

Turtle Back Hill Trail Accessibility Improvements  
Draft IS/MND  
China Camp State Park



March 2007



*California Department of Parks and Recreation  
Acquisition and Development Division  
Northern Service Center*

**On the cover:**  
*Photograph by Gail Sevrens. © 2007 California State Parks*

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## MITIGATED NEGATIVE DECLARATION

**PROJECT:** CHINA CAMP STATE PARK TURTLE BACK HILL TRAIL ACCESSIBILITY IMPROVEMENTS

**LEAD AGENCY:** California Department of Parks and Recreation

**AVAILABILITY OF DOCUMENTS:** The Initial Study for this Mitigated Negative Declaration is available for review at:

- Northern Service Center  
California Department of Parks & Recreation  
One Capitol Mall - Suite 410  
Sacramento, California 95814
- Marin District Headquarters  
California Department of Parks & Recreation  
25381 Steelhead Blvd.  
Duncans Mills, CA 95430
- China Camp State Park Ranger Office  
China Camp State Park  
North San Pedro Road  
San Rafael, CA 94901
- San Rafael Public Library  
1100 E Street  
San Rafael, California 94901
- Civic Center Library, County of Marin  
3501 Civic Center Drive # 427  
San Rafael, CA 94903
- California Department of Parks and Recreation website  
[www.parks.ca.gov/default.asp?page\\_id=981](http://www.parks.ca.gov/default.asp?page_id=981)

### PROJECT DESCRIPTION:

The Department of Parks and Recreation proposes to make the improvements described herein to the Turtle Back Hill Trail at China Camp State Park in order to remove barriers to persons with disabilities choosing a bay-side hiking experience and comply with the Americans with Disabilities Act (ADA). The following is a summary of the planned improvements:

Reroute of approximately 3,220 linear feet (lf) of trail to reduce linear grades, convert approximately 230 lf of existing dirt road to trail by reducing width, construct approximately 110 lf of four-foot-wide elevated boardwalk, and armor the trail tread. Total length of ADA-compliant trail will be approximately 3,560 lf upon completion. Approximately 1,000 lf of existing road (currently used as a trail) and approximately 1,600 lf of existing trail will be obliterated, decompacted, and revegetated with native vegetation. Permanent and temporary fencing will be installed to discourage visitor use of rehabilitated areas. Approximately six interpretive and information signs and one bench will be located along the trail. Two accessible parking spaces along North San Pedro Road will be developed.

Questions or comments regarding this Initial Study/Mitigated Negative Declaration should be addressed to:

Gail Sevrens  
California Department of Parks & Recreation  
Northern Service Center  
One Capitol Mall - Suite 500  
Sacramento, CA 95814  
gsevr@parks.ca.gov  
Fax: (916) 445-9100

Original signed by  
\_\_\_\_\_  
Gail Sevrens  
Environmental Coordinator

\_\_\_\_\_  
Date

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. 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 signed by  
\_\_\_\_\_  
David R. Gould  
District Superintendent

\_\_\_\_\_  
Date

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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 China Camp State Park Turtle Back Hill Trail Accessibility Improvements Project at China Camp State Park, Marin County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code (PRC) §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 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 project 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 may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

## 1.2 LEAD AGENCY

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

Jason Spann – Project Manager  
Accessibility Section  
California Department of Parks and Recreation  
Acquisition and Development Division  
One Capital Mall, Suite 500  
Sacramento, California 95814  
(916) 445-8907

Questions or comments regarding this Initial Study/Mitigated Negative Declaration should be submitted in writing to:

Gail Sevrens – Environmental Coordinator  
California Department of Parks & Recreation  
Acquisition and Development Division  
One Capitol Mall - Suite 500  
Sacramento, CA 95814  
Fax: (916) 445-9100  
gsevr@parks.ca.gov

### **1.3 PURPOSE AND DOCUMENT ORGANIZATION**

The purpose of this document is to evaluate the potential environmental effects of the proposed Turtle Back Hill Trail Accessibility Improvements Project at China Camp State Park. 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 provides an introduction to the project and describes the purpose and organization of this document.
- Chapter 2 - Project Description.  
This chapter describes the reasons for the project, scope of the project, and project objectives.
- Chapter 3 - Environmental Setting, Impacts, and Mitigation Measures.  
This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the potential impacts identified in the CEQA Environmental (Initial Study) Checklist. Mitigation measures are incorporated, where appropriate, to reduce potentially significant impacts to a less-than-significant level.
- Chapter 4 - Mandatory Findings of Significance.  
This chapter identifies and summarizes the overall significance of any potential impacts to natural and cultural resources, cumulative impacts, and impact to humans, as identified in the Initial Study.
- Chapter 5 - Summary of Mitigation Measures.  
This chapter summarizes the mitigation measures incorporated into the project as a result of the Initial Study.
- Chapter 6 - References.  
This chapter identifies the references and sources used in the preparation of this IS/MND.
- Chapter 7 - Report Preparation.  
This chapter provides a list of those involved in the preparation of this document.

### **1.4 SUMMARY OF FINDINGS**

Chapter 3 of this document contains the Environmental (Initial Study [IS]) 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 IS and supporting environmental analysis provided in this document, the proposed China Camp State Park Turtle Back Hill Trail Accessibility Improvements Project would 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.

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 would have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted for this project, in accordance with CEQA and the State CEQA Guidelines.

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## **CHAPTER 2: PROJECT DESCRIPTION**

### **2.1 INTRODUCTION**

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Turtle Back Hill Trail Accessibility Improvements Project at China Camp State Park.

The intent of this project is to remove barriers to persons with disabilities choosing a bay-side hiking experience within China Camp State Park by making improvements to the existing Turtle Back Hill trail.

### **2.2 PROJECT LOCATION**

China Camp State Park is located in Marin County, near the City of San Rafael (a small portion of the park is located within the city limits) and U.S. Highway 1. The park is a thirty-minute drive from San Francisco via the Golden Gate Bridge. The project site, Turtle Back Hill, is located along North San Pedro Road, at the northern edge of the park, and is outside the city limits of San Rafael. Turtle Back Hill is situated at the southwest edge of San Pablo Bay and its associated pickleweed marsh. China Camp State Park is one of the least disturbed natural watersheds remaining along the shores of San Pablo Bay.

### **2.3 BACKGROUND AND NEED FOR THE PROJECT**

The Department of Parks and Recreation is required to formulate and implement a transition plan designed to remove barriers and improve accessibility to visitors of all abilities, under the legal mandates of the Tucker v. California Department of Parks and Recreation, Case No. C-984935 CRB, consent decree. The existing Turtle Back Hill Trail does not currently meet California State Park Accessibility Guidelines or Federal Accessibility Guidelines for Outdoor Developed Areas.

### **2.4 PROJECT OBJECTIVES**

The goal of this project is to remove barriers to persons with disabilities choosing a bay-side hiking experience within China Camp State Park. To accomplish this goal, improvements to the Turtle Back Hill Trail will make the trail compliant with the Americans with Disabilities Act (ADA). The project is designed to meet accessibility requirements and guidelines as stated in "California State Parks Accessibility Guidelines" and the Federal Accessibility Guidelines for Outdoor Developed Areas.

### **2.5 PROJECT DESCRIPTION**

DPR proposes to make the improvements described herein to the Turtle Back Hill Trail at China Camp State Park.

Improvements to the Turtle Back Hill Trail will include the reroute of approximately 3,220 linear feet (lf) of trail to reduce linear grades, the conversion of approximately 230 lf of existing dirt road (previously abandoned and currently used as a trail) to trail by reducing width, the construction of approximately 110 lf of elevated boardwalk, and armoring the trail tread with crushed aggregate to maximize firmness and stability. Total length of ADA-compliant trail will be approximately 3,560 lf upon completion. Approximately 1,000 lf of existing road (currently used as a trail) and approximately 1,600 lf of existing trail will be obliterated, decompacted, and revegetated with native vegetation. Native grasses disturbed due to trail rerouting will be relocated to existing unauthorized (“volunteer”) trails and/or obliterated road and trails requiring revegetation.

Boardwalk construction will primarily be within the existing trail footprint, but may require minor disturbance of the surrounding vegetated areas. The four-foot-wide boardwalk will be used to bridge over a short length of the existing abandoned roadway and trail that are periodically inundated by tidal waters. The boardwalk will be installed directly over a 50-foot section of existing abandoned road that contains no vegetation. An additional 60 feet of boardwalk will be installed over an existing three-foot-wide trail. The existing trail is narrower than the required four-foot width of the proposed boardwalk. This 60-foot section will require posthole excavation, approximately eight inches x eight inches x three feet deep each, to be located approximately one foot to either side of the existing trail in the surrounding vegetated areas. Postholes will be located approximately eight feet apart. Posthole excavations will directly affect approximately ten square feet of vegetation, dominated by saltgrass (*Distichlis spicata*).

The installation of salt marsh harvest mouse (SMHM) exclusion fencing will require trenching to occur either side of the 60-foot-long section of existing three-foot-wide trail in locations surrounded by vegetation. This six-inch-wide trenching will directly affect 60 square feet of surrounding vegetation. Shading from the proposed boardwalk may indirectly affect another six inches of the surrounding vegetated areas on either side of the existing three-foot-wide trail for a distance of 60 feet, which amounts to an additional 60 square feet. A monitor will be on site during all boardwalk construction activities.

Prior to its removal, the existing road on the east side of the peninsula will be utilized as an access road to transport materials to the boardwalk and other sites. Fencing will not be installed, but a monitor will be onsite for all activities and will walk before all vehicles using the road to prevent take of SMHM.

Permanent split rail fencing will be relocated at the existing trailhead next to North San Pedro Road to discourage future visitor use of the rehabilitated roadway as a trail. Temporary fencing will be used at other revegetation areas to discourage visitor use until vegetation establishment. The temporary fencing in these locations will be installed a minimum of 6” off the ground to allow passage of SMHM.

Approximately six interpretive and information signs will be located along the trail. Of these signs: a) one trail information sign will be located at the trailhead, b) approximately two interpretive signs will be located on the east side of the peninsula, c) approximately one interpretive sign will be located on the north side of the peninsula, and d) approximately two interpretive signs will be located on the west side of the peninsula. The signs located on the trail itself, other than those located along North San Pedro Road, will be designed or located to

ensure that they do not provide perches for avian predators and may be fitted with anti-perching devices. The design of these interpretive signs will be approved by the U.S. Fish and Wildlife Service (USFWS) prior to installation. It is anticipated that one bench will be located near the trailhead along North San Pedro Road and would not require anti-perching devices.

In addition to the trail elements two accessible parking spaces along North San Pedro Road will be developed. Parking Area "A" will be located across North San Pedro Road from the Turtle Back Hill Trailhead and Parking Area "B" will be located at the gated trailhead for the accessible portion of the Shoreline Trail, which connects the Miwok Meadows Group Picnic Area to the Back Ranch Campground.

For this trail improvement project, a number of avoidance measures will be implemented to avoid take of Federal and State Endangered SMHM and California clapper rail (CCR). These measures have been incorporated into the timing of project implementation and into avoidance measures to be used during construction. The avoidance measures have been prepared in cooperation with the USFWS. See Chapter 3 for further information.

Project design graphics are located in Appendix B.

## **2.6 PROJECT CONSTRUCTION**

It is estimated that construction for the project would begin approximately September 2007. Construction is expected to last approximately three months. Depending on site and weather conditions an approximately one to two month public trail closure may be required post-construction to allow the proposed trail to cure and stabilize prior to visitor use. Except for the specific areas under construction, public areas around the site would remain open during construction, where possible, subject to public health and safety considerations. Restricted areas would be secured or fenced to deter unauthorized entry.

Equipment used in trail construction, road removal, revegetation, and boardwalk installation will include the following: SWECO trail dozer (small bulldozer), motorized wheelbarrows, hand operated compactors, hand-held power augers, small front-end loader, small tracker, hand-held power tools and hand tools (e.g. Pulaskis, McLeods, shovels, hammers, saws).

Staging areas for this project will be located at the current parking area across from Turtle Back Hill and at the Park Maintenance facility located off North San Pedro Road near Bull Flat. These staging locations are currently paved with either road base aggregate or asphalt.

Work would generally occur between 7:00 a.m. and 6:00 p.m., Monday through Sunday.

## 2.7 VISITATION TO CHINA CAMP STATE PARK

Recent annual attendance at China Camp State Park is as follows:

Year	Day-Use	Camping	Total
2006	275,751	8,828	284,579
2005	429,674	11,583	441,257
2004	366,861	18,802	385,663
2003	438,412	19,660	458,072

Source: DPR Attendance Database

No significant increase in total Park visitation is anticipated as a result of the proposed project. Work consists primarily of accessibility improvements to an existing attraction.

## 2.8 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The proposed project is consistent with local plans and policies currently in effect. Please see Chapter 3, Section IX, Land Use and Planning, for further details.

## 2.9 DISCRETIONARY APPROVALS

DPR has approval authority for the proposed project. The project requires approval by the DPR Accessibility Section, on authority of the Department of General Services Accessibility Section. The project site is located within 100 feet of the shoreline and therefore is subject to permitting by the San Francisco Bay Conservation and Development Commission. The project also requires approval from the California Department of Fish and Game, U.S. Army Corps of Engineers (Clean Water Act Section 404 permit), U.S. Fish and Wildlife Service, the San Francisco Bay Regional Water Quality Control Board (Clean Water Act 401 Water Quality Certification), and the State Water Resources Control Board (Notice of Intent). North San Pedro Road is under the jurisdiction of the County of Marin; project work that impacts the road will require an encroachment permit.

## 2.10 RELATED PROJECTS

DPR often has other maintenance programs and rehabilitation projects planned for a park unit. DPR has proposed removing and rehabilitating two backcountry roads: Miwok Road and Ridge Road. The length of the portion of the Ridge Road to be treated is 3,949 feet. The Miwok Road is 3,027 feet in length. The project may include construction of a trail to replace the Miwok Road. Both roads will be recontoured and restored to match the natural pre-disturbance topography. The roads are both located in a natural area of the park and are independent of the miles of trail currently available for use by park visitors.

Road recontouring is proposed to restore the natural topography and eliminate unsafe and environmentally damaged sections of the roads. The process will require the removal of vegetation (grasses and low growing shrubs) from the cutbank, roadbed and fill slope through the use of an excavator. A dozer and excavator will be used to move embankment fill back to the road surface, placing it against the cutbank and at least partially erasing the existing road and restoring natural topography and drainage patterns. Where through cuts are present, adjacent soil will be used to partially restore the original landform, leaving some small

depression but without the continued potential for soil erosion. Brush removed in the initial clearing process will serve as mulch for the temporarily bare area.

Implementation of this project will remove the impact of two highly visible road scars in an otherwise natural area. Unnatural erosion from the roads will no longer pose a threat to park resources. Bare soil areas resulting from the project that are on steep slope locations will be seeded the first winter with annual grass to limit weed encroachment and the potential for minor soil erosion. Cumulative impacts are not anticipated as the result of these projects; the Turtle Back Hill Trail project will avoid impacts to sensitive species.

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## CHAPTER 3: ENVIRONMENTAL CHECKLIST

### PROJECT INFORMATION

1. Project Title: China Camp State Park  
Turtle Back Hill Trail Accessibility Improvements Project
2. Lead Agency Name & Address: California Department of Parks and Recreation (DPR)
3. Contact Person & Phone Number: Jason Spann, Project Manager, (916) 445-8907
4. Project Location: China Camp State Park, San Rafael, Marin County
5. Project Sponsor Name & Address: California Department of Parks and Recreation  
Northern Service Center  
One Capital Mall, Suite 500  
Sacramento, California 95814
6. General Plan Designation: "Open Space" (County of Marin General Plan Update)  
"Park" (City of San Rafael General Plan 2020, 2003; China Camp State Park is not within the city limits of San Rafael falls into its "Planning Area")  
but
7. Zoning: Open Space
8. Description of Project: Reroute of approximately 3,220 linear feet (lf) of trail to reduce linear grades, convert approximately 230 lf of existing dirt road to trail by reducing width, construct approximately 110 lf of four-foot-wide elevated boardwalk, and armor the trail tread. Total length of ADA-compliant trail will be approximately 3,560 lf upon completion. Approximately 1,000 lf of existing road (currently used as a trail) and approximately 1,600 lf of existing trail will be obliterated, decompacted, and revegetated with native vegetation. Permanent and temporary fencing will be installed to discourage visitor use of rehabilitated areas. Approximately six interpretive and information signs and one bench will be located along the trail. Two accessible parking spaces along North San Pedro Road will be developed.  
• .
9. Surrounding Land Uses & Setting: See Chapter 3 of this document (Section IX, Land Use and Planning)
10. Approval Required from Other Public Agencies: See Chapter 2, Section 2.9 (Discretionary Approvals)

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact", as indicated by the checklist on the following pages.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                    | <input type="checkbox"/> Agricultural Resources             | <input type="checkbox"/> Air Quality            |
| <input type="checkbox"/> Biological Resources          | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Geology/Soils          |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality            | <input type="checkbox"/> Land Use/Planning      |
| <input type="checkbox"/> Mineral Resources             | <input type="checkbox"/> Noise                              | <input type="checkbox"/> Population/Housing     |
| <input type="checkbox"/> Public Services               | <input type="checkbox"/> Recreation                         | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems     | <input type="checkbox"/> Mandatory Findings of Significance | <input checked="" type="checkbox"/> 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,  Because 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, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required.

Original signed by \_\_\_\_\_ Date \_\_\_\_\_  
 Gail Sevens, Environmental Coordinator

## 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.

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## I. AESTHETICS.

### ENVIRONMENTAL SETTING

Situated along San Pablo Bay approximately 15 miles north of San Francisco, Turtle Back Hill is located on the marsh at the edge of the Bay, and offers sweeping views of the Bay, the salt marsh, the Park including nearby Jake's Island and Bullet Hill, and lands across the Bay. Turtle Back Hill itself is visible from San Pablo Bay, from outside the Park, and from within the Park on North San Pedro Road and other locations.

The China Camp State Park General Plan (DPR 1979) discusses aesthetics and vistas in several areas. The Plan explains that China Camp was classified as a State Park in part for "the scenic views of the bay area" (p. 13) and states that one of the specific objectives of the Park is:

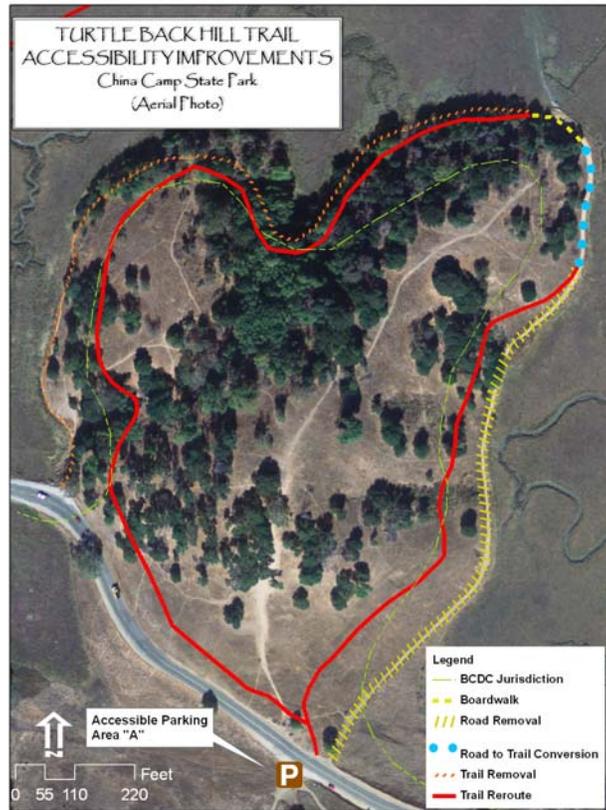
To preserve the natural scenic views of San Pablo Bay and the upland areas, and to keep them free from development that might be seen by visitors traveling on North San Pedro Road.

The Park's Declaration of Purpose, which can be found in the General Plan, states:

"The purpose of China Camp State Park is to make the varied resources and values of the unit available to the people forever, for their inspiration and enjoyment, in a condition of unimpaired ecological integrity. These include: the marshland and other habitats along the shores of San Pablo Bay; the valleys, canyons, and ridges of the uplands, with their woodland, chaparral, and grassland communities; the scenic values dependent on these natural features...."



View from Turtle Back Hill to the east, with Bullet Hill and Chicken Coop Hill on the right, and the East Bay in the background.



Aerial view of Turtle Back Hill. Note scars from unauthorized trails that crisscross the hill. These scars would be revegetated as part of the mitigation for the project.



An unauthorized trail on Turtle Back Hill, looking toward the west.



Approximate location of west side trail realignment, with North San Pedro Road in the foreground.



Approximate location of west side trail realignment, with North San Pedro Road in the foreground.

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

**DISCUSSION**

- a) During construction the overall appearance of the project site would be affected temporarily. The presence of construction equipment and fencing would present a limited, temporary adverse visual impact to those visiting the site. No new structures would be placed in the view corridor.

Upon completion of the project, the newly aligned trail would be visible from North San Pedro Road, other locations within the park, and from the Bay. Additionally, the existing trail alignment does not traverse the western side of Turtle Back along North San Pedro Road, while the new alignment will. However, this project is a realignment of an existing facility, not a new facility.

**MITIGATION MEASURE AESTHETICS-1**

- Affected purple needlegrass habitat will be replaced onsite at a ratio of 3:1 using purple needlegrass seeds and salvaged plants collected from the project site.
- Purple needlegrass plants removed for trail construction and other project activities will be salvaged during trail construction to the extent feasible and replanted on Turtle Back Hill in mitigation areas.
- A mitigation plan outlining methods to be used, success criteria to be met, and adaptive management strategies will be completed prior to project construction.
- Soil excavated for the trail segments through native perennial grassland will not be side cast into the grassland. Excavated soil will be removed to a site outside the boundary of the native perennial grassland.
- Trails and roads that pass through native habitats are known to encourage the spread of non-native, and oftentimes invasive, plant species. In order to lessen long-term impacts to the native perennial grassland, follow up weed management will occur annually for a minimum of two successive years along the new trail alignment at Turtle Back Hill. All weed management activities will be planned in co-operation with the State Parks District Environmental Scientist.
- Replacement of native grasslands removed at a ratio of 3:1. Will be conducted on Turtle Back Hill on unauthorized trail areas and other scars and on realigned areas.
- Affected coast live oak-black oak habitat and native tree species will be replaced onsite at a ratio of 3:1 using native trees and shrubs grown from locally collected plant material.

- b) Several native oak and other native trees (Coast live oak-black oak association) would be removed for the project. No State Scenic Highway is adjacent to or within viewing distance of the project location. Native grasses (Purple needlegrass alliance) would also be removed from the hillside for the trail. See discussion a) above. With the implementation of Mitigation Measure Aesthetics-1 above, this impact will be reduced to a less than significant level.
- c) As with any construction project, there would be some temporary decrease in the visual appeal of the area immediately affected by the work being performed. However, the duration of the work would be limited. However, upon completion of the project, the trail would be visible from North San Pedro Road, other locations within the park, and from the Bay. See discussion a) above. With the implementation of Mitigation Measure Aesthetics-1 above, this impact will be reduced to a less than significant level.
- d) Lighting is not an element of this project, all work would be conducted during daylight hours, and no permanent new light sources would be introduced into the landscape. Therefore, the project would have no impact.

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## II. AGRICULTURAL RESOURCES.

### ENVIRONMENTAL SETTING

China Camp State Park does not support any agricultural operations or farmland. The Park is designated Open Space in the Marin County Countrywide Plan Update and designated Public and Quasi-public; with the designation that “land shall be provided for both public and quasi-public institutional purposes.” The Park is not designated Agricultural Land in the Countywide Plan Update. The Park is not subject to a Williamson Act contract, is not a Farmland Security Act Parcel, and is not designated as Prime Farmland (County of Marin 2004; County of Marin 2005, County of Marin 1994).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT*:</b>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

### DISCUSSION

a-c) As noted in the Environmental Setting above, China Camp State Park is designated Open Space and designated Public and Quasi-public in the Marin County Countrywide Plan Update and does not support any agricultural operations or farmland. This project contains no component that will result in the conversion of agricultural land to a non-agricultural use. 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.

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### III. AIR QUALITY.

#### ENVIRONMENTAL SETTING

China Camp State Park is located in the San Francisco Bay Air Basin, managed by the Bay Area Air Quality Management District (BAAQMD), and under the jurisdiction of the United States Environmental Protection Agency (USEPA) Region IX. The District's jurisdiction encompasses all of seven counties - Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara and Napa, and portions of two others - southwestern Solano and southern Sonoma. The proposed project is located within China Camp State Park in the County of Marin.

Home to seven million people, the San Francisco Bay Air Basin (SFBAB) is the second largest urban area in the state. However, due to cool temperatures and strong Pacific Ocean breezes, much of the Bay Area enjoys good air quality. The San Rafael Monitoring Station shows that air quality in Marin County is good.

In summer, the northwest winds to the west of the Pacific coastline are drawn into the interior through the Golden Gate. This channeling of the flow through the Golden Gate produces a jet that sweeps eastward but widens downstream producing southwest winds at Berkeley and northwest winds at San Jose; a branch curves eastward through the Carquinez Straits. The range of temperature near the surface over the Bay Area is determined in large part by the effect of differential heating between land and water surfaces producing a large-scale gradient between the coast and the Central Valley as well as small-scale local gradients along the shorelines of the ocean and bays.

During winter months, the Bay Area experiences periods of storminess and moderate-to-strong winds and periods of stagnation with very light winds. Winter stagnation episodes are characterized by outflow from the Central Valley, nighttime drainage flows in coastal valleys, weak onshore flows in the afternoon, and otherwise light and variable winds. The average minimum and maximum winter temperature reverses the summer relationship; daytime variations are small while average nighttime temperatures show large differences and strong gradients.

The California Air Board makes State area designations for ten criteria pollutants (an air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set): ozone, suspended particulate matter (PM<sub>10</sub>), fine suspended particulate matter (PM<sub>2.5</sub>), carbon monoxide, nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility reducing particles (VRPs). At the State level, PM<sub>10</sub>, PM<sub>2.5</sub>, and ozone levels in the SFBAB have all been designated "non-attainment;" carbon monoxide, nitrogen dioxide, sulfur dioxide, sulfates, and lead levels have been designated attainment, and hydrogen sulfide and VRP levels have been designated unclassified. A pollutant is designated in attainment if the state standard for that pollutant was not violated at any site in the area during a three-year period. Conversely, a pollutant is designated non-attainment if there was at least one violation of a State standard for that pollutant in the area. Unclassified means the data is incomplete and designation of attainment or non-attainment is not supportable.

In contrast to the State area designations, the USEPA makes national area designations for five criteria pollutants: ozone (1-hour and 8-hour standards), PM<sub>10</sub>, carbon monoxide, nitrogen dioxide, and sulfur dioxide. At the National level, ozone is the only criteria pollutant designated "non-attainment;" sulfur dioxide is designated "attainment;" and carbon monoxide, nitrogen dioxide, and PM<sub>10</sub> are all designated as "unclassified/attainment." Nationally, any area that does

not meet (or that contributes to ambient air quality in a nearby area that does not meet) one or more of the National Ambient Air Quality Standards for the criteria pollutants designated in the Clean Air Act is designated “non-attainment”. An area considered to have air quality as good as or better than the National Ambient Air Quality Standards as defined in the Clean Air Act is designated “attainment area;” an area that cannot be classified on the basis of available data as meeting or not meeting the national primary or secondary ambient air quality standard is designated “un-classified.”

### Marin County Air 2004 Quality Designations

	State Levels	National Levels
Ozone	Non-Attainment	1-hour and 8-hour standard: Non-Attainment
Carbon Monoxide	Attainment	Unclassified
Nitrogen Dioxide	Attainment	Unclassified
Sulfur Dioxide	Attainment	Attainment
Particulate Matter PM <sub>10</sub>	Non-Attainment	Unclassified
Particulate Matter PM <sub>2.5</sub>	Non-Attainment	N/A
Sulfates	Attainment	N/A
Lead	Attainment	N/A
Hydrogen Sulfide	Unclassified	N/A
Visibility Reducing Particles	Unclassified	N/A

Source: [www.arb.ca.gov/desig/adm/adm.htm#state](http://www.arb.ca.gov/desig/adm/adm.htm#state)

Individuals or groups that would be especially reactive to criteria pollutants are considered sensitive receptors, such as children, the elderly and those who are acutely or chronically ill. Facilities where sensitive receptors are likely to be located include schools, playgrounds, childcare centers, retirement and convalescent homes, hospitals, medical clinics, and residences. No sensitive receptor facilities are located near the project sites.

The Bay Area has an extensive network of monitoring stations to measure ambient air quality. Although the San Rafael Monitoring Station shows that air quality in Marin County is good, emissions from within the county may contribute to pollution problems elsewhere in the region. In some parts of the Bay Area, ozone levels exceed National Ambient Air Quality Standards and particulate concentrations exceed State standards. Vehicle traffic produces most of the emissions leading to increased ozone levels, while construction activities, wood burning, offroad travel, and agriculture generate some measured particulate matter.

According to the Marin Countywide Draft General Plan, air quality indicators show improvement and Marin County has experienced a drop both in the total number of days exceeding State Ambient Air Quality Standards and in the number of days exceeding safe levels of ozone since 1996. Ozone precursor pollutants (pollutants emitted from vehicles, factories, fossil fuels combustion, evaporation of paints and many other sources also known as hydrocarbons and nitrogen oxide gases) have decreased locally, and are expected to continue to decline. Marin County also has had a reduction in the number of days that safe levels of particulate matter have been exceeded since 1996. The Bay Area experiences its highest PM concentrations in the winter, especially during evening and night hours. Most particulate matter comes from area-wide sources, such as combustion of wood and other non-clean fuels, and from homes and businesses without catalytic converters or other emission-control devices. Simple measures such

as requiring clean burning stoves can achieve improvements in air quality, and reducing motor vehicle use can result in significantly cleaner air.

**DISCUSSION**

	<u>LESS THAN POTENTIALLY SIGNIFICANT IMPACT</u>	<u>SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT*:</b>				
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

\* Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make these determinations.

**DISCUSSION**

- a) Work proposed by this project is not in conflict with nor will it obstruct implementation of any applicable air quality management plan for Marin County or the BAAQMD. No impact.
- b,c) The proposed project will not emit air contaminants at a level that, by themselves, will violate any air quality standard, or contribute to a permanent or long-term increase in any air contaminant. However, project implementation will generate short-term emissions of fugitive dust (PM<sub>10</sub>) and involve the use of equipment and materials that will emit ozone precursors. Increased emissions of PM<sub>10</sub> and ozone precursors could contribute to existing non-attainment conditions, which could interfere with achieving the projected attainment standards. However, integration of the following conditions into the project design will reduce potential impacts to a less than significant level.

**CONDITION AIR-1**

- All active construction areas will be watered at least twice daily during dry, dusty conditions.
- All trucks hauling soil, sand or other loose materials on public roads will be covered or required to maintain at least two feet of freeboard.
- All equipment engines will be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Excavation and grading activities will be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or dust from construction might obscure driver visibility on public roads.
- Earth or other material that has been transported onto paved streets by trucks, construction equipment, erosion, or other project-related activity will be promptly removed.

- d) As noted in Discussion III (b,c) above, project construction will generate dust and equipment exhaust emissions for the duration of the project. Park visitors with conditions that make them sensitive to these emissions will have the option of avoiding the area altogether or remaining in portions of the park that will be upwind or protected from blowing dust or other emissions. In addition, the specific construction sites would be closed to the public. Integration of Condition Air-1 above, into the project design, will reduce potential impacts to a less than significant level.
- e) Proposed work will not result in the long-term generation of odors. Construction-related emissions might result in a short-term generation of odors, including diesel exhaust; these odors might be considered objectionable by some park visitors and employees. However, construction activities will be short-term; odorous emissions will dissipate rapidly in the air, with increased distance from the source; and unauthorized personnel will not be allowed into construction areas. Potential odor impacts will be considered less than significant.

## IV. BIOLOGICAL RESOURCES.

### ENVIRONMENTAL SETTING

Turtle Back Hill is situated at the edge of San Pablo Bay within China Camp State Park, Marin County. The site supports five plant community types. In this document, plant community names follow the Sawyer-Keeler Wolf (1995) vegetation classification system. Plant communities that would be affected by the project implementation are: Coast live oak alliance, including areas of Coast live oak-black oak association; Purple needlegrass alliance, and California annual grassland alliance. While Pickleweed alliance occurs in close proximity to the project area, no work will affect this plant community. The project would also impact two slump areas where dense coyote brush (*Baccharis pilularis*), bush monkeyflower (*Mimulus aurantiacus*), and poison oak (*Toxicodendron diversilobum*) have become established.

### Special-Status Species<sup>1</sup>

Sensitive biological resources that occur or potentially occur on the proposed project site are discussed in this section. Sensitive biological resources include plants and animals that have been given special recognition by federal, state, or local resource agencies and organizations. Also included are habitats that are listed as critical for the survival of a listed species or have special value for wildlife species, and plant communities that are unique or of limited distribution and are considered sensitive.

Queries of the California Department of Fish and Game's Natural Diversity Database (DFG - CNDDDB 2006) and the California Native Plant Society's On-line Inventory (CNPS 2006) were conducted for sensitive biological resources that are known to occur, or could potentially occur, within the Petaluma Point, California 7.5-minute U.S.G.S. quadrangle map area. In addition, the U.S. Fish and Wildlife Service (USFWS) Sacramento Office website was queried for sensitive species in the 7.5' Petaluma Point quadrangle map, and a list of species that may be affected was developed. All sensitive biological resources were evaluated for potential impacts by this project.

### **Sensitive Plant and Wildlife Species That are Known to Occur, or Could Potentially Occur Within China Camp State Park and the Project Area**

#### PLANT SPECIES

A total of 61 special status plant species are listed in the CNPS<sup>2</sup> on-line inventory as potentially

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<sup>1</sup> For the purposes of this document, special-status species are defined as plants and animals that are legally protected or that are considered sensitive by federal, state, or local resource conservation agencies and organizations. Specifically, this includes species listed as state or federally Threatened or Endangered, those considered as candidates for listing as Threatened or Endangered, species identified by the USFWS and/or CDFG as Species of Concern, animals identified by CDFG as Fully Protected or Protected, and plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered (i.e., plants on CNPS lists 1 and 2).

<sup>2</sup> California Native Plant Society (CNPS) Lists: List 1A = presumed extinct in California; List 1B = rare or endangered in California and elsewhere; List 2 = rare or endangered in California, more common elsewhere; List 3 =

occurring within the nine quadrangle maps surrounding and including the Petaluma Point 7.5-minute quadrangle map. Suitable habitats are not present in the project area for 32 of the species, and those species are not addressed in this document. The remaining 29 plant species (see Appendix C) were included in surveys conducted by a DPR botanist in April, May, and June 2006 when the species were either blooming or in a life stage where they could be accurately identified. Of the 29 sensitive plant species targeted in the plant survey, only one was observed within or near the project area - Marin knotweed (*Polygonum marinense*).

The USFWS online species list for the Petaluma Point quadrangle map did not produced any additional special-status plant species that could be affected by the project. The USFWS online species list is attached in Appendix C. In addition, there are no CNDDDB records of special-status plant species occurrences in the Petaluma Point 7.5-minute quadrangle map area.

**Marin knotweed (*Polygonum marinense*)** – This is a CNPS List 3 annual plant species that occurs in coastal salt or brackish marshes and swamps at elevations between zero and ten meters. Marin knotweed is present in the pickleweed marsh habitat surrounding Turtle Back Hill at China Camp State Park. The species occurs at the edge of the marsh where pickleweed habitat meets the upland habitats and could be affected by project implementation.

**Other Sensitive Plant Species** (see Appendix C) – A total of 29 plant species were included in the 2006 blooming-period surveys. Marin knotweed was the only one documented as occurring within the project area; the remaining 28 plant species were not observed on the site and will therefore not be affected by project implementation.

## WILDLIFE SPECIES

The CNDDDB query produced a list of nine sensitive wildlife species with known occurrences in the Petaluma Point 7.5-minute quadrangle map (Appendix C). Of these species, four are known to occur within China Camp State Park. They are addressed below along with species that could potentially occur in the project area based upon the presence of suitable habitat. The USFWS online species list for the Petaluma Point quadrangle map (Appendix C) produced an additional 11 special-status fish and wildlife species that could be affected by the project. However, suitable habitat does not exist in the project area for these additional species.

Several of the following sensitive species are listed as California Fully Protected by the Department of Fish and Game. Fully Protected species may not be taken or possessed at any time and no licenses or permits can be issued for their take except for collecting these species for necessary scientific research and for relocation of bird species for the protection of livestock (DFG 2006).

### Mammals

**Salt marsh harvest mouse - (*Reithrodontomys raviventris*)** – This is a Federal Endangered, State Endangered, and California Fully Protected species that inhabits the marshes surrounding

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need more information; List 4 = plants of limited distribution. New threat code extensions are: .1 = seriously endangered in California; .2 = fairly endangered in California; and .3 not very endangered in California.

the San Francisco, San Pablo, and Suisun bays. They are dependent upon dense cover. The preferred habitat for the salt marsh harvest mouse is pickleweed marsh, and they are seldom found in cordgrass or alkali bulrush. During the highest tides, salt marsh harvest mice are known to move into adjoining grasslands (USFWS 2006 and Monk 2006). There are known occurrences of salt marsh harvest mouse in the vicinity of the project area (Monk 2006) that could be affected by project implementation.

**Suisun shrew** (*Sorex ornatus sinuous*) – This is a State Species of Special Concern that occupies tidal marshes of the northern shores of San Pablo and Suisun bays, as far east as Grizzly Island and as far west as the mouth of Petaluma Creek (DFG website 2006). Although potentially suitable habitat occurs within the project vicinity, Suisun shrews are not known to occur within China Camp State Park. Therefore, it is unlikely that Suisun shrew would be affected by project implementation.

## Birds

**California black rail** (*Laterallus jamaicensis coturniculus*) – This is a State Threatened and California Fully Protected species that inhabits pickleweed salt marshes at low elevations near large bays. The CNDDDB (2006) includes a documented occurrence of California black rail within China Camp State Park not far from the project area. If nesting California black rails are present in or near the project area, the species could be affected by loud noises during project implementation.

**California clapper rail** (*Rallus longirostris obsoletus*) – This is a Federal Endangered, State Endangered, and California Fully Protected species that inhabits dense vegetation in salt and brackish marshes. The distribution of the California clapper rail is restricted almost entirely to the marshes of San Francisco estuary. Distribution in the North Bay is patchy and occurs in isolated habitat fragments and small populations are widely distributed throughout San Pablo Bay. There are also low numbers of scattered clapper rails in the Suisun Marsh area. California clapper rail habitat bordering San Francisco Bay has declined by an estimated 84 percent since 1850. Remaining suitable habitat is affected by fragmentation, small size, and lack of tidal channel systems and other important habitat features (USFWS 2006). There are known CNDDDB (2006) occurrences of this species near the project site. If present in or near the project area, California clapper rails could be affected by project implementation.

**San Pablo song sparrow** (*Melospiza melodia samuelis*) – This is a State Species of Special Concern that inhabits salt marshes of San Francisco and San Pablo bays. Specifically, the species occurs in tidal sloughs in pickleweed marsh and nests in vegetation bordering the slough channels (CNDDDB 2006). There are known CNDDDB occurrences of San Pablo song sparrow within China Camp State Park near the project area. If present in or near the project area, San Pablo song sparrow could be affected by project implementation.

**Salt marsh common yellowthroat** (*Geothlypis trichas sinuosa*) – This is a State Species of Special Concern that inhabits marshes surrounding San Francisco and San Pablo bays and the central California coast. According to Foster (1976), this subspecies breeds in brackish and freshwater water marshes and is dependent upon salt marsh during the winter months. In brackish marshes, the species typically nests along the banks of sloughs or streams in thick

mixed brush often grading into tules or cattails. There are no CNDDDB occurrence records for this species within China Camp State Park. However, suitable breeding and winter habitat for the species occur within the project vicinity. If present in or near the project area, salt marsh common yellowthroat could be affected by project implementation.

**Nesting raptors** – Suitable nesting raptor habitat occurs in the upland portions of the project area. Raptors and their nests are protected under Fish and Game Code §3503.5. If raptors are nesting within the project area during project construction, nest success could be negatively affected.

**Migratory bird species** – Nesting migratory bird species are protected under the Migratory Bird Treaty Act. If present within the project area during construction activities, nesting migratory bird species could be affected by project implementation.

### Amphibians

**California red-legged frog** (*Rana aurora draytonii*) - This is a Federal Endangered and State Endangered species that occurs in freshwater aquatic environments with a riparian component. The adults require dense, shrubby, or emergent riparian vegetation closely associated with deep (greater than 2 1/3 feet deep) still or slow moving water. Suitable habitat for California red-legged frog does not occur within or in the near vicinity of the project site. Therefore, California red-legged frog will not be affected by project implementation.

### Insects

**Monarch butterfly** (*Danaus plexippus*) – This species has no State or Federal listing status, but is of concern regionally. Monarch butterflies typically overwinter within a few kilometers of the ocean in dense, wind-protected groves of trees that are situated in drainages. The preferred trees used are typically eucalyptus, Monterey pine, or cypress. There is a known CNDDDB occurrence of monarch butterfly in eucalyptus trees along the main road into China Camp State Park. No suitable habitat for monarch butterfly occurs within the project area. Therefore, monarch butterfly will not be affected by project implementation.

### Sensitive Plant Communities

Sensitive natural plant communities are communities that are especially diverse, regionally uncommon, or of special concern to local, state, and federal agencies. Removal or substantial degradation of these communities would constitute a significant adverse impact under CEQA.

There are three natural plant communities, listed in the CNDDDB as sensitive, that occur within, or in the immediate vicinity of, the project area: Purple needlegrass alliance, Coast live oak-black oak association, and Pickleweed alliance. Two of these, the Purple needlegrass alliance and the Coast live oak-black oak association are within the project area and will be affected by project implementation. The Pickleweed alliance plant community will not be affected by project implementation.

## Wetlands and Waters of the United States

A wetland delineation was conducted within the project area in March 2006 by a DPR qualified biologist. Data were collected in accordance with the 1987 "Corps of Engineers Wetlands Delineation Manual" methodology and a report was submitted to the USACE on June 29, 2006. Approximately 0.05 acres of wetlands (i.e., dominated by saltgrass and/or Baltic rush) and 0.22 acres of other waters of the U.S. (i.e., non-wetland areas under tidal influence) will be affected by project implementation. An application for a nationwide permit will be submitted to the USACE for this project work.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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 or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## **DISCUSSION**

- a) **Salt marsh harvest mouse.** Salt marsh harvest mouse is a Federal Endangered, State Endangered, and California Fully Protected species. There are known occurrences of salt marsh harvest mouse in the vicinity of the project area (Monk 2006) that could be affected by

the project. The following measure is expected to reduce potential effects to salt marsh harvest mouse to a less than significant level.

**MITIGATION MEASURE BIO-1 (SALT MARSH HARVEST MOUSE)**

- Road removal work requiring mechanized decompaction methods will be completely fenced with Salt Marsh Harvest Mouse (SMHM) exclusion fencing. Timing of fencing installation and removal will be staggered into segments (phases) so that only one section of fencing is in place at any time. This is required in order to prevent forming a total barrier between SMHM and their refugial upland habitat on the east side of Turtle Back Hill. A USFWS-approved biologist will monitor for SMHM avoidance during installation of the SMHM exclusion fencing, to include both sides of the road and gates across the road. USFWS will review and approve location and design specifications for proposed SMHM exclusion fencing. A USFWS-approved biologist will approve fence installation methods. Road removal work and decompaction utilizing hand tools will not require exclusion fencing, but must occur only during low tides. All road removal work on the east side of Turtle Back Hill will occur only within the tread of the existing road, and a USFWS-approved biological monitor will be onsite all day/every day during all work activities (including work using handtools).
- Fencing specifications and installation methodology will follow recommendations of Geoff Monk of Monk and Associates, local salt marsh harvest mouse expert.
- On the east side of Turtle Back Hill from North San Pedro Road to the boardwalk section, work will occur only within the tread of the abandoned roadway (with up to 60 square feet of disturbance to adjacent vegetation in the boardwalk section) and a monitor will be onsite all day/every day during all work activities (including work using hand tools).
- A USFWS-permitted or approved biologist will monitor and instruct DPR staff and/or construction contractor in the materials and methods required for proper installation of salt marsh harvest mouse exclusion fencing, to train the construction crew on approved avoidance measures and on the life history of salt marsh harvest mouse, to train DPR biological monitors in appropriate monitoring techniques and methods for salt marsh harvest mouse protection so that these individuals can conduct daily monitoring on their own for the duration of project work, and be available on an “on-call” basis.
- A qualified biological monitor will conduct daily monitoring on the project site during all work activities that are occurring near the edge of the salt marsh.
- If a salt marsh harvest mouse is observed on the project site, work will stop and the USFWS-permitted or approved biologist will be notified. If the mouse leaves the work area of its own volition, then work can proceed only if approved by the USFWS-permitted or approved biologist. If the mouse does not leave the project site, then no work will be restarted until the USFWS has been notified and additional avoidance measures, if any, are discussed and implemented.
- On the west side of Turtle Back Hill, a qualified biological monitor will be onsite for all trail removal work that is located next to the marsh edge. Trail removal work will be within the existing tread only (with possibly up to 6” disturbance on each side of the trail tread), and only hand tools will be used. No fencing will be installed in this section, but a qualified biological monitor will be on-site during all work activities.

**California black rail.** California black rail is a State Threatened and California Fully Protected species that is known to occur in the vicinity of the proposed project site and could be affected by project work. The following measure is expected to reduce potential effects to California black rail to a less than significant level.

**MITIGATION MEASURE BIO-2 (CALIFORNIA BLACK RAIL)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the California black rail breeding season. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

**California clapper rail.** California clapper rail is a Federal Endangered, State Endangered, and California Fully Protected species. There are known occurrences of this species near the project site that could be affected by project work. The following measure will reduce potential effects to California clapper rail to a less than significant level.

**MITIGATION MEASURE BIO-3 (CALIFORNIA CLAPPER RAIL)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the California clapper rail breeding season. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.
- A USFWS-permitted or approved biologist will train the construction crew on approved avoidance measures and on the life history of California clapper rail, train DPR biological monitors in appropriate monitoring techniques so that these individuals can conduct daily monitoring on their own for the duration of project work, and be available on an “on-call” basis.
- A qualified biological monitor will conduct daily monitoring on the project site during all work activities that are occurring near the edge of the salt marsh.
- If a California clapper rail is observed on the project site, work will stop and the USFWS-permitted or approved biologist will be notified. If the rail leaves the work area of its own volition, then work can proceed only if approved by the USFWS-permitted or approved biologist. If the rail does not leave the project site, then no work will be restarted until the USFWS has been notified and additional avoidance measures, if any, are discussed and implemented.

**San Pablo song sparrow.** San Pablo song sparrow is a State Species of Special Concern. There are known occurrences of this species near the project site that could be affected by project work. The following measure will reduce potential effects to San Pablo song sparrow to a less than significant level.

**MITIGATION MEASURE BIO-4 (SAN PABLO SONG SPARROW)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the San Pablo song sparrow breeding season. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

**Salt marsh common yellowthroat.** Salt marsh common yellowthroat is a State Species of Special Concern. Although there are not known occurrences of this species near the project site, suitable habitat for the species occurs nearby. The following measure will reduce potential effects to salt marsh common yellowthroat to a less than significant level.

**MITIGATION MEASURE BIO-5 (SALT MARSH COMMON YELLOWTHROAT)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the salt marsh common yellowthroat breeding season. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

**Nesting Raptors.** Raptors and their nests are protected under Fish and Game Code §3503.5. The following avoidance measures are designed to prevent the disturbance or loss of active nests and reduce project-related impacts to nesting raptors, if present in the project area, to a less than significant level.

**MITIGATION MEASURE BIO-6 (NESTING RAPTORS)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the breeding season for nesting raptors. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

**Nesting Migratory Bird Species Under the Migratory Bird Treaty Act.** Nests of migratory bird species could occur within the proposed project area. The following avoidance measures are designed to reduce project-related impacts to nesting migratory bird species to a less than significant level.

**MITIGATION MEASURE BIO-7 (NESTING MIGRATORY BIRD SPECIES)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the breeding season for nesting migratory bird species. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

- b) **Sensitive Plant Communities.** There are two natural plant communities (Purple needlegrass alliance and Coast live oak-black oak association) listed in the CNDDDB as sensitive that occur within the project area and will be affected by project implementation.

Purple Needlegrass Alliance: Native perennial grasslands such as the Purple needlegrass alliance were once extensive in California. It is estimated that, at present, only two percent of California's native grasslands remain. The following measure is expected to reduce project-related impacts to Purple needlegrass alliance to a less than significant level.

**MITIGATION MEASURE BIO-8 (SENSITIVE PLANT COMMUNITIES – PURPLE NEEDLEGRASS ALLIANCE)**

- Affected purple needlegrass habitat will be replaced onsite at a ratio of 3:1 using purple needlegrass seeds and salvaged plants collected from the project site.
- Purple needlegrass plants removed for trail construction and other project activities will be salvaged during trail construction to the extent feasible and replanted on Turtle Back Hill in mitigation areas.
- A mitigation plan outlining methods to be used, success criteria to be met, and adaptive management strategies will be completed prior to project construction.
- Soil excavated for the trail segments through native perennial grassland will not be side cast into the grassland. Excavated soil will be removed to a site outside the boundary of the native perennial grassland.
- Trails and roads that pass through native habitats are known to encourage the spread of non-native, and oftentimes invasive, plant species. In order to lessen long-term impacts to the native perennial grassland, follow up weed management will occur annually for a minimum of two successive years along the new trail alignment at Turtle Back Hill. All weed management activities will be planned in co-operation with the State Parks District Environmental Scientist.

Coast Live Oak-Black Oak Association: The Coast Live Oak-Black Oak Association is a unique component of the Coast live oak alliance that occurs on the project site.

**MITIGATION MEASURE BIO-9 (SENSITIVE PLANT COMMUNITIES – COAST LIVE OAK-BLACK OAK ASSOCIATION)**

- Affected coast live oak-black oak habitat will be replaced onsite at a ratio of 3:1 using native trees and shrubs grown from locally collected plant material.

- c) **Wetlands and Waters of the United States.** Small wetlands dominated by saltgrass and/or Baltic rush, and other waters of the U.S. (i.e., non-wetland areas under tidal influence) will be affected by project implementation. Impacts to wetlands are minimal (0.05 acres). Since topography will not be altered, these wetlands are expected to reestablish on the site following project implementation. Impacts to non-wetland areas under tidal influence is approximately 0.22 acres. A nationwide permit for these affects is being obtained from the USACE.
- d) Salt marsh harvest mouse, California black rail, California clapper rail, and San Pablo song sparrow are known to occur within China Camp State Park. These species could occur within or near the project area. Potential also exists for the presence of other State Species of Special Concern, nesting raptors, and other migratory bird species. Please see Discussion a) above for explanation of avoidance and mitigation measures to be implemented on the proposed project for these species.
- e) Marin County has an existing Native Tree Preservation and Protection Ordinance (Ordinance No. 3342). Removal of approximately 12 native trees at 3” or greater diameter-at-breast-height would occur as a result of project implementation. An additional 18 native trees could

be affected by potential impacts to roots from cut and fill required for trail installation. Implementation of the following mitigation measure is designed to reduce project-related impacts to native tree species to a less than significant level.

<b>MITIGATION MEASURE BIO-10 (NATIVE TREE SPECIES)</b>
--

- |  |
|--|
| <ul style="list-style-type: none"><li>• Affected native tree species will be replaced onsite at a ratio of 3:1 using native trees grown from locally-collected material.</li></ul> |
|--|

f) This project does 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.

## **V. CULTURAL RESOURCES.**

### **Environmental Setting**

China Camp State Park is located on the southwest shore of San Pablo Bay, approximately three miles northeast of San Rafael in Marin County and 40 miles north of San Francisco. The park is accessible from U.S. Highway 1. The China Camp State Park unit is divided into two areas. The larger area is known as Back Ranch. Back Ranch is the primary resource area for natural resources, Native American resources, and primary open spaces. The smaller 40-acre area, known as China Camp (China Camp Village), is considered to be the primary historic area. The China Camp area was one of the most significant shrimp fishing and processing camps on the Pacific Coast when it was at peak production. Several structures from this period of significance (ca. 1870-1890) still remain at China Camp today.

The park is ecologically diverse with salt and fresh water marsh areas, riparian areas, grasslands, and oak woodlands, along with introduced grass and tree species. This diversity in topography and natural resources throughout the park provided an ideal setting for both prehistoric and historic occupation and resource procurement, evidenced by the archaeological remains recorded in the park unit. These cultural resources consist of prehistoric and historic archaeological resources as well as historic non-Native American resources. Existing non-Native American cultural resources relate to early ranching operations as well as the era of shrimp fishing as carried out by members of the immigrant Chinese community once found here. Features include roads, houses and the archaeological remains of other sites.

The park offers fifteen miles of hiking trails as well as 25 developed picnic sites. A group picnic area for up to 200 people can also be reserved.

China Camp was officially nominated for inclusion into the National Register of Historic Places (NRHP) on April 26, 1979, and is listed as No. 924 on the list of California Historical Landmarks. According to the NRHP Nomination Form, the nominated property is described as follows: "The remains of the China Camp shrimp factory are located within two coves and on an intervening ridge; this ridge also contains a prehistoric shell mound. These areas constitute the nominated property, with the inclusion of several hundred feet of adjacent tide land containing the archeological remains of China Camp and the existing pier." The official determination of significance states, of the prehistoric shell mound, "Though damaged, the site retains its intrinsic scientific, interpretive, and cultural values" and that "The significance of the archeological and structural remains in the nominated district cannot be overestimated as China Camp was one of the largest settlements of this type and it is the last operating vestige of the Chinese shrimp fishery in the state." (NRHP 1978).

### **Historic Resources**

The entire area encompassing China Camp State Park was once part of a large land grant, Rancho San Pedro, Santa Margarita y las Gallinas, originally held by Irishman Timothy (Timoteo) Murphy (Inventory of Features [IF] 17). Consisting of five square leagues (22,000 acres) this rancho was granted in 1844 by Governor Manuel Micheltoarena. In 1853 Murphy passed away and his will deeded all but 317 acres (for use for a school) to his nephews (IF 18). The land grant

was broken up and the land parceled out with John and George McNear purchasing 700 acres on Point San Pedro, including the area containing the China Camp area. The McNears started a basalt quarrying and brickworks on San Pedro Point to the south, using the Point as a shipping terminal to send bricks and basalt pavers, by barge, throughout the Bay Area (IF 18). Land not being used for industrial purposes was leased for large-scale grazing operations. This included the area where present day China Camp State Park is.

It is estimated the Chinese fishermen started taking shrimp from the waters off the coast of California as early as the mid-1860s. As the industry grew the number of “shrimp camps” likewise grew, to be established mostly on the shores of San Francisco and San Pablo Bays. There were two shrimp fishing villages established within the boundaries of the present day park, one at Rat Rock Cove and the other at China Camp Cove. The camp at Rat Rock Cove was extensive, with at least 24 structures existing in the late 19<sup>th</sup> early 20<sup>th</sup> centuries. Today there are no standing structures to denote this once thriving camp.

Of all the Chinese shrimping camps that once existed along the Pacific Coast of California, China Camp, located at China Camp State Park, was one of the largest and most certainly, the longest lived.

China Camp State Park became a unit of the California State Park system in the fall of 1977, and on January 13, 1978, the State Park and Recreation Commission classified the unit as a state park. The creation of China Camp State Park was based “Primarily on the basis of its natural values, along with the historical significance of Chinese shrimping and related cultural and natural values” (DPR 1979: p. v, no. 3).

While the historic record mentions several prehistoric and historic sites, as well as the remaining structures at China Camp Cove, only one archaeological resource appears to potentially be located in the area of the proposed ADA trail work and might possibly be impacted by the work.

## **ARCHAEOLOGICAL SETTING**

**Prehistoric Archaeology:** In the context of California archaeology, past work at China Camp SP is noteworthy as it dates back to 1907 when Nels C. Nelson (a prominent early archaeologist) identified 10 prehistoric shell mounds within the present-day boundary of the park. One prehistoric site, Ca-Mrn-115, was excavated in 1948 by the University of California, Berkeley. In subsequent years, three additional sites were recorded by U.C. Berkeley and DPR, bringing the total amount of sites in the park to 13.

Mound sites typically contain high densities of marine shell, mussel and fish; dark stained soils and ash; land and sea mammal bones; botanical remains; shell beads; and, flaked and ground-stone artifacts. Mounds can contain fragmentary, partially, and fully articulated human remains; cremations; and a variety of burial and funerary items. Mound sites in the Bay Area are noted for having exceptionally large volumes of materials; implying they were either products of intermittent habitation and deposited over long periods of time, or products of sedentary and large populations (Moratto 1984: 236).

The China Camp General Plan (GP) describes five zones of cultural sensitivity. They are numerically ordered from one to five with the highest numbered zones containing sites that meet criteria for NRHP eligibility (DPR 1979). Five archaeological sites in the park are located within 0.3 of a mile from the current project area and are included in Cultural Resource Zones one and two. In 2000, Lindahl et al. described one of these sites as a “shell rich” deposit that despite impacts from previous activities exhibited a distinct mound-shaped landform. The site was subsequently relocated in 2005 during a survey that was completed in support of the proposed project (Benson 2005a).

The fore-mentioned survey resulted in providing information that allowed project management to restrict subsurface construction to depths determined disturbed by previous construction. As an added precautionary action, project management subsequently determined to make additional redesigns or drop construction of part of the project altogether if this work results in inadvertent finds of intact mound remains.

**Ethnographic:** China Camp State Park is in the ethnographic territory of the Coast Miwok. The Coast Miwok inhabited Marin Peninsula north to a line that extended east from Bodega Bay to the town of Glenn Ellen (Kelly 1978; DPR 1979). As identified by Kroeber in 1925 (1976: 273-275), the Hookooeka were a political sub-group of Coast Miwok who inhabited most of present-day Marin County. Coast Miwok villages often were situated near shores, sloughs, and lagoons as these environments yielded vitally important marine resources. Villages averaged in size from ten to 12 households, which themselves could consist of up to ten individuals each. Winter houses were constructed of heavy poles covered with redwood bark. Summer houses were of similar construction, but consisted of lighter poles covered with thatched grass. In contrast to Lake and Valley Miwok, Coast Miwok houses were constructed on the surface and not excavated into the ground. Besides household structures, Coast Miwok villages could consist of a large men’s sweathouse, a comparatively smaller women’s puberty or menstrual hut, and a large semi-subterranean log framed ceremonial structure or dance house (Kelly 1978; DPR 1979). Kelly’s (1978) map of tribal territory in the Smithsonian Handbook of North American Indians depicts four Coast Miwok villages located within a five-mile radius of China Camp State Park.

**Historic Archaeology:** Much of the current park was purchased by John and George McNear in the early 1850s for grazing cattle. A number of ranching operations survived into the 20<sup>th</sup> century and historic archaeological features related to grazing such as water cisterns or wells survive in isolated locales. One brick-lined well is located adjacent to an existing portion of trail currently proposed for removal. The most significant period of history commenced in the mid-1860s when Chinese immigrants began intensively harvesting shrimp in San Francisco and San Pablo bays (DPR 1979). The shrimp industry peaked in the early 1890s after which increased restrictions caused a sharp decline. One rectangular landform feature is extant. The feature most likely constitutes the remains of a removed building (Benson 2005a).

<b>WOULD THE PROJECT:</b>	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource, to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) The proposed project will not cause a substantial adverse change in the significance of any of the historical resources located at China Camp State Park. The proposed project location is approximately one mile from the historic China Camp fishing village and will have no impact upon those historic resources.

b) The China Camp GP requires appropriate measures for cultural resource management be implemented to preserve the NRHP eligibility of prehistoric archaeological sites. Proposed work in the area of concern has achieved this goal by restricting construction to depths no greater than those disturbed by previous activities. This goal has been further supported by the precautionary actions of additional project redesign or abandonment of the project element altogether should the action result in exposing mound remains. Implementation of Cultural Resource Condition Cult-1 will further reduce the potential for ground disturbing work in that area to impact archaeological remains to a less than significant level.

**CULTURAL RESOURCE CONDITION CULT-1 (EXCAVATION AND MONITORING)**

A combined program of presence/absence testing and monitoring will be applied to avoid potential impacts to sensitive sites.

- A DPR-Qualified archaeologist will test the proposed work at sensitive site locations prior to construction. If midden is discovered the location of the work will be abandoned. In the event that previously undocumented cultural resources are encountered during project construction (including but not limited to dark soil containing shellfish, bone, flaked-stone, ground-stone, or deposits of historic trash), work within the immediate vicinity of the find will be halted temporarily or diverted until a DPR-qualified cultural resource specialist has evaluated the find and implemented appropriate disposition of the artifacts(s).

One historic brick-lined water cistern likely associated with mid-1800s cattle grazing is adjacent to a portion of existing trail currently proposed for removal. One rectangular landform of unidentified origin is adjacent to the existing trail entry. Implementation of Cultural Resource Condition Cult-2 will reduce the potential of the current project to impact these historic archaeological features to a less than significant level.

**CULTURAL RESOURCE CONDITION CULT-2 (RESOURCE AVOIDANCE)**

- Prior to the start of construction a DPR qualified archaeologist will place flagging to exclude the features from all project activities.

c) No human remains, burial sites or funerary objects have been documented or are expected to be found in the current project area. However, the possibility exists for inadvertent finds of such remains to occur during ground disturbing phases of construction. Cultural Resource Condition Cult-3 below will reduce the potential for ground disturbing construction in the current project area to impact any human, burial and funerary remains to a less than significant level.

**CULTURAL RESOURCE CONDITION CULT-3 (HUMAN REMAINS)**

- In the event that human remains are discovered, work will cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate DPR personnel. Any human remains and/or funerary objects will be left in place. The DPR Sector Superintendent (or authorized representative) will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) will be notified within 24 hours of the discovery if the Coroner determines that the remains are Native American. The NAHC will designate the “Most Likely Descendent” (MLD) of the deceased Native American. The MLD will recommend an appropriate disposition of the remains. If a Native American monitor is on-site at the time of the discovery and that person has been designated the MLD by the NAHC, the monitor will make the recommendation of the appropriate disposition.

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## **VI. GEOLOGY AND SOILS.**

### **ENVIRONMENTAL SETTING**

#### **GEOLOGY**

China Camp State Park is located within the California Coast Range Geomorphic Province, a northwest-trending chain of mountains forming the outer northern and central California Coast Range. The predominant bedrock material within the Park is Franciscan Formation, with alluvial and marsh deposits along the San Pablo Bay margins. The Franciscan Formation originated as marine deposits in the Jurassic to Cretaceous periods (180-89 million years ago), was then subducted and subsequently uplifted to its current position in China Camp State Park. The Franciscan is predominantly composed of sandstone and shale, very often greatly sheared and broken, and intermixed with other materials. Franciscan Mélange is the name given to this type of Franciscan. Mélange is a disruptive assemblage of small and large masses of various rock types, separated by areas of intensely sheared and crushed rock material. Within Mélange, there are often hard rock outcrops composed of sandstone, greenstone, chert, serpentine, and glaucophane schists (DPR 1979). The Turtle Back Hill Trail project area is underlain by the Mélange unit.

#### Topography

This 1,512 acre park starts at sea level and increases to over 700 feet. The proposed project area, Turtle Back Hill, begins at sea level and reaches an elevation of 141 feet. The project will restore the current trail to natural conditions at the lower elevations where the salt marsh ends and an accessible route will be placed along the slope between the end of the salt marsh and 100 feet.

#### Slope Stability

The Franciscan Formation tends to have different stability characteristics. The sheared Mélange is quite weak, and is often associated with landslides and slippage. The consolidated blocks of sandstone and shale tend to be more stable (DPR 1979). The alluvial soils found in the area are relatively weak and unconsolidated. There are no evident slope failures around Turtle Back Hill within the project area.

#### Seismicity

No major faults are known to exist in China Camp State Park; however, the San Andreas Fault Zone (SAFZ) and Hayward Fault are within 15 miles of the park. The SAFZ is the transformation boundary between the North American tectonic plate to the east and the Pacific tectonic plate to the west. China Camp State Park is approximately 12 miles east of the SAFZ. The Hayward Fault is approximately five miles to the east of the park. The Hayward Fault is a creeping fault that has the rate of creep measured in millimeters per year. Some of these creeping faults are unlocked and unhindered in their movement. The measured creep rate on the Hayward Fault is less than the rate the Earth's crust is moving on either side. This seems to indicate that the fault is locked at depth, therefore the friction caused by its inability to move builds up leading to future earthquakes. The Hayward Fault generated a major earthquake in 1868 (USGS 2006).

**SOILS**

According to the Marin County Soil Survey (USDA 2006) there are two predominant soil types. Turtle Back Hill is composed of the Tocaloma-McMullin complex on 50 to 75 percent slopes. This complex is 40 percent Tocaloma loam and 35 percent McMullin gravelly loam, with the remainder made up of small areas of Saurin and Bonnydoom soils. The Tocaloma soils are moderately deep and well drained derived from fractured bedrock made of sandstone and shale about 20 to 40 inches deep. Permeability is moderately rapid, runoff is very rapid and the erosion hazard is very high (USDA 1985). The McMullin soil is shallow and well drained, derived from sandstone, with fractured bedrock at a depth of about ten to 20 inches. Permeability is moderate, runoff is very rapid and the hazard of water erosion is very high (USDA 1985).

Under much of the existing trail and into the salt marsh the soil type is Novato Clay, a very poorly drained soil in saltwater marshes formed by alluvium derived from various kinds of rock. This soil type is found from two to ten feet in elevation on zero to two percent slopes. Permeability is slow because the water table is at or near the surface throughout the year (USDA 1985).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## DISCUSSION

- a) The project site is located within the seismically active Northern California Coastal Region and while the chance of the rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure are certainly possible in this area, this project would not substantially increase the exposure of people or structures to risk of loss, injury, or death as a result of these events.
- i) The project site is not located within an Alquist-Priolo Earthquake Fault Zone (APEFZ) as designated by the California Geological Survey (CGS 2000). Therefore, there is a less than significant impact from surface rupture of a known fault due to this project.
- ii) The California Geological Survey has determined that faults in the area (San Andreas Fault and Hayward Fault) are capable of generating strong earthquakes with magnitudes of 7.1 and 6.9, respectively (Petersen 1996). The expected ground acceleration at the project site is on the order of 0.577g (CGS 2003). Shaking intensity maps (ABAG 2003a) indicate that the project area could be subject to strong to very strong shaking in the event of a major earthquake on the San Andreas or other Bay Area faults. However, this is an existing condition and there would be no increased risk and a less than significant impact to the public due to this project.
- iii) Seismic-induced ground failure, such as liquefaction, usually occurs in unconsolidated granular soils that are water saturated. During seismic-induced ground shaking, pore water pressure can increase in loose soils, causing the soils to change from a solid to a liquid state (liquefaction). The soils adjacent to and in the lower elevations at Turtle Back Hill are relatively unconsolidated and can be water saturated. There is a high risk for liquefaction in these soils. The liquefaction susceptibility maps for the area (ABAG 2003b) indicate that Turtle Back Hill is rated as very low (bedrock areas), but the surrounding marshy lowlands are rated as high. Portions of the rerouted trail may still be in areas that would be susceptible to liquefaction (especially the boardwalk section), while other trail segments are being rerouted uphill into less susceptible areas.
- iv) Landslides could occur where slopes are steep and soils are erodable at Turtle Back Hill.

Implementation of Condition GEO-1 below will reduce the risk of injury to park users from seismic-induced ground failure and landslides to a less than significant level.

<b>CONDITION GEO-1 (POST-EARTHQUAKE INSPECTIONS)</b>
▪ State Park staff will inspect boardwalks and trails for damage as soon as feasible after a large earthquake, and close trails if they pose a danger to park users.



- b) A temporary increase in erosion may occur during construction of this project as a result of ground disturbing activities. Implementation of Condition GEO-2 below will reduce soil erosion or loss of topsoil by the proposed project to a less than significant level.

**CONDITION GEO-2 (EROSION CONTROL)**

- Best Management Practices (BMPs) will be used in all areas to control soil and surface water runoff during excavation and grading activities. Due to sensitive species avoidance measures, the project work must occur between September 1 and December 15. In order to minimize soil erosion during the construction period, “winterizing” will occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil. Temporary erosion control measures (BMPs) must be used during all soil disturbing activities and until all disturbed soil has been stabilized (recompacted, re-vegetated, etc.). A Stormwater Pollution Prevention Plan will be prepared and will include BMPs such as silt fences, fiber rolls, mulch or other applicable techniques. Information on approved BMPs can be found in the Stormwater Best Management Practice Handbook for Construction, available on-line at [www.cabmphandbooks.com](http://www.cabmphandbooks.com).
- Permanent BMPs for erosion control will consist of properly compacting disturbed areas and revegetation of disturbed soil areas in the Purple Needlegrass Alliance with native grass seed or salvaged native grass material collected onsite (see Mitigation Measure Bio-8 Sensitive Plant Communities-Purple Needlegrass Alliance). Newly disturbed areas in plant communities other than Purple Needlegrass Alliance will be stabilized using locally collected native plant seed, salvaged native grass material, or sterile wheat grass, as appropriate. Final design plans will include BMP measures to be incorporated into the project.

- c) Portions of this project are located within geologic units or soils that are known to be unstable and landslides could occur at Turtle Back Hill where slopes are steep. Storm water runoff must not be concentrated, but spread over the area of the trail to minimize erosion. Trails along slopes must be constructed to channel water off either as sheetflow or into areas with slope protection or existing channels to minimize erosion.
- d) The soils mapped by the U.S. Department of Agriculture (2006) in the project area have a low-to-moderate shrink-swell potential. Therefore, there is a less than significant impact potential for expansive soils to be an issue on the project site.
- e) The project does not involve the installation of a septic system or leach field. Therefore, there is no impact due to this project.
- f) No known unique paleontological resources exist within the Turtle Back Hill project area. Therefore, there is no impact.

## VII. HAZARDS AND HAZARDOUS MATERIALS.

### ENVIRONMENTAL SETTING

The proposed project within the China Camp State Park will implement changes to meet the requirements and guidelines of the Americans with Disabilities Act (ADA) and California State Parks Accessibility Guidelines. The Turtle Back Hill Trail will be rerouted to reduce linear grades, including a small section of the former trail, a section of constructed boardwalk, and the reroute. Parking areas will be developed on either side of North San Pedro Road near the Turtle Back Hill Trail trailhead. The vegetation in the project area is composed of annual grassland, oak woodland, and salt marsh.

#### Hazardous Materials

There has been no known industrial use or construction of buildings in the project area that could have been a source of hazardous material (CDTSC 2006).

#### Airports

The project is not located within an airport land use zone, or within two miles of an airport. The San Rafael Airport is about eight miles south of the project site (Google Maps 2006). A private airstrip is located about 2½ miles northwest of the projected project site (Global Aviation Navigator 2006).

#### Schools

The closest school, Gallinas Annex-Braum, is located approximately 2½ miles to the west of the project site off of North San Pedro Road (Google Maps 2006).

#### Fire

The China Camp State Park is rated as having low fire hazard severity (USGS 2004). The park's fire suppression needs are met by the California Department of Forestry and Fire Protection (CAL FIRE) and the San Rafael Fire Station #5 (Williams 2006). The San Rafael Fire Station #5 is about 3½ miles from the proposed project area (Google Maps 2006).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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?                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

**DISCUSSION**

- a) Construction activities will require the use of certain potentially hazardous materials such as fuels, oils, or other fluids associated with the operation and maintenance of vehicles and equipment. These materials are generally contained within vessels engineered for safe storage. Large quantities of these materials will not be stored at or transported to the construction site. However, spills, upsets, or other construction-related accidents could result in release of fuel or other hazardous substances into the environment. The following conditions would reduce the potential for adverse impacts from these incidents to a less than significant level:

**CONDITION HAZMAT-1 (SPILL PREVENTION AND RESPONSE)**

- All equipment will be inspected by the contractor for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises.
- Prior to the start of construction, the contractor(s) and/or DPR will prepare a Storm Water Pollution Prevention Plan (SWPPP), which contains BMPs for spill prevention. A spill kit will be maintained on-site throughout the life of the project. The SWPPP will include a map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment may occur.
- Areas designated for refueling, lubrication, and maintenance of equipment shall be at least 50 feet from any spring/seep/wetland/marsh areas and 100 feet from creeks. In the event of any spill or release of any chemical in any physical form at the project site or within the boundaries of the park during construction, the contractor will immediately notify the appropriate DPR staff (e.g., project manager, supervisor, or State Representative).
- Equipment will be cleaned and repaired (other than emergency repairs) outside of the park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside of park boundaries, at a lawfully permitted or authorized

destination.

- b) There is a potential for hazardous substances to be released to the environment during the project from vehicle or equipment fluid spills or leaks. Implementation of the conditions discussed above would reduce any risk to on-site workers, the public, or the environment to less than significant.
- c) As noted in the Environmental Setting, the nearest school is over two miles away from the proposed project site. There would be no significant impacts as a result of this project.
- d) No part of the park is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5. No area within the project site is currently restricted or known to have hazardous materials present. Therefore, no impact would occur within the project area.
- e, f) The Park is not located within an airport land use plan, within two miles of a public airport, or in the vicinity of a private air strip. The private airstrip run by Marin Ranch Airport is approximately 2½ miles northwest of China Camp State Park. Therefore, no impact would occur as a result of this project.
- g) All construction activities will take place within the boundaries of China Camp State Park and work would not restrict access to, cause delays, or block any public road outside the immediate construction area. The traffic on North San Pedro Road may be impacted for only short periods of time for delivery of construction materials or construction equipment. The project would not conflict with the emergency response plans of Marin County. Therefore, no impact will occur as a result of this project.
- h) The proposed project site will include sections of annual grasses that will be flammable during the dry season (June – October). Heavy equipment that can get very hot with extended use would sometimes be in close proximity to flammable vegetation. Improperly outfitted exhaust systems or friction between metal parts and/or rocks could generate sparks, resulting in a fire. The following conditions would reduce the potential for adverse impacts from wildfire to a less than significant level:

**CONDITION HAZMAT-2 (FIRE SAFETY)**

- Prior to the start of construction, the Project Contractor will develop a DPR-approved Fire Safety Plan. The plan will include the emergency calling procedures for both CAL FIRE and the San Rafael Fire Station #5.
- Spark arrestors or turbo charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all heavy equipment.
- Construction crews will be required to park vehicles away from flammable material, such as dry grass or brush. At the end of each workday, heavy equipment will be parked over mineral soil, asphalt, or concrete to reduce the chance of fire.

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## VIII. HYDROLOGY AND WATER QUALITY.

### ENVIRONMENTAL SETTING

#### Watershed

China Camp State Park falls within two watershed basins, divided by a ridgeline within the park that roughly follows the Ridge Fire trail and the upper portion of the McNears Fire Trail (DPR 2004). The watershed to the south of the ridgeline in the park is the San Rafael subwatershed which is part of the San Francisco Bay Central Basin Boundary. To the north of the ridgeline, the Gallinas Creek subwatershed is part of the San Pablo Bay Watershed (SFBRWQCB 2006). The proposed project area at Turtle Back Hill is within the Gallinas Creek subwatershed. Annual precipitation around the park ranges from less than 28 inches to 33 inches per year (DWR 2003).

#### Flooding

Flooding could cause concern as the lower portions around the base of Turtle Back Hill are within the FEMA-designated 100-year floodplain. The FEMA-designated 100-year floodplain defines the area having a one percent chance of being inundated in any given year. The boardwalk section of the proposed project would become submerged in the event of a 100-year flood.

#### Groundwater

Groundwater basins within the vicinity of China Camp State Park are part of the San Francisco Bay Hydrologic Region. Two basins that are near the park are the Novato Valley and the San Rafael Valley Groundwater Basins. Data suggests that these groundwater basins are subjected to sea-water intrusion therefore degrading the water quality (DWR 2003). No published information suggests the possibility of groundwater accumulation at China Camp. Any groundwater found in the alluvial deposits would be typical of the calcium bicarbonate type containing sodium chloride due to tidal influences (DWR 2003).

#### Water Quality

The Clean Water Act and the Environmental Protection Act provide federal protection for wetlands and waters of the United States. Responsibility for enforcing provisions of these acts lies with the federal Environmental Protection Agency, and is delegated to the U.S. Army Corps of Engineers for enforcement. Regionally, the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) is responsible for surface, groundwater, and wetland quality oversight. The SFBRWQCB Water Quality Control Plan (SFBWQCB 1995) has a category for Gallinas Creek Basin that would apply to any surface runoff within China Camp State Park. The Gallinas Creek Basin existing beneficial uses are: cold freshwater habitat; preservation of rare and endangered species; non-contact water recreational use; warm freshwater habitat; and wildlife habitat. Groundwater potential uses are negligible as no groundwater basin has been located within the proximity of China Camp State Park. The brackish wetland area surrounding Turtle Back Hill has a number of beneficial uses including: estuarine habitat; ocean, commercial, and sport fishing; preservation of rare and endangered species; non-contact water recreation; fish spawning; and wildlife habitat.

Stream channels are further protected under Section 1600 of the California Fish and Game Code.

#### Water Supply

The water supply for China Camp State Park is provided by the Marin County Municipal Water District.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place structures that would impede or redirect flood flows within a 100-year flood hazard area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## DISCUSSION

- a) During any grading, excavation, or other ground disturbing activities, a release of sediment to surface waters could occur. Other impacts to water quality could result from releases of fuels or other fluids from vehicles and equipment during the construction process. Condition Hydro-1 will control releases of pollutants in storm (or other) water runoff and result in a less than significant impact.

<b>CONDITION HYDRO-1 (WATER QUALITY)</b>
<ul style="list-style-type: none"><li>• Implementation of Condition Geo-2 to provide BMPs to control erosion and runoff during the construction phase.</li><li>• The project will be in compliance with all applicable water quality standards and waste discharge requirements as specified in the SFBRWQCB Basin Plan.</li><li>• Implementation of Condition Hazmat-1 will prevent impacts to water quality from possible pollutants (fuels and other vehicle fluids) released from vehicles and or other equipment during construction.</li></ul>



- b) This project will not result in an impact to groundwater supplies. Water application may be required during construction activities (e.g. for dust control), but this demand would be minor and temporary, and would not substantially or permanently affect the groundwater level in the park, since the water supply is from a municipal source and there are no groundwater basins within the boundaries of China Camp State Park. There will be no impact to the park's water supply or groundwater resources.
- c) The project area's existing drainage patterns will not be altered in a manner that will significantly increase on- or off-site erosion or siltation. In addition, BMPs for erosion will be integrated into the design and construction plans for this project, as described in Condition Hydro-1. Less than significant impact.
- d) The existing drainage patterns of the area will not be altered in a manner that will significantly increase the rate or amount of surface runoff to result in on- or off-site flooding. No impact.
- e) This project will not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. No substantial additional sources of polluted runoff are expected from this project, provided soil erosion BMPs are followed and BMPs for spill prevention and response are in place for vehicle fluid spills or other construction fluids or materials. Refer to Condition Hydro-1 above.
- f) This project will not substantially degrade water quality due to soil erosion and runoff or release of vehicle or equipment fluids if BMPs are implemented, as specified in Condition Hydro-1.
- g) The proposed project area does include lower elevations within the FEMA-designated 100-year floodplain. However, the project does not include any housing structures. No impact.

- h) This project will include a boardwalk along the northern section of the trail, where there is tidal influence. The boardwalk may impede or redirect flows within the FEMA-designated 100-year floodplain. The degree of hindrance or redirection from flooding will be less than significant.
- i) The project would not expose people or property to an increased risk from flooding, including flooding resulting from the failure of a levee or dam. The area around Turtle Back Hill is surrounded by salt marsh. In the event of a flooding event these areas could reduce the impact allowing people to time to evacuate the park on San Pedro Road before it becomes flooded. Therefore, this is an existing risk that is less than significant.
- j) The project area topography is relatively flat and not prone to landslides or mudflows. The project is located along the margin of San Francisco Bay and could be subjected to a tsunami and/or seiche generated by a large earthquake. There is no recorded data about tsunami effects at China Camp. However, the 1964 magnitude 9.2 Alaska earthquake generated a tsunami runup of 1.5 meters (4.9 feet) at San Rafael and 1.2 meters (3.9 feet) at Sausalito. These waves caused damage to boats and docks in the affected areas. In 1868, a magnitude 7.0 earthquake on the Hayward fault generated a tsunami runup of 4.5 meters (14.8 feet) in San Francisco (Lander 1993). Therefore, there could be an impact to this project area from a tsunami, but it is an existing condition and would be a less than significant impact due to the project.

**IX. LAND USE AND PLANNING.**

**ENVIRONMENTAL SETTING**

Several agencies including the Golden Gate National Recreation Area, Point Reyes National Seashore, California State Parks, the Marin Municipal Water District, the North Marin Water District, and the Marin Agricultural Land Trust (MALT) protect land in Marin County and share a responsibility for managing the extensive lands. Each of these agencies manages lands according to their own missions and for their own purposes (County of Marin 2005).

Although China Camp State Park is managed by the California Department of Parks and Recreation under the Park General Plan, both Marin County and the City of San Rafael have an effect on planning. The Marin Countywide General Plan identifies this land as urban open space and the lands have been zoned to allow for low density/low impact development, such as recreation, appropriate to preserving the county's open space policies. A small portion of China Camp State Park along the south boundary is located in the incorporated city limits of the City of San Rafael. It is not expected that this land would be developed for purposes other than recreation-related, low-density, low-impact uses appropriate to preserving the City's natural open space policies (DPR 1979). The City General Plan, Parks and Recreation standards and needs states that the City "will cooperate with Marin County and the State to coordinate the use and management of facilities on City, County, and State park lands." (City of San Rafael 2007)

A comprehensive planning program for China Camp as well as other units of the State Park System is authorized by Public Resources Code §540 and 541. The General Plan for China Camp State Park, which provides general guidelines for the park's management and development, was completed in June 1979 (DPR 1979). The Park General Plan recognizes the importance of hiking and biking trails for park access. The proposed project modifies the existing Turtle Back Hill Trail within China Camp State Park for compliance with the Americans with Disabilities Act.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## DISCUSSION

- a) The proposed project would occur completely within the boundaries of China Camp State Park property. No established community exists within the boundaries of the park. No impact.
- b) As mentioned in the Environmental Setting above, the proposed project site is located within China Camp State Park. Both the Countywide and the City of San Rafael General Plans recognize interagency cooperation while managing individual jurisdictions according to their own missions and for their own purposes. No elements of this project would conflict with zoning, regulatory policies, land use plans, conservation plans, or ordinances for this area. All appropriate consultation and permits would be acquired, in compliance with all applicable local, state, and federal requirements. No impact.
- c) There is no applicable habitat conservation plan or natural community conservation plan in effect in the park. No impact.

## X. MINERAL RESOURCES.

### ENVIRONMENTAL SETTING

The California Surface Mining and Reclamation Act (SMARA) of 1975 requires the State Geologist to classify land into Mineral Resource Zones (MRZs) according to known or inferred mineral potential of that land without regard to land use or land ownership. An MRZ-1 classification indicates that no significant mineral deposits are present or likely to be present. MRZ-2 indicates that significant mineral deposits are present or there is a high likelihood for their presence and development should be controlled, in MRZ-3 mineral deposits cannot be determined from available data, and MRZ-4 areas lack sufficient data to assign any other MRZ designation.

The North Bay region, comprised of Sonoma, Marin, and Napa Counties, relies on mineral resources for construction materials such as aggregate, road base and sub-base, and Portland Cement concrete. Seven of the eight sites located in Marin County are identified by the State as MRZ-2, designated as having significant mineral resources for the North Bay region. The single non-Class 2 site, Ring Mountain in Tiburon, is considered a Scientific Resource Zone and is therefore not a production site.

In addition to the mineral resource sites selected by the state there are four county-approved quarries in Marin. The locations of the Marin mineral resource sites are heavily concentrated in the eastern portion of the county with five sites located in or around the city of Novato. None of the mineral resource sites fall within the boundaries of China Camp State Park. In accordance with Public Resource Code § 5001.65, commercial exploitation of resources in the units of the state park system is prohibited.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

a, b) No state or county designated mineral resource sites fall within the boundaries of China Camp State Park. Therefore the project will not result in the loss of a known mineral resource or a locally important mineral resource recovery site. No impact will occur to these resources as a result of project implementation.

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## XI. NOISE.

### ENVIRONMENTAL SETTING

The primary source of noise in Marin County is vehicle traffic, with the highest noise levels occurring along major roadways. Major noise sources include major highways (U.S. Highway 101, Highway 1, and Highway 37), as well as major county roads (such as Sir Francis Drake Boulevard, Lucas Valley Road, Novato Boulevard, and Point Reyes Petaluma Road), the San Rafael and Gness Field County airports, and Richardson Bay Heliport. Traffic noise levels along major highways, primary arterial streets, and major county roads have not increased significantly since 1987. Future traffic projections predict an increase in existing noise levels of one decibel at most. Noise levels for air traffic have not changed substantially since 1986 and are not expected to increase in the foreseeable future.

China Camp State Park is located along the shore of San Pablo Bay in Marin County, approximately three miles from downtown San Rafael. It contains 1,512 acres of salt marsh, meadows, and oak woodlands. The project site lies adjacent to the main entrance road for the park, with the campground located approximately a quarter of a mile away. No noise sensitive land uses are located in the immediate vicinity of the project.

Noise is defined as unwanted sound and is known to have many adverse effects on people, including hearing loss, speech and sleep interference, raised blood pressure, and psychological stress. Because of these potentially detrimental effects, local governments may enact noise ordinances to restrict noise pollution.

Noise is commonly described in “Ldn,” which expresses the average sound level over a 24-hour period in decibels (dB), the standard measure of the pressure exerted by sound. Ldn includes a ten dB penalty for sounds between 10 p.m. and 7 a.m., when background noise is lower and people are more sensitive to noise. Because decibels are logarithmic units of measure, a change of three dB is hardly noticeable, while a change of five dB is quite noticeable and a change of ten dB is perceived as a doubling of the noise level. A change from 50 dB to 60 dB increases the percent of the

population that is highly annoyed by the noise source by about seven percent. An increase from 50 dB to 70 dB increases the annoyed population by 25 percent. Sounds as faint as ten dB are barely audible, while noises over 120 dB can be painful and damage hearing. Marin County residents are frequently exposed to noise ranging from 35 to 80 dB.

Type of Noise or Environment	Decibels
Recording Studio	20
Soft Whisper; Quiet Bedroom	30
Busy Open-plan Office	55
Normal Conversation	60–65
Automobile at 20 mph 25 ft. away	65
Vacuum Cleaner 10 ft. away	70
Front-end loader	86-94
Earthmover	87-94
Hammer	87-95
Dump Truck at 50 mph 50 ft. away	90
Earth Tamper, Crane	90-96
Bulldozer	93-96
Gas leaf blower at 25 ft. away	100
Helicopter 200 ft. away	100
Stud welder	101
Portable saw	88-102
Concrete joint cutter	99-102
Jackhammer	102-111
Pneumatic chip hammer	103-113
Train Horn 100 ft. away	105

The Marin Countywide Plan includes policies intended to reduce the impact of future development on noise. Project-related policies include:

*Noise Policy 1.3: Regulate Noise Generating Activities. Require measures to minimize noise exposure to neighboring properties, open space, and wildlife habitat from construction-related activities, yard maintenance equipment, and other noise sources, such as amplified music.*

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION**

a) Construction noise levels at or near the project site will vary depending on the number and type of construction equipment operating at a given time. No noise-sensitive land uses are located immediately adjacent to the project area, and the distance between the campground and the project location (approximately a quarter of a mile) should be sufficient to prevent an objectionable level of noise to park visitors in the campground. At the work site, specific construction activities would result in short-term increases in ambient noise levels that could result in speech interference and a potential increase in annoyance to nearby visitors and staff. Integration of Mitigation Measure Noise-1 will be consistent with county requirements and reduce noise impacts to a less than significant level.

**MITIGATION MEASURE NOISE-1**

- Work will generally occur between 7 a.m. and 6 p.m., Monday through Sunday.
- Internal combustion engines used for any purpose at the job site will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction will utilize the best available noise control techniques (e.g. ducts, etc.) whenever feasible and necessary.
- Stationary noise sources and staging areas will be located as far from visitors as possible. If they must be located near visitors, stationary noise sources will be muffled to the extent feasible and/or, where practical, enclosed within temporary sheds.

- b) Construction activities will not involve the use of explosives, pile driving, or other intensive construction techniques that could generate significant ground vibration or noise. Minor vibration adjacent to excavating and heavy equipment during construction will be generated only on a short term basis. Therefore ground borne vibrations and noises will have a less than significant impact.
- c) Once the project is completed, construction-related noises will disappear. This project will not create any source that will contribute to a substantial permanent increase in noise levels around the project area. No impact.
- d) See Discussion (a) above. Implementation of Mitigation Measure Noise-1 will reduce any potential impacts to a less than significant level.
- e, f) The project is not located within an airport land use plan, within two miles of a public airport, or adjacent to a private airstrip. No impact will occur as a result of this project.

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## XII. POPULATION AND HOUSING.

### ENVIRONMENTAL SETTING

Easily reached from U.S. Highway 101, China Camp State Park is located on the southwest shore of San Pablo Bay in Marin County, three miles from downtown San Rafael and a thirty-minute drive from San Francisco by way of the Golden Gate Bridge. Approximately 1,512 acres in size, this unit provides day use picnic areas, single party campsites, group campsites, nature trails for recreation, and scenic view points, as well as interpretive panels and parking and restroom facilities for unit visitors.

In 2005, San Rafael's citizens accounted for approximately 23 percent of Marin County's total population. According to the California Department of Finance's City/County Population Estimates with Annual Percent Change, from January 1, 2004 to January 1, 2005, San Rafael's population has increased 0.01 percent, from 57,182 to 57,224. According to the 2004 Population Projections by Race/Ethnicity, Gender and Age Report from the California Department of Finance, the population for Marin County will peak at 252,440 people in 2010, an increase of 1.6 percent from the 2000 population level of 248,473 before falling to 225,127 people in 2050, a decrease of nine percent from the 2000 population levels and a projected decrease of 12 percent from the 2010 projection population.

Housing within the China Camp park boundaries is limited to four existing staff residences, one non-parks personnel residence, and two unoccupied trailer pads. The permanent population of the park is relatively static, with approximately 13 people living in the park on a permanent basis. These numbers are based on DPR staffing requirements, and no significant growth is anticipated in the foreseeable future. The park is a recreational resource utilized by both locals and out-of-town visitors. One non-parks personnel person resides in China Camp State Park; concessionaire resident Frank Quan is the sole resident in the Village Area (McSweeney 2006).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

a,b,c) The project will not have a housing component and all work will take place within the confines of the park boundary, with no additions or changes to the existing local infrastructure. It will neither modify nor displace any existing housing and will displace no one, either temporarily or permanently. Permanent jobs are not expected to be generated as a result of this project therefore it will have no impact on population growth or housing.

### XIII. PUBLIC SERVICES.

#### ENVIRONMENTAL SETTING

China Camp State Park is located in Marin County along the shore of San Pablo Bay, approximately four miles from San Rafael. Fire response is provided by the nearest fire station, which is San Rafael Station #5, and the California Department of Forestry and Fire (CAL FIRE) is notified. In the event of a prolonged fire event, CAL FIRE will also provide support.

State Park Rangers are responsible for providing law enforcement in the park. If necessary, backup may be provided by the California Highway Patrol, the Marin County Sheriff's Department, or law enforcement officials at Corte Madera.

China Camp State Park is located near the San Rafael School District. No schools exist within two miles of the project site.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### DISCUSSION

a) The project proposes to upgrade and reroute sections of the Turtle Back Hill Trail in China Camp State Park. These modifications to previously existing facilities are not expected to result in a significant increase in overall visitation to the park. Any jobs generated as a result of the project will be short term with no permanent connection to the park location. No significant increase to the level of required services will occur.

Fire Protection: Use of construction equipment around flammable annual vegetation presents an increased fire risk and could result in additional demands on local fire teams and CAL FIRE. Any impact on services would be temporary and nothing in the project scope will contribute to a need for an increase in the existing level of public service. Integration of the conditions outlined in the Hazards section (Chapter III, Section VII) will reduce the potential impact on fire protection services to a less than significant level.

Police Protection: State Park Rangers are responsible for providing law enforcement within park boundaries. The project is not expected to result in any increased need for police services. No impact.

Schools: No schools exist at or immediately adjacent to the project site. This project does not include any elements that would increase enrollment at schools in the area, and therefore has no impact.

Parks and Other Public Facilities: This project will result in the temporary closure of certain sections of trail within the park, and may result in minor delays and inconveniences along park roads due to construction equipment access. However, only a small portion of the park will be affected. Significant increased use at other parks in the area is not expected to occur, and the project will have no significant impact on parks or any other public services.

## XIV. RECREATION.

### ENVIRONMENTAL SETTING

Marin County, encompassing roughly 606 square miles, offers a large variety of recreational opportunities via its more than 32 state and regional parks, recreational areas, and beaches (County of Marin, Draft Countywide Plan 2005; California State Parks 1979 and 2004). Its beaches offer not only swimming, surfing, and sunbathing but also whale watching and ocean fishing opportunities. Inland recreational opportunities are even more varied with private enterprises supplementing the offerings of the parks. Opportunities include sightseeing, camping, hiking, and wildlife observation.

Located east of San Rafael on the shore of San Pablo Bay, China Camp State Park's recreational opportunities include 15 miles of hiking trails, with trails heavily used during spring and summer weekends. Visitors can also enjoy wildlife-watching, hiking, swimming, boating and windsurfing. There are twenty five developed picnic sites and a group picnic area for up to two hundred people can be reserved. Visitors to China Camp Village can walk through the house museum that describes the early Chinese shrimping settlement. A natural watershed along the shores of San Pablo Bay, China Camp State Park's natural features include an extensive intertidal salt marsh, meadow and oak habitats, which are home to a variety of wildlife, including deer, squirrels and numerous birds. Nearby parks offering additional recreational opportunities include Muir Woods National Monument, Mount Tamalpais State Park, Tomales Bay State Park, and Point Reyes National Seashore.

This project will have a slight temporary impact on the recreational opportunities at China Camp State Park in the area of Turtle Back Hill while the trail is closed for the proposed rerouting and regrading. Full or partial trail closure to the general public will likely occur between September 2007 and February 2008. The planned work will result in an improved trail that will loop around Turtle Back Hill and bring the visitor back to the trailhead located along North San Pedro Road and increase recreational opportunities for persons with disabilities.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## **DISCUSSION**

- a) Although hikers may use other recreational areas during the trail closure, any increase in use of other facilities is expected to be minimal. It is anticipated that the work will take place during the fall and winter months when visitor levels are normally lower than in the peak spring and summer seasons. Less than significant impact.
- b) The work proposed would improve existing recreational facilities. Potential effects on the physical environment as a result of the proposed work will be avoided or mitigated through implementation of conditions and mitigation measures found throughout this document.

## XV. TRANSPORTATION/TRAFFIC.

### ENVIRONMENTAL SETTING

Private automobiles are the dominant form of transportation used in Marin County and are likely to remain so for the foreseeable future. However, travel demands already exceed capacity along some main corridors such as Highway 101, Interstate 580, and Sir Francis Drake Boulevard. According to the vehicle Level of Service (LOS) standards, these roadways have received the lowest LOS designation, an "F," along at least one section. This rating indicates that excessive traffic delays may occur. Furthermore, the number of daily trips per household in Marin County has been increasing since 1990 and this increase is projected to continue, causing further travel demand.

Traditional approaches to the problem, such as road widening, have been dismissed as expensive and ineffective. To address concerns about traffic, Marin County proposes to encourage other modes of travel. These plans include putting in bike lanes, improving bicycle and pedestrian access, providing incentives for employees to use carpools and vans, and providing affordable and adequate public transportation. In addition, a project called the Sonoma Marin Area Rail Transit (SMART) will provide passenger train service from Cloverdale to San Rafael with five stations in Marin County. Service for this train is not expected to start until 2009.

In 2004, Marin County voters approved a sales tax measure providing \$331 million over 20 years to fund local transportation projects. The goal of this measure, to improve transportation throughout the county, includes expanding bus service, completing the Highway 101 carpool lane through San Rafael, improving local roads, and providing safer access to schools.

China Camp State Park is located in Marin County near the city of San Rafael and U.S. Highway 101. The project will occur at a site adjacent to North San Pedro Road, which is the main access road to the park. The park is accessible to cars and bicycles, but no public transportation routes currently run there.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Result in inadequate parking capacity?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## DISCUSSION

- a) The project will modify existing facilities to make Turtle Back Hill Trail easily accessible to disabled persons. No significant increase in park visitation is expected as a result. All construction activities will take place within the boundaries of the park. Therefore, there will be no impact to existing traffic patterns or the capacity of the street system.
- b) As noted above, China Camp State Park lies close to U.S. Highway 101, sections of which may be subject to congestion and delays. However, since the project is not expected to increase park visitation, no additional strains would be placed on the highway as a result of project implementation. No impact.
- c) The project is not located within an airport land use plan, within two miles of a public airport, or adjacent to a private airstrip. Nothing in the project will change existing air traffic patterns in the area. No impact.
- d) Nothing in the project's design will increase transportation hazards. No impact.
- e) All construction activities will take place in the vicinity of Turtle Back Hill, and no public roads will be blocked. Minor delays may occur along park roads as a result of delivery of construction materials, however, minimum access requirements for emergency vehicles would be maintained at all times. Therefore, this project will have a less than significant impact on emergency access.
- f) The project includes the addition of two accessible parking spaces. A significant increase in visitation is not anticipated. Therefore, the project will not result in inadequate parking capacity. No impact.
- g) There are no policies, plans, or programs supporting alternative transportation that apply to this project. No impact.

## **XVI. UTILITIES AND SERVICE SYSTEMS.**

### **ENVIRONMENTAL SETTING**

The China Camp Turtle Back Hill Trail Accessibility Improvements Project is located solely within the boundaries of China Camp State Park. China Camp is located on the southwest shore of San Pablo Bay, three miles from downtown San Rafael in Marin County. Easily reached from Highway 101, China Camp is a 30-minute drive from San Francisco by way of the Golden Gate Bridge. China Camp State Park is approximately 1,512 acres. This unit provides day use picnic areas, single party campsites, group campsites, nature trails for recreation, and scenic view points, as well as interpretive panels, parking, and restroom facilities for park visitors.

Utilities and services available within China Camp State Park include: picnic tables, barbecues, water (hose bibs), kayak rentals, flush toilets, chemical toilets, pit toilets, and telephones. Restroom facilities are open to the public and garbage disposal is available at the day use and campground areas (McSweeney 2006).

All water for the park is purchased from the Marin Municipal Water District. There are two service connection points at China Camp State Park (McSweeney 2006).

Utilities and services available for the day use areas are limited to garbage and sewage disposal. Garbage collected in the park day use areas is removed by State Parks personnel once a day and deposited into one of nine two-cubic-yard Dumpsters, located in the park. The Dumpsters are picked up by a contracted removal service once a week between October 1<sup>st</sup> and April 30<sup>th</sup>, and twice a week between May 1<sup>st</sup> and September 30<sup>th</sup>. Sewage disposal at the campground restrooms is handled by a tank and leach field system. Sewage disposal at the other flush toilets and the residences is pumped into the City of San Rafael sewer system via lift stations (McSweeney 2006).

Power and telephone service is provided to the park residences and on-site offices as well as to the concessionaire. Electrical power is provided by the Pacific Gas and Electric Company via overhead and underground lines, telephone services are provided by SBC. The park uses propane gas for some needs and it is provided by tank service, through a statewide services contract with Amerigas. The park owns five propane tanks; four tanks are 200 gallons and there is a single 450-gallon tank (McSweeney 2006).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Would the construction of these facilities cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Would the construction of these facilities cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations as they relate to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## DISCUSSION

- a) China Camp State Park is within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board. As designed the project will be in compliance with all applicable water quality standards and waste discharge requirements. No impact.
- b) The project does not call for the construction of new restroom facilities, nor will it require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities. No impact.
- c) As designed the project will not require or result in the construction of new storm water drainage facilities or the expansion of existing facilities. No impact.
- d) The project does not propose construction that would result in an increased usage of the water supply and as of this time, current supplies for China Camp State Park are adequate for

existing demand and projected future use. No impact.

- e) Project does not propose construction that would result in a determination that there is inadequate capacity to service the project's anticipated demand in addition to the already existing commitments. No impact.
- f) While it is possible that the proposed project will attract slightly more visitors due to the improvements proposed by this project, it is anticipated that any increase in the park's solid waste output will be handled by the current systems in place. No impact.
- g) As proposed, project will comply with federal, state, and local statutes and regulations as they relate to solid waste. No impact.

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## CHAPTER 4: MANDATORY FINDINGS OF SIGNIFICANCE

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>WOULD THE PROJECT:</b>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### DISCUSSION

- a) The proposed project was evaluated for potential significant adverse impacts to the natural environment and its animals and plant communities. It has been determined that the proposed project has the potential to degrade the quality of the environment by impacting the habitat of wildlife species, impacting a plant community, and reduce the number or restrict the range of rare or endangered plants or animals. However, full implementation of all mitigation measures, conditions, and constraints incorporated into this project would avoid or reduce these potential impacts to a less than significant level.
  
- b) The proposed project was evaluated for potential significant adverse impacts to cultural resources. It has been determined that some of the work proposed in this project would have the potential to cause a less than significant adverse impact to archaeological resources. Full implementation of all conditions and constraints incorporated into this project would reduce those impacts, both individually and cumulatively, to a less than significant level.
  
- c) DPR often has other smaller maintenance programs and rehabilitation projects planned for a park unit. DPR currently has a proposed project to remove two backcountry roads and recontour them to a natural topography, possibly repacing one road with a new trail. Impacts from this project, along with other environmental issues addressed in this evaluation, would not overlap in such a way as to result in cumulative impacts that are greater than the sum of

the parts. Full implementation of all mitigation measures, conditions, and constraints incorporated into this project would reduce all impacts to a less than significant level.

- d) Project-related environmental effects have been determined to pose a less than significant impact on humans.

## CHAPTER 5: SUMMARY OF MITIGATION MEASURES AND PROJECT CONDITIONS

### Mitigation Measure Aesthetics-1

- Affected purple needlegrass habitat will be replaced onsite at a ratio of 3:1 using purple needlegrass seeds and salvaged plants collected from the project site.
- Purple needlegrass plants removed for trail construction and other project activities will be salvaged during trail construction to the extent feasible and replanted on Turtle Back Hill in mitigation areas.
- A mitigation plan outlining methods to be used, success criteria to be met, and adaptive management strategies will be completed prior to project construction.
- Soil excavated for the trail segments through native perennial grassland will not be side cast into the grassland. Excavated soil will be removed to a site outside the boundary of the native perennial grassland.
- Trails and roads that pass through native habitats are known to encourage the spread of non-native, and oftentimes invasive, plant species. In order to lessen long-term impacts to the native perennial grassland, follow up weed management will occur annually for a minimum of two successive years along the new trail alignment at Turtle Back Hill. All weed management activities will be planned in co-operation with the State Parks District Environmental Scientist.
- Replacement of native grasslands removed at a ratio of 3:1. Will be conducted on Turtle Back Hill on unauthorized trail areas and other scars and on realigned areas.
- Affected coast live oak-black oak habitat and native tree species will be replaced onsite at a ratio of 3:1 using native trees and shrubs grown from locally collected plant material.

### Condition Air-1

- All active construction areas will be watered at least twice daily during dry, dusty conditions.
- All trucks hauling soil, sand or other loose materials on public roads will be covered or required to maintain at least two feet of freeboard.
- All equipment engines will be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Excavation and grading activities will be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or dust from construction might obscure driver visibility on public roads.
- Earth or other material that has been transported onto paved streets by trucks, construction equipment, erosion, or other project-related activity will be promptly removed.

### Mitigation Measure Bio-1 (Salt Marsh Harvest Mouse)

- Road removal work requiring mechanized decompaction methods will be completely fenced with Salt Marsh Harvest Mouse (SMHM) exclusion fencing. Timing of fencing installation and removal will be staggered into segments (phases) so that only one section of fencing is in place at any time. This is required in order to prevent forming a total barrier between SMHM and their refugial upland habitat on the east side of Turtle Back Hill. A USFWS-approved biologist will monitor for SMHM avoidance during installation of the SMHM exclusion fencing, to include both sides of the road and gates across the road. USFWS will review and approve location and design specifications for proposed SMHM exclusion fencing. A USFWS-approved biologist will approve fence installation methods. Road removal work and

decompaction utilizing hand tools will not require exclusion fencing, but must occur only during low tides. All road removal work on the east side of Turtle Back Hill will occur only within the tread of the existing road, and a USFWS-approved biological monitor will be onsite all day/every day during all work activities (including work using handtools).

- Fencing specifications and installation methodology will follow recommendations of Geoff Monk of Monk and Associates, local salt marsh harvest mouse expert.
- On the east side of Turtle Back Hill from North San Pedro Road to the boardwalk section, work will occur only within the tread of the abandoned roadway (with up to 60 square feet of disturbance to adjacent vegetation in the boardwalk section) and a monitor will be onsite all day/every day during all work activities (including work using hand tools).
- A USFWS-permitted or approved biologist will monitor and instruct DPR staff and/or construction contractor in the materials and methods required for proper installation of salt marsh harvest mouse exclusion fencing, to train the construction crew on approved avoidance measures and on the life history of salt marsh harvest mouse, to train DPR biological monitors in appropriate monitoring techniques and methods for salt marsh harvest mouse protection so that these individuals can conduct daily monitoring on their own for the duration of project work, and be available on an “on-call” basis.
- A qualified biological monitor will conduct daily monitoring on the project site during all work activities that are occurring near the edge of the salt marsh.
- If a salt marsh harvest mouse is observed on the project site, work will stop and the USFWS-permitted or approved biologist will be notified. If the mouse leaves the work area of its own volition, then work can proceed only if approved by the USFWS-permitted or approved biologist. If the mouse does not leave the project site, then no work will be restarted until the USFWS has been notified and additional avoidance measures, if any, are discussed and implemented.
- On the west side of Turtle Back Hill, a qualified biological monitor will be onsite for all trail removal work that is located next to the marsh edge. Trail removal work will be within the existing tread only (with possibly up to 6” disturbance on each side of the trail tread), and only hand tools will be used. No fencing will be installed in this section, but a qualified biological monitor will be on-site during all work activities.

#### **Mitigation Measure Bio-2 (California Black Rail)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the California black rail breeding season. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

#### **Mitigation Measure Bio-3 (California Clapper Rail)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the California clapper rail breeding season. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.
- A USFWS-permitted or approved biologist will train the construction crew on approved avoidance measures and on the life history of California clapper rail, train DPR biological monitors in appropriate monitoring techniques so that these individuals can conduct daily monitoring on their own for the duration of project work, and be available on an “on-call” basis.
- A qualified biological monitor will conduct daily monitoring on the project site during all work activities that are occurring near the edge of the salt marsh.

- If a California clapper rail is observed on the project site, work will stop and the USFWS-permitted or approved biologist will be notified. If the rail leaves the work area of its own volition, then work can proceed only if approved by the USFWS-permitted or approved biologist. If the rail does not leave the project site, then no work will be restarted until the USFWS has been notified and additional avoidance measures, if any, are discussed and implemented.

**Mitigation Measure Bio-4 (San Pablo Song Sparrow)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the San Pablo song sparrow breeding season. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

**Mitigation Measure Bio-5 (Salt Marsh Common Yellowthroat)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the salt marsh common yellowthroat breeding season. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

**Mitigation Measure Bio-6 (Nesting Raptors)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the breeding season for nesting raptors. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

**Mitigation Measure Bio-7 (Nesting Migratory Bird Species)**

- All project work (including mitigation planting) will occur between September 1 and December 15 to avoid the breeding season for nesting migratory bird species. Seed collection may occur on the project site prior to September 1, but will be conducted using hand tools only.

**Mitigation Measure Bio-8 (Sensitive Plant Communities – Purple Needlegrass Alliance)**

- Affected purple needlegrass habitat will be replaced onsite at a ratio of 3:1 using purple needlegrass seeds and salvaged plants collected from the project site.
- Purple needlegrass plants removed for trail construction and other project activities will be salvaged during trail construction to the extent feasible and replanted on Turtle Back Hill in mitigation areas.
- A mitigation plan outlining methods to be used, success criteria to be met, and adaptive management strategies will be completed prior to project construction.
- Soil excavated for the trail segments through native perennial grassland will not be side cast into the grassland. Excavated soil will be removed to a site outside the boundary of the native perennial grassland.
- Trails and roads that pass through native habitats are known to encourage the spread of non-native, and oftentimes invasive, plant species. In order to lessen long-term impacts to the native perennial grassland, follow up weed management will occur annually for a minimum of two successive years along the new trail alignment at Turtle Back Hill. All weed management activities will be planned in co-operation with the State Parks District Environmental Scientist.

**Mitigation Measure Bio-9 (Sensitive Plant Communities – Coast Live Oak-Black Oak)**

**Association)**

- Affected coast live oak-black oak habitat will be replaced onsite at a ratio of 3:1 using native trees and shrubs grown from locally collected plant material.

**Mitigation Measure Bio-10 (Native Tree Species)**

- Affected native tree species will be replaced onsite at a ratio of 3:1 using native trees grown from locally-collected material.

**Cultural Resource Condition Cult-1 (Excavation and Monitoring)**

- A combined program of presence/absence testing and monitoring will be applied to avoid potential impacts to sensitive sites.
- A DPR-Qualified archaeologist will test the proposed work at sensitive site locations prior to construction. If midden is discovered the location of the work will be abandoned. In the event that previously undocumented cultural resources are encountered during project construction (including but not limited to dark soil containing shellfish, bone, flaked-stone, ground-stone, or deposits of historic trash), work within the immediate vicinity of the find will be halted temporarily or diverted until a DPR-qualified cultural resource specialist has evaluated the find and implemented appropriate disposition of the artifacts(s).

**Cultural Resource Condition Cult-2 (Resource Avoidance)**

- Prior to the start of construction a DPR qualified archaeologist will place flagging to exclude the features from all project activities.

**Cultural Resource Condition Cult-3 (Human Remains)**

- In the event that human remains are discovered, work will cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate DPR personnel. Any human remains and/or funerary objects will be left in place. The DPR Sector Superintendent (or authorized representative) will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) will be notified within 24 hours of the discovery if the Coroner determines that the remains are Native American. The NAHC will designate the "Most Likely Descendent" (MLD) of the deceased Native American. The MLD will recommend an appropriate disposition of the remains. If a Native American monitor is on-site at the time of the discovery and that person has been designated the MLD by the NAHC, the monitor will make the recommendation of the appropriate disposition.

**Condition Geo-1 (Post-Earthquake Inspections)**

- State Park staff will inspect boardwalks and trails for damage as soon as feasible after a large earthquake, and close trails if they pose a danger to park users.

### **Condition Geo-2 (Erosion Control)**

- Best Management Practices (BMPs) will be used in all areas to control soil and surface water runoff during excavation and grading activities. Due to sensitive species avoidance measures, the project work must occur between September 1 and December 15. In order to minimize soil erosion during the construction period, “winterizing” will occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil. Temporary erosion control measures (BMPs) must be used during all soil disturbing activities and until all disturbed soil has been stabilized (recompacted, revegetated, etc.). A Stormwater Pollution Prevention Plan will be prepared and will include BMPs such as silt fences, fiber rolls, mulch or other applicable techniques. Information on approved BMPs can be found in the Stormwater Best Management Practice Handbook for Construction, available on-line at [www.cabmphandbooks.com](http://www.cabmphandbooks.com).
- Permanent BMPs for erosion control will consist of properly compacting disturbed areas and revegetation of disturbed soil areas in the Purple Needlegrass Alliance with native grass seed or salvaged native grass material collected onsite (see Mitigation Measure Bio-8 Sensitive Plant Communities-Purple Needlegrass Alliance). Newly disturbed areas in plant communities other than Purple Needlegrass Alliance will be stabilized using locally collected native plant seed, salvaged native grass material, or sterile wheat grass, as appropriate. Final design plans will include BMP measures to be incorporated into the project.

### **Condition Hazmat-1 (Spill Prevention and Response)**

- All equipment will be inspected by the contractor for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises.
- Prior to the start of construction, the contractor(s) and/or DPR will prepare a Storm Water Pollution Prevention Plan (SWPPP), which contains BMPs for spill prevention. A spill kit will be maintained on-site throughout the life of the project. The SWPPP will include a map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment may occur.
- Areas designated for refueling, lubrication, and maintenance of equipment shall be at least 50 feet from any spring/seep/wetland/marsh areas and 100 feet from creeks. In the event of any spill or release of any chemical in any physical form at the project site or within the boundaries of the park during construction, the contractor will immediately notify the appropriate DPR staff (e.g., project manager, supervisor, or State Representative).
- Equipment will be cleaned and repaired (other than emergency repairs) outside of the park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside of park boundaries, at a lawfully permitted or authorized destination.

### **Condition Hazmat-2 (Fire Safety)**

- Prior to the start of construction, the Project Contractor will develop a DPR-approved Fire Safety Plan. The plan will include the emergency calling procedures for both CAL FIRE and the San Rafael Fire Station #5.
- Spark arrestors or turbo charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all heavy equipment.

- Construction crews will be required to park vehicles away from flammable material, such as dry grass or brush. At the end of each workday, heavy equipment will be parked over mineral soil, asphalt, or concrete to reduce the chance of fire.

#### **Condition Hydro-1 (Water Quality)**

- Implementation of Condition Geo-2 to provide BMPs to control erosion and runoff during the construction phase.
- The project will be in compliance with all applicable water quality standards and waste discharge requirements as specified in the SFBRWQCB Basin Plan.
- Implementation of Condition Hazmat-1 will prevent impacts to water quality from possible pollutants (fuels and other vehicle fluids) released from vehicles and or other equipment during construction.

#### **Mitigation Measure Noise-1**

- Work will general occur between 7 a.m. and 6 p.m., Monday through Sunday.
- Internal combustion engines used for any purpose at the job site will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction will utilize the best available noise control techniques (e.g. ducts, etc.) whenever feasible and necessary.
- Stationary noise sources and staging areas will be located as far from visitors as possible. If they must be located near visitors, stationary noise sources will be muffled to the extent feasible and/or, where practical, enclosed within temporary sheds.

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