 km) is primarily going to remain on the existing pavement and the ADA trail will be installed as a floating boardwalk. The Park currently does not have any DA compatible trails or facilities. By installing these trails more recreational opportunities are available for the public.

	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 may increase existing use of the Park, but will not accelerate the deterioration of any facility because current and or proposed facilities will be improved as part of the project. The project will not lead to increased use of other nearby facilities. No impact.

b) The project does include the installation of recreational facilities, particularly trails (ADA included), signs, and parking areas. Due to the extensive way trails and lack of official

parking areas this project will not have an adverse effect on the environment as the improvements will help to reduce impacts from visitors by offering a trail system and designated parking areas. In addition, the signs will help deliver the message of resource protection to the visitors; therefore, no significant impact will occur.

XV. TRANSPORTATION/TRAFFIC

ENVIRONMENTAL SETTING

The Park is directly adjacent to Clam Beach Road, which can be accessed by two exits off HWY 101. The project does not include any activities that would affect HWY 101 or the exits. The project will result in shifting the Clam Beach Road alignment to the east to accommodate the coastal trail; however, this is not expected to result in expanding the footprint of the roadway. The project will also result in improvements to two areas currently used by the public for parking. These improvements will not result in a significant change (increase or decrease) in the amount of parking available at LRSB. Crosswalks and warning signs will be installed at each of the parking areas to facilitate pedestrian traffic from the parking areas to the beach. None of these improvements should result in closures of Clam Beach Road or impede emergency access. Emergency access to the beach will be enhanced by the project as a new gate and restricted access point is proposed off of the Clam Beach Road. The project is not expected to substantially increase visitation at the Park and therefore not result in increases to the number of vehicle trips or road capacity.

The Park is accessible by air from the Eureka-Arcata Airport in McKinleyville. The airport has regularly scheduled commercial flights, which are often delayed or canceled due to thick fog and heavy rain. There is no bus service in the area. There is no regional transportation agency. Humboldt Transit Authority operates the local bus system providing service as far north as Trinidad and south to Scotia.

		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project:					
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 significantly increase the traffic on any public street system. The number of vehicles and frequency of travel related to this project is insignificant. No more than four pickup trucks would be used to travel to and from the project site. 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 area is not located within two miles of a public airport, or in the vicinity of a private airstrip, 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 use that will substantially increase traffic hazards. Road use will not increase. Although two crosswalks will be installed across Clam Beach Road, warning signs and a clear, long, site distance will reduce the impact of this project to less than significant.

e) The project will not result in inadequate emergency access because during the project normal emergency access to any portion of the Park will be improved. No impact.

f) Currently there are only 14 designated parking spaces within the Park. These parking areas are located within the shared CBCP/LRSB parking lot. An ADA compatible parking space, loading area, and entrance path to the ADA trailhead will be installed where there are currently three regular parking spaces, reducing the total number of parking spaces to 12 within the shared lot. However, the project will not result in inadequate parking capacity because the Plan proposes to increase the total parking capacity within the Park by installing 22 additional spaces. Two of these new spaces will be designed to accommodate horse trailers with the remaining spaces designated for vehicle parking. This will increase of the total number of parking spaces from 14 to 34 within the Park. Work vehicles will not impact the parking or access to he Park. 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

The project area does not contain any utilities or service systems. The area is within the beach and dune habitat at LRSB. There is one area with trash receptacles in the project area, but contractors and park employees are required to pick up and remove any personal trash generated from the project site daily. Minor project related debris generated from project activities that will require removal. Some removed vegetation will be burned off site and will require short distance transportation. Most removed vegetation will be left on site, either buried or left to decompose naturally. Two sets of trash receptacles will be placed within the footprint of both proposed parking areas at LRSB.

		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?	☐ Yes	☒ No		
	Would the construction of these facilities cause significant environmental effects?	☐ Yes	☒ No		
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) No wastewater will be produced by this project. No impact.

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. No water drafting will be conducted. No impact.

e) No wastewater will be generated by this project. No impact.

f) No solid waste will be generated by this project. Waste from construction workers will be hauled off site and disposed of in a lawful facility designed for waste. No impact.

g) No solid waste will be generated by this project. No impact.

WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 project was evaluated for potential significant adverse impacts to the natural environment. It has been determined that the proposed project has the potential to temporarily degrade the quality of the environment and adversely affect special-status plant and animal species. However, 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 project has been evaluated for potential significant impacts to cultural resources. It has been determined that, with implementation of proposed mitigation measures, no examples of significant cultural resources will be significantly impacted by the project.

c) Dune restoration work, primarily through the removal of non-native plant species and the revegetation with native dune species, will be occurring concurrently with the implementation phases of this project. There is not likely to be any additional adverse impact resulting from the combined effects of these activities.

Full implementation of all mitigation measures incorporated into this project will reduce its impacts to a less than significant level. Impacts from environmental issues addressed in this evaluation do not overlap with additional planned projects in such a way as to result in cumulative adverse impacts that are greater than the sum of the parts. This project will result in a less than significant impact with mitigation.

d) Most plan-related environmental effects have been determined to pose a less than significant impact on humans. However, possible impacts from earthquakes (Geology and

Soils), have the potential to result in significant adverse effects on humans. These potentially significant adverse impacts will be reduced to a less than significant level with the full implementation of all mitigation measures incorporated into this project.

CHAPTER 5 - SUMMARY OF MITIGATION MEASURES

The following mitigation measures would be implemented by DPR as part of the LRSB Restoration and Enhancement Plan.

MITIGATION MEASURE BIOLOGICAL 1 – SENSITIVE PLANTS

- Prior to operations surveys will 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 will be conducted in conformance with the DFG "Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities". Results of the survey effort will be submitted to the Senior Environmental Scientist and the DFG at least 10 business days prior to commencing operations to allow sufficient time for review of the survey effort.
- The 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 will be avoidance. Sensitive plant locations will be identified prior to operations and provided with a 5-meter equipment exclusion zone (EEZ) buffer. Buffer zones will be flagged with Yellow and Black Candy-striped flagging in conformance with the Districts flagging policy. No heavy equipment operation will be allowed within this zone. Restoration activities within the EEZ will be restricted to hand pulling. CNPS List 3 and 4 plants will be avoided when feasible; however, mitigation will not be required.
- Heavy equipment will enter the project area through an existing trail from the Clam Beach frontage road to the foredunes, where it will be stored at the interface of European beachgrass and Coyote brush plant series. Heavy equipment will remain onsite until the completion of each year's implementation phases, at which time that equipment will exit from where it came. Objects to obstruct the entrance to the path will be placed at the trailhead once heavy equipment moves through.
- Heavy equipment will be fueled at the start of every day at a predetermined location (western ¼ of each treatment area). Fuel will be delivered via a 4x4 truck at the start of each workday, and be administered by a fuel dispenser held in the bed of the truck. The truck carrying the fuel dispenser will enter the beach at the Clam Beach County Park vehicle entrance or through the newly created access path through LRSB. A snowy plover monitor will walk in front of the vehicle from the waveslope to/from the western ¼ of the treatment area, where heavy equipment will be fueled.

MITIGATION MEASURE BIOLOGICAL 2 – WESTERN SNOWY PLOVER

- Western snowy plover mitigation measures will be applied whenever operations are occurring in the nearshore dune habitat.
- Permitted snowy plover monitors will survey areas that work will be conducted in each day prior to operation. Snowy plover monitors will be onsite for the entire duration of operational hours to ensure that there are no snowy plovers present within the established spatial buffer zone and that they have not moved on site. If snowy plovers are observed within the spatial buffer zone of project activities, an alternative area where snowy plovers are not present will be picked.
- All staff and activities will remain in delineated project area in which presence/absence surveys will be conducted.

- Heavy equipment operations will be conducted outside of the WSP breeding season between September 15th and March 1st. All operations will occur during daylight hours.
- During the non-breeding season, a 50 meter (164 feet) spatial buffer zone will be maintained between WSP and restoration/enhancement operations. If the WSP monitor determines that operations are resulting in a behavioral disturbance to WSP then operations will be moved far enough away so as to eliminate the disturbance to the plovers.
- During the breeding season, a 100 meter (330 feet) spatial buffer zone will be maintained between WSP and restoration/enhancement operations. If the WSP monitor determines that operations are resulting in a behavioral disturbance to WSP then operations will be moved far enough away so as to eliminate the disturbance to the plovers.
- All operations will occur during daylight hours.
- Vehicles driven on the beach will be limited to 10 mph, or the minimal speed required to prevent getting stuck in sand. Vehicles will remain on the wet sand until reaching the treatment area. All vehicles will be escorted by a permitted snowy plover biologist. A snowy plover monitor will walk in front of vehicles to and from the waveslope. This will be repeated in the afternoon when work is completed for the day. There will be no night driving or driving during periods of diminished visibility.
- Trash will be contained in predator-proof containers and transported off site at the end of each workday.
- Lunch and breaks will be taken at the work site to prevent workers from disturbing plovers.
- No dogs or other pets will accompany workers to the work site.

MITIGATION MEASURE BIOLOGICAL 3 – TREES

- Hooker willow, obtained from plants currently growing within LRSB and surrounding areas will be planted in the newly created dune swales (approximately 1 hectare).
- Bishop pine seedlings will be planted in and around the existing dune forest (approximately 1 hectare).
- Planting of trees species will be implemented to achieve a 3:1 ratio with the amount of non-native trees removed during restoration activities.

MITIGATION MEASURE CULTURAL – 1

- Prior to operating in area(s) identified in the confidential 5024 document as potentially culturally sensitive, the project manager will contact the North Coast District Archaeologist at least two weeks prior to operations. The Archaeologist (or his designee) shall determine the boundaries of the sensitive area(s) and flag with black and yellow candy-stripe flagging. The Archaeologist will determine if a tribal monitor needs to be present during operations within these area(s). No heavy equipment will be allowed within designated culturally sensitive area(s).

CHAPTER 6 - MONITORING PLAN

Compliance and effectiveness monitoring will be implemented in conjunction with the activities proposed under the LRSB Restoration and Enhancement Plan. See LRSB Restoration and Enhancement Plan (Appendix A) for the detailed monitoring plan.

Reports will be filed annually with DPR North Coast Redwoods District headquarters and will summarize the quality and quantity of work accomplished. Any difficulties regarding compliance with the terms of the LRSB Restoration and Enhancement Plan will be noted along with recommendations to improve future efforts.

CHAPTER 7 - REFERENCES AND GLOSSARY

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