

DRAFT

INITIAL STUDY
MITIGATED NEGATIVE DECLARATION

Samuel P. Taylor State Park
Water Tank Installation Project



March 2006



State of California
DEPARTMENT OF PARKS AND RECREATION

Northern Service Center
One Capitol Mall, Suite 500
Sacramento, California 95814

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Initial Study / Mitigated Negative Declaration

PROJECT: Water Tank Installation Project

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, CA 95814
- North Bay District Headquarters
California Department of Parks & Recreation
7665 Redwood Blvd., Suite 150
Novato CA 94945
- Samuel P. Taylor State Park
8889 Sir Frances Drake Blvd.
Lagunitas, CA 94938
- Fairfax Public Library
2097 Sir Francis Drake Blvd.
Fairfax, CA 94930
- San Geronimo Valley Library
Sir Francis Drake Blvd & Meadow Way
San Geronimo, CA 94963
- California State Parks Internet Website
www.parks.ca.gov/default.asp?page_id=981

PROJECT DESCRIPTION:

The Department of Parks and Recreation proposes to replace the deteriorating potable water storage tanks at Samuel P. Taylor State Park to provide reliable and adequate supplies for park use and fire protection. The project will replace two 40 year old 100,000-gallon redwood storage tanks with two 210,000-gallon steel tanks – Main Tank and Barnabe Tank. The following is a brief summary of the proposed work:

- Remove the existing redwood tanks. The existing redwood material and metal will be stored at the Park for potential re-use. The Barnabe tank will be replaced first.
- Perform ground excavation, grading and compaction required for construction of the new tanks.
- Construct two new 210,000-gallon steel water storage reservoirs on-site.
- Perform all work necessary to connect and rehabilitate the existing water system to make the new tanks fully functional.

- Perform final grading, roadwork, and landscape improvements as necessary to provide access for maintenance, and restoration of the surrounding natural resources.
- Provide equipment staging areas: near the park residences adjacent to Lagunitas Creek and on the level area downhill from the Barnabe tank site.

A copy of the Initial Study is attached. Questions or comments regarding this Initial Study/Mitigated Negative Declaration should be submitted in writing to:

Patricia DuMont – Environmental Coordinator
 California Department of Parks & Recreation
 Northern Service Center
 One Capitol Mall - Suite 500
 Sacramento, CA 95814

E-mail Address: CEQANSC@parks.ca.gov

Fax Number: 916-445-8883

Submissions must be in writing and postmarked, or received by fax or e-mail, no later than April 1, 2006. The originals of any faxed document must be received by regular mail within 10 (ten) working days following the deadline for comments, along with proof of successful fax transmission.

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 Mitigated 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 conditions and mitigation measures detailed in these documents are feasible and will be implemented as stated in the Mitigated Negative Declaration.

Signature on Original Document
 Patricia DuMont
 Environmental Coordinator

 Date

Signature on Original Document
 Kathy Amann
 Chief Northern/Southern Service Centers
 Acquisition & Development

 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 Water tank Installation Project at Samuel P. Taylor State Park, Marin County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq.*, and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq.*

An Initial Study is conducted by a lead agency to determine if a 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 the lead agency is:

Gary Leach
Construction Supervisor II
California Department of Parks and Recreation
Northern Service Center
One Capitol Mall, Suite 500
Sacramento, California 95814
916-445-8691

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

Patricia DuMont
Environmental Coordinator
California Department of Parks and Recreation
Northern Service Center
One Capitol Mall, Suite 500
Sacramento, California 95814

E-Mail Address: CEQANSC@parks.ca.gov

Fax Number: 916-445-8883

Submissions must be in writing and postmarked, or received by fax or e-mail, no later than April 1, 2006. The originals of any faxed document must be received by regular mail within ten (10) working days following the comment deadline, along with proof of successful fax transmission.

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed Water tank Installation Project at Samuel P. Taylor State Park. Mitigation measures have also 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, Conditions, 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 Conditions and 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. It also provides a list of those involved in the preparation of this document.
- 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) 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 Water tank Installation Project will result in less-than-significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

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

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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 water tank Installation Project at Samuel P. Taylor State Park, located in the City of Lagunitas, Marin County, California. The proposed project will replace the deteriorating potable water storage tanks at Samuel P. Taylor State Park in order to provide reliable and adequate water supplies for park use and fire protection.

2.2 PROJECT LOCATION

Samuel P. Taylor State Park (SP) features over 2,700 acres of wooded countryside in the steep rolling hills of Marin County north of San Francisco. The park is located in Lagunitas, about 15 miles west of San Rafael on Sir Francis Drake Boulevard. The park features a unique contrast of coast redwoods groves and open grassland as well as a variety of trees and flowers, including oak, tanoak, madrone, live oak, laurel and Douglas fir. California native wildflowers include buttercups, milkmaids, and Indian paintbrush. The most common animal in the park is the black-tailed deer. There are also raccoons, striped skunks and gray foxes. Silver salmon and steelhead trout migrate up Lagunitas Creek to spawn.

Park facilities include a network of hiking trails, campgrounds and day use picnic areas. A paved bike trail runs about three miles through the park, beginning near the entrance of the park.

The park is named after Samuel Penfield Taylor, who came to California from Boston in 1849 to try his luck in the gold rush. He actually found gold, cashed in and entered the lumber business. He purchased 100 acres of timberland along what is now Lagunitas Creek in the park. He built a paper mill and established a paper-making process using scrap paper and rags from San Francisco to produce newsprint and well as square-bottomed paper bags, a novelty at the time. Taylor built a resort hotel and Camp Taylor, one of the first sites in the U.S. to offer camping as a recreational pursuit. The area was one of California's most popular and well-known weekend recreation destinations in the 1870s-80s.

2.3 BACKGROUND AND NEED FOR THE PROJECT

The department owns and operates its own water system within the park to serve operational needs, as a municipal water supply is not available. Groundwater is collected and currently stored in two redwood 100,000-gallon tanks. The tanks are located at opposite ends of the water system and the system is primarily gravity-fed. A reliable water supply is crucial for providing for the needs of the public visiting the Park and for fire-safety. However, there are several serious problems with the existing system:

- The tanks are deteriorating and leak despite continued and increasing maintenance efforts. The tanks are approximately 40 years old and have reached the end of their useful life.
- The existing tanks are not large enough to handle the peak water demand in the park.
- The existing tanks are located in a seismically active area, but are not designed to withstand a significant earthquake event.
- The existing tanks constitute a public health and safety hazard.

Without this project the Department would continue to operate and maintain the existing water system, using maintenance funds to repair problems and replace components as they arise. However the Department risks a loss or reduction of water storage and seasonal closing of all or a portion of the park to the park visitors. Loss of water storage would, at a minimum, close the campgrounds. The public health and safety issues related to the existing tanks would continue to pose a significant problem to the public. Should the Department close down the existing water system and the facilities it supports, the Department would be reducing recreational opportunities to park visitors by closing the park, which would be counter to the Department's mission.

2.4 PROJECT OBJECTIVES

The mission of the California Department of Parks and Recreation is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality recreation.

The intent of this project is to provide reliable and adequate water supplies for park use and fire protection. The recommended work is expected to:

- Provide new tanks requiring decreased maintenance and have an expected 100-year useful life.
- Provide new tanks that conform to earthquake design requirements.
- Install new steel tanks that will meet current health and safety standards

The proposed water tank replacement project and all its components will allow the department to meet its mission to provide visitors to Samuel P. Taylor State Park high-quality camping and recreational opportunities.

2.5 PROJECT DESCRIPTION

The Department of Parks and Recreation proposes to replace the deteriorating potable water storage tanks at Samuel P. Taylor State Park to provide reliable and adequate supplies for park use and fire protection. The project will replace two 40 year old 100,000-gallon redwood storage tanks with two 210,000-gallon steel tanks – Main Tank and Barnabe Tank. The following is a summary of the proposed work:

- Construct two new 210,000-gallon steel water storage reservoirs on-site. The tanks will be constructed by installing a circular concrete foundation and erecting/assembling steel panels to provide exterior structure integrity. The finished tanks will be 24 feet tall with a diameter of 40 feet.

- Remove the existing redwood tanks. The existing redwood material and metal will be stored at the Park for potential re-use. The Barnabe tank will be replaced first.
- Perform ground excavation, grading and compaction required for construction of the new tanks. Work at each site will include excavation for a concrete ring approximately 45 feet in diameter, 3 feet wide and four feet deep to construct the tank foundation. During the construction period some construction material and equipment will be stored on the level areas near the existing tank sites. Some additional grading may be necessary at the tanks sites to provide a staging area for the contractor. The surrounding area will be re-graded, compacted, and restored at the end of construction.
- Perform all work necessary to connect and rehabilitate the existing water system to make the new tanks fully functional. This project will only expose enough of the existing distribution system to allow connection to the new reservoirs, less than 20 feet of excavation. The Barnabe tank supply line will have to be re-routed during construction to maintain water flow to the existing distribution system.
- Perform final grading, roadwork, and landscape improvements as necessary to provide access for maintenance, and restoration of the surrounding natural resources. The Main tank and Barnabe tank access roads will require some pre-construction grading and aggregate base material to provide a safe suitable access road to the sites. This work will also help to keep the dust down from the construction vehicles/equipment accessing the site. Access to the Barnabe tank site will be up the hill from Sir Francis Drake Boulevard. The road near the staff residences provides access to the Main tank.
- Additional staging areas will be located near the park residences adjacent to Lagunitas Creek and on the level area downhill from the Barnabe tank site.

2.6 PROJECT IMPLEMENTATION

This project includes the demolition and replacement of two 100,000 gallon water tanks. Work will be phased over a period of approximately 6 months and will occur on one tank at a time during spring/summer months. Work will occur only during daylight hours; however, weekend work may be implemented to accelerate construction or address emergency or unforeseen circumstances.

Heavy equipment, such as crane, backhoe, excavator, grader, bulldozer, compressor, and dump truck will be used during construction. Most equipment will be transported to the site and remain until associated work is completed. Transport vehicles for material or equipment, delivery trucks, and crew vehicles will also be present intermittently at the site. Staging areas for equipment will be confined to the area near the staff residences adjacent to Lagunitas Creek and the level area below the Barnabe Tank site (see Appendix A, site map).

Best Management Practices (BMPs) will be incorporated into this project design to ensure that the natural and cultural resources in and around the project area are adequately protected during and after construction. The BMPs discussed in this document and used in the implementation of this project were obtained from the

California Stormwater Quality Association (CSQA), *Stormwater Best Management Practices Construction Handbook*. Temporary BMPs will be used to keep sediment on-site throughout the duration of the tank installations; during construction, BMPs will be checked daily, maintained, and modified as needed; and BMPs will be used after construction to stabilize the site and minimize erosion.

The Department of Parks and Recreation has consistently referenced CSQA BMPs and has identified them as an acceptable standard for use in all State Park projects.

2.7 VISITATION TO SAMUEL P. TAYLOR STATE PARK

The park unit receives an average 176,029 visitors per year

Table 2.7.1

| Year | Paid Day-Use | Free Day Use | Overnight Camping | Total |
|--------------------|--------------|--------------|-------------------|-----------|
| 1996 | 39,526 | 57,266 | 83,042 | 179,834 |
| 1997 | 51,473 | 81,550 | 119,623 | 252,646 |
| 1998 | 36,832 | 68,866 | 102,549 | 208,247 |
| 1999 | 41,466 | 80,614 | 89,456 | 211,536 |
| 2000 | 49,681 | 41,470 | 89,288 | 180,439 |
| 2001 | 43,470 | 29,732 | 68,955 | 142,157 |
| 2002 | 44,437 | 56,034 | 60,769 | 161,240 |
| 2003 | 48,215 | 48,143 | 68,811 | 165,169 |
| 2004 | 50,701 | 43,369 | 64,809 | 158,879 |
| 2005 | 11,596 | 57,086 | 31,466 | 100,148 |
| Total Attendance | 417,398 | 564,129 | 778,767 | 1,760,294 |
| Average Attendance | 41,740 | 56,413 | 77,877 | 176,029 |

This project is not expected to result in a decrease or an increase in park visitation.

2.8 CONSISTENCY WITH LOCAL PLANS AND POLICIES

All project components will be implemented entirely within the boundaries of Samuel P. Taylor State Park. Although this park does not have a General Plan, work to repair, replace, or rehabilitate existing facilities or to protect public health and safety are permitted under PRC §5002.2 (c). This project is also consistent with the State Parks mission and its management directives aimed at creating opportunities for high-quality outdoor recreation. This project does not conflict with local plans or land-use policies for the immediate area.

2.9 DISCRETIONARY APPROVALS

The California Department of Parks and Recreation retains approval authority for the proposed water tank installation project at Samuel P. Taylor State Park. However, this project requires consultation with:

- California Department of Fish and Game
- California Department of Forestry and Fire
- County Agricultural Commissioner (for Sudden Oak Death concerns)
- Regional Water Quality Control Board
- Department of Health Services
- Additional internal document reviews include compliance with the Americans with Disabilities Act, and Public Resources Code § 5024. State Parks will acquire all necessary reviews and permits prior to implementing any project components requiring regulatory review.

2.10 RELATED PROJECTS

Parks and Recreation often has smaller maintenance programs and rehabilitation projects planned for a park unit. According to District staff, no other projects, other than routine maintenance, are planned for the proposed project area in the foreseeable future.

The Marin Municipal Water District (MMWD) has proposed to remove the Barnabe Tank access road and naturalize the area to reduce silt into the Barnabe Creek. MMWD would be the lead agency for this project and would prepare its own environmental document.

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CHAPTER 3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1. Project Title: Water Tank Installation Project
2. Lead Agency Name & Address: California Department of Parks and Recreation
3. Contact Person & Phone Number: Gary Leach, 916-445-8691
4. Project Location: Samuel P. Taylor State Park, Marin County
5. Project Sponsor Name & Address: California Department of Parks and Recreation
Acquisition and Planning Division
Northern Service Center
One Capital Mall - Suite 500
Sacramento, California 95814
6. General Plan Designation: No General Plan has been prepared
7. Zoning: Open Space (Marin Countywide Draft GP)
8. Description of Project:

The Department of Parks and Recreation proposes to replace the deteriorating potable water storage tanks at Samuel P. Taylor State Park to provide reliable and adequate supplies for park use and fire protection. The project will replace two 40 year old 100,000-gallon redwood storage tanks with two 210,000-gallon steel tanks – Main Tank and Barnabe Tank. The following is a brief summary of the proposed work:

 - Remove the existing redwood tanks. The existing redwood material and metal will be stored at the Park for potential re-use. The Barnabe tank will be replaced first.
 - Perform ground excavation, grading and compaction required for construction of the new tanks.
 - Construct two new 210,000-gallon steel water storage reservoirs on-site.
 - Perform all work necessary to connect and rehabilitate the existing water system to make the new tanks fully functional.
 - Perform final grading, roadwork, and landscape improvements as necessary to provide access for maintenance, and restoration of the surrounding natural resources.
 - Provide equipment staging areas will be located near the park residences adjacent to Lagunitas Creek and on the level area downhill from the Barnabe.
9. Surrounding Land Uses & Setting: Refer to Chapter 3 of this document (Section IX, Land Use Planning)
10. Approval Required from Other Public Agencies

1. 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.

Patricia DuMont
Environmental Coordinator

Date

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.
4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:
 - a) Identify the earlier analysis and state where it is available for review.
 - b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.
 - c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.
6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.
7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.
8. Explanation(s) of each issue should identify:
 - a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
 - b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

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ENVIRONMENTAL ISSUES

I. AESTHETICS

ENVIRONMENTAL SETTING

Samuel P. Taylor SP contains a unique mix of shady Coast Redwood groves and open, sunny grassland in the rolling hills of Marin County north of San Francisco.

Climate in the San Francisco-Bay area varies greatly with elevation and the amount of coastal influence. Areas with more coastal influence experience moderate temperatures year round with fog likely from June through mid-August. Coastal visits are best planned in the late summer or fall to ensure the best conditions for viewing the scenery. Areas further inland, like Samuel P. Taylor SP, experience greater temperature extremes; summer and spring are warm, fall and winter can be cool. Inland areas often receive frost on winter nights. Most of the precipitation comes in the winter months, with April through October normally very dry.

The park features a variety of flowers and trees, including oak, tanoak, madrone, live oak, laurel and Douglas fir. California native wildflowers include buttercups, milkmaids, and Indian paintbrush. The most common animal in the park is the black-tailed deer. There are also raccoons, striped skunks and gray foxes. Silver salmon and steelhead trout migrate up Lagunitas Creek to spawn. The park offers 20 miles of trails to provide the best opportunities to enjoy the landscapes in and around the park as well as the abundant wildlife.

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|--|---|--|---|-------------------------------------|
| WOULD THE PROJECT: | | | | |
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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, and until the water tanks and vegetation are replaced, the overall appearance of the project sites will be affected. The presence of construction equipment and fencing restricting access to the specific construction sites would present a limited, temporary adverse visual impact. However, neither the Main tank site nor the Baranabe tank site would be considered a scenic vista. Less than significant.
- b) This project is not within or adjacent to a scenic highway. Although there are Eligible State Scenic Highways within Marin County, there are none Officially Designated at this time

(CalTrans). Neither tank is historic nor would the sites be considered a scenic resource. Additionally, no trees or rock outcrops would be impacted by any aspect of this project. No impact.

- c) The location of steel tanks in place of redwood tanks could be viewed as a degraded view; however, both of the existing redwood tanks are at the end of their useful life and must be replaced. Replacement with redwood tanks is not possible with current health and safety standards. Steel tanks meet current standards and have a much longer useful life. The Main Tank site is located under a dense canopy of mixed forest of mature Douglas-fir and redwood and is not accessible to park visitors. The Barnabe tanks site; however, is visible from the Bolinas Ridge Fire Trail. Although this site is sparsely covered with Coast Live Oak at the end of the maintenance access road, the project would not substantially degrade the existing visual character or quality of the site and its surroundings. Less than significant.
- d) The project proposes to replace two redwood water tanks with two steel tanks in the same locations. Although the new tanks will be made of steel, they will be covered with a non-glare coating that will be applied at the manufacturing factory. No new lighting is proposed to be installed around the tanks and it is expected that all construction work for the proposed project will occur during daylight hours, eliminating the need for work lights. No impact.

II. AGRICULTURAL RESOURCES

ENVIRONMENTAL SETTING

Agriculture has been a part of Marin County’s landscape since the mid-1800’s. Livestock and dairy have been the foundation of the County’s agricultural economy, but vegetables, fruit and forage crops continue to be produced. Local animal products include, milk, beef, sheep, poultry and eggs with oysters, mussels and clams being produced by the County’s aquaculture industry. Local farms also produce vegetables, wine grapes, flowers, nursery crops, wool, hay, honey, and herbs. Agricultural diversity and viability are improving through the production of value-added products such as cheese -making, including Giacomini Ranch, the Strauss Creamery, and Cowgirl Creamery.

The Marin Agricultural Land Trust has preserved over 33,000 acres of agricultural lands through conservation easements since its inception in 1980.

Classified a State Park in May 1963, Samuel P. Taylor SP is approximately 2,700 acres of wooded countryside in the hills of Marin County. The Park is zoned “Open Space” by the Marin Countywide General Plan and does not support any commercial agricultural operations or farmland. None of the land within the Park is included in any of the Important Farmland categories, as delineated by the California Department of Conservation under the Farmland Mapping and Monitoring Program (FMMP).

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|--|---|--|---|-------------------------------------|
| WOULD THE PROJECT*: | | | | |
| 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, Samuel P. Taylor State Park lacks any ongoing commercial development of agricultural resources within park boundaries. Prime farmland, Unique Farmland and farmland of Statewide Importance will not be converted to non-agricultural use. No conflicts with existing zoning for agricultural use or Williamson Act contract will occur as a result of the proposed work. Farmland will not be converted to

non-agricultural use as a result of procedures necessary to implement this project. No impact.

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III. AIR QUALITY

ENVIRONMENTAL SETTING

Samuel P. Taylor 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 BAAQMD'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 Samuel P. Taylor SP in Marin County. Home to 7 million people, the San Francisco Bay Air Basin (SFBAB) is the second largest urban area in the state. Due to cool temperatures and strong Pacific Ocean breezes, much of the Bay Area enjoys good air quality. However, air quality trends are difficult to discern because ambient pollutant concentrations are highly dependent on weather conditions. One summer day may be hot with calm winds, another summer day may be cool and windy throughout the region.

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 (BAAQMD).

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 (PM₁₀), fine suspended particulate matter (PM_{2.5}), carbon monoxide, nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility reducing particles (VRPs). At the State level, PM₁₀, PM_{2.5}, 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 U.S. Environmental Protection Agency (U.S. EPA) makes national area designations for five criteria pollutants: ozone (1-hour and 8-hour standards), PM₁₀, 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 PM₁₀ are all designated as "unclassified". 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 “unclassified”.

Marin County Air 2004 Quality Designations

| | State Levels | Federal Levels |
|---|----------------|---|
| Ozone | Non-attainment | 1 hour & 8 hour standard: Non-attainment |
| Carbon Monoxide | Attainment | Unclassified |
| Nitrogen Dioxide | Attainment | Unclassified |
| Sulfur Dioxide | Attainment | Attainment |
| Particulate matter (PM ₁₀) | Non-Attainment | Unclassified |
| Particulate Matter (PM _{2.5}) | Non-Attainment | Not Applicable (N/A) |
| Sulfates | Attainment | N/A |
| Lead | Attainment | N/A |
| Hydrogen Sulfide | Unclassified | N/A |
| Visibility Reducing Particles | Unclassified | N/A |

<http://www.arb.ca.gov/desig/adm/adm.htm#state>

Individual 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. This project is located approximately 250-300 feet away from State Park staff housing; no other 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, off-road 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.

The Marin Countywide Draft General Plan also includes policies and programs intended to reduce the impact of future development on air quality. Relevant County Air Quality Policies Include:

County Air Policy 1.2. Meet Air Quality Standards. Seek to attain or exceed the more stringent of Federal or State Ambient Air Quality Standards for each measured pollutant

County Air Policy 1.3 Require Mitigation of Air Quality Impacts. Require projects that generate potentially significant levels of air pollutants to incorporate best available air quality mitigation in the project design.

Bay Area Air Quality Management District relevant regulations:

District Regulation 8, Rule 3 controls the volatile organic compound (VOC) content of architectural coatings, which are those coatings used on stationary structures, appurtenances and pavement.

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|--|---|--|---|-------------------------------------|
| WOULD THE PROJECT*: | | | | |
| 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) Although the steel tanks will be covered with a non-glare coating, this will be applied to the steel surfaces during manufacturing, not at the project site. Work proposed by this project will not conflict with or obstruct the implementation of any applicable air quality management plan for Marin County or the Bay Area Air Quality Management District (BAAQMD).

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 (PM₁₀) and involve the use of equipment and materials that will emit ozone precursors. Increased emissions of PM₁₀ 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.

Air Condition - 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. Park staff housing is located approximately 250-300 vertical feet away from the Main tank construction site, a sufficient distance to reduce the impact of blowing dust or equipment emissions. Equipment use that could generate fugitive dust would be of limited duration, both in daily operation and as a percentage of the proposed work for this project. In addition, the specific construction sites would be closed to the public. Integration of **Air Conditions 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, fuel vapors; 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.

III. BIOLOGICAL RESOURCES

ENVIRONMENTAL SETTING

Samuel P. Taylor State Park is located along Lagunitas Creek in Marin County approximately two miles north of San Geronimo. The park's 2,700 acres of steep coastal hills and canyons encompass redwood/Douglas-fir forests, hardwood forests, annual grasslands, and chaparral vegetation. The "main" water tank site, near the park residences, is situated in a mixed forest of mature Douglas-fir and redwood. The Barnabe Creek tank site occupies a more open area adjacent to Barnabe Creek within annual grasslands, oak woodlands, and coyote brush. Elevations in the unit range from approximately 100 feet along Lagunitas Creek to nearly the 1,466-foot summit of Barnabe Mountain, which is just east of the park boundary.

Vegetation

Vegetation within the park is comprised of five distinct vegetation series (= plant community or alliance), as defined by the Sawyer/Keeler-Wolf (1995) classification system, and a seep vegetation type not described by this system. The six vegetation types are:

- California Annual Grassland series
- Douglas-fir - tanoak series
- Redwood series
- Coyote Brush series
- Coast Live Oak series
- Rush/Umbrella Sedge Seep

The "main" water tank site is located in a forested setting of mature Douglas-fir / tanoak series vegetation. This vegetation type is dominated by Douglas-fir (*Pseudotsuga menziesii*) and tanoak (*Lithocarpus densiflorus*) in the canopy, with lesser numbers of California bay laurel (*Umbellularia californica*) and hazelnut (*Corylus cornuta* var. *californica*). Commonly encountered species in the shrub and herbaceous layer include sword fern (*Polystichum munitum*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), and bracken fern (*Pteridium aquilinum*). Redwood series is the dominant vegetation type along Lagunitas Creek and immediately adjacent slopes. This vegetation is dominated by redwood (*Sequoia sempervirens*), with large numbers of Douglas-fir and tanoak in the canopy. Species composition of the shrub and herbaceous layers is comparable to the Douglas-fir - tanoak series.

The Barnabe Creek water tank site is in an open location within a California Annual Grassland series vegetation type. Commonly encountered species include soft chess (*Bromus hordeaceus*), dogtail grass (*Cynosurus echinatus*), slender oats (*Avena barbata*), and filaree (*Erodium* sp.). On the immediate slopes adjacent to the tank is a mixture of the Annual Grassland series and a Coyote Brush Series. The latter series is dominated by coyote brush (*Baccharis pilularis* var. *consanguinea*), poison oak, and California sagebrush (*Artemisia californica*). Downslope from the tank is a Rush/Umbrella Sedge Seep that was largely created by leakage from the water tank. The most common species are umbrella sedge (*Cyperus eragrostis*) and rush (*Juncus* sp.). The two roads that access the site traverse a Redwood series that is described above and a Coast Live Oak series. The Coast Live Oak series is dominated by coast live oak (*Quercus agrifolia*) in the canopy and an herbaceous and shrub layer of poison oak, toyon (*Heteromeles arbutifolia*), bracken fern (*Pteridium aquilinum*

var. *pubescens*) and other common species.

Wildlife Species

Samuel P. Taylor State Park provides a diversity of wildlife habitats, including the redwood forest and the aquatic habitat of Lagunitas Creek and its tributaries. Lagunitas Creek in particular provides excellent habitat for numerous aquatic species. The creek segment that passes through the park contains a variety of habitat characteristics valuable to salmonid and shrimp life stages, such as the presence of riffles, pools, and run habitat, along with gravel areas suitable for salmonid spawning (ESA, 2003).

Some of the common bird species that can be found in the park include the California quail (*Callipepla californica*), northern flicker (*Colaptes auratus*), Pacific-slope flycatcher (*Empidonax difficilis*), Stellar's jay (*Cyanocitta stelleri*), winter wren (*Troglodytes troglodytes*), golden-crowned kinglet (*Regulus satrapa*), Swainson's thrush (*Catharus ustulatus*), American robin (*Turdus migratorius*), and purple finch (*Carpodacus purpureus*). A number of common mammals live in the park including the western gray squirrel (*Sciurus griseus*), striped skunk (*Mephitis mephitis*), and mule deer (*Odocoileus hemionus*). In addition to these common wildlife species, a number of special-status wildlife species could potentially be found in the area.

Special-Status Species¹

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

All sensitive species and their habitats were evaluated for potential impacts by this project. A query of the California Department of Fish and Game's Natural Diversity Database (CNDDDB 2005) was conducted for sensitive species and habitats within the Inverness, Bolinas, Novato, San Geronimo, and San Rafael 7.5-minute USGS quadrangles. Additionally, a U.S. Fish and Wildlife Service (USFWS) species list was generated for the same five quads. Special-status plant species potentially occurring in the five quadrangle maps were derived from the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (6th edition, electronic version, 2001)

Threatened and Endangered Species and Species of Special Concern

Threatened and Endangered plants and animals and Species of Special Concern are special-status species that have legal protection. The following special-status species are the result of the CNDDDB and CNPS queries for the quadrangle maps mentioned above and a review of available studies and literature.

¹ 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).

Special-Status Plant Species -Special-status plant species that are known or that could potentially occur within or near the project area are based on the CNDDDB (2005), the CNPS (2006), and field observations by the California Department of Parks and Recreation natural resource staff. The CNDDDB reports occurrences of 49 special-status plant species for the Inverness, Bolinas, Novato, San Geronimo, and San Rafael 7.5-minute USGS quadrangles.

The CNPS lists 39 special-status species (CNPS List 1B or 2) for these quadrangles, most of which appear on the CNDDDB list. The USFWS reports four federally listed species that occur within or may be affected by projects within the five quadrangles. These four species appear on the CNPS and/or CNDDDB lists.

Most of the species appearing on the three lists are restricted to habitat types or on substrates, such as serpentinite, that do not exist within or adjacent to the project site. Examples of habitat types that do not occur within the project site include coastal scrub, coastal dunes, and marshes and swamps (freshwater and salt water). Potentially suitable to marginally suitable habitat does exist for fourteen species, which are described below.

Plant Species with a Potential to Occur within the Project Area

Baker's navarettia (*Navarettia leucocephala* ssp. *bakeri*). This CNPS List 1B plant is an annual herb of mesic locations within various habitats, including coniferous forest, woodlands, grasslands, seeps, and vernal pools. Baker's navarettia, which blooms from May through July, is reported from western Sacramento Valley and the Coast Range from Solano County to Mendocino County. Potentially suitable habitat occurs in the seepy meadow area downslope and adjacent to the existing secondary water tank at Barnabe Creek.

Bent-flowered fiddleneck (*Amsinckia lunaris*). Blooming from March through June, this CNPS List 1B herb inhabits coastal scrub, open woodlands, and grasslands of the San Francisco Bay region, the Central Valley, and the inner Coast Range to Lake County. Potentially suitable habitat occurs in the open grassy areas adjacent to the existing secondary water tank at Barnabe Creek.

Diablo helianthella (*Helianthella castanea*). This CNPS List 1B perennial herb blooms from April through June, occurring in mostly open grassy locations, often in transition zones bordering chaparral, coastal scrub, broadleaved woodlands, and riparian woodlands. Its range is limited to the northern San Francisco Bay region. Potentially suitable habitat occurs in the open grassy areas adjacent to the existing secondary water tank at Barnabe Creek.

Fissidens moss (*Fissidens pauperculus*). A CNPS List 1B species, this moss occurs on damp coastal soil of coniferous forests. It has been reported at scattered locations from Santa Cruz County north to Del Norte County. Suitable habitat is present in the Douglas-fir forest surrounding the main water tank.

Fragrant fritillary (*Fritillaria liliacea*). Fragrant fritillary is a CNPS List 1B perennial herb that blooms from February through April. It occurs in woodlands, coastal scrub, and grassland habitats of coastal locations. Potentially suitable habitat occurs in the open grassy areas adjacent to the existing secondary water tank at Barnabe Creek.

Franciscan thistle (*Cirsium andrewsii*). This CNPS List 1B perennial herb blooms from March through July. It occurs in broadleaved forests, coastal scrub, and grasslands on mesic sites. Potentially suitable habitat occurs in the open grassy areas adjacent to the existing secondary water tank at Barnabe Creek.

Marin manzanita (*Arctostaphylos virgata*). This CNPS List 1B shrub is limited to Marin County in open areas within broadleaved forest, chaparral, closed-cone coniferous forest, and coniferous forest (e.g. Douglas-fir forest) habitat types. It blooms from January through March. Potentially suitable habitat occurs on the fringes of the oak woodlands adjacent to the existing secondary water tank at Barnabe Creek.

Marsh microseris (*Microseris paludosa*). Marsh microseries is a CNPS List 1B perennial herb that blooms from April through June. It occurs in moist areas of closed-cone coniferous forest, woodlands, grasslands, and coastal scrub of the Coast Ranges from San Luis Obispo County to Mendocino County. Potentially suitable habitat occurs adjacent to the existing secondary water tank at Barnabe Creek.

Napa false indigo (*Amorpha californica* var. *napensis*). Napa false indigo is a CNPS List 1B shrub that occurs in woodlands, chaparral, and openings of broadleaved forest. Blooming from April through July, this species is only known from Marin, Monterey, Napa, and Sonoma Counties. Potentially suitable habitat occurs adjacent to the existing secondary water tank at Barnabe Creek.

North Coast semaphore grass (*Pleuropogon hooverianus*). This perennial grass is a CNPS List 1B species that is listed as rare by the state of California. Blooming from May through August, this species is only known from Marin, Sonoma, and Mendocino Counties. It occurs in broadleaved forests, coniferous forests (e.g. redwood forest), seeps, vernal pools, and freshwater marshes and swamps. Potentially suitable habitat occurs in the seepy meadow area downslope and adjacent to the existing secondary water tank at Barnabe Creek.

Small groundcone (*Boschniakia hookeri*). Small groundcone is a CNPS List 2 perennial herb that is parasitic on salal and huckleberry. It blooms from April through August. This occurs in coastal coniferous forests from Marin County north to Oregon and Washington. Potentially suitable habitat is present in the Douglas-fir forest surrounding the main water tank.

Swamp harebell (*Campanula californica*). Swamp harebell is a CNPS List 1B perennial herb that occurs on mesic sites within several habitat types, including bogs and fens, closed-cone coniferous forest, grasslands, seeps, and freshwater swamps and marshes. It blooms from June through October. Potentially suitable habitat occurs in the seepy meadow area downslope and adjacent to the existing secondary water tank at Barnabe Creek.

Thin-lobed horkelia (*Horkelia tenuiloba*). This CNPS List 1B perennial herb occurs in mesic openings of broadleaved forests and chaparral. Blooming from May through July, this species is only known from Marin, Sonoma, and Mendocino Counties. Potentially suitable habitat occurs adjacent to the existing secondary water tank at Barnabe Creek.

Western leatherwood (*Dirca occidentalis*). This shrub species is a CNPS List 1B plant that blooms from January through April. It occurs on mesic sites of several different habitats, including broadleaved forests, closed-cone coniferous forest, woodlands, chaparral, and riparian scrub. Western leatherwood is known only from the San Francisco Bay region. Potentially suitable habitat occurs adjacent to both of the water tanks.

Wildlife Species with a Potential to Occur within the Project Area

Special-status wildlife species that have been documented in Samuel P. Taylor SP, or could potentially occur based on the presence of suitable habitat, are described below.

Steelhead – Central California Coastal ESU (*Oncorhynchus mykiss*). Lagunitas Creek provides important habitat for steelhead, a Federally Threatened species, and supports a self-sustaining population. Steelhead migrate to natal streams in late-fall or winter rains, and spawn in December (ESA, 2003). Juvenile steelhead could be present in the creek year-round (Logan, pers. com.).

Chinook Salmon – (*Oncorhynchus tshawytscha*). The National Marine Fisheries “California Coastal Salmon and Steelhead Current Stream Habitat Distribution Table” contains a report of Chinook salmon in Lagunitas Creek in the park (2000).

Coho Salmon – Central California Coastal ESU (*Oncorhynchus kisutch*) – Although there are no records in the CNDDDB for this Federally Threatened species, the National Marine Fisheries “California Coastal Salmon and Steelhead Current Stream Habitat Distribution Table” has a 2001 records stating that Coho have been observed in good numbers in Lagunitas Creek every year from 1982 through 2001 (Source: Cox). Coho Salmon spawning migrations begin after heavy late-fall or winter rains, and in the short coastal streams of California, most Coho return during mid-November through mid-January (DFG, 1995). This species could be present in the project area.

Foothill Yellow-legged Frog (*Rana boylei*). The CNDDDB contains records for foothill yellow-legged frog, a California Species of Special Concern, in San Geronimo, Bolinas, San Rafael, and Novato quads (CDFG, 2004). This species requires shallow, flowing water in small to moderate-sized streams with at least some cobble-sized substrate (Jennings and Hayes, 1994). Potential habitat for this species is present in the vicinity of the project area.

California Red-legged Frog (*Rana aurora draytonii*). The California red-legged frog, a federally threatened and California Species of Special Concern, the park contains potential habitat; however, the park is not located within proposed critical habitat for this species (USFWS). This frog breeds in permanent or temporary water bordered by dense grassy or shrubby vegetation, and can be found in adjacent upland habitat, such as sword ferns and sedges along streamside flats within coastal redwood forest (Jennings and Hayes, 1994).

Northwestern Pond Turtle (*Clemmys marmorata marmorata*). The CNDDDB lists this species in both the San Geronimo and San Rafael quads. Pond turtles are associated with permanent or nearly permanent water in a wide variety of habitat types (Zeiner et. al., 1988). This species could potentially be present in the project area.

Northern Spotted Owl (*Strix occidentalis caurina*). The federally threatened northern spotted owl resides in dense, old growth, multi-layered mixed conifer, redwood and Douglas-fir habitats (Zeiner et. al., 1990). Samuel P. Taylor SP contains a large amount of high-quality habitat for this species, and occupied territories are present in the Lagunitas Creek drainage (Fehring, pers. com.).

Osprey (*Pandion haliaetus*). The CNDDDB lists an osprey nest site in the Inverness Quad. Osprey have been detected in Samuel P. Taylor SP, however, there are no nesting records in the park. This California Species of Special Concern builds large nests in treetops within 15 miles of water foraging habitat.

White-tailed kite (*Elanus leucurus*). The white-tailed kite, a California Species of Special Concern and Fully Protected Species, is typically found in coastal and valley lowlands, and nests near the top of dense oak, willow, or other tree stands. This species could be present in the park and in the more open habitat above the Barnabe tank site.

Sharp-shinned hawk (*Accipiter striatus*) (wintering); **Cooper's hawk** (*Accipiter cooperi*); **Merlin** (*Falco columbarius*) (wintering); **Northern harrier** (*Circus cyaneus*). The project area contains potential foraging and/or nesting habitat for these raptor species, which are California Species of Special Concern.

Peregrine falcon (*Falco peregrinus*). Peregrine falcons, which are state endangered and protected, are known to occur along the coast of California. This species is generally found near bodies of water in open areas with cliffs and canyons nearby for cover and nesting (Zeiner et. al., 1990). Peregrine falcons could be present in Samuel P. Taylor SP.

Black Swift (*Cypseloides niger*). Black swifts breed very locally throughout California, and nest in moist crevices or caves on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons (Zeiner et. al., 1990). This species has not been recorded onsite, and is unlikely to be present in the project area.

Vaux's Swift (*Chaetura vauxi*). The Vaux's swift, a California Species of Special Concern, could be present in the project area. This species is a summer resident of northern California, and prefers redwood and Douglas-fir habitats with nest sites in large hollow trees and snags, especially tall, burned-out stubs (Zeiner et. al., 1990). The redwood/Douglas-fir habitat on the project site provides suitable breeding habitat for this species (breeds early May to mid-August).

Purple Martin (*Progne subis*). The purple martin is a California Species of Special Concern. This bird is an uncommon summer resident of wooded, low-elevation habitats throughout the state, including Douglas-fir and redwood (Zeiner et. al., 1990). Purple martins could be present in the vicinity of the project area.

Yellow Warbler (*Dendroica petechia brewsteri*). This migratory species is a California Species of Special Concern. The CNDDDB lists an occurrence of yellow warbler in the Inverness quad. Suitable habitat for this species exists in Samuel P. Taylor SP. Yellow warblers usually breed in riparian deciduous habitats in summer, such as cottonwoods, willows, alders, and other small trees and shrubs typical of low open-canopy riparian woodland, from mid-April into early August (Zeiner et. al., 1990).

Pallid Bat (*Antrozous pallidus*); **Townsend's Western Big-eared Bat** (*Corynorhinus townsendii townsendii*); **Western Red Bat** (*Lasiurus blossevillii*). All three of these sensitive bat species have CNDDDB records in the area around Samuel P. Taylor SP. Suitable roosting habitat for these species is present in the vicinity of the project area.

Point Reyes Mountain Beaver (*Aplodontia rufa phaea*). The Point Reyes mountain beaver is a California Species of Special Concern that is found in west Marin County. This species was historically collected in Lagunitas, just south of the park. However, during a survey conducted during 1979-83, the closest populations of Point Reyes mountain beaver were located on the Point Reyes Peninsula, and none were found in Lagunitas or near the park (Steele, 1989). Although suitable habitat is present within the project area, it is unlikely that this species is present this far off the peninsula.

California Freshwater Shrimp (*Syncaris pacifica*). The state and federally endangered California freshwater shrimp is present in Lagunitas Creek. This species lives in lowland perennial streams in Sonoma, Marin, and Napa counties. Freshwater shrimp are found within stream pools, in areas away from the main current, where there are often undercut banks, exposed root systems, and vegetation hanging into the water. This species breeds in

September, then the females carry their eggs with them until late spring, when young shrimp are released as miniature adults. (Serpa, 1996) The recovery plan for this species contains an index to assess the relative health of populations of California freshwater shrimp; Lagunitas Creek along with Salmon Creek were rated good to excellent due to the relatively high numbers of sampled shrimp over a relatively long distance (USFWS, 1998).

Monarch Butterfly (*Danaus plexippus*). The CNDDDB lists numerous monarch over-wintering and autumnal sites in the Bolinas quad, in and around the town of Bolinas, Stinson Beach, and Point Reyes National Seashore. No monarch roosts have been identified in Samuel P. Taylor SP.

Sensitive Natural Communities

Sensitive natural plant communities are communities that are especially diverse, regionally uncommon, or of special concern to local, state and federal agencies. Elimination or substantial degradation of these communities would constitute a significant impact under CEQA. The Redwood and Douglas-fir-tanoak series within the project area are considered sensitive natural communities. Both vegetation series contain mature forest components that provide valuable habitat for both common and special status wildlife species

The Marin Countywide Draft General Plan includes a goal to protect and, where, possible, restore the natural structure and functions of riparian areas. Policy “*Bio 4.1- Restrict Land Use in Stream Conservation Areas – Limit land uses in a designated Stream Conservation Area to those that create minimal disturbance or alteration to water, soils, vegetation, and wildlife and that maintain or improve function or habitat values.*” Stream Conservation Areas (SCA) are defined as a setback from the bank of a natural watercourse, which is intended to protect the active channel, water quality, and flood control functions and associated fish and wildlife habitat values along streams. As noted above, the Barnabe Creek site is adjacent to Barnabe Creek and portions of the project could be located within this SCA.

Wetland and Waters of the United States

The U.S. Army Corps of Engineers (USACE) defines wetlands as areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The majority of USACE jurisdictional wetlands meet three wetland delineation criteria: (1) hydrophytic vegetation, (2) hydric soil types, and (3) wetland hydrology. No areas that meet these criteria occur within the project footprint. The seep downslope of the water tank at Barnabe Creek does not satisfy the three USACE criteria as described above.

Sudden Oak Death

Discovered in 1995, Sudden Oak Death (*Phytophthora ramorum*) has infected and killed thousands of tanoak, coast live oak, Shreve Oak, and California black oak trees in coastal forests from Humboldt County to Monterey County. This fungus also infects California bay laurel, pacific madrone, California buckeye, coast redwood, Douglas-fir, big leaf maple, California honeysuckle, California coffeeberry, toyon, rhododendron, manzanita and huckleberry.

Sudden Oak Death (SOD) is transported to new areas when infected plants or infested soil is moved. SOD thrives in wet or moist climates, cool temperatures, and living plants. Its spores can be found in soil and water as well as plant material. The risk of SOD spread is greatest in

muddy areas and during rainy weather where spore-producing hosts are present. Marin County is one of 14 California counties to have confirmed SOD findings and is under State and federal quarantine regulations. Quarantined areas are subject to specific regulations regarding the movement and use of susceptible plants. County Agricultural Commissioners enforce both State and federal regulations. Sudden Oak Death has been confirmed to occur by laboratory analysis in Samuel P. Taylor State Park.

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|---|---|--|---|-------------------------------------|
| WOULD THE PROJECT: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input checked="" 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) Steelhead, Coho salmon, and California freshwater shrimp are present in Lagunitas Creek. The project requires excavation and other ground disturbance at the two tank sites, which could result in harmful sediments entering Lagunitas Creek. Erosion and sediment runoff from construction activities into the creek could have adverse effects on sensitive aquatic species. Best Management Practices (BMPs) will be implemented during construction to prevent any construction debris or sediment from negatively impacting aquatic habitat. Integration of the following condition into project design and construction plans will reduce sedimentation impacts to a less than significant level.

Bio Condition - 1 Steelhead, Coho Salmon and California Freshwater Shrimp

- Best Management Practices (BMPs) will be implemented during construction to prevent any erosion, construction debris or sediment from leaving the project area and impacting adjacent habitat. Refer to **Geo Condition 2** Erosion Control, and **Hydro 1** Water Quality.
- California Department of Fish and Game and National Marine Fisheries (NMFS) will be consulted to ensure that BMPs are sufficient to protect sensitive aquatic species. DPR will direct the contractor to institute additional BMPs as necessary after consultation.

California red-legged frogs and other sensitive amphibians (northern red-legged frog, foothill yellow-legged frog) could potentially occur in the park, and could be impacted by construction activities. The following mitigation measure will reduce impacts to a less than significant level.

Mitigation Measure Bio- 2 California Red-legged Frog

- DPR and its contractor(s) will follow the U.S Fish and Wildlife Service “*Revised Guidelines on Site Assessments and Field Surveys for the California Red-legged Frog, August 2005*” (partially appended, Appendix A) to determine the need for surveys and appropriate avoidance measures.

Northern spotted owl habitat (NSO) is known to occur within approximately a ¼ mile of the Main tank project site; nesting owls could be disturbed by construction-related noise. In addition, trees that could be considered habitat for owls could be removed along the access roads to move materials and equipment on-site. The following mitigation measure will reduce impacts to this species to a less-than significant level.

Mitigation Measure Bio- 3 Northern Spotted Owl Seasonal Avoidance

- To avoid critical nesting period, no noise-generating activities during demolition and construction at the Main Tank project site will be permitted from February 1 through July 10 unless a DPR-approved Biologist conducts protocol-level nesting status surveys and the territory is classified as “non-nesting.”
- If the owls are classified as “nesting” during protocol-level status surveys, no noise-generating construction activities resulting in noise disturbance above ambient levels will occur within ¼ mile of the nest from February 1 through July 10.
- To protect owl habitat, no trees 12” or greater DBH shall be removed along access roads.

Sensitive raptors could be present in the project area, and could be nesting in the vicinity. Raptors and their nests are protected under the Fish and Game Code (Section 3503.5). The following mitigation measure will reduce potential impacts to nesting raptors to less than significant level.

Mitigation Measure Bio- 4 Nesting Raptors

- If construction is planned during the breeding season (February 1- August 31) for any raptors, then DPR-approved biologist will conduct a pre-construction, breeding season survey to locate any potential raptor nests in and around the project area. If a nest is located near the project area, construction will not occur within 200 feet of the active nest until after the young have fledged, as determined by a DPR-approved biologist.

Additionally, in order to prevent incidental hazards to any wildlife species during construction activities, in accordance with DPR Policies, integration of the following conditions into the project plans will reduce impacts to a less than significant level.

Bio Condition 2 - General Wildlife Protection Measures

- A DPR-approved biologist will conduct a training session for all project personnel prior to the start of construction. Instruction will cover identification of sensitive species and their habitat, and specific measures required to protect and avoid sensitive wildlife.
- To prevent trapping wildlife, all holes and trenches will be covered at the close of each workday with plywood or similar materials, or will include wooden escape planks ramps; all pipes will be capped. A DPR-approved biologist or other staff trained by a DPR-approved biologist will inspect trenches and pipes for animals at the beginning of each work day. If a sensitive species becomes trapped, work will be temporarily halted or diverted and the DFG will be contacted for instruction on relocating the animal.

There are fourteen CNPS List 1B or List 2 species that have reported occurrences within the Inverness, Bolinas, Novato, San Geronimo, and San Rafael 7.5-minute USGS quadrangles by either the CNDDDB or the CNPS. These are Baker’s navarettia, bent-flowered fiddleneck, Diablo helianthella bent-flowered fiddleneck, Diablo helianthella, fisedens moss, fragrant fritillary, Franciscan thistle, Marin manzanita, marsh microrseris, Napa false indigo, North Coast semaphore grass, small groundcone, swamp harebell, thin-lobed horkelia, and western leatherwood. North Coast semaphore grass is listed as rare by the State of California. Marginal to potentially suitable habitat exists either within or adjacent to the project area for the above listed species, although the likelihood of their occurrence is minimal. Implementation of the following mitigation measure would reduce impacts to a less than significant level.

Mitigation Measure Bio- 5 CNPS List 1B and List 2 Plant Species

- Prior to the start of construction, a DPR-approved biologist will conduct plant surveys during the appropriate blooming months (or when species can be unmistakably identified) for all CNPS List 1B and List 2 plant species that could potentially occur within the project area.
- All occurrences of CNPS List 1B and List 2 species found within the project area will be mapped on project maps and flagged on the ground by a DPR-approved biologist. All flagged occurrences will be avoided, if possible.
- If unavoidable impacts will occur to CNPS List 1B or List 2 species as a result of project implementation, DPR will mitigate loss of habitat or individuals at a ratio of 3:1 (or as negotiated with the California Department of Fish and Game) through habitat enhancement for these species within Samuel P. Taylor SP.

b) Redwood and Douglas-fir-tanoak series are sensitive natural plant communities that occur within the project footprint. It is not anticipated that the proposed project will create significant impacts to these plant communities. However, upgrading of the access roads to the two water tanks could damage the roots of mature native trees. Implementation of the following mitigation measure would reduce impacts to a less than significant level.

Mitigation Measure Bio-6 Sensitive Natural Plant Communities

- No roots with a diameter of 1 inch or greater within the structural root zone (3 times dbh (diameter at breast height)) of any native tree with a dbh of 24 inches or greater will be cut by road grading activities.

- c) No wetlands or “Waters of the United States”, as defined by the USACE, occur within the project area. No impact.
- d) The project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. However, native wildlife nursery sites are likely to occur within the project area and songbirds, small mammals, amphibians, and other species are likely to inhabit the project sites. Implementation of the Biological Resources mitigation measures and integration of the Biological Resource conditions above would reduce impacts to a less than significant level.
- e) As stated in the Environmental Setting above, Marin County is under quarantine regulations for Sudden Oak Death and the pathogen has been confirmed by laboratory analysis to occur in Samuel P. Taylor State Park. Integration of Sudden Oak Death BMPs into design plans will reduce impacts to a less than significant level.

Bio Condition 3 – Sudden Oak Death

- All project components impacting Sudden Oak Death host or carrier plants will follow the “Sudden Oak Death Best Management Practices in Zone of Infestation Regulated Areas, Assembled by the Management Committee of California Oak Mortality Task Force, 2002” (See Appendix A)

In addition, this project replaces two existing water tanks in order to provide reliable and adequate water supplies for park use and fire protection. Under the County's Stream Conservancy Area guidelines this project qualifies as an allowable use as a "currently existing permitted or legal non-conforming structures or improvements, their repair and retrofit within the existing footprint." Less than significant.

- f) This project does not conflict with any Habitat Conservation Plans, Natural Communities Conservation Plans, or other approved habitat conservation plan. No impact

IV. CULTURAL RESOURCES

ENVIRONMENTAL SETTING

The Project Area is within the boundaries of Samuel P. Taylor State Park. The park encompasses 2,700 acres within the North Coast Range of Marin County, California. The entrance to the park is located along Sir Francis Drake Blvd. with Lagunitas Creek running parallel to the existing road corridor.

The park campground and central core involves a recreational landscape along the southern bank of Lagunitas Creek, however a large area of the park encompasses much of the rugged, undeveloped upslope land north of Lagunitas Creek above Sir Francis Drake Blvd.. This is part of the Bolinas Ridge and Barnabe Mountain, a high point of the ridge zone. The park consists of a mixture of mature redwood-Douglas fir forest, riparian areas, and coastal scrub grasslands. (Department of Parks and Recreation 1987:2).

The Area of Potential Effects (APE) for this project includes two primary areas: 1) Tank #1 (Main Tank) and the 2) Barnabe Tank site. The APE for Tank #1 falls within the most sensitive area of cultural resource concerns.

There are various categories of cultural resources addressed in California. These are prehistoric archaeological sites, historic archaeological sites, historic structures and buildings, and cultural landscapes. Linear resources like transportation networks and/or trails are usually included as part of landscapes. Any or all of these categories or sub-categories may be found as isolated features or as contributing elements to larger historic or cultural districts or landscapes.

A partial cultural resource assessment of the 2,700 acre Samuel P. Taylor State Park was performed by DPR archaeologist Francis Miller in 1987. Miller's pre-field archival research identified eleven previous archaeological surveys ranging from 20 acres to over 1,200 acres that occurred within the vicinity of the park. In addition to these surveys outside the park boundaries, Miller found that in 1978 and 1986 DPR archaeologists had completed two archaeological surveys within the boundaries of the park. Based on the results of her pre-field research Miller's survey strategy was to survey only 700 acres or 27 % of the park.

During her survey, Miller identified 16 previously unrecorded cultural resources that included 13 historic archaeological sites and three prehistoric sites. Of this total, two archaeological sites, CA-MRN-478 and CA-MRN-549H are located in the vicinity of the current project's APE. CA-MRN-478 is a prehistoric lithic scatter described as a "possible occupational site" in the site record. CA-MRN-549H is a historic narrow gauge railroad grade.

Miller also provided a two-page sketch of the historic landscape between Camp Taylor and Samuel P. Taylor's residence along the southern bank of Lagunitas Creek. This sketch depicts many if not all of the structures associated with the Samuel P. Taylor enterprise of the mid- to late-1800s along Daniels Creek later to be known as Lagunitas Creek. Historic structures identified on the map include the residence of Samuel P. Taylor located near the existing Duplex Residences #5 and #6. This map is most likely based map on interviews Miller had with Bill Lintow, a long time resident of the area. Lintow identified the location of the first Samuel P. Taylor house by artifacts he found during the 1960s. This archaeological feature

has not been formally recorded.

Based upon the above information, subsequent archaeological investigations, and archival research of the historic landscape of Samuel P. Taylor State Park the primary core of historic activity is south of Lagunitas Creek. Specifically, the core lies between Camp Taylor and the bridge crossing just west of the 'Old Paper Mill' foundation site along the south bank of Lagunitas Creek. This area includes the proposed construction activity APE at Tank #1 (Main Tank). One newly discovered historic archaeological site, SPT-233-RT-01 was recorded adjacent to Tank #1. Since this archaeological site represents the earlier dismantling of the historic redwood tank, the historic archaeological site was recorded.

Historic Resources

Duplex Residence #5 and #6, located within the proposed staging area at the Main tank site, is an existing park residence constructed in 1950. It was designed by Edwin Kelton and is a representative of the Post War period (1942-1954) of California State Park's architectural history. Until formal evaluation, this duplex must be treated as potentially eligible for the California Register of Historical Resources (Allen and Baxter, 1999).

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|--|---|--|---|--------------------------|
| WOULD THE PROJECT: | | | | |
| 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 checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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"/> |

DISCUSSION

a) Although no aspect of the proposed project will directly cause an adverse substantial change in a historic resource, historically significant residences #5 and #6 are located adjacent to proposed equipment staging areas. Implementation of the following mitigation measure will reduce inadvertent impact to these resources to a less than significant level.

| |
|---|
| Cultural Mitigation Measure 1 – Inadvertent Impact |
| No construction equipment or materials will be parked/stored within 25 feet of residences 5 and 6 in order to prevent inadvertent damage to the structures. |

b) As noted in the Environmental Setting above, prehistoric archaeological sites have been recorded adjacent to the Main tank site. Although no cultural resources were observed on the surface during the archaeological survey of the project's proposed APE natural and cultural events over time may have displaced and/or obscured these resources, there is a potential for the inadvertent discovery of artifacts during any ground disturbing activity. Implementation of **Cultural Condition Cult-1** will be included in construction plans as a precaution.

Cultural Condition 1 – Previously Undocumented Resources

- In the event the previously undocumented cultural resources are encountered during project construction (including, but not limited to dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic ash), work within the immediate vicinity of the find will be temporarily halted or diverted until a DPR-qualified cultural resource specialist has evaluated the find and implemented appropriate treatment and disposition of the artifact(s).

The proposed project includes establishing staging areas for construction equipment and new construction materials, and improvements to existing access roads to both the Main tank site and the Barnabe tank site. Excavation of the footprint of both existing redwood water tanks will be site-specific ground disturbing activity. Based upon the discovery and documentation of historic archaeological site SPT-233-RT-01 in the immediate vicinity of the Main tank site there is a moderate to high likelihood that subsurface archaeological materials could be present within the footprint of the construction area. To prevent unanticipated impacts to the newly discovered archaeological site, implementation of **Mitigation Measures Cult-2** below will reduce impacts to a less than significant level.

Cultural Resource Mitigation Measure 2 - Resource Protection

- Prior to the start of construction, a DPR-qualified archaeologist will flag site SPT-233-RT-01 perimeter with a 10 foot buffer zone.
- Prior to the start of construction, DPR-qualified archaeologist will meet with the contractor and project manager on-site to specify the area (based on flagging) for contractor to place orange construction fencing.

- c) No human remains or burial sites have been documented in the immediate vicinity of the proposed water tank installation project. However, because there are prehistoric archaeological sites recorded within the state park boundary and there is documentation of Native American land use of the area, there is a potential of discovering undocumented human remains. Implementation of the following condition would reduce impacts to a less than significant level.

Cultural Condition 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 or returned to the point of discovery and covered with soil. 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 (or Tribal Representative). If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the appropriate Native American authorities.
- If the coroner or tribal representative determines the remains represent Native American interment, the Native American Heritage Commission in Sacramento and/or tribe will be consulted to identify the most likely descendants and appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete (PRC 5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination.
- If it is determined the find indicates a sacred or religious site; the site will be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the Native American Heritage Commission/Tribal Cultural representatives will also occur as necessary to define additional site mitigation or future restrictions.

VI. GEOLOGY AND SOILS

ENVIRONMENTAL SETTING

Topography

Samuel P. Taylor State Park comprises nearly 2,700 acres of steep rolling hills, including 3 miles Lagunitas Creek canyon. A few small perennial tributaries, Devils Gulch and Barnabe Creek, discharge their flows into Lagunitas Creek within park boundaries. Elevations in the unit range from approximately 100 feet along Lagunitas Creek to nearly the 1,466-foot summit of Barnabe Mountain, which is just east of the park boundary. The gently undulating summit area of Bolinas Ridge parallels the southwestern boundary of the park.

Regional Geology

The Park is located within the California Coast Range Geomorphic Province, a 600-mile long northwest trending chain of mountains that formed primarily as a result of movement along the San Andreas Fault and associated faults. The northwest-southeast trending San Andreas Fault Zone (SAFZ) is located approximately 2 miles west of the park. This fault zone marks the boundary between the North American plate to the east and the Pacific plate to the west.

Bedrock on the east side of the SAFZ, which includes the park, consists of the 80 to 140 million years old Franciscan Formation, a heterogeneous assemblage of clay-rich greywacke sandstone, shale, chert, and greenstone (metamorphosed volcanic rock). On the western side of the SAFZ bedrock consists of Upper Cretaceous (100 to 65 million years ago) granitic and older metamorphic rocks of the Salinian Block, which are overlain in some areas by younger marine sedimentary rocks (sandstone, shale, mudstone, siltstone) of the younger Miocene to Pliocene (12-5 million years old). Alluvium occurs on both sides of the SAFZ along stream channels and flat lands and beaches, such as at Tomales Bay. (DPR 2004; Marin County CDA 2002)

Park Geology

The geologic units underlying Samuel P. Taylor State Park are Franciscan Formation bedrock consisting of sandstone, shale, and conglomerate rocks (Wagner and Bortugno 1982). Other geologic reports describe the bedrock as Franciscan mélangé, a unit that contains a sheared mudstone and sandstone matrix with minor amounts of chert and metamorphic rocks (Taber, 2005). Weathered and fractured “blocky” sandstone is exposed on a slope cut immediately adjacent to the Main tank site (Taber 2005). This cut slope is relatively stable with minor sloughing and accumulation of some debris at the base of the slope. No rock outcrops are observable in the vicinity of the Barnabe tank site, but the cut slope adjacent to the site exposes granular material with a silty/clayey matrix. This cut slope is adequately stable with some surficial slumping on the cut-face.

Published mapping has not identified any faults that run through or adjacent to either of the tank sites, although as indicated above the San Andreas Fault is approximately 2 miles west of the park. Neither site is within an Alquist-Priolo “Earthquake Fault Zone” for fault-rupture hazard.

No landslides have been mapped in the vicinity of either work site in published surveys. No significant hazards were observed at either site by Taber (2005).

Soils

There are nine soil mapping units identified in the Soil Survey of Marin County (USDA-SCS 1979) for Samuel P. Taylor State Park. Important physical characteristics of these soils are listed in Appendix A, Table 1. Most of the park, including the Main Tank project site has been mapped as Dipsea-Barnabe very gravelly loams, 50 to 75 percent slopes and Saurin-Bonnydoon complex, 50 to 75 percent slopes. The Barnabe Tank project site has been mapped as Cronkhite and Barnabe complex soils, 15 to 30 percent slopes.

Seismicity

The most significant, well-represented geologic feature in the park and surrounding area is the San Andreas Fault Zone (SAFZ). The fault zone affects the local seismicity, some of the regional topographic characteristics (e.g. Tomales Bay), and some of the local drainage patterns. This is the largest fault zone on the west coast of the North American continent and due to its length, tectonic characteristics, and recent and continuing movement, is capable of producing strong ground shaking and surface fault rupture (ESA 2003). The 1906 San Francisco Earthquake (7.9 moment magnitude²) was the highest magnitude earthquake ever experienced in this region of California. The California Department of Conservation Division of Mines and Geology has determined that the San Andreas Fault in this region is capable of a maximum moment magnitude 7.1 earthquake. The expected shaking motion for this event is 0.683g peak ground acceleration³. The Working Group on California Earthquake Probabilities (1999) has determined there is a 70% probability of at least a magnitude 6.7 or greater earthquake before 2030 within the San Francisco Bay Region.

At the worksite locations Taber (2005) concludes that the potential for secondary seismic effects such as liquefaction, rapid settlement or lateral spreading is very low

| WOULD THE PROJECT: | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|--|---|--|---|-------------------------------------|
| 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 type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 type="checkbox"/> | <input checked="" type="checkbox"/> |

² Magnitude is a measure of the energy released in an earthquake. The Richter magnitude scale is logarithmic, with each increase in whole number corresponding to a 10 times increase in wave amplitude. The energy released increases by a factor of 31 for each whole number increase.

³ The most commonly used measure of the amplitude of a particular ground motion is peak ground acceleration. The peak ground acceleration for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. Peak ground acceleration is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared.

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 type="checkbox"/> | <input checked="" 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) i) Although the San Andreas Fault is located approximately two miles to the west of the park, the project sites are not within an “Alquist-Priolo Earthquake Fault Zone” for fault rupture hazard. Published mapping has not identified any faults that run through or adjacent to either of the work sites. Site reconnaissance performed by Taber (2005) for this project did not indicate specific evidence of faulting. No impact.

ii) As stated above, the project sites are in an area that is subject to potential strong ground shaking from the nearby San Andreas Fault. The California Department of Conservation Division of Mines and Geology (now the California Geological Survey) has determined that the San Andreas Fault in this region is capable of a maximum moment magnitude 7.1 earthquake. The expected peak ground acceleration in the project area is 0.683g (acceleration due to gravity). Implementation of **Condition Geo-1** into project design plans will reduce this impact to less than significant.

| |
|--|
| <p>Geo Condition - 1</p> <ul style="list-style-type: none"> • The design of the proposed water tanks will conform to earthquake design requirements. Tank and foundation design will follow the applicable regulations and design practices of the American Water Works Association Design Standards. • Any new equipment installed as part of the water system treatment upgrades will be secured to the walls and/or floor in the existing water treatment building to prevent damage in the event of a large earthquake. • State Park staff will inspect the water supply system for damage as soon as feasible after a large earthquake. |
|--|

iii) Seismic-related ground failure, such as liquefaction, usually occurs in unconsolidated granular soils that are water saturated. Unconsolidated granular soils do not occur at either project site. 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). Taber (2005) has conducted geotechnical investigations of both water tank sites, concluding that the potential for secondary seismic effects such as liquefaction, rapid settlement or lateral spreading is very low. No impact.

iv) Published surveys have not mapped any landslides in the vicinity of either work site and no significant landslides hazards were observed at either site by Taber (2005). No impact.

b) A temporary increase in erosion could occur during grading for the water tank foundation and equipment staging areas, improvement of tank access roads, and other ground disturbing activities. Implementation of **Condition Geo-2** into construction plans will reduce soil erosion or loss of topsoil by the proposed project to a less than significant level.

Condition Geo 2 - Erosion Control BMPs

- Final Construction plans will identify BMPs to be used in all areas to control soil and surface water runoff during excavation, grading, and trenching. BMPs will include, but not be limited to, the use of silt fences, straw bales, or straw or rice coir rolls, to prevent soil loss and siltation into nearby water bodies.
- Grading and excavation activities will not be planned during the rainy season (October 15 to April 15), but if storms occur outside these dates and during construction, “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 (re-compacted, re-vegetated, etc.) Areas requiring revegetation will be revegetated with plant material of local genetic stock.

c) The project is not located within a geologic unit or soil that is known to be unstable, based on available data, including the geotechnical site investigations by Taber (2005). No impact.

d) Although some soils in the park have been mapped by USDA-SCS (1979) as having a high shrink-swell potential, site-specific geotechnical investigations by Taber (2005) indicate that soils at the main tank site have a low expansion potential and a low to moderate potential at the Barnabe tank site. Therefore, there is a less than significant impact potential for expansive soils for the project sites.

e) The project does not involve the installation of a septic system or leach field. Therefore, there is no impact.

f) No known unique paleontological resource or unique geologic feature exists within the project site. No impact.

VII. HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL SETTING

The two sites at Samuel P. Taylor State Historic Park (Park) proposed for water tank replacements are located in a mountainous region of Marin County, approximately 14 miles northwest of the town of San Rafael and 1 mile north of the town of Lagunitas. Vegetation in the park area is composed of a mosaic of annual grassland meadows, chaparral, oak woodland, redwood and mixed evergreen forests. Slopes are moderate to steep.

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 materials.

Airports and Schools

The project site is not located within an airport land use zone, or within 2 miles of an airport. The Marin County Airport at Gness Field is located approximately 22 miles northeast of the project site, in the City of Novato (County of Marin, 2005). There are no private airstrips in the vicinity of the Park.

The closest school, Lagunitas Elementary, is located approximately 3 miles to the southeast at the intersection of Lagunitas School Road and Sir Francis Drake Blvd (Mapquest, 2006).

Fire Hazards

The Park region is rated as having high to very high fire danger by Marin County (County of Marin, 2005). The Park's fire suppression needs are met by the California Department of Forestry and Fire Protection (CDF) and the Marin County Fire Department.

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|--|---|--|---|-------------------------------------|
| WOULD THE PROJECT: | | | | |
| 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 checked="" type="checkbox"/> | <input 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 a 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.

| |
|--|
| <p>Hazmat Condition – 1 – Hazardous Materials</p> <ul style="list-style-type: none"> • 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 an emergency Spill Prevention and Response Plan and maintain a spill kit on-site throughout the life of the project. This plan will include a map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment may occur. The Spill Prevention and Response Plan will be incorporated into a Storm Water Pollution Prevention Plan if it is determined that the project requires a NPDES construction permit. • Areas designated for refueling, lubrication, and maintenance of equipment shall be at least 50 feet from any spring/seep 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 the Park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside Park boundaries, at a lawfully permitted or authorized 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 Spill Prevention Plan and 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 approximately three 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 with project development.
- 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 Marin County Airport at Gness Field is located 22 miles to the northeast in the City of Novato. Therefore, no impact would occur as a result of this project.
- g) The proposed Barnabe site work location is in an open area surrounded by annual grasses and heavy fuels. The Main tank site is situated in, and surrounded by, heavy vegetation. Heavy equipment can get very hot with extended use; this equipment could sometimes be in close proximity to this vegetation, particularly at the Barnabe site. Improperly outfitted exhaust systems or friction between metal parts and/or rocks could generate sparks, resulting in a fire. Integration of the following construction fire control conditions below into design and construction plans would reduce the potential for adverse construction impacts from this project to a less than significant level.

| Hazmat Condition 2 - Fire |
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|----------------------------------|

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|--|
| <ul style="list-style-type: none"> • 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 CDF and the Marin County Fire Department. • 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

Samuel P. Taylor State Park is located within the Lagunitas Creek Watershed as identified in the Marin County Watershed Management Plan Administrative Draft (2004). This watershed, which is the largest drainage emptying into Tomales Bay, is 103 square miles in size. Major tributaries include Devils Gulch, whose lower reach is within park boundaries. Park lands encompass all or nearly all of the watersheds of four other minor tributaries of Lagunitas Creek. Barnabe Creek and Deadman's Gulch drain the western slopes of Barnabe Mountain. Wildcat Canyon and Irving Creek drain the northern slopes of Bolinas Ridge in the southern portion of the park.

Flooding

None of the streams within the park, including Lagunitas Creek, have FEMA-designated flood zones. Both tank sites are situated on land that is well outside the limits of any maximum flood events. The Main Tank site is situated on a moderately steep slope more than 500 linear feet and at least 100 feet in elevation above Lagunitas Creek. The Barnabe Tank site is within 200 linear feet of Barnabe Creek, a very small deeply incised stream.

Water Quality Regulation

The San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) regulates water quality in the region and provides water quality standards and management criteria as required by the Clean Water Act. These standards and criteria are presented in the 1995 Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin, which includes all fully approved subsequent amendments that can be viewed online at the SFBRWQCB website (<http://www.waterboards.ca.gov/sanfranciscobay/basinplan.htm>). The Basin Plan identifies the beneficial uses, water quality objectives, and implementation plans for the San Francisco Bay Basin. The Lagunitas Creek Watershed falls within Marin Coastal Basin as identified in the Basin Plan. Lagunitas Creek is identified as significant surface water. Present and potential beneficial uses that are applicable to the Lagunitas Creek Watershed include municipal and domestic supply, agricultural supply, industrial process supply, groundwater recharge, water contact recreation, non-contact water recreation, wildlife habitat, cold freshwater habitat, warm freshwater habitat, fish migration, and fish spawning. Currently, surface and groundwaters within the park provide water supply for the park staff and visitors; fire protection; groundwater recharge; and habitat for aquatic and terrestrial organisms, including sensitive wildlife species such as coho salmon, steelhead, California red-legged frogs, and freshwater shrimp.

Water Supply

Water for park uses is primarily supplied from three lateral wells that tap into spring sources located in the Devils Gulch and Deadmans Gulch areas of the park. A vertical groundwater well, located approximately ¼ mile from the Barnabe Tank site, augments this primary supply. All wells supply water via gravity flow to a system of interconnected water lines. Both water tanks are at equivalent elevations in order to enable a gravity flow system.

Water Quality

An October 2005 water quality analysis of the park’s primary and secondary water supply sources by Sequoia Analytical of Morgan Hill indicates that none of the standard water quality constituents tested for exceeded California Action Levels or Maximum Contaminant Levels. These constituents include inorganics (e.g. ammonia-n), volatile organic compounds (e.g. benzene), metals (e.g. aluminum), chlorides, nitrates/nitrites, etc.

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

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|--|---|--|---|-------------------------------------|
| h) Place structures that would impede or redirect flood flows within a 100-year flood hazard area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Result in inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

DISCUSSION

- a) Proposed grading of tank access roads, equipment staging areas, and excavation of tank pad sites could result in the generation of sediment that ultimately makes its way into the local stream systems. Although construction work would not be allowed during the wet season (generally October 15 through April 15), some loose soil material and concrete waste could potentially be mobilized by rainfall events and reach park streams that are habitat for sensitive wildlife species, including freshwater shrimp, coho salmon, steelhead, and California red-legged frog. Other impacts to water quality could result from releases of fuels or other fluids from vehicles and equipment during the construction process. These activities could result in a violation of water quality standards and waste discharge requirements. Integration of **Hydro Condition 1** into construction plans will control releases of pollutants in storm (or other) water runoff. Less than significant.

Hydro Condition 1 – Water Quality

- Integration of **Geo Condition 2** into design plans will provide BMPs to control erosion and runoff during project construction and post-construction.
- The project will comply with all applicable water quality standards as specified in the SFBRWQCB Water Quality Control Plan (Basin Plan).
- Integration of **Hazmat Condition 1** into construction plans will reduce impacts to water quality from possible pollutants (fuels and other vehicle fluids) released from vehicles and heavy equipment during construction and concrete waste generated during construction of water tank foundations.

- b) This project will cause no change to current withdrawals of water from existing wells that supply the park’s water needs. No impact.
- c) The existing area drainages will not be altered in a manner that will significantly increase in on- off-site erosion or siltation. In addition, BMPs for erosion will be integrated into the design and construction plans for this project. Less than significant.
- 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 which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. No impact.
- f) This project will provide reliable and adequate water supplies for park use and fire protection. The new tanks will require approval from the Department of Health Services, Drinking Water branch for drinking water purposes. In addition, construction of the project has the potential to substantially degrade water quality if BMPs to control soil erosion and runoff or release of vehicle or equipment fluids were not in place during construction. However, integration of **Hydro Condition 1** above would prevent a substantial degradation of water quality from construction.
- g) This project is not located within any FEMA-designated 100-year flood plain and does not involve any housing. No impact.
- h) This project would not place structures that could impede or redirect flood flows within any FEMA-designated 100-year flood plain. No impact.
- i) This project would not expose people or structures to an increased significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam. No impact.
- j) The project is not located in an area that would be inundated by either a seiche or a tsunami. While landslides and possible mudflows may be possible in the steeper areas of the park, no mudflows are expected to occur at the project site. No impact.

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 extensive lands that are generally in a natural condition and open to the public. Each of these agencies manages lands that amount to thousands of acres each.

The Marin Countywide General Plan recognizes the 606 square miles (370,511 acres) of land and water comprising Marin County as a cohesive environmental unit made up of regions called corridors, each with specific geographical and environmental characteristics and natural boundaries such as north-south ridgelines and bay land. Planning areas include: Novato, Las Gallinas, San Rafael Basin, Upper Ross Valley, Lower Ross Valley, Richardson Bay, and West Marin.

Samuel P. Taylor State Park, a park of 2,700 acres, is included in the West Marin planning area. The West Marin Planning Area consists of 249,128 acres and is comprised of open space, agricultural lands, and small towns located west of the City Centered Corridor and from Fort Cronkite Baker in the south to the Sonoma County line in the north. Park lands are designated as open space by the Marin Countywide Draft General Plan.

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|---|---|--|---|-------------------------------------|
| WOULD THE PROJECT: | | | | |
| 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

- The proposed project is completely within the boundaries of Samuel P. Taylor State Park property. Although staging areas will be located near Park staff housing; it will not divide the small community. The project would add no barriers or elements that would divide or interfere with the established surrounding community. No impact.
- As noted in the Environmental Setting and Discussion IX(a) above, the proposed project site is located within Samuel P. Taylor State Park. Although this park does not have a General Plan, work to repair, replace, or rehabilitate existing facilities or to protect public health and safety are permitted under PRC §5002.2 (c). In addition, no project elements

are in conflict with the 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 or natural community conservation plans in effect in the park; therefore, no conflict and 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 the 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 the 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.

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. The Nicasio Quarry, located in Nicasio, is approximately five miles north of Samuel P. Taylor State Park.

No significant mineral resources have been identified within the boundaries of Samuel P. Taylor 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> |
|--|---|--|---|-------------------------------------|
| WOULD THE PROJECT: | | | | |
| a) Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state? | <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) As stated in the Environmental Setting above, no significant mineral resources have been identified within the park boundaries. Therefore, the project would not result in the loss of availability of a known mineral resource nor a locally important mineral resource recovery site. No impact.

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XI. NOISE

ENVIRONMENTAL SETTING

Vehicle traffic is the primary source of noise in Marin County, with the highest noise levels occurring along major roadways. The major noise sources include major highways (Highway 37, Highway 101, and Highway 1), and major county roads (including Sir Francis Drake Boulevard, Petaluma Point Reyes Road, Lucas Valley Road, Novato Boulevard, etc.), the San Rafael Airport, Gness Field County Airport, and Richardson Bay Helipad. Traffic noise levels on the major highways, primary arterial streets and major county roads have not changed significantly since 1987 and future projects expect an increase of at most one decibel over existing levels. Existing noise levels for air traffic have not changed substantially since 1986 and are not expected to increase in the future.

Samuel P. Taylor State Park features over 2,700 acres of wooded countryside in the steep rolling hills of Marin County north of San Francisco. The park is located in Lagunitas, about 15 miles west of San Rafael on Sir Francis Drake Boulevard. The project site is relatively undeveloped and all construction activities associated with the project would occur within the park boundaries. Additionally, no noise sensitive land uses are located in the immediate vicinity of any of the proposed construction. Park staff housing is located approximately 250-300 vertical feet away from the Main tank site.

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain activities. Noise is commonly described in “Ldn,” which expresses average sound level over a 24-hour period in decibels (dB), the standard measure of pressure exerted by sound. Ldn includes a 10 dB penalty for sounds between 10 P.M. and 7 A.M., when background noise is lower and people are most sensitive to noise. Because decibels are logarithmic units of measure, a change of 3 decibels is hardly noticeable, while a change of 5 decibels is quite noticeable and an increase of 10 decibels is perceived as a doubling of the noise level. A change from 50dB to 60dB increases the percentage of the population that is highly annoyed at the noise source by about 7 percent, while an increase from 50 dB to 70 dB increases the annoyed population by about 25 percent. Sounds as faint as 10 decibels are barely audible, while noise over 120 decibels

Typical Noise Levels

| Type of Noise or Environment | Decibels (dBA) |
|---------------------------------|----------------|
| Soft Whisper | 30 |
| Normal Conversation | 60-65 |
| Car, at 20 mph, 25 ft away | 65 |
| Vacuum Cleaner 10 ft away | 70 |
| Backhoe | 84-93 |
| Front end loader | 86-94 |
| Hammer , Earthmover | 87-95 |
| Portable saw | 88-102 |
| Dump Truck at 50 mph 50 ft away | 90 |
| Earth Tamper ; Crane | 90-96 |
| Bulldozer | 93-96 |
| Gas leaf blower, 25 ft away | 100 |
| Helicopter 200 ft away | 100 |
| Stud welder | 101 |
| Jackhammer | 102-111 |
| Train horn 100 ft away | 105 |
| Jet takeoff 200 ft away | 120 |
| Shotgun at shooter’s ear | 140 |

can be painful or damaging to hearing. County residents are frequently exposed to noise ranging from 35 to 80 decibels.

The Marin Countywide Draft General Plan includes policies and programs intended to reduce the impact of future development on noise. Project-relevant noise policies include:

Noise Policy 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> |
|---|---|--|---|-------------------------------------|
| WOULD THE PROJECT: | | | | |
| a) Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 checked="" type="checkbox"/> | <input 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 type="checkbox"/> | <input checked="" 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 and near the project area will fluctuate, depending on the type and number of construction equipment operating at any given time, and will exceed ambient noise standards in the immediate vicinity of the work for brief periods of time. The distance from staff residences (approximately 250-300 feet horizontally or approximately 1000 feet along the access road) to the proposed work sites is sufficient to prevent an objectionable level of noise. However, depending on the specific construction activities being performed, short-term increases in ambient noise levels could result in speech interference at the work site and a potential increase in annoyance to visitors and staff. As a result, construction-generated noise will be considered to have a potentially significant short-term impact to these people. Integration of **Noise Condition 1** into the project design and construction plans will reduce noise impacts to a less than significant level.

Noise Condition 1

- Construction activities will generally be limited to the daylight hours, Monday – Friday; however, weekend work may be implemented to accelerate construction or address emergency or unforeseen circumstances. If weekend work is necessary, no work will occur on those days before 8:00 a.m. or after 6 p.m.
- 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. engine enclosures, acoustically-attenuating shields, or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.
- Stationary noise sources and staging areas will be located as far away from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources will be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.

- b) Construction activity will not involve the use of explosives, pile driving, or other intensive construction techniques that could generate significant ground vibration or noise. Minor vibration immediately adjacent to backhoes and heavy equipment will only be generated on a short-term basis. Therefore, ground-borne vibration or noise generated by the project will have a less than significant impact.
- c) Once the proposed project is completed, all related construction noise will disappear. Nothing within the scope of the proposed project will result in a substantial permanent increase in ambient noise levels. Therefore, no impact.
- d) See Discussion XI(a) above. Conditions integrated into project design reduce impacts to a less than significant impact.
- e,f) This project 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. Therefore, no impact will occur as a result of these project activities.

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XII POPULATION AND HOUSING

ENVIRONMENTAL SETTING

Samuel P. Taylor State Park is located in the wooded, steep, rolling hills of Marin County. The largest towns close to the Park are San Rafael, Richmond, and San Francisco located approximately 15 miles, 26 miles, and 32 miles respectively to the southeast and south.

The population for Marin County will peak at 252,440 people in 2010, an increase of 1.6 percent from the 2000 population before falling to 225,127 people in 2050. In 2005, approximately 23 percent of Marin County's total population or 57,244 people resided in San Rafael, the largest city closest to Samuel P. Taylor SP. (DOF)

Housing within the park boundaries is limited to seven existing staff residences. The permanent population of the park is relatively static, with approximately 15 people living in the park per year. 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. No business or residential opportunities are offered within the park boundaries.

| | <u>LESS THAN POTENTIALLY SIGNIFICANT IMPACT</u> | <u>SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|---|---|--|---|-------------------------------------|
| WOULD THE PROJECT: | | | | |
| 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-c) The proposed project will install two water tanks at two separate locations within Samuel P. Taylor State Park. 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. Jobs are not expected to be generated as a result of this project therefore it will have no impact on population growth or housing.

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XIII PUBLIC SERVICES

ENVIRONMENTAL SETTING

Samuel P. Taylor SP is located on State Responsibility Land in West Marin County. The California Department of Forestry and Fire has a legal responsibility to provide fire protection on all State Responsibility Lands (CDF). In support of its ground forces, the CDF emergency response air program includes several pieces of air attack equipment. All California Department of Forestry and Fire (CDF) Aircraft are strategically located throughout the state at 13 air attack and nine helitack bases. Airtankers and helicopters are equipped to carry fire retardant or water, the helicopters can also transport firefighters, equipment and injured personnel. Aircraft can reach most fires within 20 minutes.

The size of the state and the numerous types of emergencies such as wildfire fires, floods, and earthquakes, require the cooperative efforts of federal, state and local agencies. CDF and Marin County Fire Department, Woodacre Fire Headquarters, respond to emergencies at Samuel. P. Taylor SP. Marin County Fire Department dispatches all emergencies from the Woodacre Headquarters Emergency Command Center (ECC). The ECC also coordinates emergency response with neighboring agencies, such as California State Parks and the National Park Service. The ECC Fire Chief is the California Office of Emergency Services (OES) Area Coordinator and coordinates all OES mutual aid requests for assistance, both in-state and out-of-state.

The State Park Rangers are trained in Law Enforcement and are responsible for watching over the park. The Marin County Sheriff's Department responds to emergency calls and assists with criminal investigations.

Samuel P. Taylor SP is located closest to the Lagunitas School District. There are no existing or proposed schools within one-quarter mile of the proposed project site.

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|--|---|--|---|-------------------------------------|
| WOULD THE PROJECT: | | | | |
| a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: | <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 checked="" type="checkbox"/> | <input 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 replace two existing, deteriorated redwood water tanks with two new, 210,000 gallon capacity steel tanks within Samuel P. Taylor State Park. While the plan proposes replace tanks, rehabilitate the existing water system, perform roadwork as necessary and restore disturbed vegetation, these will be within the tank areas; this project will not result in a significant impact to acceptable service ratios, response times of other performance objectives for public services. Any jobs generated as a result of the project will be short-term, with no permanent connection to the park location. No significant increase in public service requirements.

Fire Protection: Use of construction equipment around flammable annual vegetation presents an increased fire risk that could result in additional demands on CDF and local fire response teams. Any impact on services will be temporary and nothing in the project scope will contribute to the need for an increase in the existing level of public service. Integration of **Hazmat Conditions 3-4**, combined with the availability of on-site fire suppression equipment and support from State Park Rangers, will reduce the potential impact on Fire Protection services to a less than significant level.

Police Protection: State Park Rangers with law enforcement authority patrol the park boundaries, police the public use areas and grounds, enforce the public resource code, and guard against misuse of park property and resources. The Marin County Sheriff's Department responds to emergency calls and assists with criminal investigations. The proposed project is not expected to result in any need for increased police services. No impact.

Schools: No schools exist within two miles of the project area and there are no elements of this project that will result in an increased school enrollment in the area. No changes will occur that will require additional schools or school personnel. No impact.

Parks or Other Public Facilities: Work related to this project could cause minor delays and inconveniences at park access points and around the staging areas, especially during minor road work to improve construction equipment access. All areas under construction will be closed to park visitors; however, due to the seasonal use of these facilities and the phasing of construction, the proposed project will not result in any significant adverse impact to park facilities or increased use at other parks in the area

XIII. RECREATION

ENVIRONMENTAL SETTING

Samuel P. Taylor State Park has over 2,700 acres of wooded countryside in the steep rolling hills of Marin County north of San Francisco. Samuel Penfield Taylor built a resort hotel and Camp Taylor on this property, which was one of the first sites in the United States to offer camping as a recreational pursuit. The area was one of California's most popular and well-known weekend recreation destinations in the 1870s-80s (DPR 2006a).

Samuel P. Taylor SP has been set aside, in part, by the State of California to provide public recreational opportunities. Over the past decade, an average of 176,000 people has visited the park each year. Overnight campers comprise 44% of the park's visitors; paid day use averages 23% of the total, with free day use averaging 32% (DPR 2006b).

The park offers a network of hiking trails and fire roads, making it easy to hike to the top of Mount Barnabe. A less strenuous option is a visit to Devil's Gulch, considered by many to be the best place in the park for a picnic or a place to relax. A paved bike trail runs about three miles through the park, beginning near its entrance on Sir Francis Drake Boulevard. The trail is nearly level and follows the old Northwest Pacific Railroad right of way (DPR 2006a).

In addition to hiking and bicycling, recreational opportunities for visitors include picnic areas, family and group campsites, sites for hike- and bike-in camping, equestrian and nature trails, and swimming. Recreational vehicles and camping trailers are also accommodated. Special programs offered by park staff include environmental resource education through the Lagunitas Elementary School District.

Marin County attracts hikers, cyclists, equestrians, campers, and fishermen from throughout the San Francisco Bay Area, with 141,400 acres of federal, state, and county parkland, county open space, and two water districts' lands devoted to recreation. The many state, county and city operated parks and recreational facilities in the general project vicinity include: Mount Tamalpais State Park, China Camp State Park, Point Reyes National Seashore, and the Golden Gate National Recreation Area (Marin.org 2006).

The proposed project area is within the boundaries of Samuel P. Taylor SP, but not within its primary visitor area. There are no public services or facilities at either water tank site. Any impacts on recreation from proposed secondary construction staging on the level and paved areas below park residences near Lagunitas Creek and downhill from the Barnabe tank site would be temporary and less than significant.

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|---|---|--|---|--------------------------|
| WOULD THE PROJECT: | | | | |
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated? | <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 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

facilities that might have an adverse physical effect on the environment?

DISCUSSION

- a) As noted above, numerous and varied recreational opportunities exist on public lands throughout Marin County. The proposed project would replace elements of the existing potable water service within a public park, with minimal direct impact (construction or expansion) on the park's recreational facilities. During construction as the first tank is taken off-line and replaced, a temporary reduction in water capacity would result within the park and could require the limited closure of shower facilities; however, any increase in use of alternative recreation areas during this period would be limited and temporary. Less than significant impact.
- b) Although the project would increase the capacity of the small water system, this increase would only serve existing recreational users and meet the park's operational needs. Increasing water delivery in this system would have negligible or no effect on recreational opportunities within the park. Less than significant impact.

XIV. TRANSPORTATION/TRAFFIC

ENVIRONMENTAL SETTING

The proposed project site is located within the boundaries of Samuel P. Taylor State Park, approximately 15 miles west of San Rafael on Sir Francis Drake Boulevard in Marin County. The park attracts approximately 176,000 visitors per year (DPR 2006a, 2006b).

General circulation in and around Marin County is largely dependent on the private automobile. Although traditional approaches to maintaining acceptable traffic flows include physical changes such as road widening, the County found these to be, “prohibitively expensive and environmentally damaging while not relieving traffic congestion for the long term.” The County is instead promoting significant “changes in travel behavior,” in order to reduce traffic congestion, greenhouse gas emissions, and air pollution. Among these changes are a proposed shift away from 2-way single destination car trips and toward greater reliance on an inter-modal system of transportation by bus, rail, ferry, bicycle, and foot (Marin 2005a).

In November 2004, Marin County residents overwhelmingly approved a landmark sales tax measure allocating \$331 million dollars over the next 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 (Marin 2005a).

Public transportation in the county has developed into an integrated system relying largely on Golden Gate Transit buses and ferries. As the public transit system focuses its efforts in the communities and routes where traffic congestion and ridership is greatest, service to outlying areas in the western county is limited. The West Marin Stagecoach provides a weekday shuttle between San Anselmo and the Lagunitas area. The shuttle is limited, however, to four trips along Sir Francis Drake Boulevard per day and stops short of the park boundaries, at Forest Knolls (Marin 2005b; Golden Gate Transit 2006).

In September 2003, the County monitored peak hour traffic volumes on 24 roadway segments, including local roads and state and federal highways. Sir Francis Drake Boulevard between Butterfield Road in Fairfax and State Route 1 (the section that passes the park) has recorded peak traffic volumes averaging 1004 westbound vehicles and 630 eastbound vehicles on weekday afternoons. The County has identified the Level of Service in this area at “B” for eastbound traffic and “F” for westbound; the flow ranging from “stable” to “forced,” and delays ranging from “short” to “excessive” (Marin 2005a; Mapquest.com 2006b). This segment of Sir Francis Drake Boulevard is one of several that are “grandfathered” into the County’s Traffic Demand Management Program and allowed to operate at below standard LOS level until such time as they are improved or the traffic load is diverted (Marin 2005a).

| WOULD THE PROJECT: | <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 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 checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input 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) Seasonal closures caused by water shortages in the park would no longer be necessary with implementation of the proposed project. Park visitation would not, however, increase significantly over the totals recorded in prior years when the park remained open. All construction activities associated with the project will occur within the boundaries of Samuel P. Taylor SP and work would not restrict access to or block any public road. The delivery of construction materials would have the potential to create limited and temporary traffic delays on Sir Francis Drake Boulevard, as it is the only access road into the park for construction equipment.

As noted above, the section of Sir Francis Drake Boulevard that passes through the park has recorded traffic volumes as high as 1004 per hour at peak, weekday afternoons. The addition of an estimated 10-12 additional vehicles (crew pickups, delivery trucks, and equipment haulers) making 1-2 trips during daylight hours would not constitute a substantial increase in traffic volume for this road or result in additional congestion. Additionally, most heavy equipment would be stored on park property for the duration of the project, further reducing the traffic impact. Less than significant impact.

b) As noted above, Sir Francis Drake Boulevard has recorded peak traffic volumes averaging 1004 westbound vehicles and 630 eastbound vehicles on weekday afternoons. The County has identified the Level of Service in this area at “B” for eastbound traffic and “F” for

westbound; the flow ranging from “stable” to “forced,” and delays ranging from “short” to “excessive.” The temporary addition of several construction-related vehicle trips per day would not exceed, individually or cumulatively, the LOS standards for this roadway. Less than significant impact.

- c) The only public airport in Marin County is Gness Field, located in Novato, over 25 miles away from Samuel P. Taylor SP (Marin 2006; Mapquest.com 2006a). The project site is not located within an airport land use plan, within two miles of a public airport, in the vicinity of a private air strip, and does not serve as a normal reporting point for air traffic in the area. Nothing in the proposed project would in any way affect or change existing air traffic patterns; therefore, no impact would occur as a result of this project.
- d) No transportation-related change will result from this project. No impact.
- e) All construction activities associated with the project would occur within the boundaries of Samuel P. Taylor SP and work would not restrict access to or block any road outside the immediate construction area. Although minor delays may occur along interior park roads during delivery of construction materials and structural components, minimum access requirements for emergency vehicles would be maintained at all times. Therefore, the impact of this project on emergency access or response would be less than significant.
- f) The project site and primary staging areas would be limited to the existing tank locations and their immediate environs. Additional staging areas will be available near the park residences adjacent to Lagunitas Creek (Main tank site) and on the level area downhill from the Barnabe tank site. Any project encroachment on existing parking lots would be limited and temporary, allowing access to both the construction and recreational areas. Less than significant impact.
- g) There are no policies, plans, or programs supporting alternative transportation that apply to this project. No impact.

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XV. UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL SETTING

Samuel P. Taylor SP is located in Marin County, about 15 miles west of San Rafael on Sir Francis Drake Boulevard. Lagunitas, the town closest to the park, is located less than one mile from its southeast boundary (DPR 2006a).

The park is served by various public utility systems, with internal collection and distribution systems generally owned and/or maintained by park maintenance staff. Electricity for the park is provided by Pacific Gas and Electric Company and commercial telecommunications are provided by SBC Pacific Bell (DPR 2006). The park is situated within Marin County's Western Franchise Area 1, where solid waste management and disposal services are provided by Shoreline Disposal / Empire Waste Management (Marin County 2006).

Sewage treatment is provided via an existing DPR-owned and operated sewage treatment plant (within park boundaries) with the treated sewage pumped to a multiple forced main leach fields on National Park Service lands. The plant capacity is sufficient to meet existing demand. In addition, the park provides a sanitary dump station for recreation vehicles. Restrooms are available in the camping and day use areas; most of the campgrounds also have showers (DPR 2004, 2006a).

DPR owns and operates its own water system within the park to serve operational needs. Groundwater is collected via horizontal wells (developed springs) and stored in two redwood 100,000-gallon tanks located at opposite ends of the water system (DOF 2003). The existing tanks were built in 1964. The water system operates under gravity pressure developed from the tank elevation; there are no additional pumps in the system (DPR 2004).

The project will replace the water storage system at Samuel P. Taylor SP in order to provide reliable and adequate supplies for park use and fire protection. The project will replace two deteriorated and leaking 100,000 -gallon redwood storage tanks with two storage reservoirs of approximately twice their capacity (DOF 2003). The project will only replace the existing holding tanks; it will not affect the water distribution system in any way (DPR 2004). The existing tanks are not large enough to handle the peak water demand in the park. The water yield from the existing collection system naturally decreases throughout the summer when demand is at its highest. The water level in the tanks falls throughout the summer due to the reduced recharge, leakage, and increased demand. The existing tanks have the capacity to allow for a 50,000-gallon reserve for fire control storage. The potable water supply is at or near that reserve level during September and October of a normal water supply year. This has resulted in park closures in the past. Based on an average demand of 10,000 gallons per day, the park has experienced closures or partial closures of up to three months during years with 90% of normal water supply (DOF 2003).

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|--|---|--|---|----------------------|
|--|---|--|---|----------------------|

WOULD THE PROJECT:

- a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water

| | <u>POTENTIALLY SIGNIFICANT IMPACT</u> | <u>LESS THAN SIGNIFICANT WITH MITIGATION</u> | <u>LESS THAN SIGNIFICANT IMPACT</u> | <u>NO IMPACT</u> |
|---|---|--|---|-------------------------------------|
| Quality Control Board? | | | | |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | | |
| Would the construction of these facilities cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 checked="" 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 checked="" type="checkbox"/> | <input 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) Samuel P. Taylor SP is within the jurisdiction of the Regional Water Quality Control Board, Region 2. The project would be in compliance with all applicable water quality standards and waste discharge requirements (see project **Hazmat Condition 1** regarding potential impact from accidents, spills, or upset). No impact.
- b) The proposed project would replace elements of the existing potable water service within the park, with no direct impact (construction or expansion) on the park's drinking water or wastewater treatment facilities. Although the project would increase the capacity of the small water system, this increase would only serve existing recreational users and meet the park's operational needs. Increasing water delivery in this system would have negligible or no effect on existing treatment systems serving the park. Less than significant impact.
- c) The project scope does not include storm water drainage facilities and would neither increase nor alter existing conditions. No impact.
- d) As indicated in the Environmental Setting above, potable water is supplied for the park from DPR owned and/or controlled private water supplies. The system experiences significant stored water loss through leakage from the existing tanks. The system's current storage capacity is not adequate for existing year-round demands or maintaining an adequate

reserve for projected fire control needs. This project is designed to resolve the existing problem of inadequate potable water storage and delivery. The park's existing entitlement is sufficient to accommodate the limited increase in water usage anticipated once the replacement tanks are on line and fully operational. Less than significant impact.

- e) Wastewater treatment services are provided by DPR personnel with DPR owned facilities. No impact.
- f) Solid waste disposal services are provided by a local company under the jurisdiction of Marin County Public Works Department. The project would not increase the park's solid waste disposal needs. No impact.
- g) The proposed project does not have a solid waste component. 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> |
|---|---|--|---|--------------------------|
| WOULD THE PROJECT: | | | | |
| 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 checked="" type="checkbox"/> | <input 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 type="checkbox"/> | <input checked="" 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

DISCUSSION

- a) The proposed project was evaluated for potential significant adverse impacts to the natural environment and its plant and animal communities. The project site could support certain special status plants and animals. It has been determined that the project could have the potential to disturb northern spotted owls nesting in the vicinity as well as sensitive raptor species, red-legged frog, steelhead, Coho salmon, CNPS List 1B, and List 2 plant species. In addition, project-related equipment and vehicles could spread the Sudden Oak Death pathogen. However, full integration of the conditions and implementation of all mitigation measures incorporated into this project would reduce those impacts, both individually and cumulatively, to a less than significant level.
- b) The proposed project was evaluated for potential significant adverse impacts to the cultural resources of Samuel P. Taylor SP and the immediate area. It has been determined that activities associated with the proposed project could have the potential to significantly disturb historic or archaeological resources. The proposed water tank installation project would involve excavations in the immediate vicinity of an archaeological site as well as staging areas adjacent to historic resources. However, full integration of the conditions and implementation of all mitigation measures incorporated into this project would reduce those impacts, both individually and cumulatively, to a less than significant level.

- c) DPR often has smaller maintenance programs and rehabilitation projects planned for a park unit. However, no other projects, other than routine maintenance, are planned for the proposed project area in the foreseeable future. Additionally, impacts from other environmental issues addressed in this evaluation do not overlap in such a way as to result in cumulative impacts that are greater than the sum of the parts. Less than significant impact.
- d) Most project-related environmental effects have been determined to pose a less than significant impact on humans. However, possible impacts from construction emissions (Air Quality), construction accidents, seismic events, and fire (Hazards and Hazardous Wastes), and noise, though temporary in nature, have the potential to result in significant adverse effects on humans. These potentially significant adverse impacts would be reduced to a less than significant level if all conditions are fully integrated into project design and construction documents.

Chapter 5

Summary of Conditions and Mitigation Measures

The following conditions and mitigation measures will be implemented by DPR as part of the Water Tank Installation Project at Samuel P. Taylor State Park.

Aesthetics

No conditions or mitigation measures necessary

Agricultural Resources

No conditions or mitigation measures necessary.

Air Quality

Air Condition 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.

Biological Resources

Bio Condition 1 - Steelhead, Coho Salmon and California Freshwater Shrimp

- Best Management Practices (BMPs) will be implemented during construction to prevent any erosion, construction debris or sediment from leaving the project area and impacting adjacent habitat. Refer to Conditions **Geo 2** Erosion Control and **Hydro 1** Water Quality.
- California Department of Fish and Game and National Marine Fisheries (NMFS) will be consulted to ensure that BMPs are sufficient to protect sensitive aquatic species. DPR will direct the contractor to institute additional BMPs as necessary after consultation.

Mitigation Measure Bio 2 – California Red-Legged Frog

- DPR and its contractor(s) will follow the U.S Fish and Wildlife Service "*Revised Guidelines on Site Assessments and Field Surveys for the California Red-legged Frog, August 2005*" to determine the need for surveys and appropriate avoidance measures.

Mitigation Measure Bio 3 – Northern Spotted Owl Seasonal Avoidance

- To avoid critical nesting period, no noise-generating activities during demolition and construction at the Main Tank project site will be permitted from February 1 through July 10 unless a DPR-approved Biologist conducts protocol-level nesting status surveys and the territory is classified as “non-nesting.”
- If the owls are classified as “nesting” during protocol-level status surveys, no noise-generating construction activities resulting in noise disturbance above ambient levels will occur within ¼ mile of the nest from February 1 through July 10.
- To protect owl habitat, no trees 12” or greater DBH shall be removed along access roads.

Mitigation Measure Bio 4 – Nesting Raptors

- If construction is planned during the breeding season (February 1- August 31) for any raptors, a DPR-approved biologist will conduct a pre-construction breeding season survey to locate any potential raptor nests in and around the project area. If a nest is located near the project area, construction will not occur within 200 feet of the active nest until after the young have fledged, as determined by a DPR-approved biologist.

Bio Condition 1 – General Wildlife Protection Measures

- A DPR-approved biologist will conduct a training session for all project personnel prior to the start of construction. Instruction will cover identification of sensitive species and their habitat, and specific measures required to protect and avoid sensitive wildlife.
- To prevent trapping wildlife, all holes and trenches will be covered at the close of each workday with plywood or similar materials, or will include wooden escape planks ramps; all pipes will be capped. A DPR-approved biologist or other staff trained by a DPR-approved biologist will inspect trenches and pipes for animals at the beginning of each work day. If a sensitive species becomes trapped, work will be temporarily halted or diverted and the DFG will be contacted for instruction on relocating the animal.

Mitigation Measure Bio 5 – CNPS List 1B and List 2 Plant Species

- Prior to the start of construction, a DPR-approved biologist will conduct plant surveys during the appropriate blooming months (or when species can be unmistakably identified) for all CNPS List 1B and List 2 plant species that could potentially occur within the project area.
- All occurrences of CNPS List 1B and List 2 species found within the project area will be mapped on project maps and flagged on the ground by a DPR-approved biologist. All flagged occurrences will be avoided, if possible.
- If unavoidable impacts will occur to CNPS List 1B or List 2 species as a result of project implementation, DPR will mitigate loss of habitat or individuals at a ratio of 3:1 (or as negotiated with the California Department of Fish and Game) through habitat enhancement for these species within Samuel P. Taylor SP.

Mitigation Measure Bio 6 – Sensitive Natural Communities

- No roots with a diameter of 1 inch or greater within the structural root zone (3 times dbh (diameter at breast height)) of any native tree with a dbh of 24 inches or greater will be cut by road grading activities.

Bio Condition 2 – Sudden Oak Death

- All project components impacting Sudden Oak Death host or carrier plants will follow the “Sudden Oak Death Best Management Practices in Zone of Infestation Regulated Areas, Assembled by the Management Committee of California Oak Mortality Task Force, 2002” (See Appendix A)

Cultural Resources

Cultural Resource Mitigation Measure 1 – Historic Resources

- No construction equipment or materials will be parked/stored within 25 feet of residences 5 and 6 in order to prevent inadvertent damage to the structures.

Cultural Condition 1 – Previously Undocumented Find

- In the event the previously undocumented cultural resources are encountered during project construction (including, but not limited to dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic ash), work within the immediate vicinity of the find will be temporarily halted or diverted until a DPR-qualified cultural resource specialist has evaluated the find and implemented appropriate treatment and disposition of the artifact(s).

Cultural Resource Mitigation Measure 2 – Resource Protection

- Prior to the start of construction, a DPR-qualified archaeologist will flag site SPT-233-RT-01 perimeter with a 10 foot buffer zone.
- Prior to the start of construction, DPR-qualified archaeologist will meet with the contractor and project manager on-site to specify the area (based on flagging) for contractor to place orange construction fencing.

Cultural Condition 2 – 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 or returned to the point of discovery and covered with soil. 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 (or Tribal Representative). If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the appropriate Native American authorities.
- If the coroner or tribal representative determines the remains represent Native American interment, the Native American Heritage Commission in Sacramento and/or tribe will be consulted to identify the most likely descendants and appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete (PRC 5097.98). No human remains or funerary objects will be

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

Geology and Soils

Geo Condition 1

- The design of the proposed water tanks will conform to earthquake design requirements. Tank and foundation design will follow the applicable regulations and design practices of the American Water Works Association Design Standards.
- Any new equipment installed as part of the water system treatment upgrades will be secured to the walls and/or floor in the existing water treatment building to prevent damage in the event of a large earthquake.
- State Park staff will inspect the water supply system for damage as soon as feasible after a large earthquake. State Park staff will inspect the water supply system for damage as soon as feasible after a large earthquake.

Geo Condition 2 – Erosion Control BMPs

- Final Construction plans will identify BMPs to be used in all areas to control soil and surface water runoff during excavation, grading, and trenching. BMPs will include, but not be limited to, the use of silt fences, straw bales, or straw or rice coir rolls, to prevent soil loss and siltation into nearby water bodies.
- Grading and excavation activities will not be planned during the rainy season (October 31 to May 1), but if storms are anticipated during construction or if construction must occur during winter months, “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 (re-compacted, re-vegetated, etc.) Areas requiring revegetation will be revegetated with plant material of local genetic stock.

Hazards and Hazardous Materials

Hazard Condition 1 – Hazardous Materials

- 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 an emergency Spill Prevention and Response Plan and maintain a spill kit on-site throughout the life of the project. This plan will include a map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment may occur. The Spill Prevention and Response Plan will be incorporated into a Storm Water Pollution Prevention Plan if it is determined that the project requires a NPDES construction permit.

- Areas designated for refueling, lubrication, and maintenance of equipment shall be at least 50 feet from the spring/seep 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 the Park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside Park boundaries, at a lawfully permitted or authorized destination.

Hazard Condition 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 the CDF and the Marin County Fire Department.
- 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.

Hydrology and Water Quality

Hydro Condition 1 – Water Quality

- Integration of Geo Condition 2 into design plans will provide BMPs to control erosion and runoff during project construction and post-construction.
- The project will comply with all applicable water quality standards as specified in the SFBRWQCB Water Quality Control Plan (Basin Plan).
- Integration of Hazmat Condition 1 into construction plans will reduce impacts to water quality from possible pollutants (fuels and other vehicle fluids) released from vehicles and heavy equipment during construction and concrete waste generated during construction of water tank foundations.

Land Use Planning

No conditions or mitigation measures necessary.

Mineral Resources

No conditions or mitigation measures necessary.

Noise

Noise Condition 1

- Construction activities will generally be limited to the daylight hours, Monday – Friday; however, weekend work may be implemented to accelerate construction or address emergency or unforeseen circumstances. If weekend work is necessary, no work will occur on those days before 8:00 a.m. or after 6 p.m.
- 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. engine enclosures, acoustically-attenuating shields, or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.

- Stationary noise sources and staging areas will be located as far away from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources will be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.

Population and Housing

No conditions or mitigation measures necessary.

Public Services

No conditions or mitigation measures necessary.

Recreation

No conditions or mitigation measures necessary.

Transportation and Traffic

No conditions or mitigation measures necessary.

Utilities and Service Systems

No conditions or mitigation measures necessary.

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Chapter 7 Report Preparation

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Appendix A
MAPS, TABLES, AND CHARTS

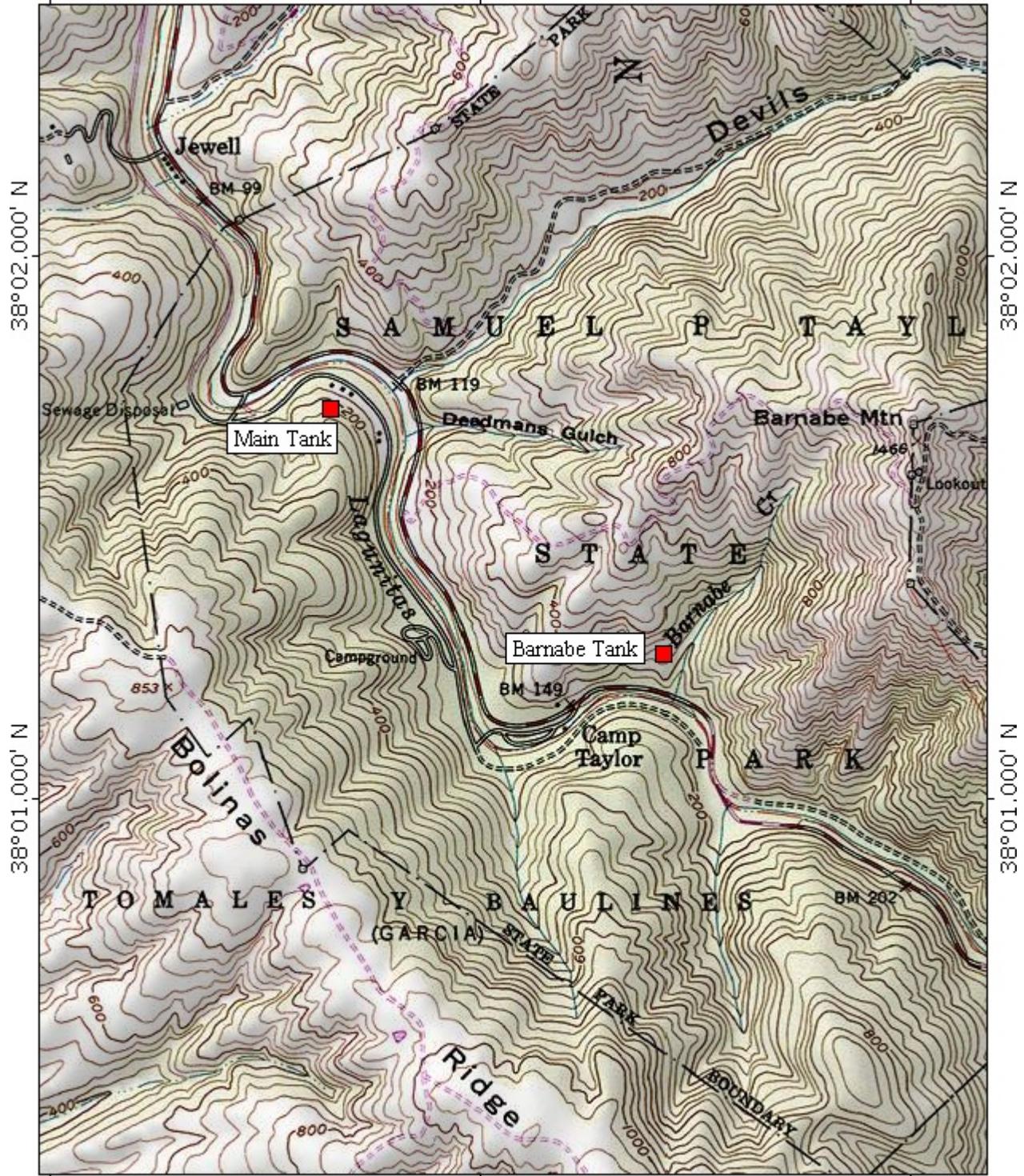
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Samuel P. Taylor SP - Water Tank Replacement Project

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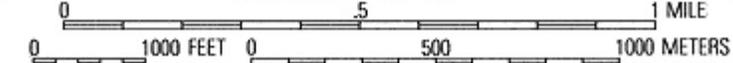
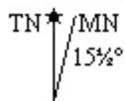
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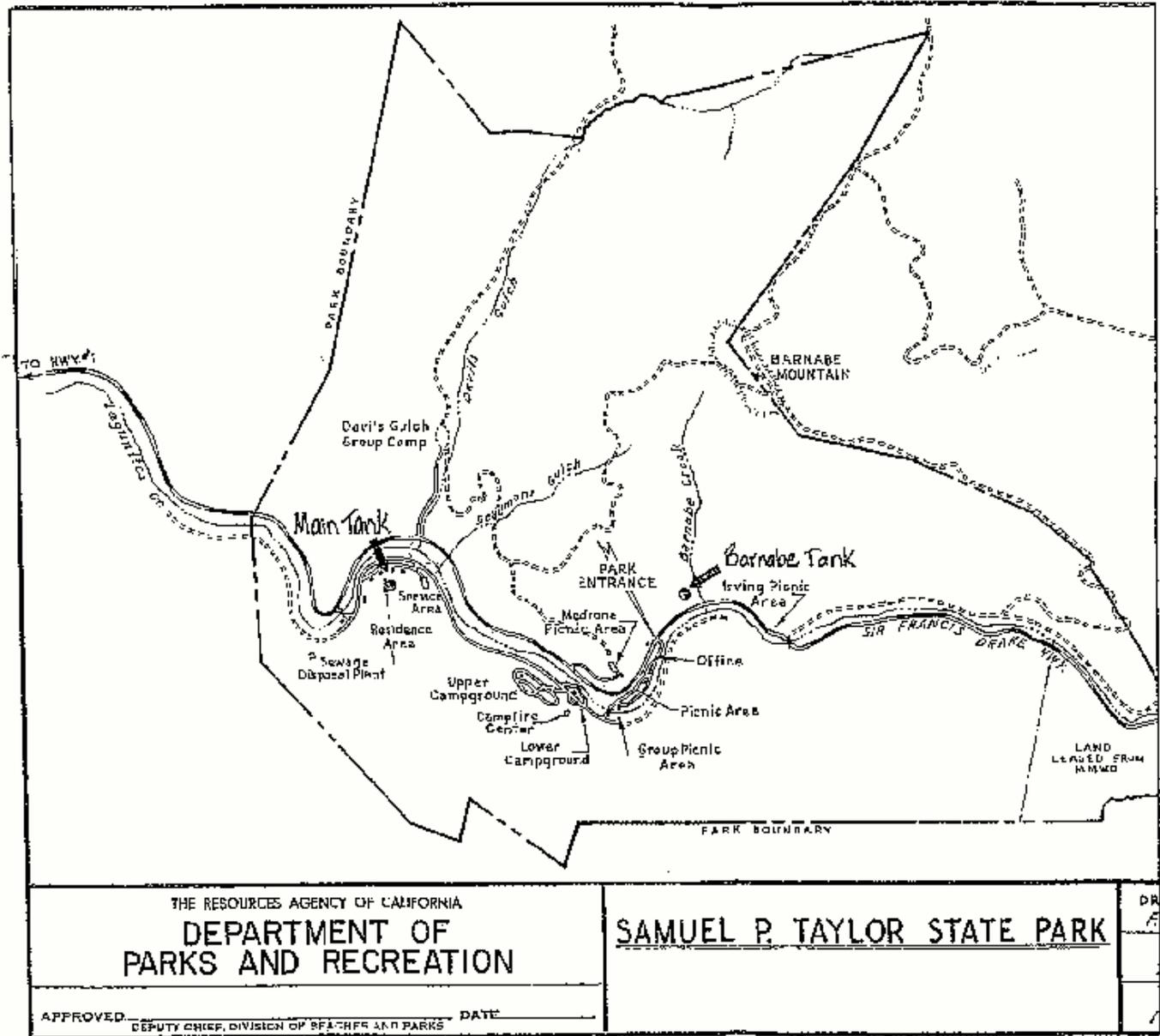
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Samuel P. Taylor Tank Installation Project Site Map



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U.S. Fish and Wildlife Service

Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog



August 2005

I. Introduction

The U.S. Fish and Wildlife Service (Service) issued guidance on conducting site assessments and surveys for the California red-legged frog (*Rana aurora draytonii*) (CRF) on February 18, 1997 (1997 Guidance). Since then, the Service has reviewed numerous CRF site assessments and surveys results, accompanied wildlife biologists in the field during the preparation and performance of site assessments and CRF surveys, and consulted with species experts on the effectiveness of the 1997 Guidance. Based on our review of the information, the Service has determined that the survey portion of the 1997 Guidance is less likely to accurately detect CRF than previously thought, especially in certain portions of the species range and particularly where CRF exist in low numbers. In response to the need for new guidance, the Service has prepared this *Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog* (Guidance).

Similar to the 1997 Guidance, two procedures are recommended in the new Guidance to accurately assess the likelihood of CRF presence in the vicinity of a project site: (1) an assessment of CRF locality records and potential CRF habitat in and around the project area and, (2) focused field surveys of breeding pools and other associated habitat to determine whether CRF are likely to be present.

Because CRF are known to use aquatic, riparian, and upland habitat, they may be present in any of these habitat types, depending on the time of year, on any given property. For sites with no suitable aquatic breeding habitat, but where suitable upland dispersal habitat exists, it is difficult to support a negative finding with the results of any survey guidance. Therefore, this Guidance focuses on site assessments and surveys conducted in and around aquatic and riparian habitat.

This Guidance was developed by the Service's Sacramento Fish and Wildlife Office in coordination with the Ventura Fish and Wildlife Office. Input by field biologists and scientists experienced in surveying for the CRF was also used in the development of this Guidance.

If the following Guidance is followed in its entirety, the results of the site assessments and surveys will be considered valid by the Service for two (2) years, unless determined otherwise on a case-by-case basis by the appropriate Service Fish and Wildlife Office. After two (2) years, new surveys conducted under the most current Service Guidance may be required, if deemed necessary by the appropriate Service Fish and Wildlife Office.

Modifications of this Guidance for specific projects or circumstances may be approved by the appropriate Fish and Wildlife Office; however, we strongly recommend that all modifications be reviewed and approved by the Service prior to implementation.

II. Permit Requirements

Unless otherwise authorized, individuals participating in site assessments and surveys for CRF may **NOT** take the California red-legged frog during the course of site assessments or survey activities. Take may only be authorized via section 7 or section 10 of the Endangered Species Act of 1973, as amended. Typically, take associated with survey activities is authorized via issuance of section 10(a)(1)(A) permits. For reference, an application for a section 10(a)(1)(A) permit is available through the appropriate Fish and Wildlife Office or online at:

<http://forms.fws.gov/3-200-55.pdf>.

The site assessment and survey methods recommended in this Guidance do NOT require the surveyor to have a permit. As stated below, the surveyor must be otherwise qualified to conduct the surveys.

It is the responsibility of the surveyor to ensure all other applicable permits are obtained and valid (e.g., state scientific collection permits), and that permission from private landowners or land managers is obtained prior to accessing a site and beginning site assessments and surveys.

III. Site Assessments

To prevent any unnecessary loss of time or use of resources, it is essential that completed site assessments be submitted to the appropriate Service Fish and Wildlife Office for review in order to obtain further guidance from the Service before conducting surveys.

Surveyors are encouraged to implement the decontamination guidelines provided in Appendix B before conducting a site assessment to prevent the spread of parasites and diseases to CRF and other amphibians.

Careful evaluation of the following information about CRF and their habitats in the vicinity of a project or other land use activities is important because this information indicates the likelihood of the presence of CRF. This information will help determine whether it is necessary to conduct field surveys.

To conduct a site assessment for CRF, complete the data sheet in Appendix D and return it with any necessary supporting documentation to the appropriate Service Fish and Wildlife Office for review prior to initiating surveys. The following information is critical to completing a proper site assessment:

1. Is the site within the current or historic range of the CRF?

Since knowledge of the distribution of the CRF is likely to change as new locality information becomes available, biologists are expected to contact the appropriate Fish and Wildlife Office (see section IV below) to determine if a project site is within the range of this species.

2. Are there known records of CRF at the site or within a 1.6-kilometer* (1-mile) radius of the site?

The biologist should consult the California Natural Diversity Data Base (CNDDDB) maintained by the California Department of Fish and Game's (CDFG) Natural Heritage Division as a starting point to determine if there are reported localities of CRF within a 1.6-kilometer (1-mile) radius of the site. Information on the CNDDDB is attached to the end of this document. Data entry into the CNDDDB is not always current nor do all surveyors submit reports to the CNDDDB, thus it is essential that other information sources on local occurrences of CRF be consulted. These sources may include, but are not limited to, biological consultants, local residents, amateur herpetologists, resource managers and biologists from municipal, State, and Federal agencies, environmental groups, and herpetologists at museums and universities. The biologist should report to the Service all known CRF records at the project site and within a 1.6-kilometer (1-mile) radius of the project boundaries. One-point-six (1.6) kilometers (1 mile) was selected as a proximity radius to a project site based on telemetry data collected by Bulger *et al.* (2003), rounded to the nearest whole mile. This distance may be subject to change when new data becomes available, or based on site-specific conditions, so it is advised that surveyors check with the appropriate Service Fish and Wildlife Office to ensure they are using the most up-to-date information.

* **IMPORTANT:** One-point-six (1.6) kilometers (1 mile) radius is a general guideline. The appropriate Service Fish and Wildlife Office will advise surveyors of the most appropriate distance for each specific project location on a case-by-case basis.

3. What are the habitats within the project site and within 1.6 kilometers* (1 mile) of the project boundary?

In order to properly characterize the habitat within 1.6 kilometers (1 mile) of the project site, individuals conducting site assessments must visit the project site and as much of the surrounding habitat within 1.6 kilometers (1 mile) of the project site as possible. Aerial photographs, maps, and other resources should be consulted as well to ensure all possible accessible habitats are considered. Based on this reconnaissance assessment, the surveyor shall describe the upland and aquatic habitats within the project site and within 1.6 kilometers (1 mile) of the project boundary. The aquatic habitats should be mapped and characterized (*e.g.*, ponds vs. creeks, pool vs. riffle, ephemeral vs. permanent (if ephemeral, give date it goes dry), vegetation (type, emergent, overhanging), water depth at the time of the site assessment, bank full depth, stream gradient (percent slope), substrate, and description of bank). The presence of bullfrogs (*Rana catesbeiana*) and other aquatic predators such as centrarchid fishes (bass, perch, sunfish) should be documented even though their presence

does not negate the presence of CRF. Upland habitats should be characterized by including a description of upland vegetation communities, land uses, and any potential barriers to CRF movement. The information provided in Appendix A serves as a guide to the features that will indicate possible CRF habitat.

4. Report the results of the site assessment

A site assessment report shall be provided to the appropriate Fish and Wildlife Office for review. Reports should include, but are not limited to, the following information:

- 1) Copies of the data sheet provided at Appendix D;
- 2) Copies of field notes and all other supporting documentation including:
 - A. A list of all known CRF localities within 1.6 kilometers* (1 mile) of the project site boundaries;
 - B. Photographs of the project site (photopoints shall be indicated on an accompanying map);
 - C. A map of the site showing all of the habitat types and other important features as well as the location of any species detected during the site assessment within 1.6 kilometers (1 mile) of the project site boundaries. Maps shall be either copies of those portions of the U.S. Geological Service 7.5-minute quadrangle map(s) or geographic information system (GIS) data;
 - D. A description of the project and/or land use that is being proposed at the site.

Based on the information provided in the site assessment report, the Service will provide guidance on how CRF issues should be addressed, including whether field surveys are appropriate, where the field surveys should be conducted, and whether incidental take authorization should be obtained through section 7 consultation or a section 10 permit pursuant to the Endangered Species Act.

IV. Field Surveys

Surveyors are encouraged to implement the decontamination guidelines provided in Appendix B before conducting surveys to prevent the spread of parasites and diseases to CRF and other amphibians.

To avoid and minimize the potential of harassment or harm to CRF, no additional surveys will be conducted in an area once occupancy has been established, unless the surveying effort is part of a Service-approved project to determine actual numbers of frogs at a site.

The Service should be notified in writing (e.g., email) by the surveyor within three (3) working days once a CRF is detected. The Service will provide guidance to the surveyor regarding the need to collect additional information such as population size, age class, habitat use, etc.

A. Qualifications of Surveyors

Surveyors must be familiar with the distinguishing physical characteristics of all life stages of the CRF, other anurans of California, and with introduced, exotic species such as the bullfrog and the African clawed frog (*Xenopus Laevis*) prior to conducting surveys according to this Guidance.

Surveyors must submit their qualifications to the Service along with their survey results.

A field guide should be consulted (e.g., Wright and Wright 1949; Stebbins 2003) to confirm the identification of amphibians encountered during surveys. Surveyors also should be familiar with the vocalizations of the CRF and other amphibians found in California. Recordings of these vocalizations are available through various sources (e.g., Davidson 1995). Surveyors that do not have experience with the species are required to obtain training on locating and identifying CRF adult, larval and egg stages before survey results are accepted. Training may include attendance at various workshops that have an emphasis on the biology of the California red-legged frog, accompanied by an appropriate level of field identification training; field work with individuals who possess valid 10(a)(1)(A) permits for the CRF; and experience working with ranids and similar taxa.

In some localities more intensive surveys (e.g., dip-netting larvae and adults) may be desirable to document the presence of CRF. In order to conduct such focused surveys a valid section 10(a)(1)(A) permit is required (refer to introduction section for information on how to apply for a section 10(a)(1)(A) permit). Applicants will be considered qualified for a section 10(a)(1)(A) permit if they meet the Service's most current qualification requirements. At a minimum, prospective applicants must:

- 1) Possess a Baccalaureate degree in biology, ecology, a resource management-related field, or have equivalent relevant experience;
- 2) Have completed course work in herpetology and study-design/survey-methodology or have equivalent relevant experience;
- 3) Have verifiable experience in the design and implementation of amphibian surveys or research or have equivalent relevant experience;
- 4) Have verifiable experience handling and identifying a minimum of 10 CRF, or similar ranid species, comprised of a minimum of 5 adults and a combination of larva and juveniles;
- 5) Obtain a minimum of 40 hours of field experience through assisting in surveys for the CRF during which positive identification is made;
- 6) Have familiarity with suitable habitats for the species and be able to identify the major vegetative components of communities in which California red-legged frog surveys or research may be conducted.
- 7) Have familiarity with and be able to identify native and non-native amphibians that may co-occur with the listed species.

B. Survey Periods

Surveys may begin anytime during January and should be completed by the end of September. Multiple survey visits conducted throughout the survey-year (January through September) increases the likelihood of detecting the various life stages of the CRF. For example, adult frogs are most likely to be detected at night between January 1 and June 30, somewhere in the vicinity of a breeding location, whereas, sub-adults are most easily detected during the day from July 1 through September 30.

Due to the geographic and yearly variation in egg laying dates, it is not possible to specify a range of dates that is appropriate for egg surveys throughout the range of the CRF. The following table summarizes the best approximated times to survey for CRF egg masses.

| Geographic Area | Best Survey Period* |
|--|----------------------------------|
| Northern California along the coast and interior to the Coast Range (north of Santa Cruz County) | January 1 and February 28 |
| Southern California along the coast and interior through the Coast Range (south of, and including Santa Cruz County) | February 25 and April 30 |
| Sierra Nevada Mountains and other high-elevation locations | Should not begin before April 15 |

Site specific conditions may warrant modifications to the timing of survey periods, modifications must be made with the Service's approval prior to conducting the surveys.

Survey Methodology

This Guidance recommends a total of **up to** eight (8) surveys to determine the presence of CRF at or near a project site. Two (2) day surveys and four (4) night surveys are recommended during the breeding season; one (1) day and one (1) night survey is recommended during the non-breeding season. Each survey must take place at least seven (7) days apart. At least one survey must be conducted prior to August 15th. The survey period must be over a minimum period of 6 weeks (*i.e.*, the time between the first and last survey must be at least 6 weeks). Throughout the species' range, the non-breeding season is defined as between July 1 and September 30.

If CRF are identified at any time during the course of surveys, no additional surveys will be conducted in the area, unless the surveying effort is part of a Service-approved project to determine actual numbers of frogs at a site.

The following methodology shall be followed unless otherwise specified, or approved by the appropriate Service Fish and Wildlife Office:

- 1) Upon arrival at the survey site, surveyors should listen for a few minutes for frogs calling, prior to disturbing the survey site by walking or looking for eye shine using bright

lights. If CRF calls are identified, the surveyor should note this information on the survey data sheet and note the approximate location of the call. Once the survey begins, the surveyor should pay special attention to the area where the call originated in an attempt to visually identify the frog.

- 2) The most common method of surveying for CRF is the visual-encounter survey. This survey is conducted either during daylight hours or at night by walking entirely around the pond or marsh or along the entire length of a creek or stream while repeatedly scanning for frogs. This procedure allows one to scan each section of shore from at least two different angles. Surveyors should begin by first working along the entire shoreline, then by entering the water (if necessary and no egg masses would be crushed or disturbed), and visually scanning all shoreline areas and all aquatic habitats identified in the site assessment. Generally, surveyors shall focus on all open water to at least 2 meters (6.5 feet) up the bank. When wading, surveyors must take maximum care to avoid disturbing sediments, vegetation, or larvae. When walking on the bank, surveyors shall take care to not crush rootballs, overhanging banks, and stream-side vegetation that might provide shelter for frogs. Surveys must cover the entire area, otherwise the remaining survey area must be surveyed the next day/night that weather conditions allow (both visits would constitute one day/night survey).
- 3) Day surveys may be conducted on the same day as a night survey.

The main purpose of day surveys during the breeding season is to look for larvae, metamorphs, and egg masses; the main purpose of day surveys during the non-breeding season is to look for metamorphosing sub-adults, and non-breeding adults. Daytime surveys shall be conducted between one hour after sunrise and one hour before sunset.

4) Night surveys

The main purpose of night surveys is to identify and locate adult and metamorphosed frogs. Conditions and requirements for conducting night surveys are as follows:

- A. Night surveys must commence no earlier than one (1) hour after sunset.
- B. Due to diminished visibility, surveys should not be conducted during heavy rains, fog, or other conditions that impair the surveyor's ability to accurately locate and identify frogs.
- C. Nighttime surveys shall be conducted with a Service-approved light such as a Wheat Lamp, Nite Light, or sealed-beam light that produces less than 100,000 candle watt. Lights that the Service does not accept for surveys are lights that are either too dim or too bright. For example, Mag-Light-type lights and other types of flashlights that rely on 2 or 4 AA's/AAA's, 2 C's or 2 D batteries. Lights with 100,000 candle watt or greater are too bright and also would not meet Service requirements.
- D. The Service approved light must be held at the surveyor's eye level so that the frog's eye shine is visible to the surveyor.

- E. The use of binoculars is a must in order to effectively see the eye shine of the frogs. Surveys conducted without the use of binoculars may call in to question the validity of the survey.

5) Weather conditions.

Weather and visibility conditions must be consistent throughout the duration of the survey; if weather conditions become unsuitable, the survey must be completed at another time when conditions are better suited to positively locating and identifying frogs. Suitable conditions are as follows:

- A. Air temperature at the survey site must be at least 10 degrees Celsius (50 degrees Fahrenheit). Frogs are less likely to be active when temperatures are below 10 degrees Celsius (50 degrees Fahrenheit).
- B. Wind speed must not exceed 8 kilometers/hour (5 miles/hour) at the survey site. High wind speeds affect temperatures and the surveyor's ability to hear frogs calling.
- C. Surveys must be conducted under clear to partly cloudy skies (high clouds are okay) but not under dense fog or during heavy rain, as stated above. Surveys may be conducted during light rains.

Surveyors should carefully consider weather conditions prior to initiating a survey. Ask yourself, "Can I collect accurate, reliable data under the existing weather conditions" prior to proceeding with the survey. Weather conditions will be taken into account when the data is reviewed by the appropriate Service Fish and Wildlife Service Office.

6) Decontamination of equipment

In an effort to minimize the spread of terrestrial and aquatic pathogens, all aquatic survey equipment including chest waders, wet suits, float tubes, kayaks, shall be decontaminated before entering potential CRF habitat using the guidelines in Appendix B. Careful attention shall be taken to remove all dirt from boots, chest waders, wetsuits, float tubes, kayaks, and other equipment before placing equipment into the water.

7) Unidentified larvae, sub-adults, and adults

If the larval life stage is the only life stage detected and the larvae are not identified to species (or similarly, if sub-adult or adult frogs are observed but not identified to species), the surveyor must either return to the habitat to identify the frog in another life stage or obtain the appropriate permit (e.g., section 10(a)(1)(A) permit) authorization allowing the surveyor to handle CRF and larvae. In order for the Service to consider a survey to be complete, all frogs encountered must be accurately identified.

8) Reporting results of the surveys

A species survey report shall be provided to the appropriate Fish and Wildlife Office for review. Reports should include, but are not limited to, the following information:

1. Copies of the data sheets provided at Appendix E;
2. Copies of field notes and all other supporting documentation including:
 - A. Photographs of all CRF observed during the survey and of the habitat where each individual was located, if possible without harming or harassing the individual;
 - B. A map of the site showing the location of any species detected during the survey. Maps shall be either copies of those portions of the U.S. Geological Service 7.5-minute quadrangle map(s) *or* geographic information system (GIS) data;

Based on the information provided in the site assessment report and the survey results, the Service will provide guidance on how CRF issues should be addressed through the section 7 or section 10 processes.

All information on CRF distribution resulting from field surveys shall be sent to the California Natural Diversity Database (CNDDDB). CNDDDB forms shall be completed, as appropriate, for each listed species identified during the survey(s) and submitted to the California Department of Fish and Game, Wildlife Habitat Data Analysis Branch, 1807 13th Street, Suite 202, Sacramento, California 95814, with copies submitted to the appropriate Service Fish and Wildlife Office. Each form sent to the CDFG shall have an accompanying 1:24,000 scale USGS map (or an exact scale photocopy of the appropriate portion(s) of the map) -or- Global Information System (GIS) data coverage of the site. Copies of the form can be obtained from the CDFG at the above address (telephone: 916-324-3812) or online at: <http://www.dfg.ca.gov/whdab/html/animals.html>. Additional information about the CNDDDB is available in Appendix C.

The Service may not accept the results of field surveys conducted under this Guidance for any of the following reasons:

- A. if the appropriate Service Fish and Wildlife Office was not contacted to review the results of the site assessment prior to field surveys being conducted;
- B. if field surveys were conducted in a manner inconsistent with this Guidance or with survey methods not previously approved by the Service;
- C. if field surveys were incomplete;
- D. if surveyors were not adequately qualified to conduct the surveys;
- E. if the reporting requirements, including submission of CNDDDB forms, were not fulfilled.

This document was partially appended; contact U.S.F.W.S. to obtain a full copy

Sudden Oak Death Best Management Practices *in Zone Of Infestation Regulated Areas*

Developed by the California Oak Mortality Task Force Biomass Utilization Committee 7/17/01; Reviewed and Amended by Management Committee 10/15/01, by Executive Committee 10/17/01, by email to all ending 10/24/01; mostly approved by other reviewers, to go out to website soon

Mitigation Measures to prevent the spread of Sudden Oak Death (SOD) pathogen during Tree Removal or Pruning Operations in SOD Infested Counties

Hosts of SOD: See California Oak Mortality Task Force (COMTF) website [suddenoakdeath.org] for most recent list of host species.

Distribution of SOD: See COMTF website (monitoring) for latest distribution.

Regulation: The pathogen, *Phytophthora ramorum*, can be spread via host material. Therefore, plants, plant parts, unprocessed wood and wood products, and other products of the above mentioned hosts may not be moved within or from counties infested with SOD without authorization of the local County Agricultural Commissioner. See <http://www.cdfa.ca.gov/cdfa/pendingregs/> for further information.

Infected foliage of a number of host plants presents a high risk for pathogen spread. Spread of the pathogen can occur through the transport of infected host foliage.

The SOD fungus resides in soil in infested areas and soil is therefore a potential carrier of the pathogen. The greatest threat of pathogen spread occurs when wet soil is present. Currently, soil movement is not regulated.

Mitigation measures to prevent the spread of SOD are warranted in the following situations:

- *Tree removal and pruning of non-host trees from infested sites.* Regulations do not apply if host material is not being moved from the harvest area. However, infected host material (especially foliage) and contaminated soil could be picked-up on tree removal and pruning equipment and transferred to other sites. Mitigation measures to minimize the unintended movement of host material and soil would be appropriate. See mitigation measures section below for a more thorough discussion.
- *Tree removal and pruning in an infested site where infected trees will be harvested or pruned.* Regulations apply. Host material should not leave the site except as authorized by the County Agricultural Commissioner and/or mitigation measures approved by the California Department of Forestry and Fire Protection (CDF). There is a danger that infected host material (especially foliage) and contaminated soil will be picked-up on tree cutting and handling equipment and transferred to other sites. Mitigation measures to minimize the unintended movement of host material and soil would be appropriate.
- *Tree removal and pruning on a site that is not known to be infested, but is in an infested county and contains susceptible host plants.* If the harvest area is within ¼ mile of a known infested area, then the tree removal area is considered to be infested and tree removal and

pruning operations are conducted accordingly. For other tree removal and pruning areas, a detection survey must be conducted to determine if SOD is present. Consult with CDF and/or the Agricultural Commissioner for survey and sampling protocols. If hosts with SOD symptoms are found and the pathogen is confirmed, the site would be added to the list of infested sites and tree removal and pruning operations conducted accordingly.

Mitigation measures to minimize the unintended movement of host material and soil from infested areas:

- Inform personnel that they are working in a SOD-infested area, unauthorized movement of plant material is prohibited, and the intent of mitigation measures is to prevent spread of the pathogen. Non-English speaking tree workers should be provided translation or written materials in appropriate language explaining mitigation measures.
- If some sites in the general operating area are found to be pathogen-free or have a low incidence of the pathogen, initiate and complete operations on these sites before moving to more heavily infested sites.
- Because wet soil and mud will readily adhere to vehicles, equipment, and boots: conduct operations during the dry season; utilize paved and graveled roads to the extent possible.
- Locate landings, log decks, roads, skid trails, chipping sites and other sites of equipment activity away from host plants, especially areas with symptomatic trees. Route equipment away from host plants and trees, especially areas with symptomatic trees.
- After working in an infested area, remove or wash-off accumulations of plant debris (especially foliage), soil, and mud from shoes, boots, vehicles and heavy equipment, etc. before traveling to an area that is not infested with SOD. Consider establishing an equipment power wash station. The station should be:
 - located within the generally infested area
 - paved or rocked
 - well-drained so that vehicles exiting the station do not become contaminated by the wash water.
- Pay particular attention to locations where plant debris and soil may accumulate and blow off or clean vegetative material from equipment. Consider cleaning tools and equipment, also boots with Lysol, Phisan, denatured alcohol or similar materials.
- After cleaning host debris from equipment, cut or chip non-host material to further clean the equipment of host debris.

If planning work in an area that is not infested with SOD, make sure that vehicles and equipment coming from an infested area are washed prior to entering the area that is not infested.

Soil Properties

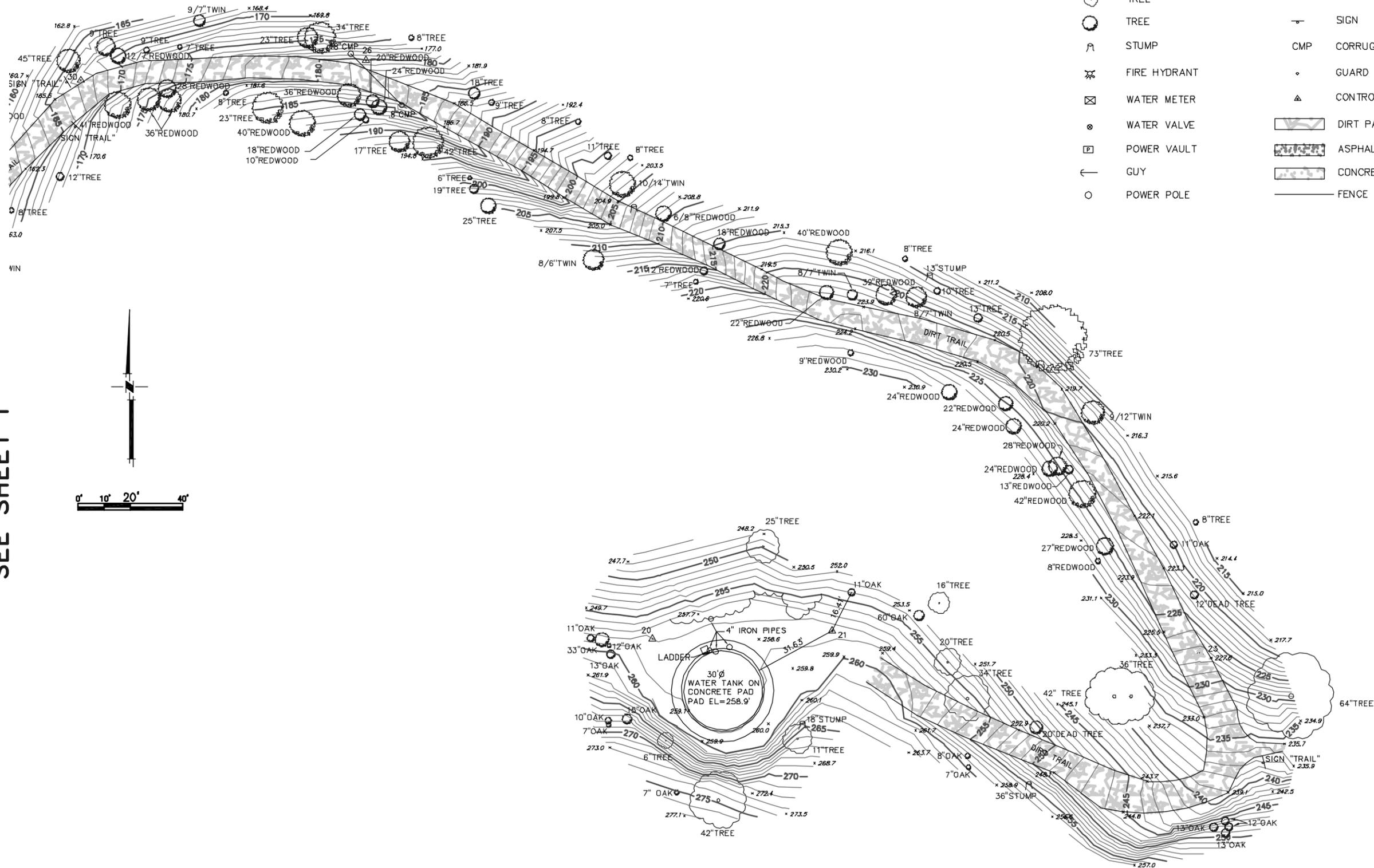
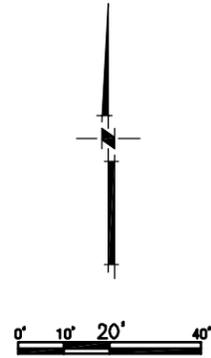
| Soil Mapping Unit | Typical Soil Profile with NRCS Classification | Erosion Potential | Permeability | Shrink-Swell Potential |
|--|--|--------------------------|--|-------------------------------|
| 116: Cronkhite-Barnabe complex, 15 to 30 percent slopes | Cronkhite: 0-45 inches deep loam and clay loam Barnabe: 0-10 to 20 inches deep very gravelly loam | High | Cronkhite: slow Barnabe: moderate | Low to high |
| 117: Cronkhite-Barnabe complex, 30 to 50 percent slopes | Cronkhite: 0-45 inches deep loam and clay loam Barnabe: 0-10 to 20 inches deep very gravelly loam | High | Cronkhite: slow Barnabe: moderate | Low to high |
| 120: Dipsea-Barnabe very gravelly loams, 50 to 75 percent slopes | Dipsea: 0-48 inches deep very gravelly loam Barnabe: 0-10 to 20 inches deep very gravelly loam | Very High | Dipsea: moderate Barnabe: moderate | Low |
| 125: Felton Variant-Soulajule complex, 30 to 50 percent slopes | Felton Variant: 0-47 inches deep loam, clay loam, and clay Soulajule: 0-28 inches deep clay loam and gravelly to very gravelly clay | High | Felton Variant: moderately slow Soulajule: slow | Low to high |
| 126: Felton Variant-Soulajule complex, 50 to 75 percent slopes | Felton Variant: 0-47 inches deep loam, clay loam, and clay Soulajule: 0-28 inches deep clay loam and gravelly to very gravelly clay | High | Felton Variant: moderately slow Soulajule: slow | Low to high |
| 127: Fluvents, channeled | Stratified layers of sand, gravel, stones, and cobbles | Slight to Very High | Not Indicated | Not indicated |
| 163: Saurin-Bonnydoon complex, 30 to 50 percent slopes | Saurin: 0-33 inches deep clay loam Bonnydoon: 0-10 to 20 inches deep gravelly loam | High | Saurin: moderate Bonnydoon: moderate | Low to moderate |
| 164: Saurin-Bonnydoon complex, 50 to 75 percent slopes | Saurin: 0-33 inches deep clay loam Bonnydoon: 0-10 to 20 inches deep gravelly loam | High | Saurin: moderate Bonnydoon: moderate | Low to moderate |
| 185: Tocaloma-Saurin association, extremely steep | Tocaloma: 0-39 inches deep loam and very gravelly loam Saurin: 0-33 inches deep clay loam | High | Tocaloma: Moderately rapid Saurin: moderate | Low to moderate |

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Appendix B
PROJECT DESIGN GRAPHICS

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SEE SHEET 1



LEGEND

- TREE
- TREE
- STUMP
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- POWER VAULT
- GUY
- POWER POLE
- SIGN
- CMP CORRUGATED METAL PIPE
- GUARD POST
- CONTROL POINT
- DIRT PATH
- ASPHALT
- CONCRETE
- FENCE

PREPARED UNDER THE SUPERVISION OF

SCALE: 20
 DATE: 01/23/2009
 DRAWN BY: KJM
 ENGINEER:
 CHECKED BY: BAW
 FB: PG.

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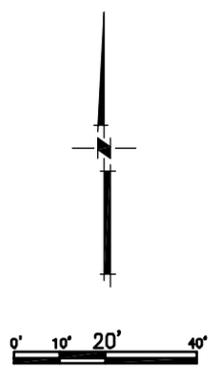
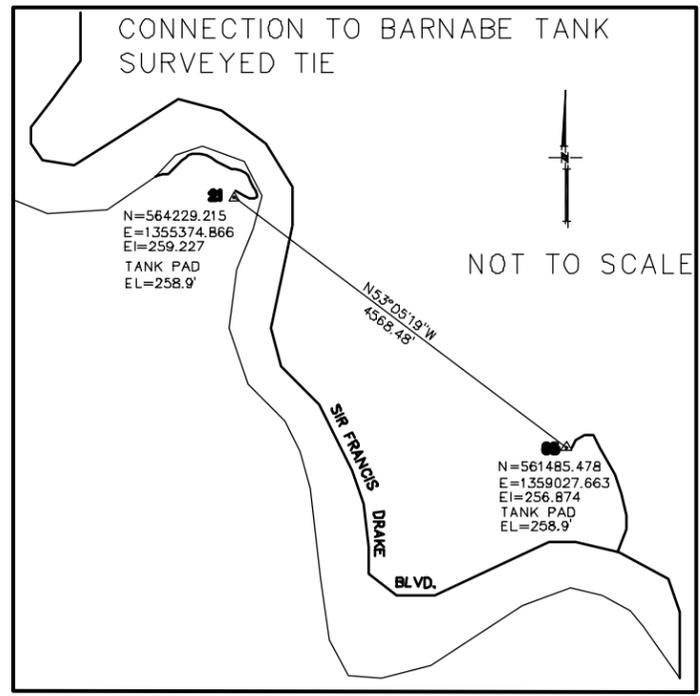
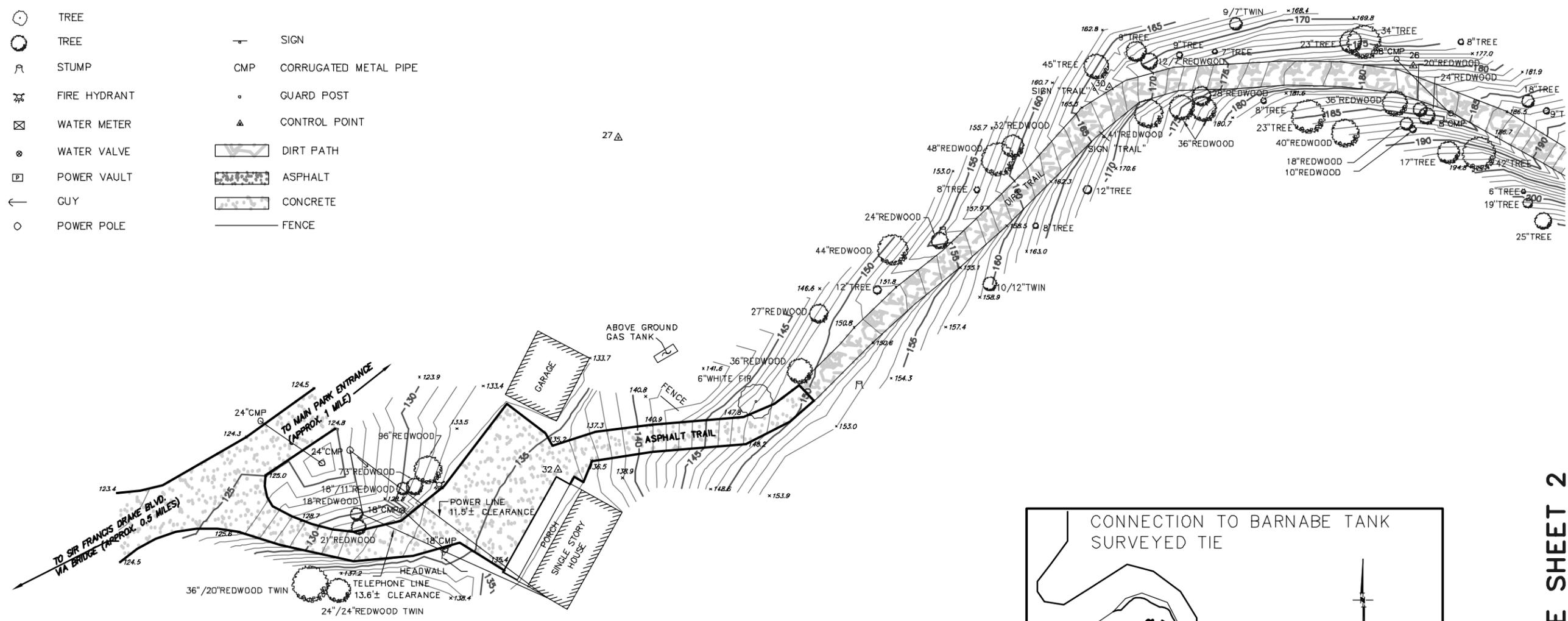
TOPOGRAPHIC SURVEY
SAMUEL P. TAYLOR STATE PARK
MAIN TANK SITE
 MARIN COUNTY CALIFORNIA

SHEET NO.
 2 OF 3 SHEETS
 JOB No.
 CPR-0010

NO. BY DATE

LEGEND

- TREE
- TREE
- STUMP
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- POWER VAULT
- GUY
- POWER POLE
- SIGN
- CMP CORRUGATED METAL PIPE
- GUARD POST
- CONTROL POINT
- DIRT PATH
- ASPHALT
- CONCRETE
- FENCE

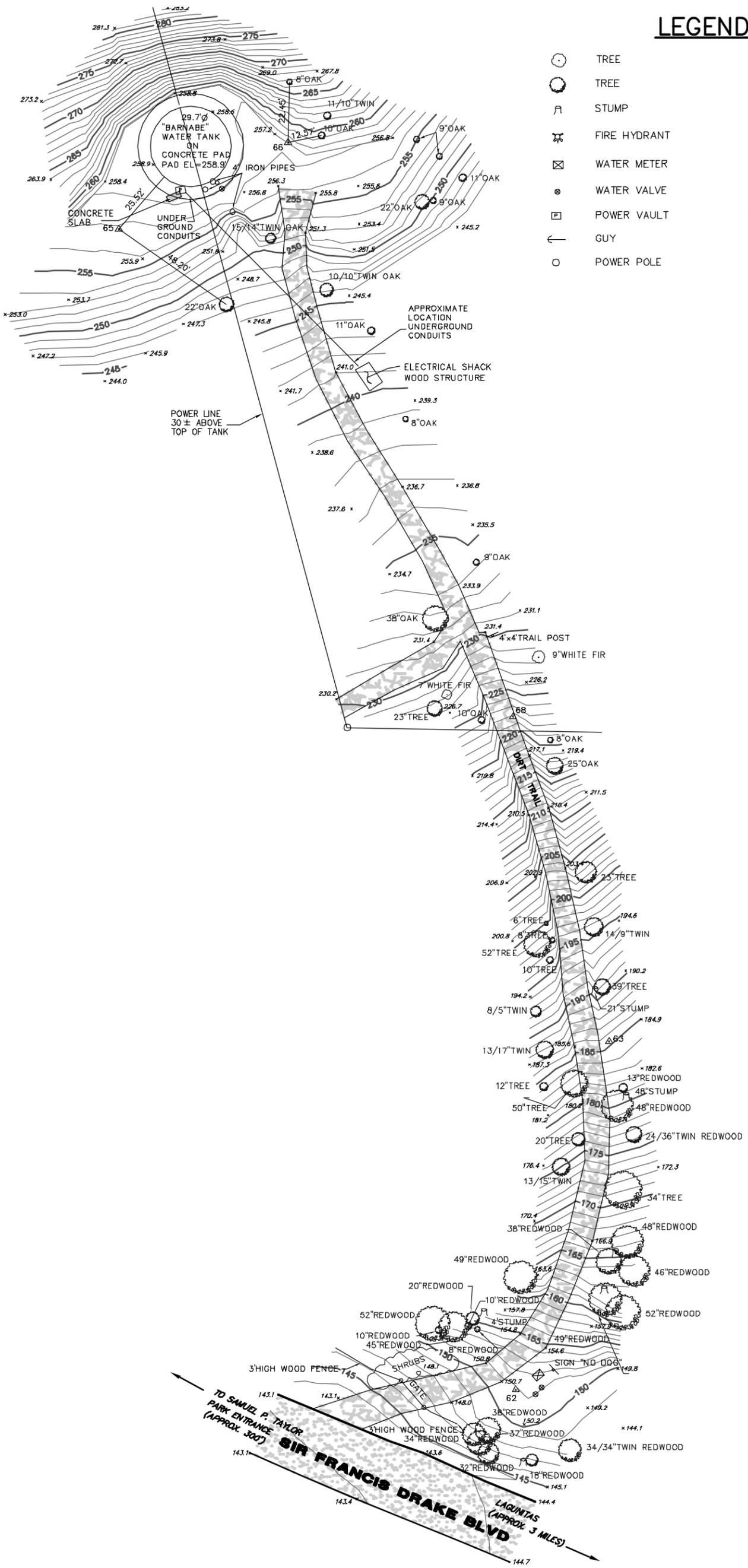


NOTES

- (1) THIS DRAWING IS BASED ON CCS27 ZONE 3 USING THE FOUND POINTS P34 AND P35 AS SHOWN ON THE MAP ENTITLED "SAMUEL P. TAYLOR STATE PARK PLAT OF FIELD NOTES" BY JOHN W. BLODGER 1979. SAID MAP IS STAMPED "PA-991". ALL BEARINGS DISTANCES AND COORDINATES ARE GRID. TO OBTAIN GROUND LEVEL DISTANCES MULTIPLE BY 1.0000642.
- (2) ALL ELEVATIONS SHOWN HEREON ARE BASED ON USC&GS MEAN SEA LEVEL (NGVD29) HOLDING THE FOUND STANDARD 3 1/2" BRASS DISC "J632" WITH AN ELEVATION OF 115.510.
- (3) ALL DISTANCES ARE IN FEET AND DECIMALS THEREOF.
- (4) THE SYMBOLS SHOWN IN THE ABOVE LEGEND ARE ICONS ONLY, AND ARE NOT INTENDED TO INDICATE THE ACTUAL SIZE OR SHAPE OF THE PHYSICAL FEATURES REPRESENTED.

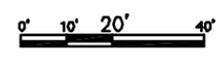
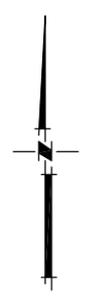
SEE SHEET 2

| | |
|--|--------------------|
| <p>PREPARED UNDER THE SUPERVISION OF</p> | <p>NO. BY DATE</p> |
| <p>SCALE: 20</p> <p>DATE: 01/23/2009</p> <p>DRAWN BY: KJM</p> <p>ENGINEER:</p> <p>CHECKED BY: BAW</p> <p>FB:</p> | |
| <p>DAVID EVANS AND ASSOCIATES INC.</p> <p>5000 Executive Parkway, Suite 125</p> <p>San Ramon, California 94583</p> <p>Phone: 925.587.3380</p> <p>Fax: 925.587.3388</p> | |
| <p>TOPOGRAPHIC SURVEY</p> <p>SAMUEL P. TAYLOR STATE PARK</p> <p>MAIN TANK SITE</p> <p>MARIN COUNTY CALIFORNIA</p> | |
| <p>SHEET NO.</p> <p>1 OF 3 SHEETS</p> <p>JOB No.</p> <p>CPR-0010</p> | |



LEGEND

- TREE
- TREE
- ⌒ STUMP
- ⊗ FIRE HYDRANT
- ⊠ WATER METER
- ⊙ WATER VALVE
- ⊠ POWER VAULT
- ← GUY
- POWER POLE
- SIGN
- CMP CORRUGATED METAL PIPE
- GUARD POST
- ▲ CONTROL POINT
- ▭ DIRT PATH
- ▨ ASPHALT
- ▩ CONCRETE
- FENCE



| | | | | | | | |
|--------------------|----------------------------|---|--|---|--|--|--|
| JOB No. CP-0010 | SHEET NO. 3 OF 3 SHEETS | TOPOGRAPHIC SURVEY SAMUEL P. TAYLOR STATE PARK MAIN TANK SITE MARIN COUNTY CALIFORNIA |  DAVID EVANS AND ASSOCIATES INC. 5000 Executive Parkway, Suite 125 San Ramon California 94583 Phone: 925.867.3380 Fax: 925.867.3388 | SCALE: 20 DATE: 01/23/2008 DRAWN BY: KGM ENGINEER: CHECKED BY: BMM FB: PG. | PREPARED UNDER THE SUPERVISION OF <table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> </table> | | |
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| | | | | | NO. BY DATE | | |

APPENDIX C
ACRONYMS

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Acronyms

ADA - Americans with Disabilities Act
AGR - Agricultural Supply
APE - Area of Potential Effect
APEFZ - Alquist-Priolo Earthquake Fault Zoning
ARB/CARB - California Air Resources Board
BAAQMD – Bay Area Air Quality Management District
BMP - Best Management Practices
CA - California
Caltrans - California Department of Transportation
CBC/UBC - California Uniform Building Code
CCR - California Code of Regulations
CDF - California Department of Forestry and Fire
CDFG - California Department of Fish and Game
CEQA - California Environmental Quality Act
CGS - California Geological Survey
CNDDDB - California Natural Diversity Database (Calif. Dept. of Fish and Game)
CNPS - California Native Plant Society
CRHP - California Register of Historic Places
CSQA - California Storm Water Quality Association
DBH – diameter at breast height
DOF – California Department of Finance
DPR - California Department of Parks and Recreation (California State Parks)
ECC – Emergency Command Center
EIR - Environmental Impact Report
ES - Environmental Setting
ESA - Endangered Species Act
FEMA - Federal Emergency Management Agency
FMMP - Farmland Mapping and Monitoring Program
GP - General Plan
IS/MND - Initial Study / Mitigated Negative Declaration
Ldn - day-night average levels
LOS - level of service
MALT – Marin Agricultural Land Trust
MSL - mean sea level
MND - Mitigated Negative Declaration
MMWD – Marin Municipal Water District
mph - miles per hour
MRZ – Mineral resources Zone
N/A – Not Applicable
NAHC - Native American Heritage Commission
NMFS – National Marine Fisheries
NOx - nitrogen oxide
NPDES - National Pollutant Discharge Elimination System
NRHP - National Register of Historic Places
NSC - Northern Service Center

NSO – northern spotted owl
OES – Office of Emergency Services
PM₁₀ - particulate matter (particles with an aerodynamic diameter of 10 Microns or less)
PM_{2.5} - particulate matter (particles with an aerodynamic diameter of 2.5 Microns or less)
PRC - Public Resources Code
RWQCB - Regional Water Quality Control Board
RV - Recreational Vehicle
ROG - reactive organic gases
SAFZ - San Andreas Fault Zone
SCA – Stream Conservation Area
SFBAB – San Francisco Bay Air Basin
SFBRWQCB - San Francisco Bay Regional Water Quality Control Board
SMP - Storm Water Management Plan
SWPPP - Storm Water Pollution Prevention Plan
SWRCB - State Water Resource Control Board
SOD – Sudden Oak Death
U.S. - United States
USACOE - United States Army Corps of Engineers
USDA – SCS – United States Department of Agriculture – Soil Conservation Service
USEPA - United States Environmental Protection Agency
USFWS - United States Fish and Wildlife Service
USGS - United States Geological Service
VOC – volatile organic compound
VRP – Visibility Reducing Particle