

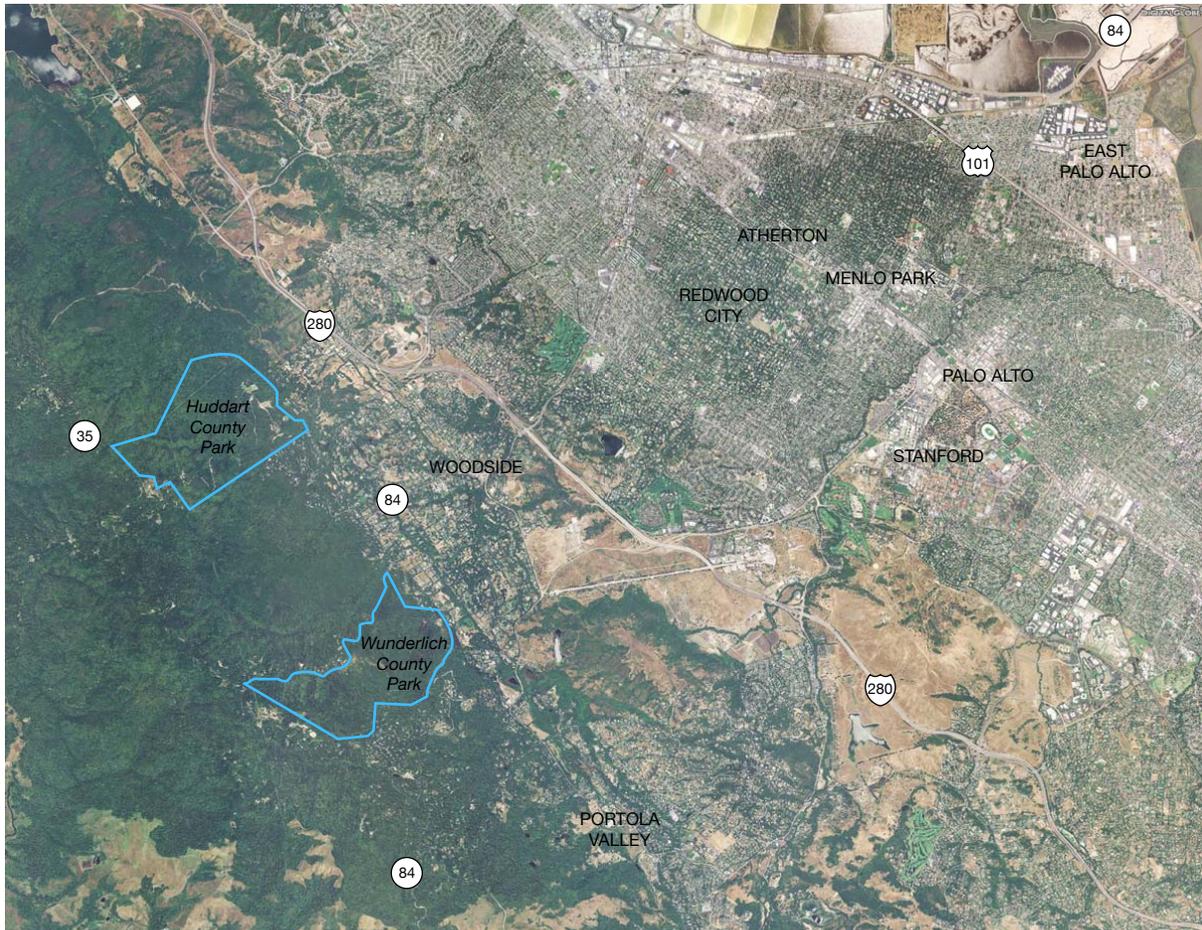
# HUDDART AND WUNDERLICH PARKS MASTER PLAN

Draft Environmental Impact Report

Prepared for  
San Mateo County  
Parks Department



July 2007



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# SUMMARY

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## S.1 Introduction

This environmental impact report (EIR) has been prepared by Environmental Science Associates for the San Mateo County Parks Department (County) pursuant to the applicable provisions of the California Environmental Quality Act (CEQA) and its implementing guidelines (CEQA Guidelines). The County is the lead agency for this EIR, which examines the overall effects of implementing the proposed Huddart and Wunderlich Parks Master Plan (referred to throughout this document as the “Master Plan,” “project,” or “proposed project”) for the 973-acre Huddart Park and 942-acre Wunderlich Park (referred to throughout this document as “parks,” “project site” or “site”), located in District 3 of San Mateo County.

This EIR has been prepared to inform the County, responsible agencies, trustee agencies, and the public of the proposed project’s environmental effects. The EIR is intended to publicly disclose those impacts that may be significant and adverse, describe the possible measures that would mitigate or avoid such impacts, and describe a reasonable range of alternatives to the project. The illustrative figures of the proposed project contained herein, although necessarily conceptual in nature, describe the major features of the Master Plan.

## S.2 Background

The County parks planning staff strives to prepare and update a master plan for each facility on a 20-year basis. Master Plans for regional parks and open space areas typically provide a guiding framework for land use and stewardship, natural resource enhancement, and the development of appropriate recreational facilities. These master plans outline a general vision for each park, set forth goals, outline specific improvements, and serve as a guiding framework for operation and improvement of each facility.

The proposed Huddart and Wunderlich Parks Master Plan (Master Plan) presents a 20-year vision for the development, operation and maintenance of these two parks. It also establishes a framework for the County to provide a variety of recreational opportunities in an environmentally sound and sensitive manner. This Master Plan is intended to achieve the following objectives:

- Develop a plan that can be implemented over time, taking into account available financial resources, potential phasing, and long-term management implications;
- Create achievable proposals to address each park’s unique challenges and problems;

- Serve as a working tool that can be implemented with flexibility to respond to changing conditions over the 20-year planning horizon; and
- Provide consistency with other adopted County plans, including the County General Plan and County Trails Plan.

### S.3 Public Involvement

The master planning process for Huddart and Wunderlich Parks was initiated in the spring of 2004. Initial steps included inventory and assessment of existing conditions, interviews with County staff, and review of previous plans and related plans and data. This process was followed by an outreach effort in which the universe of interested stakeholders was identified and contacts were made (Table S-1). The stakeholder groups were engaged in a variety of ways, including meetings and telephone interviews.

**TABLE S-1  
STAKEHOLDER PARTICIPANTS**

• Bear Gulch Road Association	• San Francisco Bay Area Ridge Trail Council
• C/CAG Bikeways Committee	• San Francisquito Creek Watershed Council
• California Department of Forestry and Fire Protection	• San Mateo County Horseman's Association
• California Water Service Company	• San Mateo County Parks Commission
• Diamond Crest Girl Scouts	• San Mateo County Trails Advisory Committee
• ETRAC	• SBC
• Folger Estate Stable Committee	• Sierra Club, Loma Prieta Chapter
• Folger Stable Lessee - Pat Holmes	• Skyline Water District
• Friends of Huddart and Wunderlich Parks	• The Trail Center
• Kings Mountain Archers	• Town of Woodside
• Midpeninsula Regional Open Space District	• Volunteer Horse Patrol
• National Park Service, Golden Gate National Recreation Area	• Woodside Bicycle Committee
• Peninsula Bicycle and Pedestrian Coalition	• Woodside Fire Department
• Peninsula Girl Scouts	• Woodside Trails Club
• PG&E	• Woodside Trails Committee
• Portola Valley Trails Association	
• Responsible Organized Mountain Pedalers (ROMP)	

Several workshops and meetings were held at key points in the process. The process benefited greatly through the active participation of these stakeholder groups and other interested individuals. The following sessions informed and guided the planning effort:

- Public Workshop #1 – July 2004
- Equestrian Focus Group – July 2004
- Public Workshop #2 – November 2004
- Woodside Bicycle Committee Focus Group – December 2004
- Neighboring Agencies Focus Group – February 2005
- Girl Scouts Focus Group – February 2005
- Trails Stakeholders Focus Group – March 2005
- Public Workshop #3 – June 7, 2005
- Park and Recreation Commission – Site Visit July, 2005
- Park and Recreation Commission – August 4, 2005
- Second Trails Stakeholders Meeting – January 31, 2006
- Park and Recreation Commission – March 22, 2006
- Park and Recreation Commission – April 6, 2006
- County Board of Supervisors – September 12, 2006

A questionnaire in the form of a “comment sheet” was made available to the participants in each public meeting, and blank sheets were made available at both park entrances. In addition, the various stakeholder groups circulated the questionnaire to interested members of their organization via mail and internet. Between July 2004 and May 2005, approximately 160 questionnaires were received. In addition, numerous letters and emails were received and entered into the public record.

The following summarizes the goals of the Master Plan that emerged from the planning process:

- Continue to provide multiple recreational opportunities that are consistent with the regional nature of the parks and with protection of the environmental, cultural and historic resources of the land.
- Concentrate development of new facilities in the already developed portions of the park. Protect the wild character of the undeveloped portions of the park.
- Increase the revenue generation capability of each park.
- Identify physical improvements that will decrease ongoing operation and maintenance costs.
- Make public safety a top priority in ongoing park operations and maintenance, and in new improvement projects.
- Ensure the continued equestrian use of the parks.
- Improve vehicular and pedestrian circulation within each park.

## S.4 Master Plan Summary

Selection of program elements was guided by the goals and objectives of the planning process and suggestions made by the public. The proposed Master Plan includes the following elements:

- Huddart and Wunderlich Park Improvements (facilities, parking, traffic and circulation)
- Trails Recommendations
- Signage Guidelines
- Erosion and Sedimentation Control
- Site Utilities
- Fisheries Recommendations
- Fire Hazard Assessment and Recommendations
- Implementation

Using a phased approach, the Master Plan identifies three different implementation timelines – short, medium, and long-term – each of which correspond with a timeframe of 5, 10, and 20-years. The rationale for phasing was based on the following goals:

- Phase I improvements (next 5 years) were designed to address public safety concerns, code requirements, environmental damage, or to respond to a pressing need.
- Phase II (next 10 years) includes improvements to reduce ongoing operation and maintenance costs or that respond to a pressing need, but require a longer lead-time for planning and design.
- Phase III (next 20 years) includes facilities that will improve the level of recreational service to the park visitor.

This approach provides a structured method for better meeting the public's recreational needs and for preserving and enhancing the wild portions of the park. Phase 1 projects included in the Master Plan include:

Short-term, Phase I components of the Master Plan at Huddart Park include: 1) Phase I Archery Range improvements; 2) Directional signage to the AIDS Grove; 3) Horse trailer parking; 4) Possible transfer of park land located south of Kings Mountain Road; 5) New connector trail and pedestrian crosswalks in lower picnic area; 6) 20-year phased park bridge replacement program; 7) New crossing on McGarvey Gulch Creek at Richards Road to eliminate fish passage barrier; 8) Alternate park entrance from the Phleger Estate; 9) Replace the existing bridge across West Union Creek in collaboration with Town of Woodside and private property owners; 10) Annual assessment of 2-inch water system and segment replacement; 11) Water pressure and volume at the Park Maintenance Yard; 12) Low-flow toilet fixtures at Sequoia, Redwood, and Oak restrooms; and, 13) Coordination with AT&T to protect communications facilities and repair any damage.

Short-term, Phase I components of the Master Plan at Wunderlich Park include: 1) Folger Stable Building seismic retrofit and restoration; 2) Horse-keeping measures at Folger Stable complex; 3) Vehicular entrance/exit and parking area improvements, including horse trailer parking, and traffic safety improvements on Woodside Road; 4) New vault-type restroom at parking lot, with running water; 5) Entrance signage; 6) ADA upgrades at Carriage House; 7) Fee collection

station at parking lot; 8) Annual assessment of 2-inch water system and segment replacement, in coordination with the Folger Stable Improvement Project; 9) Loop Trail fuel reduction program; 10) New fire road connection between Loop and Alambique Trails; and, 11) Fire safety zones and turn-arounds.

Phase I projects common to both parks include: 1) Creation of a Blue Ribbon Panel to work with County Parks to prepare an update to the 2001 County Trails Plan; 2) Studying a potential safe crossing of Skyline Boulevard; 3) Additional hose bibs for horse watering; 4) Interpretive and educational signage; 5) Preparation of a Sediment Assessment Study; beginning phased implementation of sediment reduction measures; 6) Development of a prioritized capital improvement program for storm drainage culvert replacement; and, 7) Establishment of benches on trails, with bench donation program.

Medium-term, Phase II projects at Huddart Park include: 1) Vault toilet at Sequoia Day Camp; 2) Oak Area improvements, including restroom replacement, road realignment, and parking; 3) New rental building at Zwierlein Area; 4) Parking at Miwok, picnic shelter and restroom replacement; 5) Flagpole and crafts sink at Sequoia Day Camp; 6) Phase II Archery Range improvements; and, 7) All-weather single track trails. Medium-term, Phase II projects at Wunderlich Park include: 1) Folger Stable area site improvements, including paddocks, arena, drainage, caretakers residence, and other components; and, 2) All-weather single track trails. Phase II projects common to both parks include a potable water source installation at upper end of each park.

Long-term, Phase III projects at Huddart Park include: 1) Closure of Archery Fire Road; New loop trail connection between Archery Range and Chinquapin Trail; 2) Redwood Area improvements, including restroom and shelter replacements, road realignment, and parking; 3) Meadow Area improvements, including restroom replacement; 4) Werder picnic shelter replacement; 5) Restroom replacement at Madrone, Werder, and Zwierlein; 6) Solar photo-voltaic electric power at new structures; 7) Toyon Campground expansion, restroom and shower building replacement; 8) Ranger residence relocation; 9) Interpretive center; 10) Phase III Archery Range improvements; 11) Underground electric facilities; and 11) New trail connections in locations shown within Master Plan. Long-term, Phase III projects at Wunderlich Park include: 1) New trail connection between Alambique and Skyline Trails; and, 2) Underground electric facilities.

## **S.5 Master Plan Alternatives Summary**

Alternatives to the proposed Master Plan considered herein (see Chapter 4) include:

### **Alternative 1: No Project Alternative**

Under the No Project Alternative, the Master Plan would not be implemented. The County would continue to implement existing protection, operations, and maintenance policies. The facilities and trails system at Huddart and Wunderlich would remain as is. Circulation and parking would also remain the same. Public access to this area would likely increase in proportion to population

growth and recreational demand. Some Master Plan improvements could occur, but on an ad-hoc basis. Park patrols and operation, erosion control, treatment of non-native species and pests, and road and facilities maintenance would continue at existing levels and intensities. The No Project Alternative would not address, or would only address in a partial and unsystematic manner, the objective of the County to develop a master plan that could be implemented over time, taking into account available financial resources, potential phasing, and long-term management implications. The County would not have a working tool that would: 1) continue to provide multiple recreational opportunities that are consistent with the regional nature of the parks and protection of the environmental, cultural, and historic resources of the land; 2) increase the revenue generation capability of each park; 3) identify physical improvements that would decrease ongoing operation and maintenance costs; 4) make public safety a top priority; 5) ensure the continued equestrian use of the parks; nor 6) improve vehicular and pedestrian circulation within each park.

## **Alternative 2: Partial Master Plan – Trails, Signage, and Folger Estate Stable Improvements Only**

Alternative 2 is a variation of the proposed Master Plan that would prioritize resource management and restoration activities that are linked to the pedestrian and equestrian use of the park. It would direct County expenditures and staff resources to address trail improvements and related activities park-wide, in order to respond to the public demand for continued pedestrian and equestrian access. The alternative would include trail improvements such as:

- new trail connections and access points
- erosion and sediment controls (relating to roads, fire trails, hiking trails, and equestrian trails)
- bridge repair
- trailside amenities, such as horse watering bibs, drinking fountains, and benches
- horse keeping measures to protect water quality
- a park-wide signage program

This alternative would also concentrate facility improvements to be implemented within the federally listed Folger Estate Stable Historic District, in-lieu of park-wide improvements to Huddart and Wunderlich Parks. Under this alternative, park-wide site utilities would not be improved, new facilities would not be constructed at Huddart Park, and the rehabilitation of existing structures at Huddart Park would be deferred. This Alternative would not address, or would only address in a partial and unsystematic manner, the goal of the Master Plan to decrease ongoing operations and maintenance costs associated with aging facilities and site utilities across the two parks. Therefore, this alternative was not selected.

## **S.6 Summary of Impacts and Mitigation Measures**

Under CEQA, a significant effect on the environment is defined as a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by a project,

including effects on land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. The criteria of significance used to determine whether or not effects are significant are included in the introduction to each topic discussion in this EIR.

This EIR presents information in the following impact categories, as required under CEQA:

- Land Use and Agriculture
- Recreation
- Visual Quality
- Geology, Geohazards and Soils
- Hydrology and Water Quality
- Biological Resources
- Cultural Resources
- Transportation and Circulation
- Air Quality
- Noise
- Fire Hazards, Fire Management and Hazardous Materials
- Public Services and Utilities

Potential environmental impacts of the project are summarized in Table S-2 at the end of this chapter. This table lists impacts and mitigation measures in three major categories: significant impacts that would remain significant even with mitigation; significant impacts that could be mitigated to a less-than-significant level; and impacts that would not be significant. For each significant impact, the table includes a summary of mitigation measure(s) and an indication of whether the impact would be mitigated to a less-than-significant level. Please refer to Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, for a complete discussion of each impact and associated mitigation.

## Environmentally Superior Alternative

Alternative 2 is considered the Environmentally Superior Alternative because this alternative slightly reduces project impacts. However, it should be noted that it does not meet all the project objectives, and the proposed project actually creates the greatest potential environmental benefit as it addresses environmental benefits not weighed in making an environmentally superior determination.

## S.7 Areas of Controversy

In the fall of 2006, the County prepared and released a Notice of Preparation (NOP) of a Draft EIR (see Appendix A). Comments submitted during the NOP review period raised issues on the scope and content of the Draft EIR, including:

- Traffic and circulation impacts to adjacent neighbors from park improvements
- Public safety – user conflicts
- Law enforcement in County parks – parking and illegal uses
- Due to parks' locations, need to include Town of Woodside and GGNRA in planning process

A list of agencies, organizations and individuals who submitted comments during the NOP scoping period are listed in Appendix B, and are addressed throughout this document.

## S.8 Organization of this Draft EIR

The DEIR is organized into six chapters, preceded by the Table of Contents and a Summary. A brief summary of the contents of the DEIR is presented below.

- Chapter 1: Introduction
- Chapter 2: Project Description
- Chapter 3: Environmental Setting, Impacts, and Mitigation Measures
- Chapter 4: Alternatives
- Chapter 5: CEQA Statutory Sections
- Chapter 6: Report Preparers

**Chapter 1 – Introduction.** The Introduction provides a historical overview of the planning efforts for the two parks, the scope of the EIR and approach to analysis, and notes the documents incorporated by reference.

**Chapter 2 – Project Description.** The Project Description is prepared pursuant to CEQA *Guidelines* § 15124 and contains a discussion of the Project attributes through text, figures, and tables. Specifically, this chapter includes a discussion of objectives for the Master Plan, an overview of the current setting, a discussion of Master Plan characteristics, and implementation schedule.

**Chapter 3 – Environmental Setting, Impacts, and Mitigation Measures.** The majority of environmental impact evaluation for the proposed Master Plan is contained in this chapter. A description of the physical setting for each environmental issue is provided, along with disclosure of the anticipated changes to physical conditions after Program implementation. The “setting,” for purposes of this EIR, contains the existing physical characteristics of the Project area and its surroundings. Mitigation measures are included for any significant impact that would result with the proposed Master Plan.

Environmental impacts are numbered throughout this portion of the DEIR, beginning with the chapter section number, followed by sequentially numbered impacts. For example, the first impact in Section 3.1 (Land Use and Agriculture) is impact number 3.1-1, and the second impact in this section is 3.1-2. Mitigation measures are numbered to correspond to impacts; therefore, Mitigation Measures to address Impacts 3.1-1 and 3.2-1 would be Mitigation Measures 3.1-1 and 3.2-1.

**Chapter 4 – Alternatives to the Master Plan.** In accordance with CEQA *Guidelines* § 15126.6, Chapter 4 of the DEIR presents a range of reasonable alternatives designed to attain most of the basic objectives of the Master Plan and avoid or substantially reduce significant Project effects. The potential environmental impacts of the alternatives are discussed in comparison to the impacts that would result from the proposed Master Plan and the advantages and disadvantages of each alternative are presented.

**Chapter 5 – CEQA Statutory Sections.** Chapter 5 includes CEQA-mandated sections examining the Project’s significant irreversible effects, growth inducing effects and cumulative impacts. Cumulative impacts refer to two or more individual effects that, when considered

together, are considerable or compound other environmental impacts. In accordance with CEQA *Guidelines* § 15355, the analysis in Chapter 5 examines the potential for cumulative impacts of the Project in conjunction with growth projections from the General Plans of neighboring communities including Woodside, Redwood City and Portola Valley.

***Chapter 6 – DEIR Authors, Persons and Organizations Contacted.*** This chapter identifies the individuals who were involved in the preparation of the DEIR. Persons and organizations contacted in preparation of the DEIR are referenced at the end of each chapter or section.

***Appendices.*** The DEIR contains several appendices of technical or procedural materials that are pertinent to the analysis contained in the body of the document. See the Table of Contents for the full list of appendices.

**TABLE S-2  
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<b>3.1 Land Use and Planning</b>		
<b>Impact 3.1-1:</b> The project would not have the potential to physically divide an established community.	None required.	No Impact
<b>Impact 3.1-2:</b> The project would not conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.	None required.	No Impact
<b>Impact 3.1-3:</b> The project would not conflict with existing adjacent land uses.	None required.	No Impact
<b>Impact 3.1-4:</b> The project would not conflict with an applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP).	None required.	No Impact
<b>Impact 3.1-5:</b> The project would not impact agricultural resources.	None required.	No Impact
<b>3.2 Recreation</b>		
<b>Impact 3.2-1:</b> The project has the potential to increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated.	<b>Mitigation Measure 3.2-1:</b> The County shall implement Visual Resources, Transportation, Noise, and Air Quality mitigation measures included in this EIR.	LTS
<b>Impact 3.2-2:</b> The Project would include recreational facilities and would require the construction and expansion of recreational facilities that might have an adverse physical effect on the environment.	<b>Mitigation Measure 3.2-2:</b> The County shall implement Visual Resources, Transportation, Noise, and Air Quality mitigation measures included in this EIR.	LTS

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<b>3.3 Visual Quality</b>		
<p><b>Impact 3.3-1:</b> Implementation of the Master Plan would result in short-term adverse visual impacts associated with project construction.</p>	<p><b>Mitigation Measure 3.3-1:</b> The following measures are included to minimize or reduce project impacts on existing scenic resources and visual quality during project construction:</p> <ul style="list-style-type: none"> <li>• During construction of park facilities, construction staging shall be located in areas that are not visible from public vantages, to the extent possible.</li> <li>• Avoid damage to natural surroundings in and around the work limits.</li> <li>• Provide temporary barriers to protect existing trees, plants, and root zones, if necessary.</li> <li>• Construction activities shall be phased to minimize the appearance of disturbed areas within the park.</li> </ul>	LTS
<p><b>Impact 3.3-2:</b> The proposed Master Plan would substantially degrade the existing scenic character or quality of Huddart and Wunderlich Park and its surroundings.</p>	<p><b>Mitigation Measure 3.3-2:</b> The following measures are included to minimize or reduce project impacts on existing scenic resources and visual quality:</p> <ul style="list-style-type: none"> <li>• Minimize development footprints.</li> <li>• Choose building materials that are visually compatible or do not compete with the landscape. In Huddart Park, architecture of new facilities shall enhance the existing rural, rustic character. In Wunderlich, equestrian facilities will be visually compatible with the elements in the Historic District.</li> <li>• New structures shall blend indoor and outdoor spaces, including shelters, amphitheaters, indoor-outdoor rental facility at Zwerlein.</li> <li>• Parking areas will be designed with pervious materials.</li> <li>• Selected tree removal to open views of scenic vistas from designated picnic areas will not detract from the visual character of the park.</li> <li>• Incorporate the General Signage Recommendations put forward in the proposed Master Plan: <ul style="list-style-type: none"> <li>– Signage design should achieve the intended function while not dominating the natural visual quality of the parks</li> <li>– Signage clutter (gradual addition of individual signs over time) should be avoided. Sites where signage occurs should be kept to the minimum necessary by clustering signs where possible at single locations. Individual signage locations should avoid clutter through minimizing the amount of individual signs by incorporating as much information as possible into single signs.</li> <li>– The use of recycled plastic timbers for posts and monuments should be pursued to minimize consumption of redwood lumber and maximize the life of sign posts.</li> </ul> </li> </ul>	LTS

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<b>Impact 3.3-3:</b> The proposed Master Plan would introduce sources of light and glare to each park.	<p><b>Mitigation Measure 3.3-3:</b> The following mitigation measures are recommended to minimize project impacts of light and glare:</p> <ul style="list-style-type: none"> <li>• Exterior lighting shall use fixtures with low-level lighting, focused beams, and directional hoods to minimize light visible from other properties and reduce night sky impacts.</li> <li>• Non-reflective, permeable surfaces shall be utilized to reduce glare.</li> </ul>	LTS
<b>Impact 3.3-4:</b> The proposed Master Plan would substantially damage scenic resources, including, but not limited to trees, rock outcroppings and historic buildings within a state scenic highway.	None required.	No Impact
<b>3.4 Geology, Soils and Seismicity</b>		
<b>Impact 3.4-1:</b> The project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction; and landslides.	<b>Mitigation Measure 3.4-1:</b> All proposed structures shall comply with all applicable San Mateo County engineering design rules and regulations. Geotechnical and seismic design criteria shall comply with the seismic requirements of Zone 4 of the 1997 Uniform Building Code (UBC), and the California Building Code (Title 24) additions and specifications.	LTS
<b>Impact 3.4-2:</b> The project could result in substantial soil erosion or the loss of topsoil.	<b>Mitigation Measure 3.4-2:</b> All proposed new or modifications to existing, trails, fire roads, and horse facilities shall conform to erosion and sedimentation control measures provided within the Huddart and Wunderlich County Parks Master Plan. In addition, the proposed modifications shall be in compliance with guidance found in the County Trails Master Plan and County Watershed Protection Program Maintenance Standards. Implementation of these measures, along with the SWPPP, would reduce potential short-term and ongoing impacts related to erosion and loss of topsoil.	LTS
<b>Impact 3.4-3:</b> The project could 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.	<b>Mitigation Measure 3.4-3:</b> Incorporation of applicable County and state building, roadway, and trail construction and restoration standards, including those found in the County Trails Master Plan and County Watershed Protection Program Maintenance Standards, into facility siting and design would ensure that implementation of the proposed Master Plan would not result in construction of facilities upon geologically unstable areas. Furthermore, incorporation of these standards would ensure that new facilities or changes to existing facilities would not result in landslide, lateral spreading, subsidence, increased liquefaction potential, or collapse. Therefore, this impact would be less than significant.	LTS
<b>Impact 3.4-4:</b> The project is not located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property.	None Required	No Impact

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<p><b>Impact 3.4-5:</b> The project could be located within areas that include soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.</p> <p>3.5 Hydrology and Water Quality</p>	None required.	No Impact
<p><b>Impact 3.5-1:</b> The proposed Master Plan includes projects that would violate water quality standards or waste discharge requirements.</p>	<p><b>Mitigation Measure 3.5-1a:</b> A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and adhered to for construction of all new facilities, including but not limited to new or realigned trails, roadways and parking lots, new structures including buildings, shelters, and bridges, manure storage areas, paddock and horse wash-down improvements, retrofit or upgrades to existing buildings, and campground, picnic area, and archery facilities expansion areas. The SWPPP shall identify pollutant sources that may affect the quality of stormwater discharge, and shall require the implementation of Best Management Practices (BMPs) identified in the County Watershed Protection Program Maintenance Standards to reduce pollutants, including sediment, in storm water discharges.</p> <p><b>Mitigation Measure 3.5-1b:</b> New septic systems shall be installed in accordance with County and State guidelines. Additionally, septic systems shall be located away from surface drainages, creeks, and other surface waterways in order to reduce potential migration of septic system leachate into surface waters.</p>	LTS
<p><b>Impact 3.5-2:</b> The proposed Master Plan would 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.</p>	None required.	No Impact
<p><b>Impact 3.5-3:</b> The proposed Master Plan would substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site.</p>	<b>Mitigation Measure 3.5-3:</b> Implement Mitigation Measure 3.5-1a.	LTS
<p><b>Impact 3.5-4:</b> The proposed Master Plan would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of runoff, or otherwise substantially degrade water quality.</p>	<b>Mitigation Measure 3.5-4:</b> Implement Mitigation Measure 3.5-1a.	LTS

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<b>Impact 3.5-5:</b> The proposed Master Plan would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other delineation map.	None required.	No Impact
<b>Impact 3.5-6:</b> The proposed Master Plan would place within a 100-year flood hazard area structures which would impede or redirect flood flows.	<b>Mitigation Measure 3.5-6:</b> Project-level plans for all new or replacement bridges shall incorporate design measures that site bridges above 100-year flood heights, in order to eliminate potential interference with flood flows.	LTS
<b>Impact 3.5-7:</b> The proposed Master Plan would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.	None required.	No Impact
<b>Impact 3.5-8:</b> Proposed Master Plan improvements would not be subject to inundation by seiche, tsunami, or mudflow.	None required.	No Impact
<b>3.6 Biological Resources</b>		
<b>Impact 3.6-1:</b> Implementation of proposed project components, as well as implementation of vegetation management, fire hazard reduction, and erosion control activities during Phases I through III of the Master Plan, could result in temporary disturbance to, or mortality of, special-status species at both Huddart and Wunderlich Parks.	<p><b>Mitigation Measure 3.6-1a:</b> Avoid direct and indirect impacts on central California coast steelhead.</p> <ul style="list-style-type: none"> <li>• All activity involving work within the bed or banks of a stream channel will be restricted to low-flow periods of June 15 through November 1. If the channel is dry, construction can occur as early as June 1. Restricting construction activities to this work window will minimize impacts to migrating adult and smolt steelhead.</li> <li>• Construction activities will comply with adopted County Watershed Protection Program Maintenance Standards (2004).</li> <li>• Construction activities within and adjacent to all creeks and associated riparian habitat will be confined to the minimum disturbance area required for the proposed project.</li> <li>• If the channel is not dry, water will be diverted around the stream reach where work is occurring. This will reduce the potential for sediment or other pollutants to enter the waterways and to impact downstream resources.</li> <li>• Sediment curtains will be placed downstream of the construction or maintenance zone to prevent sediment disturbed during construction activities from being transported and deposited outside of the construction zone.</li> </ul>	LTS

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
	<p><b>Mitigation Measure 3.6-1a (cont.)</b></p> <ul style="list-style-type: none"> <li>• Prior to construction of a diversion and placement of sediment curtains, a qualified biologist will conduct fish relocation activities, and immediately release captured fish to a suitable habitat downstream of the project site. Capture and relocation measures will be conducted in accordance with the <i>Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act</i> (NMFS, 2000).</li> <li>• If groundwater is encountered, or if water remains within the worksite after flows are diverted, it will be pumped out of the construction area and into a retention basin constructed of hay bales lined with filter fabric. The pump(s) will be screened according to NMFS fish screening criteria for anadromous salmonids (NMFS, 1997) in case individual fish eluded prior capture and relocation efforts.</li> <li>• Silt fencing will be installed in all areas where construction occurs within 100 feet of actively flowing water.</li> <li>• Spoil sites, if necessary, will be located so they do not drain directly into the waterways. If a spoil site drains into a water body, catch basins will be constructed to intercept sediment before it reaches the channels. Spoil sites will be graded to reduce the potential for erosion.</li> <li>• When concrete is to be used in bridge construction or other construction within 100 feet of streams, concrete wash areas will be located so they do not drain directly into streams. If a concrete wash area drains into a water body, catch basins will be constructed to intercept sediment before it reaches the channels. Concrete wash areas will be graded if necessary to reduce the potential for erosion.</li> <li>• If used in bridge construction, fresh concrete will be isolated from wetted channels for a period of 30 days after it is poured. If a 30-day curing period is not feasible, a concrete sealant approved for use in fishery habitat may be applied to the surfaces of the concrete structure. If a sealant is used, the manufacturer's guidelines for drying times will be followed before reestablishing surface flows within the work area.</li> <li>• Equipment and materials will be stored at least 50 feet from waterways. No debris (such as trash and spoils) will be deposited within 100 feet of creeks. Staging and storage areas for equipment, materials, fuels, lubricants, and solvents will be located outside of the stream channel and banks. Any equipment or vehicles driven and/or operated within or adjacent to the stream will be checked daily and maintained as needed to prevent leaks of materials that, if introduced to water, could be deleterious to aquatic life. Vehicles will be moved away from the stream prior to refueling and lubrication.</li> <li>• A qualified biological monitor will be on site during all open trench stream crossing activities. The biological monitor will be authorized to halt construction if impacts to steelhead are evident.</li> <li>• Project sites will be restored to pre-construction channel conditions, including streambed composition, compaction, and gradient. Channel banks will be returned to original grade slope and appropriate bank stabilization techniques will be implemented to reduce the potential for erosion and sedimentation. A plan describing pre-project conditions and restoration methods will be prepared prior to construction.</li> </ul>	

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
	<p><b>Mitigation Measure 3.6-1a (cont.)</b></p> <ul style="list-style-type: none"> <li>• Project sites will be revegetated with an appropriate assemblage of native upland vegetation and, if necessary, riparian and wetland vegetation suitable for the area. A plan describing pre-project conditions as well as restoration and monitoring success criteria will be prepared prior to construction.</li> </ul> <p><b>Mitigation Measure 3.6-1b:</b> Avoid direct losses of nests, eggs, and nestlings and potential indirect impacts to avian breeding success.</p> <ul style="list-style-type: none"> <li>• During the breeding bird season (February 1 through August 31) a qualified biologist will survey activity sites for nesting marbled murrelet, raptors, and passerine birds not more than 14 days prior to any ground-disturbing activity, vegetation removal, or construction.</li> <li>• If ground-disturbing activity, vegetation removal, or construction occur only during the non-breeding season between August 31 and February 1, no surveys will be required.</li> <li>• Results of the surveys will be forwarded to CDFG and/or USFWS (as appropriate) and avoidance procedures will be adopted, if necessary, on a case-by-case basis. These can include construction buffer areas (up to several hundred feet in the case of marbled murrelet or raptors) or seasonal avoidance.</li> </ul> <p><b>Mitigation Measure 3.6-1c:</b> Avoidance of direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula.</p> <ul style="list-style-type: none"> <li>• A qualified bat biologist, acceptable to the CDFG, shall conduct surveys to locate colonial roosts prior to initiation of work on any buildings with potential for bat occupation. Potentially suitable habitat shall be located visually. Bat emergence counts shall be made at dusk as the bats depart from any suitable habitat. In addition, an acoustic detector shall be used to determine any areas of bat activity. At least four nighttime emergence counts shall be undertaken on nights that are warm enough for bats to be active. The bat biologist shall determine the type of each active roost (i.e., maternity, winter hibernaculum, day or night).</li> <li>• Removal of trees or demolition of buildings showing evidence of bat activity will occur during the period least likely to impact the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula and between August 15 and April 15 for maternity roosts). If active day or night roosts are found, the bat biologist shall take actions to make such roosts unsuitable habitat prior to tree removal or building demolition.</li> <li>• A no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in consultation with CDFG. Bat roosts initiated during construction are presumed to be unaffected, and no buffer is necessary. However, "take" of individuals will be prohibited.</li> </ul>	

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
	<p><b>Mitigation Measure 3.6-1c (cont.)</b></p> <ul style="list-style-type: none"> <li>• If preconstruction surveys indicate that roosts are inactive or potential habitat is unoccupied, no further mitigation is required. Trees and buildings that have been determined to be unoccupied by special status bats and that are located outside the no-disturbance buffer for active roosts may be removed or demolished.</li> </ul> <p><b>Mitigation Measure 3.6-1d:</b> Avoid destruction of woodrat nests.</p> <ul style="list-style-type: none"> <li>• Activity areas with the potential to result in adverse impacts to woodrat lodges should be surveyed prior to action taking place. Potential actions triggering woodrat nest surveys could include prescribed fires, new trail construction, maintenance of fire roads or existing trails, and utility line rehabilitation.</li> <li>• Destruction of individual woodrat nests should be avoided wherever possible through, for example, relocation of new trails or trail segments to be built through previously undisturbed scrub habitat or working around nests when conducting vegetation management activities. If woodrat nests can be avoided by project activities, suitable buffer areas for avoidance would be delineated with orange construction fencing around nests.</li> <li>• Active woodrat nests found within 10 feet of project disturbance areas that cannot be avoided would be relocated to adjacent suitable habitat under the supervision of a qualified wildlife biologist. Understory vegetation would first be cleared from around the nest. Next, the biologist would disturb the nest and allow woodrats to leave the nest. Finally, the biologist would remove the nest sticks offsite to the base of an adjacent suitable oak, bay, or other tree. Sticks would be placed at a suitable distance determined by the biologist.</li> </ul> <p><b>Mitigation Measure 3.6-1e:</b> Prior to each Master Plan phase and during the planning for specific projects requiring further analysis presence/absence surveys for special-status plants will be conducted by a qualified botanist within areas to be disturbed.</p> <ul style="list-style-type: none"> <li>• Surveys will be conducted in accordance with CNPS and CDFG rare plant survey guidelines. Surveys will include collection of GPS data on plant locations so they can be mapped and readily re-located.</li> <li>• Surveys will be conducted prior to the start of each Master Plan phase or in conjunction with further project-specific CEQA analysis, during the flowering period when the species are most readily identifiable (February – July, depending on the species).</li> <li>• The results of the surveys will be filed as part of the parks' administrative record; results will include mapped locations of all populations; if the presence of any of these species is confirmed, a copy of the survey results will be forwarded to CDFG along with CNDDDB field survey forms.</li> <li>• In the event that special-status plants are proven absent in an area of impact, then no additional mitigation is necessary.</li> </ul>	

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
	<p><b>Mitigation Measure 3.6-1f:</b> In the event that special-status plant populations are found, park staff, in coordination with a qualified biologist, will avoid disturbance to the species by establishing a visible buffer zone of not less than 25 feet prior to work or by relocating project activities.</p> <ul style="list-style-type: none"> <li>• If it is not feasible to avoid disturbance or mortality, then special-status plant habitat and/or sensitive plant communities will be restored or enhanced on-site at a 1:1 ratio in areas that are currently disturbed or in areas that will be temporarily disturbed as a result of Plan implementation.</li> <li>• If feasible, special-status plants and/or seeds will be salvaged from areas of disturbance.</li> <li>• A five-year restoration mitigation and monitoring program will be developed and implemented. Appropriate performance standards may include, but are not limited to: a 75 percent survival rate of restoration plantings or plant cover; absence of invasive plant species; and a functioning, self-sustaining plant community at the end of five years.</li> </ul>	
<p><b>Impact 3.6-2:</b> Implementation of proposed project components during Phases I through III of the Master Plan, may result in the loss of sensitive native communities at both Huddart and Wunderlich Parks, including oak woodland and redwood forest.</p>	<p><b>Mitigation Measure 3.6-2:</b> Avoid removal of sensitive native vegetation to the extent feasible through project redesign and, when avoidance is not possible, replace native vegetation lost as a result of implementation of proposed project components at a 1:1 ratio.</p> <ul style="list-style-type: none"> <li>• Avoid permanent removal of sensitive native vegetation, including oak woodland and redwood forest, to the extent feasible. Where avoidance is not feasible, quantify the amount of each of these vegetation types permanently removed and replace on a 1:1 basis in areas of the site that are to remain as open space. Replacement plant materials shall be from locally collected stock and shall be species specific to the community that was removed. Whenever feasible, plant materials (i.e., shrubs, trees, seeds, cuttings) to be removed should be salvaged and stored properly until they can be re-planted.</li> <li>• Revegetate any sensitive habitat areas that are temporarily disturbed due to project activities using locally collected stock and plant materials specific to the disturbed community.</li> <li>• Planting will be implemented in the fall following reclamation activities at a given site.</li> <li>• All revegetated sites will be monitored for five years. Success criteria to be met at the end of five years may include: at least 80 percent survival of plantings, 75 percent vegetative cover by desirable species, and a viable, self-sustaining plant community.</li> </ul>	LTS
<p><b>Impact 3.6-3:</b> Implementation of proposed project components, as well as implementation of vegetation management, fire hazard reduction, and erosion control activities, during Phases I through III of the Master Plan could result in substantial adverse effects on wetlands and waters of the U.S. under the jurisdiction of the Corps and waters of the State under the jurisdiction of CDFG and the Regional Water Quality Control Board (RWQCB).</p>	<p><b>Mitigation Measure 3.6-3a:</b> Proposed project components or programs implemented under the Parks Master Plan will avoid or minimize adverse effects on jurisdictional waters to the full extent feasible.</p> <ul style="list-style-type: none"> <li>• All jurisdictional areas to be avoided shall be protected by a 50 foot minimum setback throughout project implementation</li> <li>• Areas that are avoided and provided with setbacks will be further protected by Best Management Practices (BMPs), as described in Mitigation Measure 3.6-3b below.</li> </ul>	LTS

**TABLE S-2 (continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

<b>Impacts</b>	<b>Mitigation Measures</b>	<b>Significance after Mitigation</b>
<p><b>Impact 3.6-4:</b> Implementation of proposed project components, as well as implementation of vegetation management, fire hazard reduction, and erosion control activities, during Phases I through III of the Master Plan could result in damage to or removal of significant or heritage trees protected by the County of San Mateo that are within or adjacent to action areas.</p>	<p><b>Mitigation Measure 3.6-3b:</b> Standard BMPs shall be employed to maintain water quality and control erosion and sedimentation during construction. BMPs will include those set forth in the San Mateo County Watershed Protection Program and in Mitigation Measures set forth in the <i>Hydrology</i> section of this EIR, to address impacts to water quality. BMPs will include, but not be limited to, installing silt fencing between jurisdictional waters and project related activities, locating fueling stations away from potentially jurisdictional features, and otherwise isolating construction work areas from any identified jurisdictional features.</p> <p><b>Mitigation Measure 3.6-3c:</b> The project applicant shall provide compensation for temporary impacts to, and permanent loss of, waters of the U.S., as required by permits issued by the Corps and RWQCB.</p> <p>Many of the proposed projects that would result in direct construction-related impacts to streams are intended to restore and enhance stream function and aquatic habitat for steelhead. As such, they will essentially be self-mitigating. However, since the Master Plan includes a number of such projects, the permitting agencies may require the development of a Stream Impact Mitigation and Monitoring Plan prior to the start of Phase 1. This would include park staff preparing and submitting a mitigation and monitoring plan to regulatory agencies that includes: baseline information, anticipated habitat to be enhanced, performance and success criteria, anticipated mitigation obligations for temporary and permanent impacts to waters of the U.S. resulting from Master Plan implementation, monitoring and reporting requirements, and conceptual site-specific plans to compensate for impacts resulting from the project.</p> <p><b>Mitigation Measure 3.6-4a: Tree Mapping and Protection.</b> For each Master Plan Phase and for specific Plan components requiring further CEQA analysis, following standard operating procedures, park staff will prepare a map indicating the size and species of trees to be removed. In addition, the map will locate trees to be retained (i.e. preserved) within a given action area.</p> <ul style="list-style-type: none"> <li>• Prior to the start of any clearing, stockpiling, excavation, grading, compaction, paving, change in ground elevation, construction, or similar activities, trees to be retained, that occur adjacent to, or within, project construction shall be identified in the field as “retained” and clearly delineated by constructing short post and plank walls, or other protective fencing material, at the dripline of each tree.</li> <li>• The delineation markers shall remain in place for the duration of the work.</li> <li>• Where proposed development or other site work must encroach upon the dripline of a retained tree, special construction techniques will be required to allow the roots of remaining trees within the project site to breathe and obtain water (examples include, but are not limited to, use of hand equipment for tunnels and trenching, and/or allowance of only one pass through a tree’s dripline). Tree wells or other techniques may be used.</li> <li>• Excavation adjacent to any retained trees, when permitted, will be in such a manner that will cause only minimal root damage.</li> <li>• The following shall not occur within the dripline of any retained tree: parking; storage of vehicles, equipment, machinery, stockpiles of excavated soils, or construction materials; or dumping of oils or chemicals.</li> </ul>	<p>LTS</p>

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
	<p><b>Mitigation Measure 3.6-4b: Tree Pruning and Replacement.</b> All pruning of designated, retained trees shall be performed by a certified arborist.</p> <ul style="list-style-type: none"> <li>• No more than 25% of a tree's canopy shall be removed during pruning of retained trees.</li> <li>• If any retained tree is damaged, then the project proponent shall replace the tree as required by the County.</li> <li>• All removed trees that meet the criteria of a protected tree shall be replaced with the same species removed or as required by the County at a 1:1 ratio.</li> </ul> <p><b>Mitigation Measure 3.6-4c: Park staff shall develop and implement a five-year monitoring program for any required replacement plantings.</b> Applicable performance standards may include, but are not limited to: 75 percent survival rate of restoration plantings; absence of invasive plant species; and self-sustaining trees at the end of five years.</p>	
3.7 Cultural Resources		
<p><b>Impact 3.7-1:</b> Impacts to archaeological resources. Ground disturbing construction activities at both Huddart and Wunderlich Parks could cause damage to, disrupt, or adversely affect archaeological resources.</p>	<p><b>Mitigation Measure 3.7-1a: Cultural Resources Inventory.</b> In order to adequately address the level of potential impacts for a specific Master Plan project, and thereby design appropriate mitigation measures, the significance and nature of the cultural resources must be determined. The following are steps typically taken to assess and mitigate potential impacts to cultural resources for the purposes of CEQA:</p> <ul style="list-style-type: none"> <li>• Identify both previously recorded cultural resources and those not previously recorded.</li> <li>• Evaluate the significance of cultural resources using CEQA guidelines.</li> <li>• Identify the significance of impacts under CEQA of the proposed project within the Project Area.</li> <li>• Develop and implement mitigation measures designed to avoid, minimize, rectify, or reduce or eliminate the effects of the project on significant cultural resources.</li> </ul> <p>Minimally, a cultural resources inventory shall consist of a cultural resources records search to be conducted at the appropriate office of the California Historical Resources Information System; consultation with the Native American Heritage Commission (NAHC) and with interested Native Americans identified by the NAHC; a field survey (if one has not previously been conducted); recordation of all identified archaeological sites and historic buildings and structures on California Department of Parks and Recreation 523 Site Record forms; and preparation of a cultural resources inventory report describing the project setting, methods used in the investigation, results of the investigation, and recommendations for management of identified resources. Certain agencies, such as the Federal Highway Administration and California Department of Transportation (Caltrans), have specific requirements for inventory areas and documentation format.</p>	LTS

**TABLE S-2 (continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

<b>Impacts</b>	<b>Mitigation Measures</b>	<b>Significance after Mitigation</b>
<p><b>Impact 3.7-2:</b> Possible substantial effects can occur to known, but unevaluated prehistoric and historic archaeological deposits from ground disturbing construction operations.</p>	<p><b>Mitigation Measure 3.7-1a (cont.)</b></p> <p>Identified cultural resources that may be impacted by a proposed project shall be evaluated for eligibility for listing on the CRHR. Cultural resources that are eligible for the CRHR are considered to be significant cultural resources. Cultural resources that are identified within project areas subject to federal approval, permits, or funding shall also be evaluated for eligibility for listing on the NRHP. Cultural resources determined to be eligible for listing on the NRHP are automatically eligible for listing on the CRHR and are considered to be significant cultural resources.</p> <p><b>Mitigation Measure 3.7-1b: Avoid Impacts to Cultural Resources.</b> If feasible, impacts on identified cultural resources including prehistoric and historic archaeological sites, human remains, and historical buildings and structures shall be avoided. Methods of avoidance may include, but not be limited to, project re-design, project cancellation, or identification of protection measures such as capping or fencing.</p> <p>If avoidance is not feasible, the following Mitigation Measures 3.7-2, 3.7-3a, 3.7-3b, 3.7-3c, 3.7-4a, and/or 3.7-4b are provided to be implemented as necessary.</p>	
	<p><b>Mitigation Measure 3.7-2a: Archaeological Testing and Data Recovery.</b> If it is infeasible to avoid impacts on archaeological sites that have been determined to be eligible for listing on the CRHR or the NRHP (significant resources), additional research including, but not necessarily limited to, archaeological excavation shall be conducted (CCR Section 15126.4 (b)(3)(C)). This work shall be conducted by a qualified archaeologist and shall include preparation of research design, additional archival and historical research, archaeological excavation, analysis of artifacts, features, and other attributes of the resource, and preparation of a technical report documenting the methods and results of the investigation in accordance with the California Office of Historic Preservation <i>Guidelines for Archaeological Research Design</i> (1991). The purpose of this work is to recover a sufficient quantity of data to compensate for damage to or destruction of the resource. The procedures to be employed in this data recovery program will be determined in consultation with responsible agencies and interested parties, as appropriate. Where necessary, the County would seek Native American input and consultation.</p>	LTS
	<p><b>Mitigation Measure 3.7-2b: Conduct Archaeological Monitoring.</b> Ground-disturbing activities that have the potential to impact archaeological remains will occur in an area that has been determined by a qualified archaeologist to be an area that is sensitive for the presence of buried archaeological remains; a qualified archaeologist shall be retained to monitor those activities. Archaeological monitoring shall be conducted in areas where there is a likelihood that archaeological remains may be discovered but where those remains are not visible on the surface. Monitoring shall not be considered a substitute for efforts to identify and evaluate cultural resources prior to the project initiation. Where necessary, the County would seek Native American input and consultation.</p>	

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<p><b>Impact 3.7-3:</b> Project construction could adversely affect currently unknown historical resources, including unique archaeological resources.</p>	<p><b>Mitigation Measure 3.7-3:</b> If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources will be halted and the project proponent will consult with a qualified archaeologist to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the project proponent and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. The County or County's agent will make the final determination. All significant cultural materials recovered will be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.</p> <p>In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the County or County's agent will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out.</p>	LTS
<p><b>Impact 3.7-4:</b> The proposed project could adversely affect unidentified paleontological resources.</p>	<p><b>Mitigation Measure 3.7-4:</b> In the event that paleontological resources are discovered, the County or County's agent will notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology, 1995). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to the project proponent for review and approval prior to implementation.</p>	LTS
<p><b>Impact 3.7-5:</b> Project construction could result in damage to previously unidentified human remains.</p>	<p><b>Mitigation Measure 3.7-5:</b> If human skeletal remains are uncovered during project construction, the County or County's agent will immediately halt work, contact the San Mateo County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent will contact the NAHC, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). Per Public Resources Code 5097.98, the County shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further activity until the County has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.</p>	LTS

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<p><b>Impact 3.7-6:</b> The Master Plan may adversely affect historic resources within the Folger Estate Stable Historic District at Wunderlich Park, which is listed in the National Register of Historic Resources and considered a historic resource for CEQA purposes.</p>	<p><b>Mitigation Measure 3.7-6:</b> The San Mateo County Parks Department shall ensure that the Phase I and II plans for projects within or immediately adjacent to the Folger Estate Stable Historic District, including improvements to the Folger Stable, Carriage House/Garage, vehicular entrance, parking lot (including new restrooms), and site drainage improvements are designed in a manner consistent with the <i>Secretary of the Interior's Standards</i> by hiring, or causing to be hired, a qualified architectural consultant to review the plans prior to construction. The consultant shall report back to the County on their findings and the plans shall be modified, as necessary, to ensure compliance with the Standards. Application of the California State Historic Building Code (CSHBC) by the County or their consulting architects, which provides some degree of flexibility in implementing improvements to historic buildings, should also be implemented as necessary during the in design process for these improvements.</p>	
<p>3.8 Traffic and Circulation</p>		
<p><b>Impact 3.8-1:</b> Project construction outlined in the Master Plan would result in temporary increases in truck traffic and construction worker traffic.</p>	<p><b>Mitigation Measure 3.8-1:</b> For larger scaled construction projects at the parks, the construction contractor(s) shall develop a construction management plan for review and approval by the County's Engineering Department. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible and traffic congestion during construction:</p> <ul style="list-style-type: none"> <li>• A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.</li> <li>• Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular, bicycle and pedestrian traffic, circulation and safety, and specifically to minimize impacts to the greatest extent possible on streets in the project area.</li> <li>• Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures would occur.</li> <li>• Provisions for accommodation of bicycle flow.</li> <li>• Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.</li> </ul>	LTS
<p><b>Impact 3.8-2:</b> Implementation of the Master Plan would increase traffic on roadways in the Park vicinity.</p>	None required.	No Impact
<p><b>Impact 3.8-3:</b> Implementation of the Master Plan would increase the demand for parking in the vicinity of the Parks.</p>	None required.	No Impact
<p><b>Impact 3.8-4:</b> Implementation of the Master Plan would increase the demand for parking in the Parks.</p>	None required.	No Impact

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<p><b>Impact 3.8-5:</b> Implementation of the Master Plan would result in inadequate site access and circulation for passenger vehicles.</p>	<p><b>Mitigation Measure 3.8-5a:</b> The final driveway design shall be developed to remain consistent with the public works department and fire department approvals, and shall include the following to provide adequate vehicular circulation:</p> <ul style="list-style-type: none"> <li>• Adequate vehicle turning radii to accommodate emergency vehicles and the largest vehicle anticipated to access the site. (American Association of State Highway and Transportation Officials [AASHTO]).</li> <li>• Posting of “no parking” signs along both sides of Woodside Road along the park frontage.</li> <li>• Construction of a deceleration lane in the southbound direction on the driveway entrance approach.</li> <li>• Posting of Side Road (Caltrans Standard Drawing W2-2) intersection warning signs shall be posted in advance of each intersection. The addition of a flashing beacon light if required by Public Works.</li> <li>• Posting of advance Park Entrance and Park Exit signs at a minimum of 500 feet from the intersection.</li> </ul> <p><b>Mitigation Measure 3.8-5b:</b> The final roadway designs shall be developed to remain consistent with the public works department and fire department approvals, and the project shall include the following to provide adequate on-site vehicular circulation:</p> <ul style="list-style-type: none"> <li>• Roadway widths and cul-de-sac lengths that meet fire department standards.</li> <li>• Internal intersections should not offset or intersect below 60 degrees, unless constrained by topography, as should have excellent sight distance.</li> <li>• Adequate vehicle turning radii to accommodate emergency vehicles and the largest vehicle anticipated to access the site (AASHTO).</li> <li>• Adequate internal traffic control based on the Manual on Uniform Traffic Control Devices (FHWA, 2000).</li> </ul> <p>With implementation of the <b>Mitigation Measures 3.8-5a</b> and <b>3.8-5b</b>, the impact of the proposed Master Plan projects would be reduced to a less-than-significant level. However, SR 84 is under Caltrans jurisdiction. Because the County of San Mateo, as lead agency for this EIR, could not implement <b>Mitigation Measures 3.8-5a</b> without the approval of Caltrans, this would be a <b>significant and unavoidable</b> impact.</p>	<p>Less than Significant with Caltrans approval of Mitigation;</p> <p>Significant and Unavoidable without Caltrans approval</p>
<p><b>Impact 3.8-6:</b> Implementation of the Master Plan would result in inadequate access for public transit, bicycle access, or pedestrian access.</p>	<p>None required.</p>	<p>No Impact</p>
<p><b>Impact 3.8-7:</b> Implementation of the Master Plan would contribute to cumulative increases in traffic at intersections in the Park vicinity.</p>	<p>None required.</p>	<p>No Impact</p>

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
3.9 Air Quality		
<p><b>Impact 3.9-1:</b> Activities associated with demolition, site preparation and construction would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions.</p>	<p><b>Mitigation Measure 3.9-1.a:</b> Construction contractors shall be required to follow the BAAQMD's approach to dust abatement as specified in the most recent version of the <i>BAAQMD CEQA Guidelines</i>. The current version calls for "basic" control measures that should be implemented at all construction sites, "enhanced" control measures that should be implemented at construction sites greater than four acres in area, and "optional" control measures that should be implemented on a case-by-case basis at construction sites that are large in area, located near sensitive receptors or which, for any other reason, may warrant additional emissions reductions (BAAQMD, 1999). The nature of improvements envisioned under the Master Plan and the absence of sensitive receptors in the immediate vicinity is not expected to require implementation of the "optional" control measures.</p> <p>Elements of the "basic" dust control program for project components that disturb less than four acres shall include, but not necessarily be limited to the following:</p> <ul style="list-style-type: none"> <li>• Water all active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.</li> <li>• Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).</li> <li>• Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.</li> <li>• Sweep streets (with water sweepers using reclaimed water if possible) at the end of each day if visible soil material is carried onto adjacent paved roads.</li> <li>• Sweep (with water sweepers) all paved access roads, parking areas and staging areas at construction sites at the end of the day.</li> </ul> <p>Elements of the "enhanced" dust abatement program for project components that disturb four or more acres shall include all of the "basic" measures in addition to the following measures to be implemented by the construction contractor:</p> <ul style="list-style-type: none"> <li>• All "basic" control measures listed above.</li> <li>• Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).</li> <li>• Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).</li> <li>• Limit traffic speeds on unpaved roads to 15 miles per hour.</li> <li>• Install sandbags or other erosion control measures to prevent silt runoff to public roadways.</li> <li>• Replant vegetation in disturbed areas as quickly as possible.</li> </ul>	LTS

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
	<p><b>Mitigation Measure 3.9-1.a (cont.)</b></p> <ul style="list-style-type: none"> <li>• Limit the amount of the disturbed area at any one time, where possible.</li> <li>• Pave all roadways, driveways, sidewalks, etc. as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.</li> <li>• Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the BAAQMD prior to the start of construction.</li> </ul> <p><b>Mitigation Measure 3.9-1.b:</b> The demolition, renovation and removal of asbestos-containing building materials from buildings constructed prior to 1980 shall be conducted in accordance with the requirements of BAAQMD Regulation 11, Rule 2.</p>	
<b>Impact 3.9-2:</b> Implementation of the Master Plan would conflict with the 2005 Bay Area Ozone Strategy and the attainment goals of the Bay Area.	None required.	No Impact
<b>Impact 3.9-3:</b> The project would increase carbon monoxide concentrations above the ambient air quality standards at local intersections in the project site vicinity.	None required.	No Impact
<b>3.10 Noise and Vibration</b>		
<b>Impact 3.10-1:</b> Project construction activities would intermittently and temporarily generate noise levels above existing ambient levels.	<p><b>Mitigation Measure 3.10-1:</b> The County or its agent shall require construction contractors to implement the following measures throughout the duration of construction activity. With mitigation, the noise impacts of project construction would be less than significant.</p> <ul style="list-style-type: none"> <li>• Limit all noise-generating construction activities to daytime hours between 7:00 a.m. and 6:00 p.m., from Monday through Friday. Construction activities shall not take place on weekends and legal holidays when park use would be higher.</li> <li>• Disallow park uses within a radius of 500 feet from the site of construction activity over the duration of the activity.</li> <li>• Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).</li> </ul>	LTS

**TABLE S-2 (continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<p><b>Impact 3.10-2:</b> The project would increase traffic related noise along roadways leading up to the parks.</p>	<p><b>Mitigation Measure 3.10-1 (cont.)</b></p> <ul style="list-style-type: none"> <li>• Impact tools (e.g., jack hammers, pavement breakers, and rock drills), if any, used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.</li> <li>• Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.</li> <li>• Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the park in the event of problems.</li> <li>• Neighbors located within 300 feet of the project construction area shall be notified at least 30 days in advance of construction activities about the estimated duration of the activity; and</li> <li>• A preconstruction meeting shall be held with the job inspectors and the general contractor/onsite project manager to confirm that noise mitigation and practices are implemented.</li> </ul> <p>None required.</p>	<p>No Impact</p>
<p>3.11 Hazards and Hazardous Materials</p> <p><b>Impact 3.11-1:</b> Implementation of proposed Master Plan projects could result in increased chance of ignition during construction.</p>	<p><b>Mitigation 3.11-1a:</b> The chance of ignition can be reduced through (1) equipment features, (2) fuel treatment and (3) management of behavior.</p> <ol style="list-style-type: none"> <li>1) All equipment to be used during construction must have an approved spark arrestor.</li> <li>2) Fuel modification is proven to be effective. Because grassland is the most ignitable fuel, cutting grass as it cures is the most common action to limit ignitions. Grass is typically cut and other fuel reduced or made less flammable around the construction site, along roads, along boundaries and in other locations where vehicles may park, cigarettes may land. Budget restrictions resulted in an emphasis on grass cutting, or simply clearing roads for access.</li> <li>3) Minimizing the risks of construction operations, such as the use of mechanical equipment during hot, dry, windy weather, is also important because mechanical devices typically cause one-quarter of all fire starts in the county. Motor vehicles are permitted only on paved roadways and in established parking areas.</li> </ol>	<p>LTS</p>

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
	<p><b>Mitigation 3.11-1a (cont.)</b></p> <p>4) The contractor/staff responsible for construction will submit a Fire Safety Plan. This plan will include precautions to carry out during high fire danger, a list of tools to have on hand, a description of available communications, specifications for the supply of water to have on hand, and descriptions of other actions that will reduce the risk of ignition and immediate control of an incipient fire.</p> <p><b>Mitigation 3.11-1b:</b> During the design of the building, the architect should evaluate the exterior construction features (e.g. roofing, siding) for their ability to meet ignition resistant construction standards set in the new Wildland/Urban Building Code. This would include installation of a Class A roof, installation of fire sprinklers in main buildings, and a fire alarm system in main buildings. Additional ignition resistant features to evaluate include installation of double-paned windows, treatments to make the siding ignition resistant and the placement and design of eaves and vents.</p>	
<p><b>Impact 3.11-2:</b> A fire started during project construction could cause damage to lives property, and resources.</p>	<p><b>Mitigation 3.11-2a:</b> Methods to Hazard reduction can be done in a variety of ways, encompassing vegetation management, structure design and materials retrofit, education and training, and equipment purchase. Proposed Master Plan projects will incorporate guidance from the County’s Decision-making Guidelines for Vegetation Management. Effective vegetation management includes, but is not limited to, the following options:</p> <ul style="list-style-type: none"> <li>• Ensure landscape plans minimize wildland fire hazards and provide defensible space. Provide survivable space around each structure of 100 ft by mowing grass, pruning trees, and removing dead vegetation and other flammable materials from roofs, decks, grounds, propane tanks.</li> <li>• Install fire-resistant plants in a fire-safe design that consists of groupings isolated by hardscape or mowed grass.</li> <li>• Remove invasive and exotic plants that pose a fire hazard</li> <li>• Pursue habitat restoration with native plants in the disturbed areas with higher fire hazard.</li> <li>• Institute goat grazing in strategic locations that are not appropriate for other types of grazing. This is appropriate in Mixed Evergreen Forest where some understory persists in the coastal scrub (also called chaparral), and in the meadows.</li> <li>• Continue horse grazing in Wunderlich Park.</li> </ul>	<p>LTS</p>

**TABLE S-2 (continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

<b>Impacts</b>	<b>Mitigation Measures</b>	<b>Significance after Mitigation</b>
	<p><b>Mitigation 3.11-2b:</b> Fire hazard education and training increases support for vegetation management from the public, which facilitates the operations involved in vegetation management. Education and training of park staff increases the effectiveness of suppression actions by park personnel. Vegetation management can also be made more effective if adjacent landowners treat vegetation outside the park boundary, particularly if treatment is adjacent. Mitigation measures that involve training and education will include the following:</p> <ul style="list-style-type: none"> <li>• Ensure key on-site personnel, including Park Rangers, maintenance staff, caretakers and non-profit organization staff are trained in basic fire prevention.</li> <li>• Include information regarding prevention and fire ecology at entrance and trail staging area kiosks, and in interpretive and educational materials.</li> <li>• Meet with neighboring homeowner associations to collaborate on fire safety projects.</li> </ul> <p><b>Mitigation 3.11-2c:</b> While wildfire suppression is the responsibility of the Woodside Fire Protection District and CDF, initial wildfire attack and response is most effective if started when the fire is small. Park personnel may be the first to become aware of a fire, and could most effectively limit the fire size. In order to accomplish this, appropriate equipment is necessary.</p> <p>Ensure the appropriate Park-owned initial attack firefighting equipment and personnel protective equipment is readily accessible.</p>	
<p><b>Impact 3.11-3:</b> Construction activities and vehicles could impede fire suppression response.</p>	<p><b>Mitigation 3.11-3a:</b> The Construction Contractor will submit a fire safety plan that specifies, among other items that vehicles will be kept from lanes of fire response, and that no activities would be sited that would block emergency response.</p>	<p>LTS</p>
<p><b>Impact 3.11-4:</b> An accidental release of hazardous materials from construction equipment, such as oil, grease, or fuel, could enter West Union Creek, McGarvey Gulch Creek, Squealer Gulch Creek, or Alambique Creek and degrade water quality.</p>	<p><b>Mitigation:</b> Implement Measures 3.5-1a and 3.5-1b.</p>	<p>LTS</p>
<p>3.12 Public Services and Utilities</p>		
<p><b>Impact 3.12-1:</b> The increased population and density resulting from the project would not involve or require new or physically altered governmental facilities in order to maintain acceptable service ratios, response time, or other performance objectives for fire protection and emergency medical services and facilities.</p>	<p><b>Mitigation Measure 3.12-1:</b> Potential fire protection services impacts should be reviewed at the project-level for specific facilities proposed under the Master Plan.</p> <p>Mitigation measures considered could include, but would not be limited to:</p> <ul style="list-style-type: none"> <li>• Individual actions shall comply will all applicable State and local codes and ordinances, including the California Fire Code and California Building Code regarding life safety. Requirement may relate to automatic fire extinguishing systems and smoke detectors.</li> </ul>	<p>LTS</p>

**TABLE S-2 (continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<p><b>Impact 3.12-2:</b> The increased population and density resulting from the project would not involve or require new or physically altered governmental facilities in order to maintain acceptable service ratios, response time, or other performance objectives for police protection services.</p>	<p><b>Mitigation Measure 3.12-1 (cont.)</b></p> <ul style="list-style-type: none"> <li>• All buildings and facility design plans shall be reviewed by the applicable fire departments for a fire and life-safety review.</li> <li>• Requirements for emergency vehicle access shall be incorporated into project design, including access to physical structures and fire hydrants or water supply tanks. Such requirements include road grade and lane width, paving of access roads, curb painting, emergency breakaway gates, vertical clearance, turning radii, turn-around areas, and signage.</li> <li>• Adequate water supply for firefighting and water flow must be incorporated into the design of buildings and facilities in the park, and approved by the applicable fire departments. Ensuring adequate water supply for firefighting purposes may entail the implementation of fire hydrants and/or installation of large pressurized water storage tanks. The water supply system shall be in place prior to construction of any facilities.</li> <li>• Emergency vehicle access shall be maintained at all times during construction phases.</li> <li>• Access for fire fighting apparatus and personnel to and into all structures shall be required.</li> </ul> <p>Implementation of the requirements described above would reduce the potential program-level fire protection services impacts associated with the implementation of the proposed Master Plan. However, further project-specific examination would be necessary to determine what level of mitigation would be required for facility improvements.</p>	
<p><b>Impact 3.12-3:</b> Construction may increase fire protection, emergency medical, and police protection services.</p>	<p><b>Mitigation Measure 3.12-2:</b> Potential police protection services impacts should be reviewed at the project-level for specific facilities proposed under the Master Plan.</p> <p>Mitigation measures considered will include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Public safety services shall be coordinated to provide cooperation between park police, state park rangers and all jurisdictions serving the park and includes management actions for providing additional protection and safety services that meet the demands of increased use and activity in the park.</li> </ul> <p><b>Mitigation Measure 3.12-3a:</b> The County shall coordinate with applicable emergency service providers prior to construction to ensure that construction activities and associated lane closures would not significantly affect emergency response vehicles. Contractors shall submit verification of its consultation with emergency service providers to the County.</p> <p><b>Mitigation Measure 3.12-3b:</b> The County or its contractors will notify local fire departments any time damage to a gas utility results in a leak or suspected leak, or whenever damage to any utility result in a threat to public safety.</p>	LTS
		LTS

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<p><b>Impact 3.12-4:</b> Project construction could result in the temporary, planned, or accidental disruption of utility services including water, sewer, storm drain, electricity, natural gas, telephone, and television services.</p>	<p><b>Mitigation Measure 3.12-4:</b> Potential impacts to utility services should be reviewed at the project-level for specific facilities proposed under the Master Plan.</p> <p>Mitigation Measures will include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Prior to excavation, the County or its contractors will locate overhead and underground utility lines, such as natural gas, electricity, sewage, telephone, fuel, and water lines, that may reasonably be expected to be encountered during excavation work.</li> <li>• While any excavation is open, the County or its contractors will protect, support, or remove underground utilities as necessary to safeguard employees.</li> <li>• The County or its contractors will contact utility owners if any damage occurs as a result of the project and promptly reconnect disconnected cables and lines with approval of owner.</li> <li>• The County or its contractors will coordinate final construction plans and specifications with affected utilities, such as PG&amp;E and AT&amp;T.</li> </ul>	LTS
<p><b>Impact 3.12-5:</b> Implementation of the Master Plan may increase water demand.</p>	<p><b>Mitigation Measure 3.12-5:</b> The County shall develop project-level mitigation measures to ensure adequate and efficient use of available water supply for these projects. Such measures may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Ensure an adequate water supply for all projects.</li> <li>• Enforce time limits on shower use.</li> <li>• Utilize native, drought-resistant plants in landscaping.</li> <li>• As proposed, install vault or low-flow toilets in all new park facilities and consider composting toilets in place of flush toilets.</li> <li>• New water distribution systems shall be installed only with the correct permits.</li> <li>• Best Management Practices shall be applied to the operation and maintenance of the existing water supply system.</li> </ul>	LTS

**TABLE S-2 (continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE HUDDART AND WUNDERLICH PARKS MASTER PLAN**

Impacts	Mitigation Measures	Significance after Mitigation
<p><b>Impact 3.12-6:</b> Operation of projects included in the Master Plan could generate additional solid waste.</p>	<p><b>Mitigation Measure 3.12-6:</b> Facilities and plans implemented under each phase of the Master Plan shall undergo further review with respect to their impact on solid waste services in the County at the project level.</p> <p>Appropriate mitigation measure, as deemed necessary, shall be applied to the design and operation of each facility, including but not limited to:</p> <ul style="list-style-type: none"> <li>• Construction activities will be conducted in compliance with County Ordinance No. 04099, which addresses recycling and diversion of debris from construction and demolition. The Ordinance includes deconstruction, salvage and recovery guidelines, diversion requirements, and information requirements before a permit is issued.</li> <li>• Organic wastes such as lawn cuttings, landscaping debris, straw, and horse manure shall be composted. Wood debris from landscaping shall be made available for campfires to visitors at the park's campgrounds.</li> <li>• All park facilities, landscaped areas, picnic areas, parking lots, buildings and other visitor-serving uses should be equipped with recycling and trash bins.</li> <li>• All projects should comply with all federal, state, and local statutes and regulations related to solid waste.</li> </ul>	LTS
<p><b>Impact 3.12-7:</b> Implementation of the Master Plan may increase wastewater flows to the Parks' existing septic systems.</p>	<p><b>Mitigation Measure 3.12-7:</b> The County shall develop program-level mitigation measures to ensure adequate and efficient use of wastewater flow capacity for projects implemented under the Master Plan.</p> <p>Such measures shall include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• All faucets should be low-flow and have automatic shut off valves.</li> <li>• Installation of additional septic systems for each facility.</li> <li>• Consider composting toilets in place of flush toilets.</li> <li>• Use of reclaimed water for all irrigation and other non-potable water uses.</li> </ul>	LTS
<p><b>Impact 3.12-8:</b> Operation of the facilities to be implemented under the Master Plan could consume additional energy.</p>	<p><b>Mitigation Measure 3.12-8:</b> The County shall develop program-level Mitigation Measures to ensure they do not result in the wasteful, inefficient, and unnecessary consumption of energy.</p> <p>Some measures could include but would not be limited to:</p> <ul style="list-style-type: none"> <li>• The County shall ensure energy efficiency in the operation of its park facilities.</li> <li>• The County will coordinate final construction plans and specifications with affected utilities, such as PG&amp;E.</li> <li>• All projects should comply with all federal, state, and local statutes and regulations related to energy consumption.</li> </ul>	LTS

# CHAPTER 1

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## Introduction

### 1.1 History of Planning Efforts for Huddart and Wunderlich Parks

#### Huddart Park

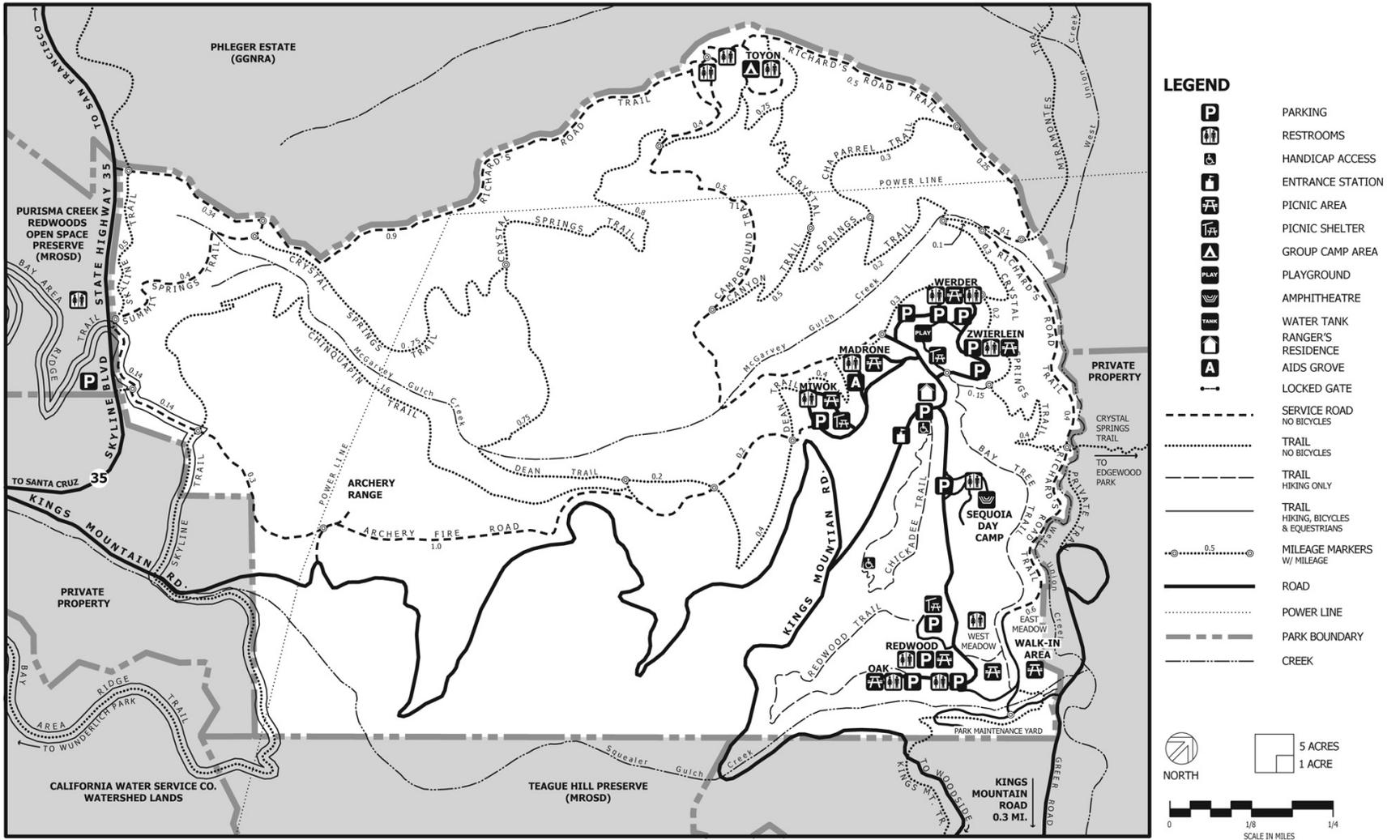
In August 1840, the Governor of Spanish California granted 12,545-acres of land, known as Rancho Canada de Raymundo, to a private individual. This rancho contained the 973 acres that now comprise Huddart Park. Ten years later, during the time of the California Gold Rush, there was a growing demand for lumber to build the city of San Francisco. Extensive logging took place within the rancho area, including operations close to the present borders of the park. A portion of this rancho was later bought by James Huddart, a wealthy San Francisco lumberman and long-time resident of Woodside. Before his passing in 1935, Mr. Huddart deeded 900 acres of his property to the County of San Francisco with the provision that it would be accepted and developed into a public park. The property was eventually willed to the County of San Mateo, and the County has owned and operated the land as a public park since 1944 (Figure 1-1).

There was little recreational use in the park until after many park improvements were finished in the late 1950s to early 1960s. Park attendance soon became quite heavy creating a number of management and environmental problems. By the last half of the 1970s, park managers were forced to restrict attendance as a means of controlling problems of park use. In order to address these problems, the County of San Mateo adopted the first Master Plan for Huddart Park in 1982.

The 1982 Master Plan focused on “increasing the carrying capacity of the site to accommodate more visitors, improving the layout and facilities of the park to increase efficiency of park management and operation, and enhancing the natural resource base by rehabilitating environmentally damaged sites and promoting proper forest management practices.” The 1982 Master Plan outlined extensive physical improvements, with approximately half of these improvements completed. Approximately 50 percent of the 1982 Master Plan work has been completed (Herzberg, pers. communication, 2007). The proposed Huddart and Wunderlich Parks Master Plan will supersede the 1982 Master Plan.

#### Wunderlich Park

The Wunderlich Park area was historically used by the Costoanoan Indians until settlers took over the land for ranching in the mid-1800s. In 1902, the land was sold to James A. Folger II, son of



SOURCE: County of San Mateo

Huddart and Wunderlich Parks Master Plan EIR . 206310

**Figure 1-1**  
 Huddart Park

the wealthy James A. Folger who established the Pioneer Steam Coffee and Spice Mills. Under Folger's ownership, the property was used by the wealthy family for weekend campouts, horseback riding, and other recreational uses. A contractor named Martin Wunderlich purchased the property from the Folgers in 1956. In 1974, he tendered the land for public recreation by deeding 942 acres to the County of San Mateo for use as public open space (see Figure 1-2).

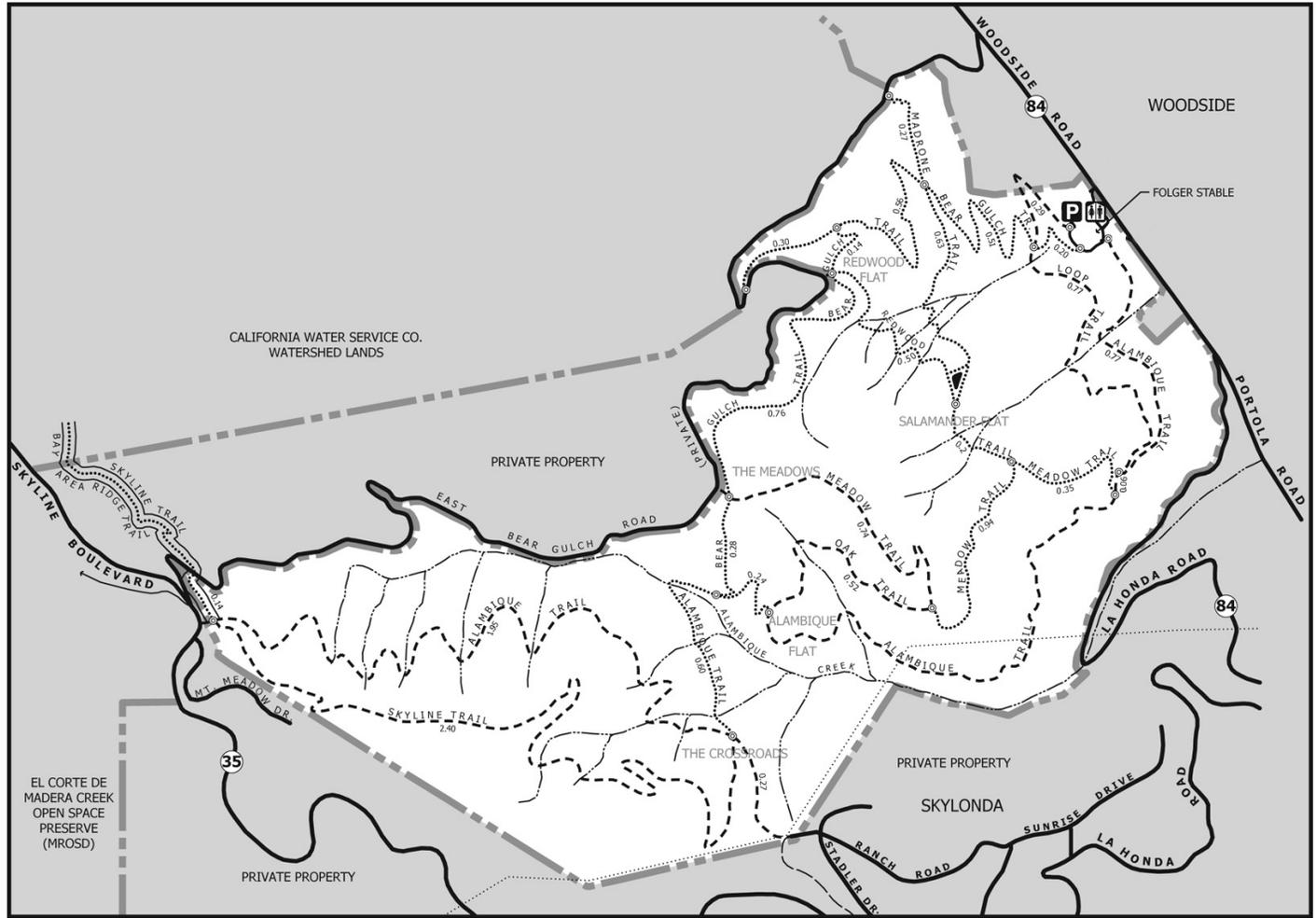
A Concept Plan for Wunderlich Park, consisting of a site inventory, analysis and recommended improvements was developed in 1975. The Concept Plan was not developed to be a Master Plan, nor was it intended to depict the detailed interrelationships of uses and developments within Wunderlich Park. None of the recommendations of the Concept Plan have ever been implemented. Proposed uses in the Concept Plan were re-evaluated to determine whether those proposed uses should now occur. Unlike Huddart Park, Wunderlich Park was not developed to facilitate picnicking, but to facilitate pedestrian and equestrian trail use (Herzberg, 2005).

The Folger Estate Stable Feasibility and Master Plan Study, completed August 1, 2003, presented a preliminary concept and use program for the stable building, analyzed needed improvements and restoration, and cost estimates for the needed work. Based on this study, the Folger Estate Stable Committee submitted a "concept paper" to the Division of Parks and Recreation on October 6, 2003 that summarized the committee's purpose, goals, and vision for the future of the stables complex. The concept paper provided guidance on project phasing, including: developing repair plans, designing seismic upgrades and restoration work on the stable building. Phase II of the Concept Plan included an upgrade of the supporting infrastructure – including the paddocks, the arena, and drainage system around the main stable building. Phase II components have been folded into the proposed Master Plan, and are part of the EIR's programmatic analysis.

## 1.2 Current Planning for Huddart and Wunderlich Parks

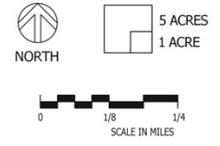
In 2004, the San Mateo County Parks Department of the Environmental Services Agency (the County) initiated a Master Planning effort for two of its 16 premier parks, Huddart and Wunderlich Parks, located in the Santa Cruz Mountains of central San Mateo County (Figure 1-3). This Master Plan is part of a County-wide effort to prepare and update master plans for every County Park facility on a 20-year basis. In the San Mateo County Park System, Master Plans are the primary management documents that guide daily decision-making for each park, and serve as the foundation for developing more detailed management and site-specific project plans. In general, they are designed to provide a guiding framework for land use and stewardship, natural resource enhancement, and the development of appropriate recreation facilities including trails, staging areas, and group gathering areas. Huddart and Wunderlich County Parks were addressed in this combined Master Plan effort to reflect the fact these two parks are an integrated management unit.

The County's Master Planning effort included an inventory and assessment of existing conditions at Huddart and Wunderlich parks, review of previous plans and related data (including documents mentioned above), and extensive public involvement opportunities including focus groups, public



**LEGEND**

- PARKING
- RESTROOMS
- LOCKED GATE
- SERVICE ROAD  
NO BICYCLES
- TRAIL  
NO BICYCLES
- TRAIL  
HIKING ONLY
- TRAIL  
HIKING, BICYCLES  
& EQUESTRIANS
- MILEAGE MARKERS  
W/ MILEAGE
- ROAD
- POWER LINE
- PARK BOUNDARY
- CREEK





SOURCE: ESRI, 2005

Huddart and Wunderlich Parks Master Plan EIR . 206310

**Figure 1-3**  
Regional Location Map

workshops, and committee meetings. These planning efforts served to define the goals, objectives, and priority recommendations for the Huddart and Wunderlich Parks Master Plan, and culminated in the creation of a 20-year vision. The Huddart and Wunderlich Parks Master Plan (published May 2006), defines the future development, operation and maintenance of these two parks, and is the subject of this CEQA document.

## 1.3 Scope of the DEIR

This DEIR analyzes the potential for the proposed Huddart and Wunderlich Parks Master Plan (Master Plan) to affect the physical environment adversely. Specifically, this Program DEIR examines the activities and actions that could occur if the Master Plan were approved and implemented over the course of the next five to 20 years, and whether and how these activities and actions could adversely impact land, air, water, biota, and other aspects of the physical environment. The DEIR has been written to comply with the CEQA statute (Public Resources Code § 21000 et seq), *Guidelines*, and applicable case law. Where the DEIR identifies impacts and determines that they meet or exceed the stated significance criteria, the document also identifies feasible mitigation measures and determines whether these would be sufficient to reduce the impact below the threshold of significance. If San Mateo County (County) approves the proposed Master Plan, the specified mitigation measures would be incorporated into it. The DEIR also provides in Chapter 4 a reasonable range of feasible alternatives to the proposed Master Plan.

This DEIR is considered a Program EIR per CEQA Guidelines § 15168. Program EIRs are used with a decision to carry out a new governmental program or to adopt a new body of regulations in a regulatory program. The Program EIR enables the Lead Agency to examine the overall effects of the proposed course of action and to take steps to avoid unnecessary adverse environmental effects.

Use of the Program EIR will enable the County to characterize the full range of activities recommended by the Master Plan and to determine broadly the potential for both individual and cumulative environmental impacts. Following this approach, when individual actions identified within the Master Plan are proposed to be implemented, the County will examine the individual activities to determine whether their effects were fully analyzed in this Program EIR. If the County determines that the activities would have no effects beyond those analyzed in this Program EIR, the County can submit a Negative Declaration. If the County determines that there were potential effects beyond those analyzed in this EIR, then further environmental review would be required.

## 1.4 Approach to Analysis

CEQA *Guidelines* § 15125(a) address how a lead agency should establish the baseline conditions against which potential environmental impacts identified in an EIR are measured, as follows:

An EIR must include a description of the physical environmental conditions in the vicinity of the [program], as they exist at the time the notice of preparation is published, or, if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

Environmental review under CEQA analyzes the difference in environmental effects between baseline conditions and the likely conditions that would be realized if the Program were approved and implemented. The environmental analysis is restricted to those effects that spring from the incremental increase in activity or action that would result from Master Plan approval and subsequent implementation.

## 1.5 Documents Incorporated by Reference in the EIR

An EIR may, "...incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public" (CEQA *Guidelines* § 15150). Portions of several documents relevant to the environmental analysis for the proposed Master Plan have been summarized in various sections throughout this DEIR. The following documents are essential to understanding the background, environmental setting, and regulatory context of the program and are incorporated by reference:

County of San Mateo, Environmental Services Agency, Parks Department, *Decision-Making Guidelines for Vegetation Management*, June 2006.

County of San Mateo, Environmental Services Agency, Parks Department, *Huddart and Wunderlich Parks Master Plan*, May 2006.

County of San Mateo, Environmental Services Agency, Parks and Recreation Division, *San Mateo County 2001 Trails Plan*.

Herzberg, Sam, pers. communication, February 2007.

## SECTION 2

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### Project Description

In 2004, the San Mateo County Parks and Recreation Division of the Environmental Services Agency (the County) initiated a Master Planning effort for two of its 16 premier parks, Huddart and Wunderlich Parks, located in the Santa Cruz Mountains of central San Mateo County. This Master Plan is part of a County-wide effort to prepare and update master plans for every County Park facility on a 20-year basis. In the San Mateo County Park System, Master Plans are the primary management documents that guide daily decision-making for each park, and serve as the foundation for developing more detailed management and site-specific project plans. In general, they are designed to provide a guiding framework for land use and stewardship, natural resource enhancement, and the development of appropriate recreation facilities including trails, staging areas, and group gathering areas. Huddart and Wunderlich County Parks were addressed in this combined Master Plan effort to reflect the fact these two parks are an integrated management unit.

The County's Master Planning effort included an inventory and assessment of existing conditions at Huddart and Wunderlich parks, review of previous plans and related data (including the First Huddart Park Master Plan, a Wunderlich Park Concept Plan, and the Folger Estate Stable Feasibility and Master Plan Study), and extensive public involvement opportunities including focus groups, public workshops, and committee meetings. These planning efforts served to define the goals, objectives, and priority recommendations for the Huddart and Wunderlich Parks Master Plan, and culminated in the creation of a 20-year vision. The Huddart and Wunderlich Parks Master Plan (published May 2006), defines the future development, operation and maintenance of these two parks, and is the subject of this CEQA document.

### 2.1 Project Need and Objectives

The County manages 15,680 acres located throughout San Mateo County and is responsible for preserving the County's natural and cultural treasures, and providing safe, accessible parks, recreation and learning opportunities to enhance the community's quality of life. The proposed Huddart and Wunderlich Parks Master Plan establishes a framework for San Mateo County to provide a variety of recreational opportunities in an environmentally sound and sensitive manner. The proposed Master Plan is intended to achieve the following objectives:

- Develop a plan that can be implemented over time, taking into account available financial resources, potential phasing, and long-term management implications;
- Create achievable proposals to address each park's unique challenges and problems;

- Serve as a working tool that can be implemented with flexibility to respond to changing conditions over the 20-year planning horizon; and
- Provide consistency with other adopted County plans, including the County General Plan and County Trails Plan.

The proposed Master Plan was completed in 2006. It contains a range of recommendations for the two individual parks, as well as recommendations that span the two areas. The Master Plan is organized first by park, followed by topic areas, including: trail recommendations, signage guidelines, erosion and sedimentation control, site utilities, fisheries recommendations, and fire hazard recommendations. The final chapter addresses implementation by setting next steps, review processes, and phasing and priorities.

## **2.2 Project Setting**

### **2.2.1 Historical Setting**

#### **Huddart Park**

In August 1840, the Governor of Spanish California granted 12,545-acres of land, known as Rancho Canada de Raymundo, to a private individual. This rancho contained the 973 acres that now comprise Huddart Park. Ten years later, during the time of the California Gold Rush, there was a growing demand for lumber to build the city of San Francisco. Extensive logging took place within the rancho area, including operations close to the present borders of the park. A portion of this rancho was later bought by James Huddart, a wealthy San Francisco lumberman and long-time resident of Woodside. Before his passing in 1935, Mr. Huddart deeded 900 acres of his property to the County of San Francisco with the provision that it would be accepted and developed into a public park. The property was eventually willed to the County of San Mateo, and the County has owned and operated the land as a public park since 1944.

There was little recreational use in the park until after many park improvements were finished in the late 1950s to early 1960s. Park attendance soon became quite heavy creating a number of management and environmental problems. By the last half of the 1970s, park managers were forced to restrict attendance as a means of controlling problems of park use. In order to address these problems, the County of San Mateo adopted the first Master Plan for Huddart Park in 1982. Approximately 50 percent of the 1982 Master Plan has been completed (Herzberg, 2005).

#### **Wunderlich Park**

The Wunderlich Park area was historically used by the Costoanoan Indians until settlers took over the land for ranching in the mid-1800s. In 1902, the land was sold to James A. Folger II, son of the wealthy James A. Folger who established the Pioneer Steam Coffee and Spice Mills. Under Folger's ownership, the property was used by the wealthy family for weekend campouts, horseback riding, and other recreational uses. A contractor named Martin Wunderlich purchased the property from the Folgers in 1956. In 1974, he tendered the land for public recreation by deeding 942 acres to the County of San Mateo for use as public open space.

A Concept Plan for the Park, consisting of a site inventory, analysis and recommended improvements was developed in 1975. The Concept Plan was not developed to be a Master Plan, nor was it intended to depict the detailed interrelationships of uses and developments within Wunderlich Park. None of the recommendations of the Concept Plan have ever been implemented. Proposed uses in the Concept Plan were re-evaluated to determine whether those proposed uses should now occur. Unlike Huddart Park, Wunderlich Park was not developed to facilitate picnicking, but to facilitate pedestrian and equestrian trail use (Herzberg, 2005).

## 2.2.2 Current Setting

Huddart and Wunderlich Parks are large, rural, rustic areas set within a regional greenbelt of open space lands. Located just west of Highway 84, the parks offer an open space oasis for the nearby urban population centers of the San Francisco Peninsula. Nestled in the Santa Cruz Mountains in central San Mateo County, west of the towns of Woodside and Portola Valley, these two County Parks are connected via the Skyline Trail. Park elevations range from 500 to 2000 feet above sea level.

Huddart and Wunderlich County Parks are set within an open space network comprised of public and private land that extends virtually the length of the San Francisco Peninsula, from San Francisco to San Jose. The open space lands, taken as a whole, provide significant visual resources, recreation opportunities, wildlife habitat, native vegetation, soils, and hydrological resources located near an urban area. The Huddart and Wunderlich Parks both provide for varied recreational uses in a natural environment. The forested slopes and steep cool canyons embody the essence of a coastal mountain environment

Throughout the parks, trails run along gulches and creeks, and traverse unique hillside habitats. Hikers of all abilities are accommodated by the variety of trails, many of which contain breathtaking views. A wide range of plant communities offer varied habitat for wildlife found in the park. The majestic coast redwoods also provide a cool, well-shaded environment along the streams and gullies.

In contrast, the chaparral areas of these parks are hot and dry. Shrubs, such as manzanita, chamise, chaparral pea, and yerba santa form a thick, almost impenetrable mass of brush. Bordering the chaparral and the redwood forest is the mixed evergreen forest, which covers most of the parks. Here trees, such as tanbark oak, madrone, California laurel, coast live oak, and douglas fir are dominant. Beneath the trees are numerous wildflowers, wood ferns, and shrubs, including sticky monkey flower, wild lilac, toyon, wood rose, and poison oak.

### Huddart Park

Huddart Park, located on the eastern slope of the Santa Cruz Mountains above the town of Woodside, encompasses 974 acres. The park's main entrance is on King's Mountain Road, approximately 3.5 miles west of Highway 84. Approximately 80 acres of the park is devoted to developed facilities for large group gatherings. Primary uses of this portion of the park include group picnicking, family picnicking, overnight group camping, and organized youth group day

camping. Several large drop-in picnic areas located throughout the park accommodate 150–250 people. There are also three shelter buildings to provide partial cover for picnic groups. The Sequoia Day Camp is often used for organized youth activities. Day camps are held throughout the summer by various groups and agencies for thousands of the area’s youth. The upper portion of the park is a semi-wilderness natural area devoted to hiking, trail running and horseback riding. The trails extend as high as Skyline Boulevard. An archery center is located on the edge of the upper portion, occupying approximately 25 acres. Approximately 91,000 people visited Huddart Park in 2004.

### ***Park Entrance***

The park’s main entrance is on Kings Mountain Road, approximately 3.5 miles west of Highway 84. There is a fee station, parking areas, and central kiosk. The ranger’s residence is located adjacent to the main parking area.

### ***Picnic Areas***

There are picnic areas located in the upper and lower areas of the park. Each area can accommodate between 120 and 250 people. Some of these are managed as drop-in family picnic areas, while others are available on weekends by reservation and Monday through Thursday with a standard park fee. Drop-in picnic areas include Werder, Miwok, and Madrone. Reservable picnic areas include East and West Meadow, Upper and Lower Oak, Redwood, Zweirlein, and Sequoia Day Camp (discussed separately below). The group picnic areas generally include picnic tables, barbecue pits, public restrooms (with running water and electricity), and nearby visitor parking.

#### **Lower Picnic Areas**

The Upper Oak area is used extensively by the Girl Scouts for youth day camping and occasional overnights. Primary features include a large oak tree, fire ring, restroom, picnic tables, shade trees, volleyball poles and horseshoe pits. It is accessible to persons with disabilities. The Lower Oak area features family picnic facilities and restroom. It also provides parking for Meadow walk-in users.

The Redwood group picnic area can accommodate up to 150 people seated at tables. It features barbeque pits, a restroom facility located at the west of the parking lot, volleyball poles, horseshoe pits, and nearby parking. Redwood is currently closed during the week, except by reservation.

The Meadow area is a walk-in facility with two picnic areas (East and West), and a grass meadow in the center. The East and West picnic areas have a capacity of 250 and 120 people, respectively. There are picnic tables, volleyball poles, and horseshoe pits. The grassy area, created in 1968 when an arroyo was filled with rip rap to create a level area, is used informally and is open to the public on a drop-in basis. Due to the steep slope of the road, drop-offs for persons with disabilities are permitted.

### **Upper Picnic Areas**

Zwerlein group picnic area is surrounded by coast redwood, madrone and brush. It can accommodate up to 250 people seated at tables. There is a horseshoe pit, two sand volleyball courts with nets, and restroom all located on the nearby grassy area. The area is not accessible to persons with disabilities. The Madrone picnic area is only open with reservations, due to staff shortages.

Werder and Miwok are both drop-in family picnic areas with shelters. They provide extensive picnic sites across a broad range of natural environments and restrooms. The Miwok shelter is occasionally used for weddings and can seat approximately 100 people. It does not have an accessible path of travel for persons with disabilities.

### ***Horse Trailer Parking***

A riding ring and horse trailer parking area were removed when the Zweirlein and Werder areas were enlarged in the 1980s. Consequently, there are no suitable parking facilities for people wishing to bring horses into the park. At the present time, the Zweirlein trailhead is used for parking, but only two trucks with trailers can be accommodated in this area. In order to obtain this parking, equestrians must arrive early on summer weekends.

### ***Day Camp and Amphitheater***

The Sequoia Day Camp, located in the easterly portion of Huddart Park, was developed in 1990 to serve the day camp needs of the Girl Scouts and other youth group organizations. The area is approximately four acres in size with a woodchip surface. Facilities include an amphitheater, a group crafts area, and “pods” that accommodate up to 300 day-campers. The site was planted with native oak and redwood trees and other native shrub species. The site tree plantings have grown over the past 10 years, but do not currently provide adequate shade cover for all pod areas in the summer months. Some shade is currently provided by wood shade structures built on several sites at the upper end of the day camp area. As the shade trees mature, these structures will be removed. Sequoia Day Camp features a restroom powered by photovoltaics, irrigation controllers, and on-site treatment of wastewater.

The Sequoia Amphitheater is located below the restroom, and can seat approximately 175 to 200 people. An amphitheater picnic area is also available adjacent to the grassy meadow where the flagpole stands. Electricity is not available at the amphitheater.

### ***Shelters***

As described above in the Picnic Areas section, Huddart has three shelter buildings that provide partial cover for group picnics: Werder, Miwok and Redwood. Each shelter can accommodate 125 people. Fees are charged for use of the shelter buildings and are available by reservation only. All three shelters are in need of repair and reconfiguration. The Miwok shelter was damaged during the 1989 Loma Prieta earthquake. The Redwood Shelter does not currently have an adjoining restroom facility.

### ***Campgrounds***

Huddart Park has three reservable overnight group campgrounds, Toyon areas #1, #2, and #3. Campgrounds are available from April through October (closed November through March) for organized youth group activities and group camping. There is a maximum occupancy of 50 people per site. The campgrounds have a central restroom facility with running water. Currently there are two working restrooms, but the shower facility is inoperable. Each campground includes a food locker, fire ring (for use by permit only), barbeque(s), fountain(s), faucet(s), and picnic tables. While there are no designated parking areas in the Toyon campground areas, each campground is designed to accommodate between 10 and 20 vehicles.

### ***Archery Range***

The Huddart Park Archery Range is located in the upper portion of the park, with vehicle access from Kings Mountain Road. The range is maintained and operated by the Kings Mountain Archers, Inc. (KMA) a California non-profit corporation founded in 1956, chartered "...to foster competition with bow and arrow, practice for hunting with the bow, and to provide personal enjoyment of the sport of archery." The range area includes a parking area, outdoor practice range, "kid's corner" practice range, club house, storage shed, storage container box, picnic area, restroom, and a 28-target field range. The archery range is the only such facility located on the San Francisco Peninsula.

### ***Existing Trails at Huddart Park***

Huddart Park offers numerous trails, some for horseback riding and hiking, and some for hiking only. Trails run along gulches and creeks, others offer outward views of the countryside, and all traverse unique hillside habitats.

Service road trails include Richards Road Trail, Summit Springs Fire Trail, Archery Fire Road, and Campground Trail. Together, these service roads form a loop which accesses most of the park area and which may be used for park maintenance, emergency vehicles, and fire fighting.

The Chickadee Nature Trail is a 3/4-mile long fully accessible trail that accommodates users of all capabilities. Horses are not allowed on this trail. The trail traverses three predominant plant communities, coastal redwood forest, mixed evergreen forest and chaparral. This area was severely disturbed by logging and grazing, and many signs of disturbance remain, in contrast to the environment presented by the more moist redwood forests located further up the mountain. The trail offers an experience of the ongoing natural re-establishment of the mature forest that existed before the impact of logging and grazing on the peninsula. The Redwood trail skirts the group picnic area at Upper Oak picnic and parking lot and connects via a bridge to the Redwood group picnic area parking lot.

Huddart Park currently provides parking for trails access in the lower portion of the park. The Midpeninsula Regional Open Space District also provides limited parking at the Purisima Creek trailhead that is located on Skyline Boulevard (Highway 35) directly across from the upper end of Huddart Park. The Crystal Springs Trail currently enters the park via an easement on private

property that is 20 feet in width. The County has transferred the easement to the Town of Woodside, who has assumed responsibility for bridge repair and trail maintenance.

### ***Existing Erosion and Sedimentation at Huddart Park***

There are over 23 miles of paved access roads, fire trails, equestrian trails and pedestrian trails at Huddart Park. Currently all facilities include some sort of erosion and sediment control features such as ditches, culverts, water bars, cross ditches, outsloping roads/trails and insloping roads/trails that control surface runoff. There was a field inventory conducted for the Master Plan to identify the range of representative soil erosion conditions in the Park. The inventory also identified subsequent erosion and sediment control measures to mitigate current situations.

### ***Existing Site Utilities at Huddart Park***

Water service to Huddart Park is currently served by two water companies: Skyline County Water District (SCWD) and California Water Service Company (CWSC). SCWD, who provides water to the upper elevations of the Park (above elevation 400), supplies water from water mains on Skyline Boulevard to the Huddart Park water storage tank (75,000 gallon). The CWSC, who provides water to the lower elevations of the Park (below elevation 400), supplies water from a 1-inch meter located at Kings Mountain Road (50 feet left of 700 Kings Mountain Road). On an average basis, Huddart Park uses 300 (224,400 gallons) units per month from the SCWD and 90 units (67,320 gallons) per month from the CWSC that serves the Huddart Park Maintenance Facility at the Greer Road park access.

Huddart and Wunderlich Parks are outside of the boundaries of any sewer maintenance and sanitation district and so do not access a public sewer line. Instead, sanitation waste at the Parks is disposed via on-site septic tanks and leach fields located in close proximity to existing restroom facilities.

Electric service at the Huddart Park is provided by Pacific Gas & Electric (PG&E). PG&E has easement rights across the park for overhead electrical service lines. In Huddart Park, the lines run northerly from the southerly corner of the Park through the Archery Range to Richard's Road Trail, then easterly through the Park and the adjacent Phleger Estate to a substation along Canada Road near Edgewood Park.

AT&T (formerly Southern Bell Communication) provides telephone and DSL services. AT&T also has an easement for underground communication lines. At Huddart Park, the lines run along the easterly side of Richard's Road Trail up to the westerly edge of Skyline Boulevard (Highway 35). At various places along Richard's Road Trail, the AT&T underground communication line is very shallow and in close proximity to the existing road surface.

For a more in-depth discussion of Site Utilities, please refer to Section 3.12 Public Services and Utilities.

## **Existing Fisheries**

Three intermittent creeks large enough to support aquatic life run through Huddart Park: West Union Creek and its two main tributaries, McGarvey Gulch Creek, and Squealer Gulch Creek. Except in drought years West Union Creek usually retains a low surface flow that connects deeper pools. McGarvey Gulch and Squealer Gulch often lack surface flow completely during the summer months but do maintain pool habitat. The only fish species observed have been steelhead (or rainbow) trout (*Onchorhynchus mykiss*).

### **West Union Creek**

Aquatic habitat in West Union Creek is almost equally proportioned between pool and riffle habitat. Undercut banks and large woody debris provide good cover for fish. This creek provides the greatest amount of spawning and juvenile rearing habitat in the Park, with the best habitat located upstream of the Crystal Springs Trail crossing (County of San Mateo, 2006). Numerous observations of steelhead in West Union Creek have been documented (Leidy et al., 2006). Juvenile steelhead were common from the confluence with McGarvey Creek downstream to the point where the stream leaves the Park in the 2004 fisheries surveys. Additional stream surveys (reported in Leidy et al. 2005) report juvenile steelhead in West Union Creek both above and below Huddart Park.

### **McGarvey Gulch Creek**

By midsummer most of McGarvey Gulch Creek is apparently without surface flow (County of San Mateo, 2006). However the creek retains isolated pool habitat large enough to support juvenile steelhead. Areas with appropriate spawning habitat are infrequent. Due to a number of fish passage impediments further upstream, including a 20 foot high waterfall, the extent of steelhead use of McGarvey Gulch Creek is a short distance above the Crystal Springs Trail crossing, and during some years may be limited to the Richards Road trail crossing. No steelhead were observed in this creek during the 2004 surveys but they have been previously reported from the lower 0.3 mile of the creek (Leidy et al., 2005).

### **Squealer Gulch Creek**

Aquatic habitat in Lower Squealer Gulch Creek is dominated by riffles and cascades, with 25 percent in pool habitat. As elevation increases the stream becomes confined to a narrow ravine and debris jams are common. A log jam approximately 0.5 mile upstream limits further upstream migration of steelhead but juveniles are common below this passage barrier. Upper Squealer Gulch Creek is dominated by plunge pools and cascades, with limited riffle habitat also available but no fish have been observed here in recent years (County of San Mateo, 2006).

## **Wunderlich Park**

Wunderlich Park is located on Woodside Road, near Portola Road, approximately two miles southwest of the town of Woodside. The park is a similar size to Huddart Park, encompassing 942 acres, but contains fewer developed facilities. The lower portion of the park includes the park entrance, a parking lot, and an equestrian center housed in the Folger Stable complex. These

facilities occupy approximately 16 acres. The remainder of the park is a semi-wilderness natural area devoted to hiking, trail running and horseback riding. Approximately 46,500 people visited Wunderlich Park in 2004.

### ***Public Entry and Exit Road***

Vehicular access to Wunderlich Park and Folger Stable has, for some time, been ill defined, circuitous, and dangerous for both horses and people. At the present time, vehicular access to Wunderlich Park occurs at one location only, at the lower stables complex area on Woodside Road (Hwy 84). Visitors enter and exit the park by crossing the same one-way bridge.

### ***Folger Stable***

The Folger Stable has operated as a private equestrian training and boarding facility under a lease agreement with the County since 1974, when the Wunderlich Park property was donated to the County of San Mateo. Considerable interest has arisen in the local community in preserving both the equestrian presence and the historic architecture of the stable building. Built mostly of redwood, the building can provide horse boarding for six horses. The facility presently has feed and tack storage, an awards room, and horse grooming space. Folger Stable is described in further detail in Section 3.7 Cultural Resources.

### ***North Wing Folger Stable***

The existing north wing of the Folger Estate contains enough space to provide for five horse stalls.

### ***Service Courtyard***

The existing stable service courtyard is a decomposed granite surfaced area that facilitates a variety of outdoor functions such as farrier pad, wash area, horse trailer loading and unloading. This large flat area is an important element of the equestrian center.

### ***Manure Holding Area***

The current manure holding area has two temporary metal dumpsters that can hold up to 30 cubic yards. The dumpsters are located adjacent to the Upper Barn area. They are accessible to both flat bed trucks and service carts.

### ***Small Barn***

A small accessory barn with accommodation for six additional horses exists just north of the service courtyard. It is a small utilitarian-looking building built with a metal frame on concrete foundation, with wood siding. The stabling capacity that it provides is useful to the overall operation.

### ***Carriage House***

The existing 800 square foot Carriage House is a unique part of the Folger Stable complex. It is a small building built in the style of the Stable, and is presently used mostly for County meeting purposes.

### ***Upper Barn (formerly the Blacksmith Shop)***

An existing blacksmith shop of the same period as the Folger Stable exists to the north is an important part of the historic district designation of the area. This building, which now contains ten horse stalls, is considered an historic structure. Of the existing ten stalls, only six are considered as well suited for stable occupancy. The building in the rear of the Upper Barn is not historic and should not have any horses boarded in it.

### ***Caretaker/Manager's House***

Just south of the Blacksmith's Shop is the location of the mobile home owned and occupied by the current lessee. This location is particularly strategic due to its ability to provide security and monitor what is going on in the equestrian center during the day and, to some extent, during the night.

### ***Small Training Ring***

There is an existing 70 ft. x 50 ft. training ring at the north side of the site.

### ***Old Hillside Paddock Area***

The existing hillside paddock area at the north side of the site is the source of major water quality erosion problems that has already adversely affected the adjacent creek and private property owner.

### ***Large Show/Training Area***

The large show/training arena is a valuable asset to the equestrian center in need of repairs and maintenance. It has been at its existing location for many years, and its approximate size (105 ft. x 220 ft.) is desirable.

### ***Arena Paddocks***

The existing paddock occupies an important visual location at the entry of the equestrian center and its run down appearance does not create a positive initial visitor experience. While the desire to having a small paddock near the large show/training arena is apparent, it is suggested that the existing wood-fenced paddock be removed and replaced with a small well-manicured metal railed holding paddock to hold horses waiting to go into the arena or coming out of the arena.

### ***Public Parking Lot***

The dirt-surfaced public parking lot is inefficient, and suffers from traffic congestion during periods of high use due to the fact that there is no parking lot striping. Park users report frequent instances of arriving at their vehicle after using the park, only to find their vehicle is blocked by another and they can not exit the park. Increased programming of the stables for public use may increase parking demand in the future, as will population growth. The park's trail system is capable of accommodating many more users than can be accommodated in the current dirt lot. The lot currently accommodates approximately 30 vehicles if parked in a proper manner, i.e., not blocking other vehicles.

### ***Septic System***

The existing septic system is at capacity with the Stable and Carriage House. Any new connections would have to be built within the historic regulations constrained by current environmental regulations. Currently, there is no possibility of connecting the Folger septic system to a public sewer.

### ***Caretaker Trailer Parking***

The existing lessee has three trailers, one truck trailer combo and two trailers, parked on-site at the current caretaker trailer parking area.

### ***Toilet***

There is a single existing chemical toilet next to the parking lot. This is a modular facility that is handicapped-accessible.

### ***Fee Collection***

Entrance to Wunderlich Park is currently free of charge.

### ***Existing Trails at Wunderlich Park***

Wunderlich Park offers numerous trails for horseback riding and hiking. Trails run along gulches and creeks, others offer outward views of the countryside, and all traverse unique hillside habitats. Service road trails include Skyline Trail, Alambique Trail, Oak Trail, Meadow Trail, and part of Bear Gulch Loop Trail. These service roads extend from the parking area to west end of the park. Single track hiking and equestrian trails include Redwood Trail, Madrone Trail, and parts of Alambique and Beach Gulch Loop Trails. At present, the only designated parking area is located adjacent to the Historic Folger Estate Complex.

### ***Existing Erosion and Sedimentation at Wunderlich Park***

There are over 15 miles of paved access roads, fire trails, equestrian trails and pedestrian trails at Wunderlich Park. Currently all of the facilities include some sort of erosion and sediment control features such as ditches, culverts, water bars, cross ditches, outsloping roads/trails and insloping roads/trails that control surface runoff. These access roads, fire trails, equestrian trails and

pedestrian trails are maintained by park personnel on an annual basis. In addition, inspections are made by park personnel for major access roads and fire trails after every major storm event during the winter and spring months, as part of an ongoing erosion and sediment control maintenance program.

The Folger Stable site is experiencing ongoing soil erosion that originates from bare dirt surfaces of the parking area, walkways, paddocks, and various exterior stable areas. Sediment due to this erosion is deposited in Alambique Creek, which is part of the sediment-impaired San Franciscquito Creek watershed. Current site horse keeping practices contribute to water pollution of Alambique Creek.

### ***Existing Site Utilities at Wunderlich Park***

Water service is provided at Wunderlich Park by CWSC and includes the existing stable facility and residence. Water is supplied from a 2-inch meter located on the west side of Woodside Road near the public fire hydrant at the existing park entrance. This meter provides domestic service and a Fire Department Connection. There is also a private fire hydrant adjacent to Folger Stables. On an average basis, Wunderlich Park uses approximately 65 units (48,620 gallons) per month.<sup>1</sup>

Huddart and Wunderlich Parks are outside of the boundaries of any sewer maintenance and sanitation district and so do not access a public sewer line. Instead, sanitation waste at the Parks is disposed via on-site septic tanks and leach fields located in close proximity to existing facilities.

Electric service at the Parks is provided by Pacific Gas & Electric (PG&E). PG&E has easement rights across the Parks for their overhead electrical service lines. At Wunderlich Park, electric service extends from Woodside Road through the park via lines running both northerly across the western boundary near Skyline Boulevard (Highway 35) and also easterly along the southern boundary. Natural gas is provided via propane storage tanks on Park property (one is located directly behind the Carriage House).

AT&T provides telephone and DSL services. AT&T also has an easement for underground communication lines.

For a more in-depth discussion of Site Utilities, please refer to Section 3.12 Public Services and Utilities.

### ***Existing Fisheries at Wunderlich Park***

Alambique Creek is the only named stream within the boundaries of Wunderlich Park. Most of this first order creek runs through a steep ravine vegetated with second growth redwood and bay trees.<sup>2</sup> Aquatic habitat in Alambique Creek is composed primarily of cascades, pools, and riffles. The creek transports a great deal of fine sediment, which chokes potential spawning gravels. In

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<sup>1</sup> One unit equals 748 gallons or 100 cubic feet of water.

<sup>2</sup> The Master Plan maps two additional streams that are tributary to Alambique Creek. These streams were not included in the habitat assessment and fisheries surveys conducted for the Master Plan (County of San Mateo, 2004), probably due to their size and steep gradients.

addition, the steep gradient and the presence of multiple and frequent debris jams all combine to make this creek less than sub-optimal habitat for steelhead. As noted in the Master Plan there are multiple barriers deemed impassable for fish passage between San Francisquito Creek and Wunderlich Park, including the inundation of the historical confluence of Alambique Creek with Corte Madera Creek by the formation of Searsville Lake and a culvert on Alambique Creek at Highway 84. Nonetheless, there may be a few rainbow trout remaining in the lower reaches of Alambique Creek descended from steelhead trapped upstream of Searsville Lake after dam construction. California newt and Pacific giant salamander were observed in Alambique Creek but no fish of any kind were found during surveys conducted for the Master Plan (County of San Mateo, 2004). However, Leidy et al. (2005) think that evidence suggests a non-anadromous population of rainbow trout (which is undoubtedly small given the habitat conditions) may be present.

## 2.3 Project Characteristics

### 2.3.1 Master Plan Goals

Goals in the Master Plan identify a long-range vision for the management of the properties and carefully balance multiple objectives.

- Concentrate development of new facilities in the already-developed portions of the parks. Protect the wild character of the undeveloped portions.
- Improve vehicular circulation, pedestrian circulation, and increase available parking and picnic areas.
- Increase revenue generation capability of each park.
- Identify physical improvements that will decrease ongoing operation and maintenance costs.
- Ensure the continued equestrian use of the parks.

### 2.3.2 Proposed Master Plan Components

#### Huddart Park Facilities Recommendations

##### *Picnic Areas*

The Master Plan proposes to improve access to picnic areas and visitor enjoyment by:

- improving traffic circulation and increasing parking in the Redwood and Oak picnic areas,
- improving pedestrian circulation to increase visitor safety via connector trails and pedestrian crosswalks,
- enlarging the size of open space devoted to group picnicking,
- creating an amphitheater and fire ring at Upper Oak,
- establishing an interpretive creek overlook at Squealer Gulch Creek,
- replacing site furniture as necessary,
- removing the gravel parking areas at Meadow,
- providing a gravel vehicle turnaround near the gate to Richards Road,

- reconfiguring the grassy area at the Meadow to appear more natural and planting shade trees, and
- removing the outdoor group picnic facilities at Zwerlein, and replacing it with an indoor-outdoor rental facilities.

### ***Horse Trailer Parking***

The Master Plan proposes to construct three to five horse trailer parking spaces on the east side of the park road between the Redwood and Oak areas. The parking lot would have a gravel surface, and be designed with proper turning radii for truck and trailer rigs. The Master Plan also recommends including a trailhead adjacent to the parking area, with a gravel surface, hitching posts, and water source that links with park's equestrian facilities.

### ***Sequoia Day Camp and Amphitheater***

The Master Plan proposes to install a second vault-style restroom near the parking lot to facilitate access for sewage disposal trucks, to upgrade the existing flagpole with an interior rope and lockbox, and add a deep craft sink with water source, located away from the restrooms.

### ***Shelters***

The Master Plan proposes to replace all three shelter buildings – Redwood, Werder, and Miwok with more modern structures. The Master Plan also proposes to improve circulation and parking in these areas. At Redwood a new loop road and parking lot is planned. The Miwok area will be entirely reconfigured to increase available parking. The Miwok shelter would be constructed wither at the existing parking location or further up the hill. There would also be a more efficient parking arrangement to serve the Miwok area and Dean Trail trailhead. New replacement restrooms are planned for Redwood and Werder, as well as a crafts sink at Redwood Shelter.

### ***Campgrounds***

The Master Plan proposes to improve Toyon in the following ways:

- Expand the capacity of the area by an additional 50 people by developing an additional loop below the shower building. Additional vehicle parking for 15 vehicles would be necessary to serve the additional area.
- Repair or replace the shower building. Install coin-operated controls.
- Construct one additional restroom for the new lower loop.
- Improve water distribution system that services Toyon.
- Pave Campground Road and improve sight distances and turning radii at tight turns to allow easier access for larger vans and fire-fighting vehicles.
- Construct an amphitheater for youth group gatherings.
- Improve the layout of the parking stalls and the site furniture. Evaluate site furniture and replace as needed.

### ***Ranger Residence and Interpretive Center***

The Master Plan proposes to prepare a preliminary feasibility study to explore alternatives for building an interpretive center for Huddart Park. Several recommended options include:

- Convert the Ranger's residence into an interpretive center after construction of a new Ranger's residence near the parks yard as recommended elsewhere in this Master Plan.
- As a second option, construct a new interpretive center near the Chickadee Trail trailhead. The existing Ranger's residence would then be converted to a park headquarters should a new residence be constructed near the parks yard.

The Master Plan also recommended constructing a new Ranger's residence in the level area at the lower portion of the park near Greer Road. The new residence should be approximately 1200 square feet in size, single-story, with an attached garage.

### ***Archery Range***

The proposed Master Plan recommends the range remain in its present location. KMA would work with the County to implement KMA's long-term goals. The following recommendations have been prioritized by KMA:

- 1) Maintain the existing revocable agreement for use of the area. KMA and the County should evaluate the existing agreement at such time as substantial new capital improvements are proposed by KMA.
- 2) Build a ten-lane indoor range/clubhouse/storage facility (approximately 4800 square feet).
- 3) Install solar power for electricity at the existing clubhouse and proposed new indoor range, or construct a block wall enclosure and install a quiet 6000-watt generator.
- 4) Construct a cover for the shoot line on the practice range and make the area accessible for the disabled. Lengthen/realign the practice range and correct drainage.
- 5) Expand the existing clubhouse and provide additional storage area.
- 6) Upgrade the drainage at the main entrance with new culverts, rolling dips, or other appropriate methods, and expand the public parking.
- 7) Upgrade the roadway and drainage along the upper fire road.
- 8) Improve drainage on the lower fire road with a new culvert or other appropriate method. Review and modify all culverts on the range as appropriate.
- 9) Reopen the old fourteen-target range.
- 10) Establish the exact boundaries of the archery range using GPS.
- 11) Connect the archery facility to PG&E electric service. Install a separate electric meter for invoicing directly to KMA.

### ***Park Maintenance Yard***

The parks yard should remain in its current location. The Master Plan recommends providing an expanded storage area within the parks yard for the Girl Scouts. This would consist of enough space to hold a small shed that could hold tables, fire pits, and other items needed for the month-long camp sessions.

### ***AIDS Memorial Grove at Madrone***

The Master Plan states that in general, the grove should remain a place for quiet reflection. It should remain in keeping with the natural surroundings, rather than a constructed memorial such as is present in Golden Gate Park. The grove should continue to occupy its current location, and should not be enlarged. Recommendations include improving directional signage within the park to guide visitors to the AIDS Grove and adding the AIDS Grove to pre-printed park maps. The Master Plan also notes that future improvements will arise from the community as interest surfaces.

### ***Vegetation Management***

The Master Plan proposes implementing vegetation management recommendations as outlined in County planning documents, specifically Chapter 9 of Huddart-Wunderlich Master Plan, “Fire Hazard Assessment and Recommendations.” See Section 3.11 Fire Hazards for an in-depth description of proposed implementation actions.

### **Huddart Park Trails Recommendations**

Chapter Four of the proposed Master Plan is dedicated to trail recommendations. The following is a brief summary of Huddart-specific recommendations. For a more detailed description, please refer to the main document.

- Remove and revegetate Archery Fire Road to address erosion issues.
- Construct a new single track trail from below the Archery Range to the Chinquapin Trail, after the Archery Fire Road is taken out of public service, in order to maintain a continuous trail network.
- Establish a short stretch of trail at the 1720-foot level to link Chinquapin and Crystal Springs Trails, in order to link additional loop route options.
- Extend the Bay Tree Trail (hiking only) to Sequoia Day Camp.
- Connect the Chickadee Nature Trail to the Redwood Nature Trail to provide for a longer hike option. Replace the existing bridge on the Chickadee Trail to address safety and functional concerns.
- Create a new roadside path from the park entrance parking lot to the lower Oak Area, adjacent to, but separated from, the park road, to provide for safe pedestrian access along the road.
- Improve the Crystal Springs Trail, Chinquapin Trail, and portion of the Dean Trail with a ¾-inch minus base rock to provide an all-weather hiking and riding loop.
- Work collaboratively with GGNA and the Town of Woodside to identify a crossing location to allow users of the Town of Woodside’s Flood Property trail to access the park.
- Install split rail fencing and educational signage along the creek to discourage equestrians and individuals from crossing the creek or playing in the water.
- Discontinue the practice of allowing multiple crossing points and entrance into the park from the private trail system located on the opposite bank.
- Develop an acceptable park entry utilizing an existing or new bridge or culvert.

- Evaluate all park bridges for structural soundness and estimated lifespan.
- Provide formalized pedestrian crossings on the park road to accommodate pedestrian movement throughout the park.
- Work with San Francisco PUC and GGNRA to develop a new trail entrance utilizing an existing service road, the existing Miramontes Trail, and a new short connector trail between the two.
- Work with the Town of Woodside to allow a portion of the private trail from the Flood property to be used by the public.
- Replace the existing bollards located at Raymundo Road and Crystal Springs Trail with a gate that is more easily operated by parks maintenance staff for safety purposes.

## **Huddart Park Erosion and Sedimentation Recommendations**

There are no recommendations specific to Huddart Park that were made in the proposed Master Plan. Please refer to recommendations made under *General Erosion and Sedimentation Recommendations*.

## **Huddart Park Site Utilities Recommendations**

### ***Water Supply and Storm Drainage***

The Master Plan recommends establishing a capital improvement program to begin annually replacing segments of the existing water distribution system to current standards. It also proposes addressing pressure and volume problems at Wunderlich (due to the existing system meter to the Maintenance Facility) by selecting one of two options:

- 1) Analyze the potential of increasing overall volume and water pressure at the Maintenance Facility by installing a combined system modification such as: verifying pressure available at the Kings Mountain Road meter, increasing meter size, installing new 2-inch or larger service piping from meter to the Maintenance Facility and installing a water pressure booster system at the Maintenance Facility. A combination of these elements should increase the overall volume of water and water pressure at the Maintenance Facility.
- 2) Change service to the Maintenance Facility to the on-site Huddart Park service by extending a new 2-inch service line from the Oaks picnic area to the Maintenance Facility.

### ***Sanitary System***

The Master Plan recommends installing a new septic system with septic tank and leach field system to accommodate the proposed restroom facility in the vicinity of the Redwood Shelter area. One option is to install a prefabricated self-contained restroom unit (with a holding tank).

### ***Storm Drainage***

The Master Plan recommends establishing a capital improvement program to annually begin or continue replacing the existing storm water drainage culvert systems to current 100-year storm

water drainage capacity standards, thereby minimizing future drainage system repair and maintenance costs.

### ***Electric/Telephone/Gas/Communication***

The Master Plan makes the following recommendations:

- Coordinate with AT&T regarding the disposition of their existing communication lines along portions of Richard' Road trail area where AT&T facilities are very close the existing surface of the road.
- Request that AT&T investigate local service lines and repair them as needed to provide reliable service.
- Incorporate new solar photo-voltaic electric generation systems into replacement structures.
- Underground existing overhead electric lines in cases where they are not replaced by solar power.
- Install a separate electric meter to service the Archery range.

### **Huddart Park Fisheries Recommendations**

The following is a summary of the recommendations for improving Huddart Park's steelhead habitat conditions. They are listed in the order of their perceived priority in the Master Plan:

- At or near the existing trail crossing and pedestrian bridge over West Union Creek (or alternative location to be determined), construct a bridge for horses to cross the creek, and prohibit instream crossings at the numerous locations located all along West Union Creek.
- Work with local equestrian representatives to determine the proper numbers, locations, and design, to construct off-stream horse watering sources to protect stream banks from erosion.
- Construct a new pipe arch culvert at Richards Road crossing at McGarvey Gulch Creek to eliminate the fish passage barrier that exists at the current culverted crossing.
- Work with private landowners to minimize landslides along the east bank of West Union Creek.
- Stabilize and revegetate McGarvey Gulch Creek as needed.
- Conduct an analysis to determine if the annual costs of debris jam removal in the narrows of Squealer Gulch Creek are feasible. If not cost-prohibitive, it is recommended that the reach of Squealer Gulch Creek on the private land outside of the park boundaries be surveyed first for habitat quality and additional barriers to upstream passage, prior to committing funds for improvements within the park's boundaries.

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### **Wunderlich Park Facilities Recommendations**

#### ***Public Entry and Exit Road***

The Master Plan proposes to create a new one-way loop road that enters the park from the driveway nearest the existing arena and exits out by way of the original park entrance onto

Woodside Road. The proposal envisions creating a new roadway segment that winds through the existing trees and enters the existing parking lot from the south. The exit route would then utilize the existing roadway that goes over the old bridge and connects Woodside Road. The existing driveway needs to be redesigned to provide safe sight line conditions for motorists entering and exiting the park onto Woodside Road. This route will provide the clarity and needed separation between equestrians and other park users. The primary vehicular route would be signed accordingly. County Parks has a commitment to work with the Arts Commission on art in public spaces, and the main entrance signs offer opportunities to incorporate public art.

### ***Folger Stable***

There are extensive plans to improve Folger Stable via a phased process, including:

**Phase I:** Restoration of the Main Stable Building.

**Phase II:** Repair and improvement of the site components, such as parking, pathways, paddocks, materials storage, and other features.

**Phase III:** Implementation of programming for public and private use of the stable complex.

### ***Main Stable***

The Master Plan supports the major historic preservation effort required to preserve the Folger Stable. Preliminary Architectural studies have been prepared for the Folger Estate Stable Committee (FESC). Further detailed planning and design is underway.

### ***North Wing Folger Stable***

The Master Plan recommends that the North Wing of Folger Stable be upgraded. The current five stalls, if provided with more open stall doors, would be more visible to the public.

### ***Service Courtyard***

This large flat area is an important element of the equestrian center and needs to remain open and unobstructed. Over time, it would be desirable to install a new drainage system and to resurface the space with base rock to improve use during the 4-5 month rainy period of the winter season.

### ***New Manure Holding Area***

The Master Plan proposes establishing a new manure holding area to replace the existing temporary dumpster. The recommendation is to create a new, sloped concrete, paved pad area near the southern edge of the Folger Stable building, provide a covered bin for stormwater pollution prevention, and design the pad to drain into a vegetated area.

### ***Small Barn***

The accessory barn accommodates six horses. The stabling capacity that it provides is useful to the overall operation. No changes are proposed in the Master Plan.

### ***Hot Walker Area***

The Master Plan proposes locating a hot walker area at the south end of the Folger Stable. The hot walker area could also be used as an additional tacking up area until such time that the need for a hot walker is fully determined. This location is also visible to the public and the use of a hot walker might be part of demonstrating the training operation to the public.

### ***Carriage House***

The Master Plan proposes that the Carriage House continue to be used for meetings, exhibits, and as a classroom facility. Prior to any public use, this facility would be brought up to current seismic and ADA standards (i.e. restrooms and an accessible vehicle parking space). Additionally, the Master Plan recommends the use of the Carriage House as an orientation venue. This would not only provide for a better appreciation for the history and context of the Folger Stable and related facilities, but would also educate visitors about required safe behavior to protect horses and visitors alike.

### ***Upper Barn (formerly the Blacksmith Shop)***

The Master Plan proposes renovating the Upper Barn. Six of the 10 horse stalls would be continue to be used for stable occupancy. The other four stalls in the back area would be used for tack, storage, and other support uses.

### ***Caretaker/Manager's House***

The Master Plan notes that a new caretakers' residence would need to be provided by the stable operator, if the existing stable operator were to change in the future.

### ***Central Paddock***

The Master Plan proposes that a central paddock area be built to benefit equestrian operations at Folger Stable. The location identified for the combined paddock area is the partially sloped meadow west of the Manager's House. It would accommodate between 19 and 20 paddocks (16 x 30 ft). These paddocks would be constructed of metal pipe rails. They would also be located 50 feet away from the center line of the adjacent creek.

The Master Plan also considers relocating the existing septic tank and leach field to one side of the meadow to allow reconfiguration of the meadow area into a centralized paddock facility. It also recommends stabilizing the existing dirt road. This concept requires further evaluation.

### ***Small Manure Holding Area***

The Master Plan recommends placing a small covered bin next to the north side of the Upper Barn for manure storage. Bin coverage is required for stormwater pollution prevention. Further investigations are necessary to determine location and necessary repairs for subsurface drains, stone walls, and concrete pad design.

### ***Small Training Ring***

The Master Plan does not propose any changes to the existing 70 ft. x 50 ft. training ring at the north side of the site. It is an important component of the training facility and should be retained in its current location.

### ***New Hay and Shaving Storage Facility***

The Master Plan proposes to build a new roofed hay and shavings building southeast of the small training ring. This site would support two large concrete bin spaces that can accommodate large volumes of both hay and shavings stored and piled in a dry enclosed space. Truck access would be available. The final site location/bin design would be developed based on future grading studies, and environmental assessment. This would be determined during the schematic design stage.

### ***Old Hillside Paddock Area***

The existing hillside paddock area at the north side of the site is the source of major water quality erosion problems that has already adversely affected the adjacent creek and private property owner. The erosion that has occurred at this location is not safe for horses. The Master Plan proposes rehabilitating the hillside and replanting to minimize erosion.

### ***Large Show/Training Area***

Proposed Master Plan improvements include a new sub-drainage system, railings, watering system, and 12-foot wide dirt road to be installed around the perimeter of the training area for carriage rides. The drainage improvements would include installing a subsurface perforated drain line in a drain rock trench located along the length of the arena at the base of the slope. The drain line would be tied into the on-site drainage system. Additional grading and drainage of the arena floor itself is likely. Reducing the size of the arena footprint is recommended to accommodate the roadway and avoid excavating into the adjacent hillside. There would also be new spectator bleachers (no greater than 50 seats).

New night lighting is under consideration in the Master Plan, in order to enhance use during winter months and to extend training operations into early evening hours. Night lighting would be shielded from adjacent neighbors and directed onto the arena floor. All programmed activities occurring after park hours would be funded and operated by the non-profit organization and coordinated *vis a vis* a formal agreement with the County.

### ***Arena Paddocks***

The Master Plan recommends removing the existing wood-fenced paddock and replacing it with a small well-manicured metal railed holding paddock to hold horses waiting to go into the arena or coming out of the arena.

### ***Service Roadway***

The Master Plan proposes changing the current dirt road which services the stables area to become a dedicated service-only road. Public visitors would not be allowed to use the service road to access the stables, but rather must park in the parking area and walk up. An exception to this arrangement would be made for handicapped visitors. One or two accessible parking spaces would be provided on the level area adjacent to the stables and Carriage House for this purpose. Horse boarders and trailers would not be allowed to park in this area. The service road would connect all major features of the equestrian center, and would be designed to include storm drainage improvements.

### ***Public Parking Lot***

The Master Plan recommends establishing a clear one-way circulation system and delineating parking spaces by use of a combination of paving, wheel stops and bollards. The Master Plan also proposes separating horse trailer parking from cars into two lots. The existing parking lot would remain in its current footprint and will feature greater definition to the stalls. The horse trailer parking area would be a separate lot large enough to accommodate five truck trailer combos (stall size 15x40 feet) and two trailer only parking spots (stall size 15x30 feet). The horse trailer parking area would also accommodate van or bus parking for youth or other groups during the week, when horse trailer demand is lower.

Vans and buses would only be allowed by permit, and would not be allowed on the weekends. Accessible parking spaces should be provided according to current Federal Americans with Disabilities Act (ADA) requirements and County standards. Removal of approximately 12 trees and grading disturbance to approximately 8800 square feet of land would be required to create the horse trailer parking area. Removal of approximately three trees and grading disturbance to approximately 4,275 square feet of land would be required to improve the entrance loop drive. Removal of approximately three trees and grading disturbance to approximately 3,300 square feet of land would be required to improve the entrance loop drive.

The proposed site plan indicates that by relocating the horse trailer parking to a separate (new) parking area, the existing lot could accommodate approximately 38 vehicles in standard stalls of 9 x 18 feet. It is also possible to gain additional efficiency by paving the auto parking spaces with asphalt and striping the stalls, and this should be considered at a later design stage. In addition, the capacity of the lot could be further increased by expanding the parking lot toward Woodside Road. This would require additional grading and tree removal.

### ***Septic System***

The Master Plan recommends that a study be conducted to determine the feasibility of increasing flows into the existing system located below the Carriage House, before undertaking any new site related improvements.

### ***Caretaker Trailer Parking***

Currently the existing lessee has a single truck and trailer on-site. The Master Plan recommends relocating these vehicles into the horse trailer parking area within the public parking lot. This is the only location where trailer parking would be allowed in the park. No trailer parking should be allowed in front of the Carriage House.

### ***Toilets***

The Master Plan recommends replacing the existing chemical toilet with a three stall restroom with sinks in the same location. Handicapped restroom facilities would be provided according to current Federal Americans with Disabilities Act (ADA) requirements and County standards.

### ***Park Access from Woodside Road***

The Master Plan makes the following recommendations to improve park access safety:

- Create a one-way loop entrance/exit drive.
- Install Side Road (CalTrans Standard Drawing W2-2) intersection warning signs that could be used in advance of the entrance and exit drives.
- Add flashing yellow warning lights to the intersection warning signs in the event that additional warning is desired.
- In the event that signage does not prove effective, construct a 15-foot wide deceleration lane with a length of 200 feet and a standard 90-foot transition taper in the southbound direction, to facilitate maneuvers of vehicles towing horse trailers.
- Post “no parking” signs along both sides of Woodside Road along the park frontage.
- Obtain Caltrans Encroach Permits for all improvements requiring one prior to implementing the recommendations.

### ***Fee Collection***

The Master Plan recommends installing an “Iron Ranger” fee collection station in the parking lot, to help defray the costs of park operation and maintenance. The Master Plan also proposes setting the parking rates for horse trailers higher than that for cars, vans, and trucks.

### ***Vegetation Management***

The Master Plan proposes implementing vegetation management recommendations as outlined in County planning documents, specifically Chapter 9 of Huddart-Wunderlich Master Plan, “Fire Hazard Assessment and Recommendations.” See Section 3.11 Fire Hazards for an in-depth description of proposed implementation actions.

## **Wunderlich Park Trails Recommendations**

Chapter Four of the proposed Master Plan is dedicated to trail recommendations. The following is a brief summary of Wunderlich-specific recommendations. For a more detailed description, please refer to the main document.

- Provide a new trail connection between the Alambique Trail at the 200-foot elevation, and the Skyline Trail at the 1900-foot elevation.
- Improve Bear Gulch Trail and Alambique Trail with a ½-inch minus base rock to provide an all-weather hiking and riding loop.
- Establish improvements to Wunderlich’s road system, to enable California Department of Forestry and Woodside Fire Department fire fighters to gain access to the interior areas of the park. In particular, create a new trail connection between the Alambique Trail and the Loop Trail. Create turnarounds and safety zones along the park’s service roads.
- Stay abreast of regional staging area investigations by MROSD for the El Corte de Madera Open Space Property. A safe crossing of Highway 35 would be a key consideration in the development of the staging area.
- Install self-closing hose bibs along park trails where feasible, as well as potable water sources at the upper end of each park.
- Install benches at regular intervals along the first ½ mile of each main trail and benches deeper within parks to provide resting spots.

## **Wunderlich Park Erosion and Sedimentation Control Recommendations**

The Master Plan recommends incorporating erosion control and horsekeeping requirements as conditions of the lease between the County and the Stable Operator. In particular, the Master Plan recommends implementing horsekeeping measures as described in the Council of Bay Area Resource Conservation Districts, Equine Facilities Assistance Program guidelines. See Appendix C for detailed recommendations.<sup>3</sup>

## **Wunderlich Park Site Utilities Recommendations**

### ***Water Supply and Storm Drainage***

The Master Plan recommends that Wunderlich Park establish a capital improvement program to annually begin or continue replacing segments of the existing water distribution system, and storm water drainage capacity. Improvements are recommended to be analyzed on the basis of age, condition, and location and to be focused on location where failures would potentially impact or shut down portions of the park access roads utilized by visitors and pair maintenance operations.

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<sup>3</sup> The Equine Facilities Assistance Program guidelines are shown as Appendix F in the draft Master Plan document (May 2006).

The Master Plan also recommends determining the water rights and County Health Department requirements for irrigation water from Salamander Flats associated with potentially upgrading the existing systems (i.e. reconstruction of the tank and piping system needed for supplying water for irrigation purposes for the lower area of Wunderlich Park.)

Lastly, because the extent of the existing drainage and plumbing systems in and around the existing Stable /Horse Barn, Carriage House and Black Smith Barn areas is undocumented and not known, the Master Plan recommends contacting a utility locating company to determine the location, size, and depth of drainage and plumbing system features.

### ***Electricity***

The Master Plan recommends installing a separate electric meter dedicated for the Folger Stable complex and to replace existing overhead electric lines with underground service.

## **Wunderlich Park Fisheries Recommendations**

The following is a summary of the recommendations for improving Wunderlich Park's steelhead habitat conditions.

- Remove Searsville Dam, as future conditions permit, as a means to open up two miles of suitable steelhead habitat in Alambique Creek. The culverts at Portola Road, Highway 84, and possibly La Honda Road would need to be reconstructed after dam removal.
- Work with local equestrian representatives to determine the proper numbers, locations, and design, to construct off-stream horse watering sources to protect stream banks from erosion.
- Eliminate any existing water troughs in the park.
- Block horse access to previously used "watering holes" with split rail fencing, and stabilize and revegetate stream banks.

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## **General Signage Recommendations**

The Master Plan makes a number of park-wide signage recommendations including installing:

- Park entrance signage and kiosk at Wunderlich Park to mark the proposed revised entrance location
- Entrance signage at pedestrian and equestrian trail entrances to mark various locations on both park perimeters, including orientation and regulatory signage
- Orientation, regulatory, and informational signage at specific locations within the parks' use areas
- Directional signage both on internal vehicular routes and along the trail system
- Directional signage to the AIDS Grove in Huddart Park

- Interpretive signage in each park to provide information about the site's natural, cultural, and historic resources
- Habitat protection signage
- Trail signage (directional and distance markers, and trail etiquette)
- Traffic signage (for internal park roads, drives and parking lots)
- New traffic warning signage within the State right-of-way at the Wunderlich Park entrance and exit

The Master Plan also recommends producing improved trail maps to be made available at park entrance stations, and incorporating public art into park signage where appropriate.

## **General Erosion and Sedimentation Control Recommendations**

The Master Plan proposes to:

- Prepare an independent Sediment Assessment Study of Roads and Trails to assess the overall impacts of all the sediment sources associated with over 38 miles of roads, fire trails and other trails.
- Maintain an ongoing maintenance program to inspect, repair and reconstruct erosion control facilities.
- Comply with all applicable governmental requirements and guidelines when conducting maintenance activities and new construction.

### **2.3.3 Project Schedule**

Using a phased approach, the Master Plan identifies three different implementation timelines – short, medium, and long-term – each of which correspond with a timeframe of 5, 10, and 20-years. The rationale for phasing was based on the following goals:

- Phase I improvements were designed to address public safety concerns, code requirements, environmental damage, or to respond to a pressing need.
- Phase II includes improvements to reduce ongoing operation and maintenance costs or that respond to a pressing need, but require a longer lead-time for planning and design.
- Phase III includes facilities that will improve the level of recreational service to the park visitor.

This approach provides a structured method for better meeting the public's recreational needs and for preserving and enhancing the wild portions of the park.

## **Huddart Park**

### ***Phase I: Short-term (implementation completed within the next 5 years)***

- Implement Phase I Archery Range improvements as prioritized and funded by King's Mountain Archers, Inc. (KMA).
- Provide directional signage to the AIDS Grove and add to park map.

- Provide horse trailer parking.
- Explore possible transfer of park land located south of Kings Mountain Road in cooperation with Mid-Peninsula Regional Open Space District (MROSD).
- Establish new connector trail and pedestrian crosswalks in lower picnic area.
- Replace damaged trail bridges; evaluate all park bridges and develop a 20-year phased replacement program.
- Install a new crossing on McGarvey Gulch Creek at Richards Road to eliminate fish passage barrier.
- Work with Golden Gate National Recreation Area and San Francisco Public Utilities Commission to establish an alternate park entrance from the Phleger Estate via an existing service road, the Miramontes Trail, and new bridges across West Union Creek.
- Work with the Town of Woodside and private property owners to replace the existing bridge across West Union Creek at the Crystal Springs Tail entrance with a new bridge suitable for passage of pedestrians and equestrians.
- Prepare an assessment of the 2-inch water system and replace segments on an annual basis.
- Increase water pressure and volume at the Park Maintenance Yard.
- Install low-flow toilet fixtures at Sequoia, Redwood, and Oak restrooms.
- Coordinate with AT&T to protect communications facilities and repair any damage.

***Phase II: Medium-term (implementation complete within the next 10 years)***

- Install vault toilet at Sequoia Day Camp.
- Implement Oak Area improvements, including restroom replacement, road realignment, and parking.
- Construct new rental building at Zwierlein Area.
- Improve parking at Miwok, replace picnic shelter, and replace restroom.
- Install flagpole and crafts sink at Sequoia Day Camp.
- Implement Phase II Archery Range improvements as prioritized and funded by KMA.
- Establish all-weather single track trails.

***Phase III: Long-term (implementation completed within the next 20 years)***

- Close Archery Fire Road and replace with new loop trail connection between Archery Range and Chinquapin Trail.
- Implement Redwood Area improvements, including restroom and shelter replacements, road realignment, and parking.
- Implement Meadow Area improvements, including restroom replacement.
- Replace Werder picnic shelter.
- Replace restrooms at Madrone, Werder, and Zwierlein.

- Provide solar photo-voltaic electric power at new structures.
- Expand Toyon Campground, replace restroom and shower buildings.
- Replace shower building at Toyon Campground.
- Relocate Ranger's residence and construct interpretive center.
- Implement Phase III Archery Range improvements as prioritized and funded by KMA.
- Replace overhead electric lines with underground facilities.
- Establish new trail connections in locations shown within Master Plan.

## **Wunderlich Park**

### ***Phase I: Short-term (implementation completed within the next 5 years)***

- Implement Folger Stable Building seismic retrofit and restoration.
- Implement horse-keeping measures at Folger Stable complex.
- Establish vehicular entrance/exit and parking area improvements, including horse trailer parking, and traffic safety improvements on Woodside Road.
- Install new vault-type restroom at parking lot, with running water.
- Install entrance signage.
- Implement ADA upgrades at Carriage House.
- Install fee collection station at parking lot.
- Prepare assessment of 2-inch water system and replace segments on an annual basis, in coordination with the Folger Stable Improvement Project.
- Complete Loop Trail fuel reduction program.
- Establish new fire road connection between Loop and Alambique Trails.
- Install fire safety zones and turn-arounds.

### ***Phase II: Medium-term (implementation complete within the next 10 years)***

- Implement Folger Stable area site improvements, including paddocks, arena, drainage, caretakers residence, and other components.
- Establish all-weather single track trails.

### ***Phase III: Long-term (implementation completed within the next 20 years)***

- Establish new trail connection between Alambique and Skyline Trails.
- Replace overhead electric service with underground lines.

## Changes Common to Both Huddart and Wunderlich Parks

### ***Phase I: Short-term (implementation completed within the next 5 years)***

- Establish Blue Ribbon Panel to work with County Parks to prepare an update to the 2001 County Trails Plan. The update should study trail use by all users from a regional perspective, and provide a prescriptive action plan for future implementation.
- Work with MROSD to study potential safe crossing of Skyline Boulevard.
- Install additional hose bibs for horse watering; work with equestrian community to identify preferred locations.
- Develop interpretive and educational signage.
- Prepare Sediment Assessment Study; begin phased implementation of sediment reduction measures.
- Prepare prioritized capital improvement program for storm drainage culvert replacement; begin phased replacement program.
- Provide benches on trails, with bench donation program.

### ***Phase II: Medium-term (implementation complete within the next 10 years)***

- Install potable water source at upper end of each park.

## 2.4 Public Involvement

The planning process for the Huddart and Wunderlich Parks Master Plan was initiated in 2004. Initial steps included inventory and assessment of existing conditions, interviews with County Staff, and review of previous plans and related plans and data.

This was followed by an outreach effort in which the universe of interested stakeholders was identified, and contacts made. The stakeholder groups were engaged in a variety of ways, including meetings and telephone interviews. Several workshops and meetings were held at key points in the process. The process benefited greatly through the active participation of these stakeholder groups and other interested individuals (Table 2-1). The following sessions informed and guided the planning effort:

- Public Workshop #1 – July 2004
- Equestrian Focus Group – July 2004
- Public Workshop #2 – November 2004
- Woodside Bicycle Committee Focus Group – December 2004
- Neighboring Agencies Focus Group – February 2005
- Girl Scouts Focus Group – February 2005
- Trails Stakeholders Focus Group – March 2005
- Public Workshop #3 – June 7, 2005

- Park and Recreation Commission – Site Visit July, 2005
- Park and Recreation Commission – August 4, 2005
- Second Trails Stakeholders Meeting – January 31, 2006
- Park and Recreation Commission – March 22, 2006
- Park and Recreation Commission – April 6, 2006
- County Board of Supervisors – September 12, 2006

**TABLE 2-1  
STAKEHOLDER PARTICIPANTS**

• Bear Gulch Road Association	• San Francisco Bay Area Ridge Trail Council
• C/CAG Bikeways Committee	• San Francisquito Creek Watershed Council
• California Department of Forestry and Fire Protection	• San Mateo County Horseman’s Association
• California Water Service Company	• San Mateo County Parks Commission
• Diamond Crest Girl Scouts	• San Mateo County Trails Advisory Committee
• ETRAC	• SBC
• Folger Estate Stable Committee	• Sierra Club, Loma Prieta Chapter
• Folger Stable Lessee - Pat Holmes	• Skyline Water District
• Friends of Huddart and Wunderlich Parks	• The Trail Center
• Kings Mountain Archers	• Town of Woodside
• Midpeninsula Regional Open Space District	• Volunteer Horse Patrol
• National Park Service, Golden Gate National Recreation Area	• Woodside Bicycle Committee
• Peninsula Bicycle and Pedestrian Coalition	• Woodside Fire Department
• Peninsula Girl Scouts	• Woodside Trails Club
• PG&E	• Woodside Trails Committee
• Portola Valley Trails Association	
• Responsible Organized Mountain Pedalers (ROMP)	

## 2.5 Issues and Concerns

Areas of controversy regarding the project that are known to the County of San Mateo Parks and Recreation Division are listed below. These areas of controversy were identified based on comments received from public agencies and members of the public in response to the Notice of

Preparation (NOP) of this EIR, as well as input received during a series of public meetings (conducted separate from the formal environmental review process) on the proposed project.

- Traffic and circulation impacts to adjacent neighbors from park improvements
- Public safety – user conflicts
- Law enforcement in County parks – parking and illegal uses
- Due to parks’ locations, need to include Town of Woodside and GGNRA in planning process

## 2.6 Discretionary Approvals Required for the Project

Upon publishing, the San Mateo County Park and Recreation Commission will hold a hearing on the Draft EIR. The San Mateo County Board of Supervisors will hold a hearing to take the final action on the Final EIR and determine approval of the Huddart and Wunderlich Parks Master Plan. If approved, the Master Plan will be adopted for implementation.

If the Master Plan is approved, subsequent project-level CEQA review will be required for implementation of recommended actions. In addition to CEQA review, there may be a range of permits required to carry out project components. Table 2-2 presents a preliminary list of the agencies and entities in addition to the County of San Mateo that would use this EIR (and subsequent CEQA documentation) in their consideration of specific permits and other discretionary approvals that may apply to the project. This EIR is intended to provide these agencies with information to support their decision-making processes. The table also lists the types of activities that would be subject to these requirements.

**TABLE 2-2  
DISCRETIONARY PERMITS POTENTIALLY REQUIRED**

<b>Agency</b>	<b>Permits and Authorizations Required</b>	<b>Activities Subject to Regulations</b>
U.S. Army Corps of Engineers	Clean Water Act Section 404 Permit	Placement of dredge or fill materials into waters of the U.S.
Regional Water Quality Control Board	Section 401 Water Quality Certification Waste Discharge Requirements	Placement of dredge or fill materials into waters of the state.
U.S. Fish and Wildlife Service	Compliance with Section 7 of the Endangered Species Act <ul style="list-style-type: none"> <li>• Programmatic Biological Opinion</li> <li>• Informal Consultation</li> <li>• Formal Consultation/Issuance of Biological Opinion</li> </ul>	Activities within known habitat or designated critical habitat for a federal threatened or endangered species. Activities that could result in potential “take” of a listed species.

**TABLE 2-2 (continued)**  
**DISCRETIONARY PERMITS POTENTIALLY REQUIRED**

Agency	Permits and Authorizations Required	Activities Subject to Regulations
California Department of Fish and Game	1602 Lake and Streambed Alteration Agreement	Any activities that will substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state.
	2080.1 Consistency Determination	Any activity that has the potential for "take" of a state threatened or endangered species.
California Air Resources Board	Registration of portable engines not related to motor vehicles.	Portable engines, air compressors and generators are required to have a current registration with CARB. This includes any engines associated with the concrete batch plant.

## References

County of San Mateo, Environmental Services Agency, Parks Department, Huddart and Wunderlich Parks Master Plan, May 2006.

Herzberg, Sam, pers. communication, February 2007.

Leidy, R.A., G.S. Becker, B.N. Harvey. 2005. Historical distribution and current status of steelhead/rainbow trout (*Oncorhynchus mykiss*) in streams of the San Francisco Estuary, California. Center for Ecosystem Management and Restoration, Oakland, CA. Available at: <http://www.cemar.org/estuarystreamsreport/homepage.html>.

## **CHAPTER 3**

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# **Environmental Setting, Impacts, and Mitigation Measures**

## **3.1 Land Use and Agriculture**

### **Approach to Analysis**

This chapter describes: (1) land use issues related to construction and operation of the proposed project, including project consistency with local and regional plans and policies; (2) the anticipated impacts of the project on these facilities; and (3) associated mitigation measures. This evaluation is based on field reconnaissance, review of local park land use information, adopted plans and policies, and agricultural data from the California Department of Conservation.

### **3.1.1 Setting**

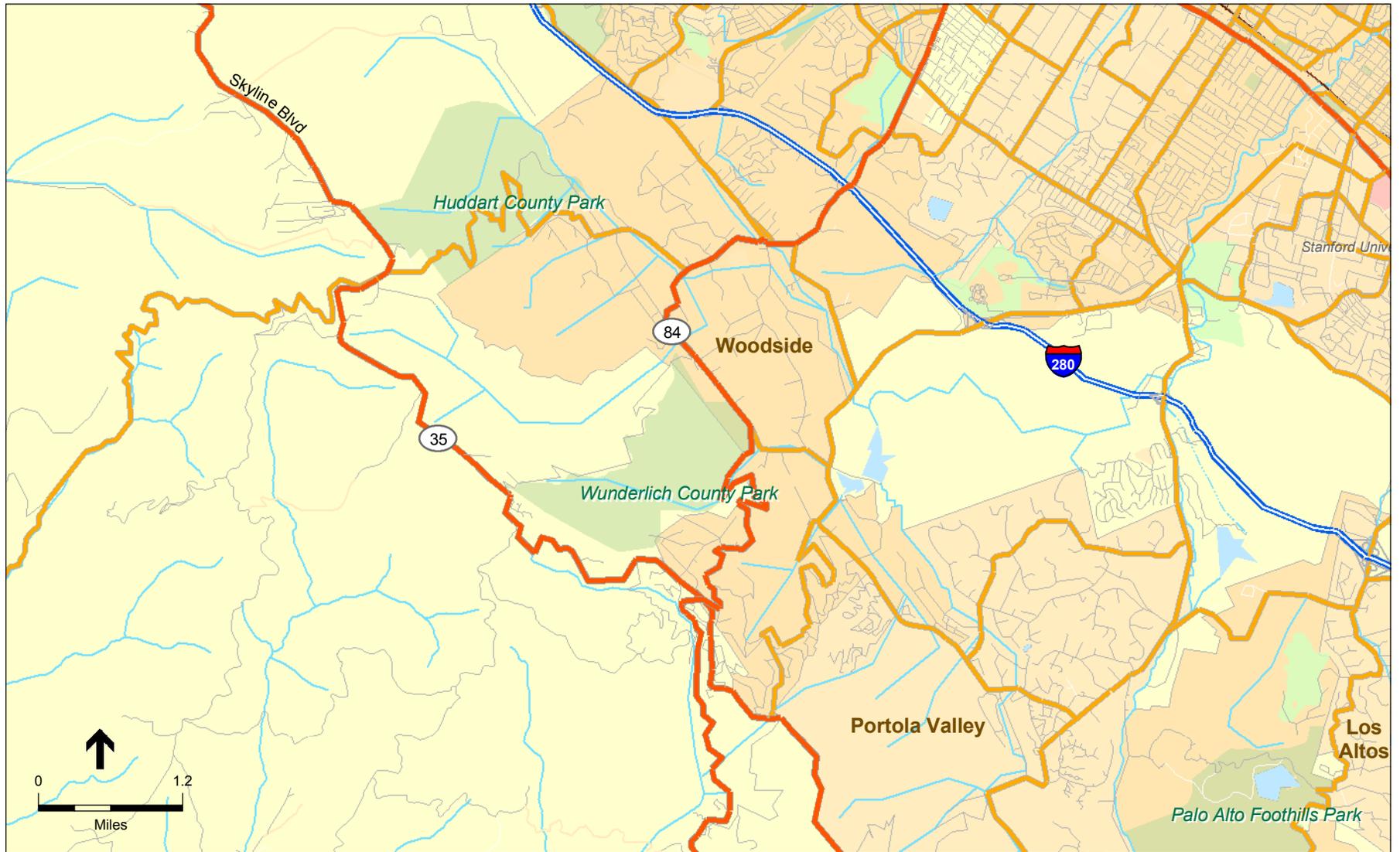
#### **Regional Land Use Setting**

Huddart and Wunderlich County Parks are set within a network of open space preserves and parks that extend virtually the length of the San Francisco Peninsula. These public and private lands, taken as a whole, provide significant visual resources, recreation opportunities, wildlife habitat, native vegetation, soils and hydrological resources located adjacent to growing urban areas and residential communities. Privately held lands in the vicinity of the two parks are generally rural, single-family residential, and undeveloped, forested resource lands.

Huddart and Wunderlich County Parks are unincorporated lands located directly adjacent to the Town of Woodside, population 5,352 (US Census, 2000) (Figure 3.1-1). Woodside maintains local control and responsibility for road maintenance, management, planning and zoning of its incorporated lands, including roads that park visitors use to access the two parks.

#### **Surrounding Land Uses**

Huddart Park is abutted by the Golden Gate National Recreation Area (GGNRA)-managed Phleger Estate to the northwest, Purisima Creek Redwoods Open Space Preserve to the west, El Corte de Madera Creek Open Space Preserve to the southwest, California Water Service Company Watershed Land to the south, and Teague Hill Open Space Preserve and Wunderlich Park to the southeast.



SOURCE: ESRI, 2005

Huddart and Wunderlich Parks Master Plan EIR . 206310

**Figure 3.1-1**  
Regional Location Map

Wunderlich Park is abutted by California Water Service Company Watershed Land to the north, Thornewood Open Space Preserve to the south, and El Corte de Madera Open Space Preserve to the west. Forested lands and rural residences are scattered in between each of the parks and preserves surrounding Huddart and Wunderlich County Parks.

### ***National Park Service – Golden Gate National Recreation Area***

#### **Phleger Estate**

The Phleger Estate is a recreation area located immediately adjacent to and north of Huddart Park, south of the San Francisco watershed lands, and east of Skyline Boulevard. This recreation area contains several miles of trails that are accessible only from Huddart Park.

### ***Mid-Peninsula Regional Open Space District (MROSD) Preserves***

#### **El Corte de Madera Open Space Preserve**

El Corte de Madera Open Space Preserve (El Corte de Madera), a formerly logged area in the Woodside area, features 36 miles of multi-use trails within a 2,821-acre area. This preserve is open to the public for hiking, biking, and equestrian use on creekside trails throughout its mixed evergreen and redwood forests. Currently, there are trail work and other improvements being implemented under the MROSD's Watershed Protection Program. Seasonal trail closures are also common at El Corte de Madera, based on changing weather conditions. There are two access points with designated parking areas. The western parking area is located on Star Hill Road and the Skeggs Point entrance is located west of Skyline Boulevard, with additional access gates and informal parking along these two roads. There are no restrooms, developed picnic areas, or camping facilities available. El Corte de Madera is not wheelchair accessible and dogs are not permitted within the preserve. Wunderlich Park abuts this preserve's southeastern edge.

#### **La Honda Creek Open Space Preserve**

La Honda Creek Open Space Preserve (La Honda Creek) is a 2,078-acre preserve located off Bear Gulch Road in La Honda, just southeast of El Corte de Madera. The preserve is accessed via a private road that spurs from Bear Gulch Rd. The sole amenities available at La Honda Creek are three miles of trails designated for hikers and equestrians and a parking area (although equestrian parking is not permitted due to narrow and winding access roads.) There are no restrooms, developed picnic areas, or camping facilities available. La Honda Creek is also not wheelchair accessible. Dogs are not permitted within the preserve.

#### **Purisima Creek Redwoods Open Space Preserve**

The Purisima Creek Redwoods Open Space Preserve (Purisima), a 3120-acre preserve located on the western slopes of the Santa Cruz Mountains overlooking Half Moon Bay. Purisima directly abuts Huddart Park and the nearby Phleger Estate. This preserve has three access points – two on the east side via Kings Mountain Road and Skyline Boulevard, and one on the west side via Purisima Creek Road. The Kings Mountain Road entrance is due west of Huddart Park's main entrance. Preserve trailhead parking is available at each access point. Purisima features 21 miles of developed trails and historical logging roads for hiking, biking and equestrian use, some of

which traverse the Purisima Creek Canyon. The Redwood Trail features wheelchair-accessible picnic facilities and restrooms along its route. There are no camping or shelter facilities available at this preserve. Dogs are not permitted within the preserve.

### **Teague Hill Open Space Preserve**

The Teague Hill Open Space Preserve (Teague Hill) is located in the Santa Cruz Mountains, along the southeastern edge of Huddart Park. Private property and California Water Service Company property that surround the remainder of Teague Hill make it difficult to visit the majority of the preserve. The preserve primarily serves as viewshed and wildlife habitat for the eastern side of the Santa Cruz Mountains. Currently, the Bay Area Ridge Trail is the only designated trail that touches the preserve. This trail will take hikers or equestrians through a small portion of the northwest corner of Teague Hill on the way to Wunderlich Park. There are no plans in the near future to create additional designated trails or to develop daytime or camping amenities. Limited parking is available along Kings Mountain Road in pullouts adjacent to the roadway, and at Huddart and Wunderlich County Parks. Dogs are not permitted within the preserve.

### **Thornewood Open Space Preserve**

Thornewood Open Space Preserve (Thornewood) is a 163-acre preserve located south of Wunderlich Park on Highway 84. Hiking and equestrian use is permitted year-round along the preserve's ¾ mile trail which ends at Schilling Lake. Schilling Lake is popular with wildlife enthusiasts during the waterfowl migration period. Currently, the historic Thornewood House and 10-acre private lease hold are being restored and are closed to the public. Limited parking is available via the Highway 84 entrance. Leashed dogs are permitted.

### ***California Water Service Company Watershed Land***

California Water Service Company owns a large area of open space, located south of Teague Hill and north of the strip of private lands lying on the north side of Wunderlich Park. This parcel is not open to the public, except for a portion of the Bay Area Ridge Trail which runs within a County-managed easement adjacent to Skyline Boulevard. This trail easement connects Huddart to Wunderlich Parks on the east side of Highway 35, and is open to hikers and equestrians.

## **Huddart County Park Land Use and Zoning**

The land use designation for all portions of Huddart Park is Public Recreation (PR). This 974-acre park features publicly accessible recreation facilities for both day use and overnight. Park visitors enjoy hiking, horseback riding, picnicking, nature interpretation, special events (weddings, company picnics, etc.), volleyball, horseshoe, archery, and overnight camping. Approximately 80 acres of the lower southeast portion of Huddart Park is devoted to developed facilities. Primary uses on this recreational landscape include large group and family picnicking, and organized youth-group day camping. The upper north and western portions of the park are semi-wilderness natural areas devoted primarily to hiking, trail running and horseback riding. Within this upper north area of the park, there are three overnight group campsites. On the

western side of the park, a 25-acre archery range is maintained by the Kings Mountain Archery Club in partnership with San Mateo County Parks. Huddart Park is zoned as Resource Management, which is consistent with the Public Recreation land use designation.

## Wunderlich Park Land Use and Zoning

The land use designation for all portions of Wunderlich Park is also PR. This 942-acre park has two distinct areas. The lower portion of the park contains the park entrance, parking lot, and an equestrian center house in the Folger Stable complex, occupying approximately 16 acres. The remainder of the park is a semi-wilderness natural area devoted to hiking, trail running, and horseback riding. Wunderlich Park is zoned as RM, which is consistent with the Public Recreation land use designation.

## Agricultural Setting

### *Important Farmland in San Mateo County*

Important Farmland Maps produced by the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) quantify and characterize San Mateo County's regional agricultural land base. Important Farmland Maps show categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-up Land, Other Land, and Water. Prime Farmland and Farmland of Statewide Importance map categories are based on qualifying soil types, as determined by the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), as well as current land use. Map categories are defined by the FMMP as follows:

**Prime Farmland:** Land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods.

**Farmland of Statewide Importance:** Land that is similar to *Prime Farmland* but with minor shortcomings, such as greater slopes or less ability to hold and store moisture.

**Unique Farmland:** Land of lesser quality soils used for the production of specific high economic value crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. It is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Examples of crops include oranges, olives, avocados, rice, grapes, and cut flowers.

**Farmland of Local Importance:** Land of importance to the local agricultural economy, as determined by each county's board of supervisors and local advisory committees. Examples include dairies, dryland farming, aquaculture, and uncultivated areas with soils qualifying for *Prime Farmland* and *Farmland of Statewide Importance*.

**Grazing Land:** Land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock.

**Other Lands:** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

All land in Huddart and Wunderlich Parks is classified as Other Lands.

### ***Williamson Act Lands***

Williamson Act contracts are a tool used by local governments in California to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Act creates an arrangement whereby private landowners contract with counties and cities to voluntarily restrict land to agricultural and open-space uses. The vehicle for these agreements is a rolling term 10-year contract (i.e., unless either party files a “notice of nonrenewal,” the contract is automatically renewed annually for an additional year). In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value (CA Department of Conservation, 2006).

**Prime Williamson Act farmland** is classified as land which is enrolled under California Land Conservation Act contract and meets any of several productivity criteria (as set forth under California Government Code Section 51201).

**Non-Prime Williamson Act Farmland** is classified as land which is enrolled under California Land Conservation Act contract and does not meet any of the criteria for classification as Prime Agricultural Land. Non-Prime Land is defined as Open Space Land of statewide Significance under the California Open Space Subvention Act (see California Government Code Section 16143), and may be identified as such in other documents. Most Non-Prime Land is in agricultural uses such as grazing or non-irrigated crops. However, Non-Prime Land may also include other open space uses which are compatible with agriculture and consistent with local general plans.

There are no lands within Huddart or Wunderlich Parks that are enrolled under the Williamson Act, and therefore the Act does not apply to the proposed project.

## **3.1.2 Regulatory Setting**

### ***San Mateo County General Plan***

Both parks are designated as PR under the Rural Land Use Element of the 1986 San Mateo County General Plan (General Plan). The General Plan defines public park and recreation facilities as “lands and facilities serving a range of recreation and/or preservation functions and owned by public agencies or other nonprofit organizations. Such facilities include, but are not limited to, public beaches, parks, recreation areas (including golf courses), natural preserves, wild areas and trails.” The primary focus of this sub-section is the Rural Land Use Element, which includes policies for Public Recreation.

## Applicable Rural Land Use Policies

### 9.23. Land Use Compatibility in Rural Lands

- a) Encourage compatibility of land uses in order to promote the health, safety, and economy and to maintain the scenic and harmonious nature of the rural lands.
- b) Promote land use compatibility by encouraging the following methods:
  - (1) locate new residential or commercial development immediately adjacent to existing developed areas;
  - (2) where services and site conditions permit, cluster new residential or commercial development so that large parcels can be retained for the protection and use of vegetative, visual, agricultural, timber and other resources;
  - (3) buffer existing agricultural activities from adjacent recreational use; and
  - (4) buffer land uses such as mineral extraction, timber harvesting, solid waste disposal sites and other resource extraction uses from surrounding land uses by auditory and visual screening, isolation in large parcels, and other appropriate methods.

### Public Recreation Land Use Designation

Allowed uses under the San Mateo County Public Recreation designation include: recreation uses including but not limited to publicly-owned park and recreation facilities such as playgrounds, parks, golf courses, and natural preserves. General public recreation land use policies for rural areas include:

### 9.35. Encourage Existing and Potential Public Recreation Land Uses

- a) Encourage the continuation and expansion of existing public recreation land uses on non-agricultural lands, including but not limited to, public beaches, parks, recreation areas, wild areas, and trails.
- b) Encourage the continuation and expansion of agricultural activities within the boundaries of public recreation lands that are not in recreational use.
- c) Encourage cooperation between public agencies and adjacent agricultural operations so as to reduce inconvenience to agricultural operators consistent with the protection of the public health.

Development standards (**Policy 9.36**) set by San Mateo County to minimize land use conflicts on Public Recreation lands include:

- a) Protect public recreation uses from incompatible land uses such as commercial timber harvesting, mineral extraction or other resource recovery uses, whether these uses occur on-site or on adjacent parcels.
- b) Consider agriculture to be a compatible activity in public recreation lands, which must be protected and buffered from significant public intrusion.
- c) Consider selective timber harvesting to be an appropriate use only when forest management (i.e., manipulation of forest growth to assure a safe and healthy forest environment) is necessary. Under no circumstances, permit clear-cutting in public recreation lands.

- d) Provide structural, visual, auditory and other buffering mechanisms to protect portions of the public recreation lands that are used by the public from non-recreational land uses.
- e) Encourage public recreation providers to submit master park development plans for the design and management of recreational and non-recreational land uses.
- f) Require full phased reclamation/restoration of any portion of lands designated for public recreation that are used for resource extraction uses other than agriculture.
- g) Encourage the State to protect agricultural activities.

### ***San Mateo County Zoning Regulations (1999)***

The County of San Mateo's Zoning Regulations are intended to provide location-specific regulation, such as use restrictions and building height and bulk limitations. Huddart and Wunderlich Parks are within San Mateo County's Resource Management (RM) District. Public and commercial recreation is a permitted use within the RM District. The RM District was created to meet the open space and conservation objectives and policies of the San Mateo County General Plan. Other permitted uses in Resource Management Districts include agricultural uses and accessory structures, on-site sales of agricultural products; nurseries and greenhouses; livestock raising and grazing; dairies; timber harvesting and commercial woodlots; single- and multi-family residences; and animal fanciers. Resource Management Districts comprise approximately 1/3 of the County land.

## **Required Project Approvals**

San Mateo County is the Lead Agency for the proposed project under CEQA. As lead agency, the County will be responsible for reviewing and certifying the adequacy of this EIR, and will be responsible for taking certain required permit and approval actions on the project (CEQA Guidelines, Section 15367).

## **3.1.3 Impacts and Mitigation Measures**

### **Significance Criteria**

According to Appendix G of the CEQA Guidelines, a project may be deemed to have a significant adverse impact on the environment with regard to land use or agriculture resources if it would:

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

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

The following land use analysis will address these general criteria. A project would also be considered to have a significant impact on the environment if it would cause physical changes in the environment that would be substantially incompatible with existing land uses. As indicated in Chapter 2, subsequent environmental documentation is required for implementation of the Master Plan program-level components.

**Impact 3.1-1: The project would not have the potential to physically divide an established community. (No Impact)**

The phased park improvements proposed under the Master Plan include improvements to the developed areas of the park to accommodate the demand for group and family picnicking, and organized youth day camping, trail enhancements, natural resource enhancements, and erosion and sediment control. None of these proposed improvements would extend beyond the existing park boundaries. Therefore, the proposed Master Plan does not include recommendations that could physically divide an established community.

**Mitigation:** None required

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**Impact 3.1-2: The project would not conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. (No Impact)**

The proposed Master Plan is consistent with the San Mateo County General Plan. In particular, the proposed Master Plan is consistent with the goals of the Rural Land Use element which state that rural lands should be protected and enhanced in order to:

- (1) protect and conserve vegetation, water, fish and wildlife resources, productive soil resources for agriculture and forestry, and other resources vital to the sustenance of the local economy;
- (2) carefully manage and enhance the use, production, conservation or extraction of soils, timber, minerals and other natural resources;
- (3) protect and enhance the unique scenic quality and pastoral character of the rural lands;
- (4) provide a diversity of outdoor recreational opportunities for existing and future County residents;

- (5) protect the public health and safety by minimizing the location of new development in potentially hazardous areas and directing infrastructure improvements to areas that will benefit the greatest number of rural residents and visitors;
- (6) minimize the amount of environmental damage caused by construction of major and minor roads or other infrastructure improvements; and
- (7) promote local employment opportunities and enhance creative enterprise by encouraging visitor-serving facilities, ancillary and accessory uses vital to resource production operations, and adaptive reuse of existing non-residential structures consistent with protection of surrounding resources.

The proposed Master Plan is also consistent with all policies pertaining to Public Recreation noted in the Regulatory Section above.

**Mitigation:** None required

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**Impact 3.1-3: The project would not conflict with existing adjacent land uses. (No Impact)**

Parks and open space preserves are common throughout the project vicinity. As such, San Mateo County Parks contribute to a larger regional recreation and open space asset on the Peninsula. The proposed Master Plan provides a guiding framework for land use and stewardship, natural resource enhancement, and the development of appropriate recreational facilities such as trails, staging areas, and group gathering areas. This framework allows San Mateo County Parks Department to provide a variety of recreational opportunities in an environmentally sound and sensitive manner. In the short-term, through a series of phased improvements, there may be short-term construction impacts (noise, traffic, air quality) that affect land uses on adjacent parcels, namely rural residences. These are addressed in Sections 3.8, 3.9 and 3.10 – Traffic, Air Quality, and Noise. However, on a long term basis, the proposed improvements would not conflict with existing adjacent land uses.

**Mitigation:** None required

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**Impact 3.1-4: The project would not conflict with an applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP). (No Impact)**

There are no applicable habitat conservation plans or natural community conservation plans in the project vicinity.

**Mitigation:** None required

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**Impact 3.1-5: The project would not impact agricultural resources. (No Impact)**

Huddart and Wunderlich Parks do not contain “Farmland” as defined by the state Farmland Mapping and Monitoring Program, are not zoned for agricultural use, and are not under Williamson Act contract. There would be no project-related impacts on agricultural resources and therefore no mitigation measures are necessary.

**Mitigation:** None required

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## References – Land Use and Agriculture

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## 3.2 Recreation

### Approach to Analysis

This chapter describes: (1) the existing recreational facilities in the project area, including entrance facilities, campgrounds, picnic areas, roads and trails, and park visitation; (2) the anticipated impacts of the project on these facilities; and (3) associated mitigation measures.

#### 3.2.1 Setting

##### Regional Park Setting

Huddart and Wunderlich County Parks are set within a network of open space preserves and parks that extend virtually the length of the San Francisco Peninsula. These public and private lands, taken as a whole, provide significant visual resources, recreation opportunities, wildlife habitat, native vegetation, soils and hydrological resources located adjacent to growing urban areas and residential communities.

Huddart Park is abutted by the Golden Gate National Recreation Area (GGNRA)-managed Phleger Estate to the northwest, Purisima Creek Redwoods Open Space Preserve to the west, El Corte de Madera Creek Open Space Preserve to the southwest, California Water Service Company Watershed Land to the south, and Teague Hill Open Space Preserve and Wunderlich Park to the southeast.

Wunderlich Park is abutted by California Water Service Company Watershed Land to the north, El Corte de Madera Open Space Preserve to the west, and Thornewood Open Space Preserve to the south. Forested lands and rural residences are scattered in between each of the parks and preserves surrounding Huddart and Wunderlich County Parks.

Detailed descriptions of the recreational opportunities and associated amenities provided by these parks, open space preserves, and watershed lands are provided in Section 3.1 Land Use and Agriculture.

##### Huddart Park Setting

This 974-acre park features publicly accessible recreation facilities for both day use and overnight (see Figure 1-1, Chapter 1). Park visitors enjoy hiking, horseback riding, picnicking, nature interpretation, special events (weddings, company picnics, etc.), volleyball, horseshoe, archery, and overnight camping. Approximately 80 acres of the lower southeast portion of Huddart Park is devoted to developed facilities. Primary uses on this recreational landscape include large group and family picnicking, and organized youth-group day camping. The upper north and western portions of the park are semi-wilderness natural areas devoted primarily to hiking, trail running and horseback riding. Within this upper north area of the park, there are three overnight group campsites. On the western side of the park, a 25-acre archery range is maintained by the Kings Mountain Archery Club in partnership with San Mateo County Parks.

### **Park Entrance**

The park's main entrance is on Kings Mountain Road, approximately 3.5 miles west of Highway 84. There is a fee station, two parking areas, and a central kiosk. The ranger's residence is located adjacent to the main parking area.

### **Picnic Areas**

There are picnic areas located in the upper and lower areas of the park. Each area can accommodate between 120 and 250 people. Some of these are managed as drop-in family picnic areas, while others are available on weekends by reservation and Monday through Thursday with a standard park fee. Drop-in picnic areas include Werder, Miwok, Lower Oak and Madrone. Reservable picnic areas include East and West Meadow, and Upper Oak, Redwood, Zweirlein, and Sequoia Day Camp (discussed separately below). The group picnic areas generally include picnic tables, barbecue pits, public restrooms (with running water and electricity), and nearby visitor parking.

#### **Lower Picnic Areas**

The Upper Oak area is used extensively by the Girl Scouts for youth day camping and occasional overnights. Primary features include a large oak tree, fire ring, restroom, picnic tables, shade trees, volleyball poles and horseshoe pits. It is accessible to persons with disabilities. The Lower Oak area features family picnic facilities and a restroom. It also provides parking for Meadow walk-in users.

The Redwood group picnic area can accommodate up to 150 people seated at tables. It features barbecue pits, a restroom facility located at the west of the parking lot, volleyball poles, horseshoe pits, and nearby parking. Redwood is currently closed during the week, except by reservation.

The Meadow area is a walk-in facility with two picnic areas (East and West), and a grass meadow in the center. The East and West picnic areas have a capacity of 250 and 120 people, respectively. There are picnic tables, volleyball poles, and horseshoe pits. The grassy area, created in 1968 when an arroyo was filled with rip rap to create a level area, is used informally and is open to the public on a drop-in basis. Due to the steep slope of the road, drop-offs for persons with disabilities are permitted.

#### **Upper Picnic Areas**

Zwerlein group picnic area is surrounded by coast redwood, madrone and brush. It can accommodate up to 250 people seated at tables. There is a horseshoe pit, two sand volleyball courts with nets, and restroom all located on the nearby grassy area. The area is not accessible to persons with disabilities. The Madrone picnic area is only open with reservations, due to staff shortages.

Werder and Miwok are both drop-in family picnic areas with shelters. They provide extensive picnic sites across a broad range of natural environments and restrooms. The Miwok shelter is

occasionally used for weddings and can seat approximately 100 people. It does not have an accessible path of travel for persons with disabilities.

### ***Horse Trailer Parking***

A riding ring and horse trailer parking area were removed when the Zweirlein and Werder areas were enlarged in the 1980s. Consequently, there are no suitable parking facilities for people wishing to bring horses into the park. At the present time, the Zweirlein trailhead is used for parking, but only two trucks with trailers can be accommodated in this area. In order to obtain this parking, equestrians must arrive early on summer weekends.

### ***Day Camp and Amphitheater***

The Sequoia Day Camp, located in the easterly portion of Huddart Park, was developed in 1990 to serve the day camp needs of the Girl Scouts and other youth group organizations. The area is approximately four acres in size with a woodchip surface. Facilities include an amphitheater, a group crafts area, and “pods” that accommodate up to 300 day-campers. The site was planted with native oak and redwood trees and other native shrub species. The site tree plantings have grown over the past 10 years, but do not currently provide adequate shade cover for all pod areas in the summer months. Some shade is currently provided by wood shade structures built on several sites at the upper end of the day camp area. As the shade trees mature, these structures will be removed. Sequoia Day Camp features a restroom powered by photovoltaic and irrigation controllers. Wastewater is treated on-site via septic tank and leach field.

The Sequoia Amphitheater is located below the restroom, and can seat approximately 175 to 200 people. An amphitheater picnic area is also available adjacent to the grassy meadow where the flag pole stands. Electricity is not available at the amphitheater.

### ***Shelters***

As described above in the Picnic Areas section, Huddart has three shelter buildings that provide partial cover for group picnics: Werder, Miwok and Redwood. Each shelter can accommodate 125 people. Fees are charged for use of the shelter buildings and are available by reservation only. All three shelters are in need of repair and reconfiguration. The Miwok shelter was damaged during the 1989 Loma Prieta earthquake. The Redwood Shelter does not currently have an adjoining restroom facility.

### ***Campgrounds***

Huddart Park has three reservable overnight group campgrounds, Toyon areas #1, #2, and #3. Campgrounds are available from April through October (closed November through March) for organized youth group activities and group camping. There is a maximum occupancy of 50 people per site. The campgrounds have a central restroom facility with running water. Currently there are two working restrooms, but the shower facility is closed to the public. Each campground includes a food locker, fire ring (for use by permit only), barbeque(s), fountain(s), faucet(s), and

picnic tables. While there are no designated parking areas in the Toyon campground areas, each campground is designed to accommodate between 10 and 20 vehicles.

## **Wunderlich Park Setting**

Wunderlich Park is located on Woodside Road, near Portola Road, approximately two miles southwest of the town of Woodside (see Figure 1-2, Chapter 1). The park is a similar size to Huddart Park, encompassing 942 acres, but contains fewer developed facilities. This 942-acre park has two distinct areas. The lower portion of the park contains the park entrance, parking lot, and an equestrian center house in the Folger Stable complex, occupying approximately 16 acres. The remainder of the park is a semi-wilderness natural area devoted to hiking, trail running, and horseback riding. Approximately 46,500 people visited Wunderlich Park in 2004.

### ***Public Entry and Exit Road***

Vehicular access to Wunderlich Park and Folger Stable has, for some time, been ill defined, circuitous, and dangerous for both horses and people. At the present time, vehicular access to Wunderlich Park occurs at one location only, at the lower stables complex area on Woodside Road (Hwy 84). Visitors enter and exit the park by crossing the same one-way bridge.

### ***Folger Stable***

The Folger Stable has operated as a private equestrian training and boarding facility under a lease agreement with the County since 1974, when the Wunderlich Park property was donated to the County of San Mateo. Considerable interest has arisen in the local community in preserving both the equestrian presence and the historic architecture of the stable building. Built mostly of redwood, the building can provide horse boarding for six horses. The facility presently has feed and tack storage, an awards room, and horse-grooming space. Folger Stable is described in further detail in Section 3.7 Cultural Resources.

### ***North Wing Folger Stable***

The existing north wing of the Folger Estate contains enough space to provide for five (5) horse stalls.

### ***Service Courtyard***

The existing stable service courtyard is a decomposed granite surfaced area that facilitates a variety of outdoor functions such as farrier pad, wash area, and horse trailer loading and unloading. This large flat area is an important element of the equestrian center.

### ***Manure Holding Area***

The current manure holding area has two temporary metal dumpsters that can hold up to 30 cubic yards. The dumpsters are located adjacent to the Upper Barn area. They are accessible to both flat bed trucks and service carts.

### ***Small Barn***

A small accessory barn with accommodation for six additional horses exists just north of the service courtyard. It is a small utilitarian-looking building built with a metal frame on concrete foundation, with wood siding. The stabling capacity that it provides is useful to the overall operation.

### ***Carriage House***

The existing 800 square foot Carriage House is a unique part of the Folger Stable complex. It is a small building built in the style of the Stable, and is presently used mostly for County meeting purposes.

### ***Upper Barn (formerly the Blacksmith Shop)***

An existing blacksmith shop of the same period as the Folger Stable exists to the north and is an important part of the Historic District designation of the area. This building, which now contains ten horse stalls, is considered an historic structure. Of the existing ten stalls, only six are considered well suited for stable occupancy. The building in the rear of the Upper Barn is not historic and should not have any horses boarded in it.

### ***Caretaker/Manager's House***

Just south of the Blacksmith's Shop is the location of the mobile home owned and occupied by the current lessee. This location is particularly strategic due to its ability to provide security and monitor activities at the equestrian center during the day and, to some extent, during the night.

### ***Small Training Ring***

There is an existing 70 ft. x 50 ft. training ring at the north side of the site.

### ***Old Hillside Paddock Area***

The existing hillside paddock area at the north side of the site is the source of major water quality erosion problems that have already adversely affected the adjacent creek and private property owner. The erosion that has occurred at this location causes an unsafe situation for horses. The restoration proposed as part of the Master Plan would eliminate the danger.

### ***Large Show/Training Area***

The large show/training arena is a valuable asset to the equestrian center in need of repairs and maintenance. It has been at its existing location for many years, and its approximate size (105 ft. x 220 ft.) is desirable.

### ***Arena Paddocks***

The existing paddock occupies an important visual location at the entry of the equestrian center and its run down appearance does not create a positive initial visitor experience. While the desire

to having a small paddock near the large show/training arena is apparent, it is suggested that the existing wood-fenced paddock be removed and replaced with a small well-manicured metal railed holding paddock to hold horses waiting to go into the arena or coming out of the arena. This proposed paddock should be located away from either service or public roadways by at least 50 feet to maximize safety to both horses and people.

### ***Public Parking Lot***

The rock-surfaced public parking lot is inefficient, and suffers from traffic congestion during periods of high use due to the fact that there is no parking lot striping. Automobiles and horse trailers are often parked in a haphazard manner. Park users report frequent instances of arriving at their vehicle after using the park, only to find their vehicle is blocked by another and they can not exit the park. Increased programming of the stables for public use may increase parking demand in the future, as will population growth. The park's trail system is capable of accommodating many more users than can be accommodated in the current dirt lot. The lot currently accommodates approximately 30 vehicles if parked in a proper manner, i.e., not blocking other vehicles.

### ***Septic System***

The primary, existing septic system is at capacity with the Stable and Carriage House. Any new connections would have to be built in keeping with the nature of the Historic District. Currently, there is no possibility of connecting the Folger septic system to a public sewer. There is a secondary septic tank and leach field for the Caretaker's trailer.

### ***Caretaker Trailer Parking***

The existing lessee has one truck and trailer parked on-site at the current caretaker trailer parking area.

### ***Toilet***

There is a single existing chemical toilet next to the parking lot. This is a modular facility that is handicapped-accessible.

### ***Fee Collection***

Entrance to Wunderlich Park is currently free of charge.

## **Trails Setting**

The trails in Huddart Park and Wunderlich Park are linked via the Bay Area Ridge Trail, and together form a regional trail network serving the Midpeninsula area. Trails in Huddart Park link to public trails in Purisima Creek Open Space Preserve and the Phleger Estate, and to a private trail system in the Town of Woodside. Trails in Wunderlich Park link to public trails in El Corte de Madera Creek Open Space Preserve. Universal trail accessibility at Huddart and Wunderlich Parks is limited. According to the County Trails Plan, some trails in Huddart and Wunderlich

Park are classified as falling under the “Difficult Level of Access” accessibility zone, because they are built on natural slopes greater than 20%.<sup>1</sup> However, most trails are 10 to 12% slope.

The Bay Area Ridge Trail (BART), a regional trail system envisioned to encircle San Francisco and San Pablo Bays on a 400-mile route along the Bay Area’s ridge lands, enters Huddart Park from Purisima Creek Redwoods Open Space Preserve, travels through Huddart Park on Skyline Trail for approximately ¼ mile, continues south via an easement on private property and the California Water Service lands, crosses East Bear Gulch Road, continues 0.14 miles within Wunderlich Park, and terminates (at present) at Skyline Boulevard.

The trails system in each park is well maintained by County Staff, in spite of the operating budget reductions that have occurred over the past three years. Erosion remains an issue to be addressed on an annual basis. Where trails cross drainages, culverts typically carry water below the trail. Most of these culverts are in poor condition and are poorly placed, such that downcutting of the streambed occurs at the outfalls. For a discussion of trail conditions, please refer to Section 3.5 Hydrology and Water Quality.

### ***Existing Huddart Park Trails***

Huddart Park offers numerous trails, some for horseback riding and hiking, and some for hiking only. Trails run along gulches and creeks, others offer outward views of the countryside, and all traverse unique hillside habitats.

Service road trails include Richards Road Trail, Summit Springs Fire Trail, Archery Fire Road, and Campground Trail. Together, these service roads form a loop which accesses most of the park area and which may be used for park maintenance, emergency vehicles, and fire fighting.

The Chickadee Nature Trail is a 3/4-mile long fully accessible trail that accommodates users of all capabilities. Horses are not allowed on this trail. The trail traverses three predominant plant communities, coastal redwood forest, mixed evergreen forest and chaparral. This area was severely disturbed by logging and grazing, and many signs of disturbance remain, in contrast to the environment presented by the more moist redwood forests located further up the mountain. The trail offers an experience of the ongoing natural re-establishment of the mature forest that existed before the impact of logging and grazing on the peninsula. The Redwood trail skirts the group picnic area at Upper Oak picnic and parking lot and connects via a bridge to the Redwood group picnic area parking lot.

Huddart Park currently provides parking for trails access in the lower portion of the park. The Midpeninsula Regional Open Space District also provides limited parking at the Purisima Creek trailhead that is located on Skyline Boulevard (Highway 35) directly across from the upper end of Huddart Park.

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<sup>1</sup> According the guidelines for this zone, the maximum running slope is 12.5%, which a maximum ramp gradient of 15%. A ramp gradient is required to have one level landing area for each six feet of elevation gain. Trails in “outdoor developed areas” are not strictly subject to the Americans with Disabilities Act (ADA) or State Title 24 requirements for accessibility.

### **Crystal Springs Trail Entrance**

The Crystal Springs Trail currently enters the park via an easement on private property which is 20 feet in width. The County has transferred the easement to the Town of Woodside, who has assumed responsibility for repair of the existing bridge and associated trail maintenance.

### **Skyline Boulevard/Highway 35 Trail Entrance**

As described above, visitors can park on the southwest side of Huddart Park at the MROSD-provided parking lot at Purisima Creek. From this trailhead, visitors can access the BART and Summit Springs Trail.

### ***Existing Wunderlich Park Trails***

Wunderlich Park offers numerous trails for horseback riding and hiking. Trails run along gulches and creeks, others offer outward views of the countryside, and all traverse unique hillside habitats.

Service road trails include Skyline Trail, Alambique Trail, Oak Trail, Meadow Trail, and part of Bear Gulch Loop Trail. These service roads extend from the parking area to the west end of the park. Single track hiking and equestrian trails include Redwood Trail, Madrone Trail, and parts of Alambique and Beach Gulch Loop Trails.

The current size of the Wunderlich Park parking lot area limits the number of park visitors, or leads to roadside parking. Parking areas are typically filled to capacity during high-use periods.

## **3.2.2 Regulatory Setting**

### **Existing Plans and Policies**

#### **San Mateo County General Plan**

The San Mateo County General Plan provides county-wide guidance on regional parks and open space lands. The following General Plan policies (San Mateo County General Plan, 1986) are designed to encourage all providers of park and recreation facilities to:

#### **6.3. Build Upon Existing System**

- a) Design all park and recreation systems on the strength and potentials of existing facilities and develop programs for meeting current and future needs.
- b) Consider the feasibility of redesigning and/or expanding existing park and recreation facilities to meet future needs while developing new acquisition and development programs.

#### **6.4. Environmental Compatibility**

- a) Protect and enhance the environmental quality of San Mateo County when developing park and recreation facilities.
- b) Mitigate, to the extent feasible, the impacts of those recreation uses which may adversely affect the environment and adjoining private ownership.

### **6.5. Access to Park and Recreation Facilities**

- a) Attempt to provide appropriate access and conveniences for all people in park and recreation facilities.
- b) Encourage access to the park and recreation system by transportation means other than private automobiles, where feasible.
- c) Attempt to provide adequate access for emergency services.

The County General Plan also includes provisions addressing the regulation of development:

#### **6.13 Development Plans**

- a) Encourage all providers to prepare development plans for proposed facilities which contain provisions that easily adapt to changing conditions.
- b) Encourage all development plans to include restroom facilities and ensure that these correspond in size and detail to the type of park and recreation facility proposed.

#### **6.14 Site Planning for Public and Private Facilities**

- a) Encourage all providers to design sites to accommodate recreation uses that minimize adverse effects on the natural environment and adjoining private ownership.
- b) Encourage all providers to design, where feasible, park and recreational sites that accommodate a variety of recreational activities.

#### **6.15 Building Materials and Service Technology for Public and Private Facilities**

- a) Encourage the use of materials and technologies that achieve low development, maintenance and operation costs while maintaining environmental compatibility.
- b) Encourage innovative technologies for conserving energy, water and other utilities for park and recreation facilities.

#### **6.16 Prioritizing Facility Development**

- a) Encourage all providers to give priority to the development of those facilities that meet the greatest recreational need.
- b) Encourage the phased development of recreation facilities in order to assess whether full development is warranted.

The County General Plan also includes provisions addressing operations and maintenance:

#### **6.29 Protection, Operation and Maintenance**

Make provisions to protect, operate and maintain park and recreation systems and related easements.

#### **6.31 Charge User Fees**

Charge reasonable user fees to offset maintenance and operation costs as needed.<sup>2</sup>

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<sup>2</sup> Standard fees are set for all parks within the County Parks Department.

### **6.38 Trail System Coordination**

- a) Support, encourage and participate in the development of a system of trails that link existing and proposed park and recreation facilities within this County and adjacent counties.
- b) Particularly encourage the development of: trails that link park and recreation facilities of San Francisco Bay to those on the Pacific Coast; multi-use trails where appropriate and trails in County lands under management by other public agencies. Ensure that these trails do not adversely affect adjacent land uses.

### **San Mateo County Zoning Regulations (1999)**

Huddart and Wunderlich Parks are within San Mateo County's Resource Management (RM) District. Public [and commercial] recreation is a permitted use within the RM District. [Section 6322. Applicability. All developments, as defined in Section 6313, proposed for location within the RM District, shall be required to obtain a Development Review Permit, pursuant to the provisions of Chapter 23 of this Ordinance.]

### **San Mateo County Trails Plan**

The San Mateo County 2001 Trails Plan directs the County's trails implementation efforts and is composed of five primary elements:

- *Proposed Trail Routes* – when implemented will create a coordinated system of trails throughout San Mateo County.
- *Inventory of Existing Trails* – an updated identification of the current trails in the County.
- *County Trails Policies* – a set of statements relating to the implementation of new, proposed trail routes illustrated on the County Trails Plan Map.
- *Design Guidelines* – specific directions that can be used as appropriate in designing individual trails.
- *Use and Management Guidelines* – specific directions that can be used as appropriate to determine the use and management of individual trails.

In the vicinity of Huddart and Wunderlich Parks, the 2001 Trails Plan identifies the Bay Area Ridge Trail as a multi-use regional trail that would extend for approximately 400 miles along the ridges of the San Francisco Bay, including passing through and connecting Huddart and Wunderlich Parks with a wide network of parks and preserves in the area. In addition, the 2001 Trails Plan proposes a continuation of Skyline Trail, a county trail route that would be continued northward from Huddart County Park to Purisima Creek Redwoods Open Space Preserve (for hikers and equestrians).

## 3.2.3 Impacts and Mitigation Measures

### Significance Criteria

As stated in Appendix G of the *CEQA Guidelines*, a project would generally have a significant effect on the environment if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment (Governor's Office of Planning and Research, 2007).

The following recreation analysis will address these general criteria. As indicated in Chapter 2, subsequent environmental documentation is required for implementation of the Master Plan components at the project-level.

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#### **Impact 3.2-1: The project has the potential to increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated. (Less than Significant with Mitigation)**

The proposed Master Plan is intended to establish improvements over time, address each park's unique challenges, and serve as a working tool that provides consistency with other adopted County plans. Master Plan project are not expected to significantly increase the use of either Huddart or Wunderlich Parks, and would not contribute to the physical deterioration of the facility. Improvements identified in the Master Plan would be implemented in phases over the next five to 20 years to enhance visitor experiences, manage and protect natural resources, and reduce costs of operations and maintenance. Development of new facilities would be concentrated in already-developed portions of the park. At Huddart Park, this would involve construction or remodeling of park amenities including water sources, restrooms, shower facilities, and picnic shelters. At Wunderlich Park, this would involve improvements to the equestrian facilities that would enhance care of horses, provide training opportunities, and protect surrounding natural resources. In many cases, new facilities such as a day-use rental facility and interpretive center at Huddart Park, and arena paddocks and training facilities at Wunderlich Park would meet and/or ameliorate existing park demands.

Furthermore, vehicular and pedestrian circulation improvements, including fire safety zones and turn-arounds, would facilitate ease of movement in and out of the park. Additional parking and enhanced picnic areas would provide greater access to recreational amenities for the local community and visitors from the surrounding region, and would reduce strain on existing resources. Therefore, while adoption of the Master Plan and subsequent implementation of park improvements could increase the use of these two parks, it would also result in a net beneficial effect.

The approximate timeframe for Master Plan implementation is five years for Phase I, 10 years for Phase II, and 15-20 years for Phase III. Based on current San Mateo County Parks Department management practices, it is assumed that the park would remain open during construction of various Master Plan components. Continued use of nearby facilities and amenities would be permitted throughout various construction periods. At various points, there would be limited access for park visitors in construction areas and interruption of service for facilities under renovation. In addition, visitor experience would be temporarily diminished during construction activities at Huddart and Wunderlich Parks as a result of temporary adverse noise, air quality, transportation, and visual resource impacts (see the following sections: Air Quality, Noise and Vibration, Transportation, and Visual Resources, respectively for discussions of potential construction-related effects.)

It may be the case that some construction would divert recreational users to other nearby recreation areas instead of Huddart and Wunderlich Parks, such as the Purisima Redwood Open Space Preserve, El Corte de Madera Open Space Preserve, Teague Hill Open Space Preserve, Thornewood Open Space Preserve, Edgewood Park and Nature Preserve, or Sam McDonald Park. However, given the abundance of recreational facilities and natural areas in the vicinity of the project area, particularly for hiking, picnicking, and equestrian uses, overcrowding and deterioration is unlikely. In addition, Best Management Practices (BMPs) for construction would ensure construction-related activities would not adversely affect the environment, and would reduce any potential recreation impacts to less than significant levels. Subsequent environmental documentation is required for implementation of the Master Plan recommendations.

**Mitigation Measure 3.2-1:** The County shall implement Visual Resources, Transportation, Noise, and Air Quality mitigation measures included in this EIR.

**Significance after Mitigation:** Less than Significant

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**Impact 3.2-2: The Project would include recreational facilities and would require the construction and expansion of recreational facilities that might have an adverse physical effect on the environment. (Less than Significant with Mitigation)**

The Master Plan is the proposed guiding framework for land use and stewardship, natural resource enhancement, and the development of appropriate recreational facilities such as trails, staging areas, and group gathering areas at Huddart and Wunderlich Parks. This framework is intended to provide for a variety of recreational opportunities in an environmentally sound and sensitive manner. As such, the emphasis of the Master Plan is to concentrate development of new facilities in already-developed portions of the park, and to protect the wild character of the undeveloped portions of the parks.

The following facilities have been recommended for construction, renovation or expansion at Huddart Park:

- Group and family picnic areas, including shelters

- Parking areas for Redwood and Oak picnic areas, horse trailer parking
- Picnic restrooms
- Interpretive Center
- Day-use facility
- Archery range
- Toyon Group Camp facilities
- Ranger residence

The following facilities have been recommended for construction, renovation or expansion at Wunderlich Park:

- Folger Stables and related equestrian facilities
- Parking area
- Permanent public restroom adjacent to parking lot

**Mitigation Measure 3.2-2:** The County shall implement Visual Resources, Transportation, Noise, and Air Quality mitigation measures included in this EIR.

**Significance after Mitigation:** Less than Significant

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## References – Recreation

County of San Mateo, Environmental Services Agency, Parks Department, Huddart and Wunderlich Parks Master Plan, May 2006.

County of San Mateo, Environmental Services Agency, Planning and Building Division, County of San Mateo General Plan, November 1986.

County of San Mateo, Environmental Services Agency, Parks and Recreation Division, San Mateo County 2001 Trails Plan.

Governor's Office of Planning and Research, California Environmental Quality Act, *CEQA Guidelines*, Appendix G, 2007.

## 3.3 Visual Resources

### Approach to Analysis

This section examines existing scenic conditions in the vicinity of Huddart and Wunderlich Parks and the potential for implementation of the proposed Master Plan to affect those conditions. The section focuses on views from nearby public areas, the scenic character of the Park and vicinity, and light and glare.

### 3.3.1 Setting

#### 3.3.1.1 Regional Visual Environment

Huddart and Wunderlich Parks are nestled in the Santa Cruz Mountains in central San Mateo County, west of Woodside and Portola Valley. Both parks can be accessed via Scenic State Route (SR) 35 (Skyline Boulevard) and SR 84 (Woodside Road). These two County Parks are connected via the Skyline Trail. Park elevations range from 500 to 2000 feet above sea level.

The regional scenic environment is predominately characterized by mixed evergreen and redwood forest, chaparral, scrublands, and open space, including nearby Open Space Preserves such as Purisima Creek Redwoods, El Corte de Madera, and Thornewood (all managed by Mid-peninsula Regional Open Space District (MROSD)). East of Huddart and Wunderlich Parks, rural residential features characterize the scenic landscape, including private rural residences, local businesses and public services (schools, fire station, religious institutions).

Due to the forested character of the immediate area, long range views of both parks are obscured along SR 35 and SR 84. The site topography and vegetation are the dominant features from these roadways.

The rugged hills of Huddart Park provide a protected sense of place. Huddart Park is abutted by the GGNRA-managed Phleger Estate to the northwest, Purisima Creek Redwoods Open Space Preserve to the west, El Corte de Madera Creek Open Space Preserve to the southwest, California Water Service Company Watershed Land to the south, and Teague Hill Open Space Preserve and Wunderlich Park to the southeast. With the minor exception of the Miwok Shelter, built features such as picnic areas, ranger residence, corporation yard, restrooms, etc. are not visible from scenic routes or vistas.

Wunderlich Park is abutted by private residences and California Water Service Company Watershed Land to the north, El Corte de Madera Open Space Preserve to the west, and Thornewood Open Space Preserve to the south. Rural residences located east of Highway 84 and north of Bear Gulch Road face Wunderlich Park. Views of Wunderlich Park from these areas are generally characterized by views of forested areas and equestrian facilities, which are typical of the local area.

## Scenic Highways

There is one formally designated State Scenic Highway in the Project area – SR 35. SR 35, generally known as Skyline Boulevard, is a 2-lane highway that provides scenic views of the Santa Cruz Mountains, the Silicon Valley metropolitan area, Half Moon Bay, and San Francisco Bay. Due to its high elevation and location it is one of the few places on the Bay Area's southern peninsula from which the San Francisco Bay and the Pacific Ocean are both visible at the same time. Because of its scenic views and winding roadway, Skyline Boulevard has substantial recreational motoring and bicycling use. Many recreational users can be found congregating near its intersection with State Route 84, particularly on weekends.

### 3.3.1.2 Parks Visual Environment

#### Huddart Park

Located due east of the northwest-southeast ridgeline of the Santa Cruz Mountains, Huddart Park offers sweeping views of the San Francisco Peninsula and Bay. To the north and east are long-ranging views of forested lands, open space, urban areas, and the San Francisco Bay. All of these are visible from the Miwok Shelter. To the south is a series of open space preserves and private residences contained within a wooded landscape, visible from Sequoia Day Camp.

Many areas within the park provide only short range views of recreational opportunities. In particular, the approximately 80 acres of the lower portion of the park is a series of discrete settings, featuring picnic amenities, restrooms, and the natural environs. Immediate views of Coast live oak woodland, mixed evergreen forest, redwood and developed/landscaped areas are available in various reservable and drop-in picnic locations.

Mixed evergreen forest covers the largest portion of the Park. The most common tree species found in this community are coast live oak, tan oak (*Lithocarpus densiflora*), madrone (*Arbutus menziesii*), and California bay (*Umbellularia californica*). Inland redwood forest is often restricted to canyons and north-facing slopes. Huddart Park is isolated from coastal fog and, as a result, the Park's redwood forest is found primarily in the larger creek canyons: Squealer Gulch Creek, McGarvey Gulch Creek, West Union Creek, and their tributaries. Redwood forest transitions into the predominant mixed evergreen forest on the upper slopes of these canyons where conditions are drier and more exposed.



Photo 1 Northeastern view from Miwok Shelter



Photo 2 Southern View from Sequoia Day Camp



**Photo 3** View of grassy area from Zwerlien Picnic Area

The upper portion of Huddart Park is a semi-wilderness natural area devoted to hiking, trail running, and horseback riding, featuring both mixed evergreen forest and redwood forest. Toyon Group camp, located adjacent to the GGNRA-managed Phleger Estate, provides a secluded setting and is not visible from public roadways. The archery center, located in the southern corner of the park off Kings Mountain Road, is also set back from the roadway and is not visible to passing motorists or cyclists.



**Photo 4** View of Toyon Group Camp surroundings

Although Scenic State Highway 35 touches the border of Huddart Park, there are no public views of recreational uses within the landscape.

### **Wunderlich Park**

Wunderlich Park is located southeast of Huddart Park on the eastern slope of the Santa Cruz Mountains. The main entrance is along State Highway 84 (Woodside Road) and several walk-in entrances are available via Highways 35, 84, and residential roads.



**Photo 5** View of Folger Stable from parking area

From Highway 84, partial views of the Historic Folger Estate Stable complex are available to passing motorists. A new sign has recently been installed to replace the older park entrance signage. A woodland area currently obscures the park entrance/exit. Once inside the park, Folger Stable is immediately visible from the parking lot area. Built in 1904, it is widely recognized for its majestic appearance and as a prime example of architecture of the “Great Estate” period of California architecture.

This developed area includes the boarding stables and paddocks, other riding facilities, and parking lots, as well as park buildings. Overstory in the immediate vicinity includes native oak and walnut mixed with non-native eucalyptus. Non-native horticultural and ruderal species, such as vinca, non-native grasses, and Italian thistle dominate the understory. An 18-acre stand of blue gum eucalyptus (*Eucalyptus globulus*) grows at the eastern end of Wunderlich Park, southwest of the Folger Stables.

Behind the Historic District, there are a series of trails and flats for hiking and equestrian use. Vegetation is comprised of mixed evergreen forest, coast live oak woodland, non-native grasslands, coyote brush scrub, and redwood forest. Mixed evergreen forest is the dominant plant community in both the western portion of the park where topography consists of rolling hills, and in the central portion, where there are many flats. Coast live oak woodland accounts for approximately 8 acres at Wunderlich Park, occurring primarily in the area known as The Meadows. There are also large areas of non-native grassland and coyote brush scrub in the vicinity of the Meadows. Coyote brush scrub is typically found between grasslands and mixed evergreen forest or oak woodland on poor, thin soils.



**Photo 6** Existing Paddocks at Wunderlich Park

Alambique Creek, the only named stream within the boundaries of Wunderlich Park, runs through a steep ravine vegetated with second growth redwood and bay trees. Redwood forest community is found along the upper reaches of Alambique Creek and in the north central portions of the park along canyons between the Meadows and the Stables.

Close to the equestrian facilities is a concrete lined irrigation reservoir at Salamander Flat in Wunderlich Park. It is covered by algae and is at least in part straight sided. It does not seem to support emergent vegetation.

## 3.3.2 Regulatory Setting

### Existing Plans and Policies

#### ***San Mateo County General Plan***

The San Mateo County General Plan provides county-wide guidance for the protection of scenic resources (San Mateo County, 1986). The County's visual quality policies include protection and enhancement of scenic corridor and forest lands, direction for rural site planning, limitations on development on ridgelines and skyline. The County protects the scenic quality of roads and corridors by giving special recognition and protection to travel routes in rural and unincorporated urban areas which provide outstanding views of scenic vistas, natural landscape features, historical sites, and attractive urban development including Skyline Boulevard (SR 35), La Honda Road (SR 84), and Woodside Road (SR 84). There are also architectural design standards for rural scenic corridors including colors, materials, tree and vegetation removal, outdoor lighting, roads and driveways, parking and paved areas(San Mateo County, 1986).

### 3.3.3 Impacts and Mitigation Measures

#### Significance Criteria

As stated in Appendix G of the *CEQA Guidelines*, a project would generally have a significant effect on the scenic environment if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing scenic character or quality of the site and its surroundings;
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area; or
- Substantially damage scenic resources, including, but not limited to, trees, rocks outcroppings, and historic buildings within a state scenic highway (Governor's Office of Planning and Research, 2007).

This impacts analysis is addressed at a program-level. As indicated in Chapter 2, subsequent environmental documentation is required for implementation of Master Plan components; they are here evaluated on a conceptual level.

#### Impacts and Mitigation Measures

##### **Impact 3.3-1: Implementation of the Master Plan would result in short-term adverse visual impacts associated with project construction. (Less than Significant with Mitigation)**

The implementation of recommendations of the Master Plan, including construction, renovation or expansion of Huddart and Wunderlich facilities and infrastructure improvements would result in construction activity that would have a short-term adverse impact on scenic resources. Construction activity would include use of construction equipment, ground disturbance associated with establishment of construction phasing areas, and temporary installation of construction safety fencing. These activities and equipment would have an adverse visual effect on the natural landscape. The construction activity, however, would be temporary in nature and localized in small areas within the project site. The proposed construction activity would occur during brief intervals over the 20-year Master Plan implementation phase. Construction activity related to Folger Stables and related equestrian facilities would be substantial during Phases I and II. Implementation of Mitigation Measure 3.3-1 would reduce potential visual impacts to less-than-significant levels.

**Mitigation Measure 3.3-1:** The following measures are included to minimize or reduce project impacts on existing scenic resources and visual quality during project construction:

- During construction of park facilities, construction staging shall be located in areas that are not visible from public vantages, to the extent possible.
- Avoid damage to natural surroundings in and around the work limits.

- Provide temporary barriers to protect existing trees, plants, and root zones, if necessary.
- Construction activities shall be phased to minimize the appearance of disturbed areas within the park.

**Significance after Mitigation:** Less Than Significant

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**Impact 3.3-2: The proposed Master Plan would substantially degrade the existing scenic character or quality of Huddart and Wunderlich Park and its surroundings. (Less than Significant with Mitigation)**

**Huddart Park**

The implementation of Master Plan recommendations would result in minor changes across the park throughout Phases I, II, and III. Changes to the picnic areas include remodeled or additional restrooms, replacement site furniture, assorted amenities, and remodeled shelters. All new structures would exhibit architectural design compatible with the rural, rustic park environment. The Master Plan also recommends enhancing visitor views with selective tree removal and constructing an interpretive creek overlook at Squealer Gulch Creek.

Other changes to the picnic areas include reconfiguring the Meadow grassy area to appear more natural, building an amphitheater around the fire ring at Upper Oak, and eventually replacing the outdoor group picnic facilities at Zwerlein with an indoor-outdoor rental facility. The indoor-outdoor facility would be large enough to accommodate group functions of up to 150 to 200 people inside, and an additional 50 to 100 people outside. Approximately 2,500 to 3,500 sq. ft of interior space would be required to accommodate a multi-purpose room, small kitchen, storage, closets, and lobby area. There would also be a 1,500 sq. ft outdoor deck, and outdoor tables and grill area. All elements would fit into the existing footprint. No tree cutting and minimal grading would be required.

At Toyon Group Camp, the Master Plan recommends building an additional loop and parking area for 15 vehicles below the shower building. This would increase capacity by an additional 50 people. Additional changes include repair or replacement of the shower building, a new restroom for the lower loop, paving Campground Road, improving sight distances and turning radii, constructing an amphitheater and other general improvements.

Several parking areas at Huddart Park would be redesigned using pervious materials and/or restored (in the case of the Meadow Area). Pedestrian and traffic circulation would be modified to include connector trails, crosswalks, and vehicle turnarounds to increase visitor safety. There would also be signage installed throughout the park. The following recommendations have been made for Huddart Park:

- Entrance signage at pedestrian and equestrian trail entrances to mark various locations on both park perimeters, including orientation and regulatory signage
- Orientation, regulatory, and informational signage at specific locations within the parks' use areas

- Directional signage both on internal vehicular routes and along the trail system
- Interpretive signage in each park to provide information about the site's natural, cultural, and historic resources
- Habitat protection signage,
- Trail signage (directional and distance markers, and trail etiquette)
- Traffic signage (for internal park roads, drives and parking lots).

Other potential facility recommendations from the Master Plan include:

- The construction of an interpretive center and ranger's residence. The outcome of this recommendation is contingent upon preparation of a preliminary feasibility study to explore alternatives and identify a preferred approach.
- Archery Range improvements at the existing location.
- An expanded storage area at the Park Maintenance Yard for the Girl Scouts.

As noted in 3.3-1, site utility improvements would likely have short term adverse visual resource impacts, but on the whole would be beneficial (i.e. the placement of utility lines underground).

#### **Views from Adjacent Streets**

Views of Huddart Park from Kings Mountain Boulevard, SR 35 and SR 84 would not change from existing conditions. Due to the area's topography and dense forested character, many areas of Huddart Park are not visible from the roadway. Any future improvements to the entrance of the Archery Range would be visible to cars and cyclists. However, built features would be concentrated in developed areas not visible from public roadways. Implementation of Mitigation Measure Visual Resources-2 would reduce potential visual impacts to less-than-significant levels.

#### **Views from Highway 35 and Interstate-280**

Due to the dense forested character of the Park and rolling topography, any changes within Huddart Park would be obscured by the mixed evergreen and redwood forests.

#### **Wunderlich Park**

The majority of changes proposed within Wunderlich Park pertain to the maintenance and repair of the Historic Folger Stable complex. Changes would include the Folger Stable building seismic retrofit and restoration, the vehicular entrance/exit and parking area improvements, ADA upgrades at the Carriage House/garage, and a new vault restroom at the parking lot. During Phase II, there would be a number of changes made to the paddocks, training area, site drainage, and caretaker's residence. Such improvements, to the extent that they would occur within or immediately adjacent to the Folger Estate Stable Historic District, could affect the District's visual character and as such, affect historic setting to the degree that it would no longer qualify for listing in the NRHP if carried out in a manner that was inconsistent with the guidance provided in the *Secretary of the Interior's Standards*. See Section 3.6 Cultural Resources for further discussion. The placement of utility lines underground would have a beneficial visual

effect to the Historic Resource District, as it would remove an intrusive element that was likely added after the area's period of significance (post-1940).

Similar signage recommendations were made for Wunderlich, but also include:

- Park entrance signage and kiosk at Wunderlich Park to mark the proposed revised entrance location.
- New traffic warning signage within the State right-of-way at the Wunderlich Park entrance and exit

### **Views from Adjacent Streets**

From Highway 84, partial views of the Historic Folger Estate Stable complex are available to passing motorists. Construction activities may be visible from the public roadway; however finished buildings would be in conformance with both San Mateo County visual quality policies and guidance from the *Secretary of the Interior's Standards*.

### **Views from Highway 35**

No changes are proposed to the western side of the park that would be visible from the public roadway.

**Mitigation Measure 3.3-2:** The following measures are included to minimize or reduce project impacts on existing scenic resources and visual quality:

- Minimize development footprints.
- Choose building materials that are visually compatible or do not compete with the landscape. In Huddart Park, architecture of new facilities shall enhance the existing rural, rustic character. In Wunderlich, equestrian facilities will be visually compatible with the elements in the Historic District.
- New structures shall blend indoor and outdoor spaces, including shelters, amphitheaters, indoor-outdoor rental facility at Zwerlein.
- Parking areas will be designed with pervious materials.
- Selected tree removal to open views of scenic vistas from designated picnic areas will not detract from the visual character of the park.
- Incorporate the General Signage Recommendations put forward in the proposed Master Plan:
  - Signage design should achieve the intended function while not dominating the natural visual quality of the parks
  - Signage clutter (gradual addition of individual signs over time) should be avoided. Sites where signage occurs should be kept to the minimum necessary by clustering signs where possible at single locations. Individual signage locations should avoid clutter through minimizing the amount of individual signs by incorporating as much information as possible into single signs.
  - The use of recycled plastic timbers for posts and monuments should be pursued to minimize consumption of redwood lumber and maximize the life of sign posts.

**Significance after Mitigation:** Less than Significant

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**Impact 3.3-3: The proposed Master Plan would introduce sources of light and glare to each park. (Less than Significant with Mitigation)**

The proposed Master Plan would potentially introduce very limited new sources of light at Wunderlich Park. Night lighting would likely be part of a final implementation phase, in order to enhance use during the winter months and to extend training operations into the early evening hours. Night lighting would be shielded from adjacent neighbors and directed only onto the arena floor. This recommendation requires further evaluation.

In Huddart Park, solar photo-voltaic electric power is proposed for new restrooms and shelters. Electric power would be used for building interiors. No exterior lighting is proposed for Huddart Park. Proposed additional parking and campground areas at Toyon would not introduce new sources of glare, (such as sunlight reflections on windshields and reflective automotive fixtures), because the wooded area would filter or block out this glare. Implementation of Mitigation Measure 3.3-3 would reduce the visual impacts associated with light and glare to a less than significant level.

**Mitigation Measure 3.3-3:** The following mitigation measures are recommended to minimize project impacts of light and glare:

- Exterior lighting shall use fixtures with low-level lighting, focused beams, and directional hoods to minimize light visible from other properties and reduce night sky impacts.
- Non-reflective, permeable surfaces shall be utilized to reduce glare.

**Significance after Mitigation:** Less than Significant

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**Impact 3.3-4: The proposed Master Plan would substantially damage scenic resources, including, but not limited to trees, rock outcroppings and historic buildings within a state scenic highway. (No Impact)**

The only change proposed within SR 35 is a potential crosswalk from the MROSD parking lot at the Purisima Creek trailhead, which is located directly across from the upper end of Huddart Park. The Master Plan recommends that a safe crossing of SR 35 should be studied. The County's visual quality policies pertaining to state scenic corridor protection would provide design guidance on this crossing.

**Mitigation:** None required

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## References – Visual Resources

County of San Mateo, Environmental Services Agency, Parks Department, *Huddart and Wunderlich Parks Master Plan*, May 2006.

County of San Mateo, Environmental Services Agency, Planning and Building Division, *County of San Mateo General Plan*, November 1986.

Governor's Office of Planning and Research, California Environmental Quality Act, *CEQA Guidelines*, Appendix G, 2007.

## 3.4 Geology, Soils, and Geohazards

This chapter provides an overview of the geologic setting for the project area. It includes a discussion of existing site conditions and topography, regional geology, soils and subsurface lithology, regional faults, and associated seismic probabilities. Potential geologic and seismic hazards that may affect the project area are outlined, along with pertinent regulatory information.

### 3.4.1 Setting

#### Geologic Setting

Huddart and Wunderlich Parks are situated in the north-central portion of the Santa Cruz Mountain Range, which is part of the southern Coast Range, which was formed approximately 30 million years ago when folding along the eastern margin of the Pacific Plate caused sea floor sediments to be crumpled, folded, and uplifted. These mountains are part of the Coast Range geomorphic province, characterized by discontinuous, northwest-trending mountain ranges and valleys.

Topographic relief within both parks is considerable. Elevations within Huddart Park range from approximately 600 feet along the park's northeastern boundary, up to approximately 2,000 feet above mean sea level (msl) near the summit of Kings Mountain, along the western boundary of the park. Creeks within the park include Squealer Gulch Creek along the southern edge of the park, McGarvey Gulch Creek within the center of the park, and several other small creeks and unnamed natural drainages.

Elevations within Wunderlich Park range from approximately 450 feet along the northeastern park boundary, near the park entrance, to approximately 2,200 feet along the western park boundary, near Skyline Boulevard. Creeks within the park include Alambique Creek, which flows through the central portion of the park, and several other small creeks and unnamed natural drainages.

#### Salinian Block

The portion of the Santa Cruz Mountains located west of the San Andreas fault, where the Project area is located, is comprised of Salinian Block materials, which are slowly moving north with the Pacific Plate (Alt and Hyndman, 2000). The Salinian block basement materials are composed of granitic materials, and are very similar to those of the Sierra Nevada; it is believed that the formation may have originated within Central America or Mexico (Page, 1982). Geologic features within Huddart and Wunderlich Parks are primarily comprised of the following Salinian block geologic assemblages, as identified within Brabb et al (1998):

***Butano Sandstone:*** Huddart Park is comprised of primarily Butano Sandstone, which is a very fine to very coarse-grained sandstone of Eocene origin. The sandstone occurs in thick beds, interbedded with mudstone and shale. Conglomerates, containing boulders of granitic and metamorphic rocks, are present within lower portions of the formation. Mudstone and shale can vary from approximately 10 to 40 percent of the volume of the formation.

**Lambert Shale:** Wunderlich Park is comprised primarily of Lambert Shale, which is a mudstone, siltstone, and claystone formation that occurs only west of the San Andreas. Chert, sandstone bodies up to 30 m thick, and fine-grained dolomite, are also present within some areas of this Oligocene/Miocene formation.

**Young Alluvial Fan Deposits:** Isolated portions of Huddart and Wunderlich Parks, especially along their eastern boundaries near the San Andreas Fault, are composed of Holocene unconsolidated fine to coarse-grained sand, silt, and gravel that is coarser grained at heads of fans and within narrow canyons.

## **Bay Mud**

Bay mud, which occurs as the youngest deposit along the margin of the San Francisco Bay, is a fine-grained sedimentary deposit consisting of highly plastic clays and silt, with varying amounts of organic matter, sand, and shells. Bay mud can present a variety of engineering challenges due to its low strength, high compressibility, and saturated condition. However, investigations of geologic maps (Brabb et al., 1998) and field surveys conducted in preparation for this EIR indicate that Bay Mud is not present within either Huddart or Wunderlich park.

## **Soils**

Soils within Huddart Park are comprised of the Alambique-McGarvey Complex (approximately 99.9 percent of the park), a sandy loam with 30 to 75 percent slopes. The only other soil complexes identified within Huddart Park were the Hugo and Josephine sandy loams (less than 0.1 percent of the park), eroded and with moderately steep slopes (NRCS, 2007).

Based upon the chemical makeup, as well as the moisture content, texture, electrical conductivity, and acidity of these soils, Huddart Park soils are expected to be moderately corrosive to concrete and steel (NRCS, 2007). Steel and concrete in installations that intersect soil boundaries or soil layers would be more susceptible to corrosion than steel and concrete installations located entirely within one kind of soil or soil layer. Limitations for paths and trails, picnic areas, and shallow excavations (e.g. less than 6 feet in depth for pipelines or power lines) are also indicated within Huddart Park, due to steep slopes greater than 15 percent (NRCS, 2007).

Soils within Wunderlich Park are comprised primarily of the Alambique-McGarvey complex (approximately 95 percent of the park) with 30 to 75 percent slopes. Other soil complexes within Wunderlich Park include very steep Hugo and Josephine sandy loams (approximately 3 percent of the park), and the Botella-Urban land complex (approximately 1 percent of the park), with 0 to 5 percent slopes (NRCS, 2007). The Botella-Urban complex is located adjacent to Woodside Road, along the eastern boundary of the park. Existing buildings and parking lots, including the stable and other facilities on the eastern side of the park are located upon the Botella-Urban complex.

Based upon the chemical makeup, as well as the moisture content, texture, electrical conductivity, and acidity of these soils, most Wunderlich Park soils are expected to be moderately corrosive to

concrete and steel. However, the Botella-Urban complex, where the existing stable and main parking lots are located, is not expected to be corrosive to concrete or steel (NRCS, 2007). Limitations for paths and trails, picnic areas, and shallow excavations (e.g. less than 6 feet in depth for pipelines or power lines) are also indicated within Huddart Park, due to steep slopes greater than 15 percent and, in portions of the Alambique-McGarvey complex, caving potential during excavation (NRCS, 2007).

## **Mineral Resources**

The California Division of Mines and Geology (CDMG) has classified lands within the San Francisco-Monterey Bay Region into Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act (SMARA) of 1975 (Stinson et al., 1983). The Project site has not been zoned for mineral resources, and extraction of mineral resources does not occur within the vicinity of either park.

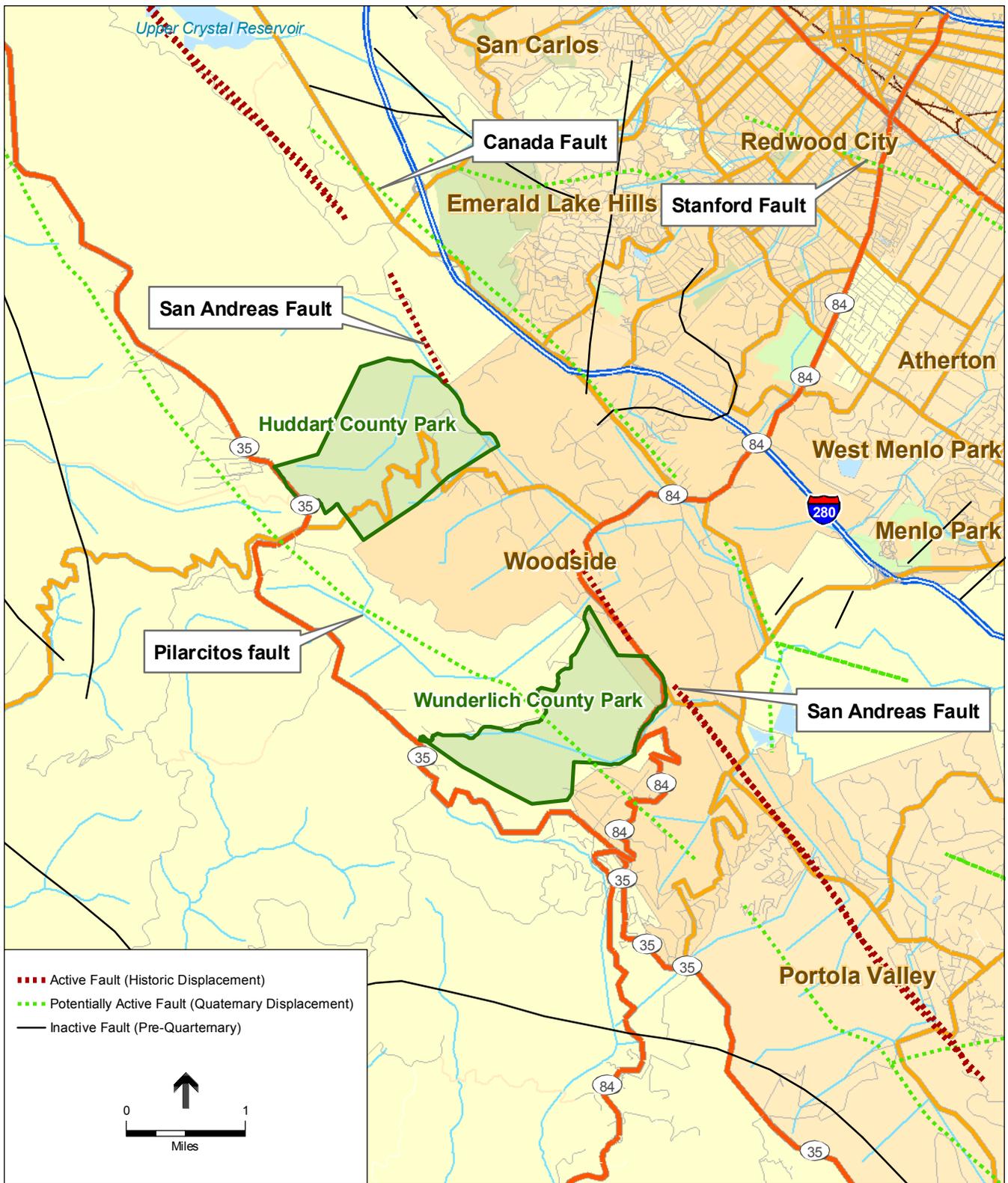
### **3.4.1.2 Seismic Setting**

The San Francisco Bay Area is considered a region of high seismic activity, and is controlled by a combination of active and potentially active faults associated with the San Andreas Fault Zone. On the basis of research conducted since the 1989 Loma Prieta earthquake, the US Geological Survey (USGS) estimates that the probability for at least one earthquake of magnitude 6.7 or greater to occur within the San Francisco Bay Region by 2032 is 62 percent (USGS, 2003).

## **Regional Faults**

The most significant fault in close proximity to the Project area is the San Andreas Fault. It runs along the northeastern edge of Huddart Park, in the immediate vicinity and to the east of Union Creek, and also along the northeastern edge of Wunderlich Park, within approximately 0.25 mi of the main entrance and park office (Figure 3.4-1). The USGS (2003) has estimated that there is a 21 percent chance that a magnitude 6.7 or greater quake would occur along the San Andreas Fault within the San Francisco Bay Area region by 2032. Due to their close proximity to the San Andreas Fault, eastern portions of both Huddart and Wunderlich Parks are located within an Earthquake Fault Zone, as delineated under the Alquist-Priolo Earthquake Fault Zoning Act.

Other faults showing within and near the Project area include (1) the Pilarcitos fault, which traverses through the central section of Wunderlich Park and continues approximately 0.4 mile west of Huddart Park, (2) the Canada fault, located east of the San Andreas approximately 1.0 mile east of Wunderlich Park and 0.75 mile east of Huddart Park, and (3) the Stanford Fault, located approximately 3.5 miles from Huddart Park and 4.5 miles from Wunderlich Park. These faults show Quaternary displacement, and, although not historically active, are considered potentially active.



SOURCE: CDMG, 2000; ESRI, 2006; and ESA, 2007

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**Figure 3.4-1**  
Alquist-Prilo Fault Zones

**Recent Earthquake Activity:**

Principle faults capable of producing significant ground-shaking at the Parks are listed in Table 3.4-1. Major seismic activity on any of these faults could cause substantial ground shaking in the parks, similar to that experienced during the 1989 Loma Prieta earthquake and the 1906 San Francisco earthquake. The estimated (moment) magnitudes presented in Table 3.4-1 represent characteristic earthquakes on particular faults.

**TABLE 3.4-1  
 PRINCIPLE FAULTS CAPABLE OF PRODUCING SIGNIFICANT GROUND-SHAKING MOVEMENT IN  
 HUDDART AND WUNDERLICH PARKS**

<b>Fault</b>	<b>Distance and Direction</b>	<b>Recency of Movement</b>	<b>Fault Classification<sup>a</sup></b>	<b>Historical Seismicity<sup>b</sup></b>	<b>Maximum Moment Magnitude Earthquake (Mw)<sup>c</sup></b>
Rodgers Creek	57 miles north	Historic (1898,; 1969)	Active	M6.7, 1898 M5.6, 5.7, 1969	7.0
Hayward	19 miles northeast	Historic (1836; 1868)	Active	M6.8, 1868 Many <M4.5	6.9
San Andreas	0-0.25 mile east	Historic (1906; 1989 ruptures)	Active	M7.1, 1989 M8.25, 1906 M7.0, 1838	7.9
West Napa	54 miles north	Historic (2000)	Active	M5.2, 2000	6.5
Concord-Green Valley	41 miles northeast	Historic (1955)	Active	Historic active creep	6.9
San Gregorio Fault	20 miles southwest	Holocene	Active	Many, M3-6.4	7.3
Marsh Creek-Greenville	43 Miles East	Historic 1980	Active	M5.6 1980	6.9
Calaveras (northern)	23 miles southeast	Historic 1861 rupture	Active	M5.6-M6.4, 1861; swarms 1970, 1990	6.8

<sup>a</sup> An active fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 10,000 years). A potentially active fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. Sufficiently active is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches (Hart, 1997).

<sup>b</sup> Richter magnitude (M) and year for recent and/or large events. Richter magnitude scale reflects the maximum amplitude of a particular type of seismic wave.

<sup>c</sup> Moment magnitude is related to the physical size of a fault rupture and movement across a fault. Moment magnitude provides a physically meaningful measure of the size of a faulting event (CDMG, 1997b). The Maximum Moment Magnitude Earthquake (Mw), derived from the joint CDMG/USGS Probabilistic Seismic Hazard Assessment for the State of California, 1996 (Peterson, 1996).

SOURCES: Hart, 1997, Jennings, 1994, Peterson, 1996.

## **Geologic and Seismic Hazards**

Huddart and Wunderlich parks are located directly adjacent to the San Andreas fault, and are therefore susceptible to ground shaking and related ground failures, including surface fault rupture. Slope failures through both static and seismically induced forces are possible, considering the underlying bedrock and hill slopes within the parks. In addition, excessive soil erosion caused from the action of water and wind on exposed surficial materials and landslide areas is considered a potential geologic hazard.

### ***Surface Fault Rupture***

Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude, sense, and nature of fault rupture can vary for different faults or even along different strands of the same fault. Surface rupture can damage or collapse buildings, cause severe damage to roads and pavement structures, and cause failure of overhead as well as underground utilities. Future faulting is generally expected along different strands of the same fault. Ground rupture is considered more likely along active faults, which are referenced above.

The northeastern edges of both Huddart and Wunderlich parks are located within a designated Alquist-Priolo Fault Rupture Hazard Zone (discussed below), associated with the San Andreas Fault (Figure 3.4-1). Therefore, fault rupture attributable to the known and mapped traces of the San Andreas Fault could occur within the Project area.

### ***Ground Shaking***

The degree of ground movement expected to occur during an earthquake depends upon the overall magnitude of the quake, distance to the fault, focus of the earthquake energy, and type of geologic material. The composition of underlying soils can intensify ground shaking, even when located relatively distant from faults. Portions of the Bay Area that experienced the worst structural damage during the 1989 Loma Prieta earthquake were not necessarily those closest to the active fault, but rather those with soils that magnified the effects of ground shaking. Areas that are underlain by bedrock tend to experience less ground shaking than those underlain by primarily unconsolidated sediments such as artificial fill. Within Huddart and Wunderlich Parks, soils consist of native clays and loams that are underlain by Salinian block formations, and are therefore unlikely to magnify ground shaking intensity. Still, due to the close vicinity of the San Andreas Fault, an earthquake there could generate exceptionally high intensity ground shaking within the parks, if the epicenter is located in close proximity to the parks.

### ***Landslide Hazards***

The susceptibility of land (slope) failure depends upon the slope and geology as well as the amount of rainfall, excavation, or seismic activities. A landslide is a mass of rock, soil, and debris displaced down-slope by sliding, flowing, or falling. Steep slopes and areas with loose surface materials characterize areas most susceptible to landslide. Landslides are least likely in topographically low alluvial fans and at the margin of the San Francisco Bay. Slope failures

including debris flows can take place as single, isolated landslides, or as part of larger complexes consisting of multiple failures occurring over a long period of time. Soils within Huddart and Wunderlich Parks, especially those where slopes are greater than 25 percent, would be susceptible to landslide and associated hazards.

### ***Liquefaction***

Liquefaction occurs when unconsolidated or near-saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in the temporary fluid-like behavior of the soil. Soil liquefaction may result in ground failure that damages roads, pipelines, underground cables, and buildings with shallow foundations. Liquefaction can occur in areas characterized by water-saturated, cohesionless, granular materials at depths less than 40 feet. Liquefaction may also occur in unconsolidated or artificial fill sediments. The depth of groundwater influences the potential for liquefaction in this area, with shallower groundwater providing increased potential for liquefaction. The native soils within the project area are expected to have relatively low potential for liquefaction, although some liquefaction could occur in areas near streams or other areas where surface sediments are saturated by groundwater. Bay mud is not present within the project area; therefore, liquefaction associated with the presence of Bay Mud is not anticipated.

### ***Seiche***

A seiche is defined as the sloshing of a closed water body resulting from earthquake shaking. Seiches can cause localized flooding within shoreline areas that would be inundated by increased wave action. Crystal Springs Reservoir, the nearest large water body, is located approximately 3 miles northwest of Huddart Park. Seiche within Crystal Springs Reservoir would therefore not be anticipated to affect the project area.

### ***Expansive Soils***

Expansive soils possess a “shrink-swell” characteristic. Shrink-swell is defined as the cyclic change in volume, via expansion and contraction, which occurs in fine-grained clay sediments during wetting and drying. Structures constructed upon expansive soils may incur damage over long periods of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Expansive soils are not anticipated to be present within the project area, as surficial soils are primarily sandy loams (NRCS, 2007).

### ***Soil Erosion***

Soil erosion occurs when soil materials are worn away and transported to another area either by wind or water action. Erosion rates vary depending upon the soil material and structure, placement, and human activity. The erosion potential for soils is variable; soil containing high amounts of silt can be easily eroded, while sandy soils are less susceptible. Erosion is most likely on areas with exposed soil, and soil erosion hazards can therefore be higher during any construction activity. Typically, the soil erosion potential is reduced once the soil is graded and covered with concrete, structures, asphalt, or vegetation. Overlying soil materials within the

project area consist of primarily sandy loams and are therefore susceptible to erosion by wind and water. Soil materials within the project area have a low to moderate erosion potential, as identified within NRCS (2007) and could therefore be susceptible to erosion, especially when graded and temporarily exposed to wind or water.

### **3.4.2 Regulatory Setting**

This section briefly describes federal, state, and local regulations, permits, and policies pertaining to geology, soils, and geohazards, as they apply to the proposed project.

## **State**

### **Alquist-Priolo Geologic Hazards Zone Act**

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act), signed into law in December, 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazard of fault rupture and to prohibit the location of most structures for human occupancy across these traces.<sup>1</sup> Cities and counties must regulate certain development projects within the zones, which includes withholding permits until geologic investigations demonstrate that sites are not threatened by future surface displacement (Hart, 1997). Surface fault rupture is not necessarily restricted to areas within the Alquist-Priolo Zone. The northeastern portion of both parks is located within an Alquist-Priolo Earthquake Hazard Zone.

### **Seismic Hazards Mapping Act**

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong groundshaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site has to be conducted and appropriate mitigation measures incorporated into the project design. The Parks have not been investigated for potential designation as a seismic hazard zone.

### **California Uniform Building Code**

The California Building Code is another name for the body of regulations known as the California Code of Regulations (CCR), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable.

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<sup>1</sup> A “structure for human occupancy” is defined by the Alquist-Priolo Act as any structure used or intended for supporting or sheltering any use or occupancy that has an occupancy rate of more than 2,000 person-hours per year.

Published by the International Conference of Building Officials, the Uniform Building Code is a widely adopted model building code in the United States. The California Building Code incorporates by reference the Uniform Building Code (UBC) with necessary California amendments. About one-third of the text within the California Building Code has been tailored for California earthquake conditions (ICBO, 1997).

## **California Department of Transportation**

The California Department of Transportation (Caltrans) has developed roadway design standards including those for seismic safety. Considerations of earthquake hazards in roadway design are detailed in the Highway Design Manual published by Caltrans (2001). Modifications to local highways and roads would be required to adhere to Caltrans engineering standards to minimize settlement.

## **Local**

The San Mateo County General Plan includes the following policies related to Soil Resources, Mineral Resources, and Natural Hazards, as relevant to the project and this Chapter:

### **Soil Resources Policies**

#### **2.1. Protect and Preserve Soil as a Resource**

Protect and preserve the availability and quality of soil as a resource for its ability to sustain healthy plant, animal, and human life within San Mateo County.

#### **2.2. Minimize Soil Erosion**

Minimize soil erosion through application of appropriate conservation practices.

#### **2.4. Protection of Productive Soil Resources**

Protect productive soil resources from abuse, misuse, and degradation.

### **Mineral Resources Policies**

#### **3.1. Mineral Resource Identification, Protection, and Extraction**

Identify significant mineral resource areas, protect the availability of mineral resources located within these areas, and encourage their extraction in a manner which minimizes adverse environmental impacts.

#### **3.2. Protection of Significant Mineral Resource Areas**

Protect significant mineral resource areas from encroachment by incompatible land uses.

#### **3.3. Prevention of Environmental Impacts**

Minimize the impact of mineral extraction activities on the surrounding natural and built environment through the application of appropriate management practices including, but not limited to, minimizing surface disturbance, air pollution, vibration, and traffic impacts.

## **Natural Hazards Policies**

### **15.1. Minimizing Risks from Natural Hazards**

Minimize the potential risks resulting from natural hazards, including but not limited to, loss of life, injury, damage to property, litigation, high service and maintenance costs, and other social and economic dislocations.

### **15.2. Public Information**

Inform and educate the public of areas of the highest risk from manmade and natural hazards, the methods available for their abatement and prevention, and appropriate procedures to follow during emergencies.

### **15.3. Incorporate Information on Natural Hazards into Land Use and Development Decisions**

Integrate data on natural hazards into review of land use and development proposals in order to identify hazardous areas, potential constraints to development, and/or appropriate mitigation measures.

## **Impacts and Mitigation Measures**

### **Significance Criteria**

According to Appendix G of the CEQA Guidelines, the proposed project could have a significant impact related to geology and soils if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State geologist for the area or based on other substantial evidence of a known fault;
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides.
- Result in substantial erosion or loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on an expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

## Approach to Analysis

The impact analysis focuses on foreseeable changes to the baseline conditions attributable to the project in the context of the significance criteria listed above. Based on the discussion of geologic and soil-related hazards provided in the setting discussion and in the context of the significance criteria prescribed above, the impact analysis focuses on impacts related to regional seismicity and associated ground motion, subsidence, slope instability, soil erosion, and expansive and corrosive soils.

## Impacts Discussion

**Impact 3.4-1: The project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction; and landslides. (Less than Significant with Mitigation)**

The Alquist-Priolo Earthquake Fault Zoning Act delineates areas upon and near active faults in order to prohibit the location of most structures upon an active fault trace, thereby mitigating potential hazards of fault rupture. Alquist-Priolo Fault Rupture Hazard Zones (FRHZs) are intended to encompass known fault traces and are established based upon a prescribed distance from the known or inferred fault trace. The Alquist-Priolo FRHZ encompasses the northeastern portion of Huddart Park, including Union Creek and portions of Greer Road. The FRHZ also encompasses northeastern portions of Wunderlich Park, including the area between Woodside Road southwest to the area of the lower Alambique Loop Trail. The existing Folger Stable, parking, and other associated park facilities are located within the FRHZ.

The following proposed improvements would be located within the Alquist-Priolo FRHZ at Huddart Park: damaged trail bridge replacement and construction of additional bridges along West Union Creek; all-weather, single-track trails; meadow-area improvements, including restroom replacement.

The following proposed improvements would be located within the Alquist-Priolo FRHZ at Wunderlich Park: Folger Stable Building seismic retrofit and restoration; horse keeping measures at Folger Stable complex; vehicular entrance/exit and parking area improvements near Woodside Road; new restroom; ADA updates to the Carriage House; fee collection system; Folger Stable area site improvements including paddocks, arena, drainage, caretaker's residence, and other components.

Construction of trails, parking lots, signage, arena, drainage improvements, and fee collection systems would not be subject to regulation under the Alquist-Priolo Act; these would not result in the construction of new structures, thereby reducing the potential for people to be exposed to hazards associated with structural damage or collapse resulting from potential surface fault rupture. However, the proposed structures for both parks listed above, would be subject to regulation under the Alquist-Priolo Act. Therefore, prior to construction, a geologic investigation would be required to determine the location of proposed structures relative to the San Andreas

Fault. Construction of the caretaker's residence and other structural facilities may not be feasible if they would be located directly upon the San Andreas Fault.

**Mitigation Measure 3.4-1:** All proposed structures shall comply with all applicable San Mateo County engineering design rules and regulations. Geotechnical and seismic design criteria shall comply with the seismic requirements of Zone 4 of the 1997 Uniform Building Code (UBC), and the California Building Code (Title 24) additions and specifications.

**Significance after Mitigation:** Less than Significant

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**Impact 3.4-2: The project could result in substantial soil erosion or the loss of topsoil. (Less than Significant with Mitigation)**

Construction of trails, bridges, structures, parking lots, fire roads, turn-arounds, and other facilities, as well as ongoing fuel reduction activities, could result in substantial soil erosion or loss of topsoil both during and after their construction. Work at these locations would be limited to clearing of the site, with limited grading activities associated with trail and bridge construction, as well as construction of the new caretaker's residence, restrooms, and other structures. Ongoing soil erosion problems may also result from construction or expansion of trails, fire roads, and paddocks, which could result in altered drainage patterns and increased loss of topsoil.

Short-term, construction-related erosion and loss of topsoil would be partially mitigated by implementation of a Stormwater Pollution Prevention Plan (SWPPP), as discussed in the Hydrology and Water Quality section of this EIR. In addition, the County would implement all projects according to the County Trails Master Plan (2001) design guidelines and the Watershed Protection Program Maintenance Standards (2004). The erosion and sedimentation control measures highlighted in these two documents would also be effective in controlling erosion (SMCPRC, 2001 and SMCDPW, 2004).

**Mitigation Measure 3.4-2:** All proposed new or modifications to existing, trails, fire roads, and horse facilities shall conform to erosion and sedimentation control measures provided within the Huddart and Wunderlich Parks Master Plan. In addition, the proposed modifications shall be in compliance with guidance found in the County Trails Master Plan and County Watershed Protection Program Maintenance Standards. Implementation of these measures, along with the SWPPP, would reduce potential short-term and ongoing impacts related to erosion and loss of topsoil.

**Significance after Mitigation:** Less than Significant

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**Impact 3.4-3: The project could 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. (Less than Significant with Mitigation)**

The proposed modifications to existing structures and construction of the following new structures and facilities within Wunderlich Park would occur upon natural sediments within areas of relatively low topographic relief, and would therefore not be anticipated to contribute to increased potential for landslide, lateral spreading, subsidence, liquefaction, or collapse: Folger Stable Building retrofit and restoration; horse keeping measures at Folger Complex; entrance and parking improvements adjacent to Woodside Road; restroom at the parking lot; ADA updates at Carriage House; fee collection system; and other Folger Stable area site improvements.

Other improvements, including new and expanded trails and fire roads located within both Huddart and Wunderlich Parks would potentially occur within areas of relatively steep topography. Soil in these areas that is disturbed during construction and operation of proposed facilities could become unstable, resulting in an on-site or off-site landslide, lateral spreading, or collapse. However, the design criteria and maintenance standards found in the County Trails Master Plan and Watershed Protection Program, respectively, that consider unstable conditions could reduce potential impacts, if incorporated (SMCPRC, 2001; SMCDPW, 2004).

**Mitigation Measure 3.4-3:** Incorporation of applicable County and state building, roadway, and trail construction and restoration standards, including those found in the County Trails Master Plan and County Watershed Protection Program Maintenance Standards, into facility siting and design would ensure that implementation of the proposed Master Plan would not result in construction of facilities upon geologically unstable areas. Furthermore, incorporation of these standards would ensure that new facilities or changes to existing facilities would not result in landslide, lateral spreading, subsidence, increased liquefaction potential, or collapse. Therefore, this impact would be less than significant.

**Significance after Mitigation:** Less than Significant

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**Impact 3.4-4: The project is not located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property. (No Impact).**

Soils within both Huddart and Wunderlich Parks are comprised of sandy loams and sandy to rocky deposits associated with recent alluvial deposits. These soils are not anticipated to exhibit properties characteristic of expansive soils, and therefore would not create a substantial risk to life or property. No impact is anticipated.

**Mitigation:** None Required

**Impact 3.4-5: The project could be located within areas that include soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (Less than Significant)**

The proposed project is not anticipated to generate substantial new sources of wastewater. New restrooms would be vault-type, and would store wastewater on-site for periodic pump-out. Improvements to restroom facilities, including installation of low-flow toilets, would not result in increased wastewater production from those facilities. Therefore, any impacts related to the use of septic tanks or other alternative wastewater disposal systems within soils incapable of supporting their use would be less than significant.

**Mitigation:** None Required

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## 3.5 Hydrology and Water Quality

### Introduction

This chapter provides an overview of the hydrologic conditions present within and adjacent to Huddart and Wunderlich Parks, including existing natural streams, major drainages, and a description of the general drainage conditions associated with existing park structures, roadways, and other improvements. Potential impacts associated with changes from these baseline conditions under the proposed Huddart-Wunderlich Master Plan are discussed, as well as pertinent mitigation measures. A discussion of fish and fish habitat is contained within Section 3.6 of this EIR, which discusses potential impacts to Biological Resources.

### 3.5.1 Setting

#### Hydrologic Setting

Huddart and Wunderlich Parks are located within the northern portion of the San Francisquito Creek Watershed, which is one of the few remaining, un-dammed watersheds within the Bay Area. San Francisquito Creek is fed by numerous creeks and small drainages located in the Santa Cruz Mountains in the vicinity of the San Andreas Fault. The watershed comprises approximately 37 square miles of hilly, upland areas, including Huddart and Wunderlich Parks. Tributaries relevant to the proposed Master Plan include West Union Creek and Alambique Creek. San Francisquito Creek ultimately discharges into the southwestern portion of the San Francisco Bay.

The existing developed drainage systems in the parks and surrounding areas is approaching 100 years in age or older, and these drainage features will likely begin to fail at a more rapid pace, thereby increasing future maintenance and repair costs of the existing system. Past culvert replacements have been implemented as a portion of the flood control measures implemented by park personnel.

#### ***Huddart Park***

West Union Creek, an intermittent stream located along the northwestern edge of Huddart Park, is a primary tributary to San Francisquito Creek. Its sandy to gravelly bottom supports native steelhead, and it is fed by several intermittent tributaries within Huddart Park, including McGarvey Gulch Creek, Squealer Gulch Creek, and many smaller drainages. Many culverts are located along the trail and road systems of Huddart Park, primarily associated with smaller drainages. During storm events, drainages and creeks within Huddart Park carry high loads of suspended sediment.

#### ***Wunderlich Park***

Storm drainage at Wunderlich Park consists of various natural drainage swales supported by a major tributary to the San Francisquito Creek Watershed; this tributary includes Alambique

Creek, which flows westerly across the park. Many other smaller tributaries extend from Alambique Creek up into the Wunderlich Park property.

## **Erosion, Sedimentation, and Water Quality**

Erosion of sediment associated with trails, roadways, fire roads, and other features within Huddart and Wunderlich Parks contribute to ongoing sedimentation problems within park waterways and downstream creeks, including San Francisquito Creek. Existing erosion, sedimentation, and water quality characteristics within both parks are described within the following text.

### ***Huddart Park***

Existing erosion control features within the park's approximately 23 miles of trails, fire roads, and paved access roads includes ditches, culverts, water bars, cross ditches, and outsloping and insloping trails and roads. Personnel inspect major roadways and fire roads after every major storm event during the winter and spring months, as part of the park's ongoing erosion and sedimentation control maintenance program.

However, several existing sources of erosion and sedimentation within Huddart Park were identified during a field inventory of soil erosion conditions that was conducted during development of the Huddart Wunderlich Master Plan. This study identified several erosion and sedimentation sources including: (1) washout associated with trail drainage crossings, (2) erosion along existing trails, (3) erosion associated with runoff from unpaved parking areas, and (4) erosion associated with culvert crossings. Sedimentation from these sources negatively affects water quality within downstream creeks and other drainages.

### ***Wunderlich Park***

Erosion is an ongoing concern within Wunderlich Park, although insloped roads, water turnouts and water bars, and other antiquated erosion control features within the park provide some level of protection against erosion during periods of excess stormwater runoff. These features are maintained annually by park personnel as part of Wunderlich Park's ongoing erosion and sediment control maintenance program. However, several substantial and ongoing sources of erosion within the park have been identified, and include: (1) erosion and channel incision below culvert crossings; (2) insloped fire roads and other roads and trails that result in substantial erosion along roadways; (3) degraded water bars that fail to prevent water from running directly down dirt roadways; and (4) erosion associated with unpaved parking lots and sloping horse paddocks. Erosion from these sources contributes to high levels of sedimentation within downstream receiving waters.

Water quality along the eastern edge of Wunderlich Park, in the areas near Folger Stable where horse paddocks and other horse facilities are located, also contribute to pollution of Alambique Creek. Of specific concern are horse keeping facilities and practices, including uncovered manure

storage, improper wash-down water containment at the horse wash-down area, surface drainage of manure- and urine-contaminated water, and rainwater leaders emptying onto bare dirt.

## **Flooding**

No portion of Huddart or Wunderlich Parks is located within a 100-year flood zone, as defined by the Federal Emergency Management Agency (FEMA, 1979).

However, during periods of heavy rainfall, drainages located within the vicinity of the Folger Stable complex in Wunderlich Park have experienced substantial flooding, including overflowing of drainages across the stable area, parking lots, and associated facilities. According to park staff and local observers, this flooding resulted primarily from the clogging of an antiquated culvert by debris, which forced flood flows across the Stable complex area.

## **3.5.2 Regulatory Setting**

This section briefly describes federal, state, and local regulations, permits, and policies pertaining to hydrology and water quality, as they apply to the proposed Master Plan.

### **Federal**

#### ***Clean Water Act***

The Clean Water Act (CWA) established the basic structure for regulating discharges of pollutants into the waters of the U.S. The Act specifies a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff.

Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into waters of the U.S., including some wetlands. Activities in waters of the U.S. that are regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. Under Section 404, any person or public agency proposing to locate a structure, excavate, or discharge dredged or fill material into waters of the U.S. or to transport dredged material for the purpose of dumping it into ocean waters must obtain a permit for the proposed activity from the U.S. Army Corps of Engineers (Corps).

Under Section 401 of the CWA every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain a Water Quality Certification that the proposed activity will comply with applicable water quality standards.

CWA Section 402 regulates point and nonpoint source discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program. In California, the SWRCB oversees the NPDES program, which is administered by the Regional Water Quality Control Boards (RWQCB). The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual permits.

## **State**

### ***Porter-Cologne Act***

Under the Porter-Cologne Act, water quality objectives are limits or levels of water quality constituents or characteristics that are established for reasonable protection of beneficial uses. The Porter-Cologne Act requires the RWQCB to establish water quality objectives, while acknowledging that water quality may be changed to some degree without unreasonably affecting beneficial uses. Designated beneficial uses, together with the corresponding water quality objectives, also constitute water quality standards under the Clean Water Act. Therefore, the water quality objectives form the regulatory references for meeting State and Federal requirements for water quality control. A change in water quality is only allowed if the change is consistent with the maximum beneficial use of the waters of the State, would not unreasonably affect the present or anticipated beneficial uses, and would not result in water quality lower than that specified in applicable water quality control plans.

### ***Basin Plan and Water Quality Objectives***

The Porter-Cologne Act provides for the development and periodic review of Water Quality Control Plans (Basin plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a water body (i.e., the reasons why the water body is considered valuable), while water quality objectives represent the standards necessary to protect and support those beneficial uses. Basin plans are primarily implemented by using the NPDES permitting system and the issuance of waste discharge requirements (WDRs) to regulate waste discharges so that water quality objectives are met. Basin plans provide the technical basis for determining waste discharge requirements and taking regulatory enforcement actions if deemed necessary.

A basin plan has been adopted for the San Francisco Bay Region (Region 2; SFRWQCB, 2006). This plan has set water quality objectives for all surface waters in the region for the following substances and parameters: bacteria, bioaccumulation, biostimulatory substances, color, dissolved oxygen, floating material, oil and grease, population and community ecology, pH, radioactivity, salinity, sediment, settleable material, suspended material, sulfide, tastes and odors, temperature, toxicity, turbidity, and un-ionized ammonia. In addition, Region 2 has also set the following water quality objectives for groundwater for the following parameters: bacteria, organic and inorganic chemical constituents, radioactivity, and taste and odor. Specific objectives for concentrations of chemical constituents are also applied to bodies of water based on their designated beneficial uses (SFRWQCB, 2006).

### ***Streambed Alteration Agreement Program***

Under Sections 1600-1616 of the California Fish and Game Code, notification to the California Department of Fish and Game (CDFG) is required by any person, business, state or local government agency, or public utility that proposes an activity that will substantially divert or obstruct the natural flow or substantially change use of any material from the bed, channel, or

bank of any river, stream, or lake, or deposit or dispose debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. The Streambed Alteration Agreement that the notifying entity and CDFG execute after such notification identifies potential impacts of construction and mitigation measures required to minimize and avoid impacts.

## **Local**

The San Mateo County General Plan (San Mateo County, 1986) outlines the following goals and objectives regarding water and water quality, as relevant to the proposed Project:

### **Vegetative, Water, Fish, and Wildlife Resources Policies**

1.1 *Conserve, Enhance, Protect, Maintain and Manage Vegetative, Water, Fish, and Wildlife Resources*

Promote the conservation, enhancement, protection, maintenance, and managed use of the County's vegetative, water, fish, and wildlife resources.

1.3 *Protection and Productive Use of Economically Valuable Vegetative, Water, Fish, and Wildlife Resources*

Protect the availability and encourage the productive use of the County's economically valuable vegetative, water, fish, and wildlife resources in a manner which minimizes adverse environmental impacts.

1.4 *Access to Vegetative, Water, Fish, and Wildlife Resources*

### **Water Supply Policies**

10.1 *Coordinate Planning*

Coordinate water supply planning with land use and wastewater management planning to assure that the supply and quality of water is commensurate with the level of development planned for an area.

10.2 *Safeguarding Water Supplies*

Seek to safeguard the productive capacity of groundwater aquifers and storage reservoirs

10.3 *Water Conservation*

Promote the conservation and efficient use of water supplies

10.4 *Development of Water Supplies*

Promote the development of water supplies to serve: (1) agricultural uses, as the highest priority; (2) domestic uses; and (3) recreational uses

## 3.5.3 Impacts and Mitigation Measures

### Significance Criteria

According to Appendix G of the CEQA Guidelines, the proposed Project could have a significant impact related to hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

### Approach to Analysis

The impact analysis focuses on foreseeable changes to the baseline conditions attributable to the Project in the context of the above significance criteria. Based on the discussion of hydrologic and water quality conditions provided in the setting discussion, and in the context of the significance criteria prescribed above, the impact analysis focuses on potentially significant changes to water quality, drainage, erosion and siltation, groundwater, and potential impacts related to flooding.

## Impacts and Mitigation Measures

**Impact 3.5-1: The proposed Master Plan includes projects that would violate water quality standards or waste discharge requirements. (Less than Significant with Mitigation)**

### Erosion and Sedimentation

High rates of sedimentation within both Huddart and Wunderlich Parks, as described above, contribute to high levels of sedimentation within Alambique Creek, Union Creek, McGarvey

Gulch Creek, San Francisquito Creek, and other creeks and drainages within and downstream of the park areas. Additionally, runoff from existing horse facilities, including horse wash-down areas, horse paddocks, and open manure piles, currently contributes to reduced water quality within receiving waters, including San Francisquito Creek.

The Huddart-Wunderlich Master Plan recognizes these existing erosion, sedimentation, and water pollution problems, and provides a series of erosion and sedimentation control measures, outlined in Chapter 5 and Appendix E of the Master Plan, to reduce the severity of these problems. Briefly, these measures include implementation or construction of appropriate road sloping, water turnouts, broad-based drainage dips, rolling dips, water bars, ditches, culvert crossing installation and replacements, maintenance and repair programs, preparation of a sediment assessment study, compliance with applicable governmental requirements, upgrades for horse paddocks, manure pile containment, and upgrades for horse wash-down areas to reduce existing sources of waterborne pollution.

Implementation of these measures would substantially reduce the amount of erosion and sedimentation, associated with roads and trails, that presently occurs within Huddart and Wunderlich Parks. However, potential additional sources of erosion would result from construction of the following proposed Master Plan components: (1) within Huddart Park: additional parking at picnic areas, facility access points, and for horse trailers; installation of new structures or replacement of existing structures, including residences, restrooms, open shelters, and other facilities; archery range expansion; construction of new, or realignment of existing trails and fire roads; and (2) within Wunderlich Park: reconfiguration of the Folger Stable area; construction of additional parking including horse trailer parking; implementation of fire hazard reduction programs; installation of a permanent public restroom; relocation of horse paddock areas; installation of new manure holding areas; installation of a new hay and shaving storage facility; and construction of new roads.

Implementation of these proposed improvements could result in increased runoff, including sediment-laden or polluted runoff, which could enter into downstream waterways including, eventually, San Francisquito Creek. While compliance with erosion and sedimentation control measures outlined within the Master Plan and the San Mateo County Watershed Protection Program would partially mitigate these potential impacts, complete mitigation to less than significant levels would require incorporation of Mitigation Measure 3.5-1a, which provides for preparation and abidance to a stormwater pollution prevention plan, as well as other measures (SMCDPW, 2004).

Installation of closed vault-type restroom facilities would not result in a change in water or groundwater quality within the parks. However, use of a septic system associated with proposed new residences, or the new interpretive center proposed for Huddart Park, could potentially lead to degradation of water resources, including groundwater and surface streams and other drainages. Implementation of Mitigation Measure 3.5-1b would reduce these potential impacts to less than significant levels by ensuring that, if a septic system is utilized, seepage from the system shall not impact the water quality of adjacent streams or other drainages.

**Mitigation Measure 3.5-1a:** A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and adhered to for construction of all new facilities, including but not limited to new or realigned trails, roadways and parking lots, new structures including buildings, shelters, and bridges, manure storage areas, paddock and horse wash-down improvements, retrofit or upgrades to existing buildings, and campground, picnic area, and archery facilities expansion areas. The SWPPP shall identify pollutant sources that may affect the quality of stormwater discharge, and shall require the implementation of Best Management Practices (BMPs) identified in the County Watershed Protection Program Maintenance Standards to reduce pollutants, including sediment, in storm water discharges.

BMPs may include, but would not be limited to, the following measures:

- Measures to reduce turbidity of stormwater runoff prior to discharge, including temporary detention before discharge.
- Excavation and grading activities, including those associated with trail and roadway construction, in areas with steep slopes or directly adjacent to open water shall be scheduled for the dry season only (April 30 to October 15), to the extent possible. This will reduce the chance of severe erosion from intense rainfall and surface runoff.
- If excavation for facility installation, retrofit, or upgrade occurs during the rainy season, storm runoff from the construction area shall be regulated through a storm water management/erosion control plan that shall include temporary onsite silt traps and/or basins with multiple discharge points to natural drainages and energy dissipaters. Stockpiles of loose material shall be covered and runoff diverted away from exposed soil material. If work stops due to rain, a positive grading away from slopes shall be provided to carry the surface runoff to areas where flow would be controlled, such as the temporary silt basins. Sediment basins/traps shall be located and operated to minimize the amount of offsite sediment transport. Any trapped sediment shall be removed from the basin or trap and placed at a suitable location onsite, away from concentrated flows, or removed to an approved disposal site.
- Temporary erosion control measures (such as fiber rolls, staked straw bales, detention basins, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) shall be provided until perennial revegetation or landscaping is established and can minimize discharge of sediment into nearby waterways. For construction within 500 feet of a water body including all creeks and drainages, appropriate erosion control measures shall be placed upstream adjacent to the water body.
- Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.
- No disturbed surfaces will be left without erosion control measures in place during the rainy season, from October 15<sup>th</sup> through April 30<sup>th</sup>.
- Erosion protection shall be provided on all cut-and-fill slopes. Revegetation shall be facilitated by mulching, hydroseeding, or other methods and shall be initiated as soon as possible after completion of grading and prior to the onset of the rainy season (by October 15).

- A vegetation and/or engineered buffer shall be maintained, to the extent feasible, between the construction zone and all surface water drainages including riparian zones.
- Vegetative cover shall be established on the construction site as soon as possible after disturbance.
- BMPs selected from the Master Plan and San Mateo County Watershed Protection Program and implemented for completion of Master Plan components shall be in place and operational prior to the onset of major earthwork on the site. The construction phase facilities shall be maintained regularly and cleared of accumulated sediment as necessary. Effective mechanical and structural BMPs that could be implemented at the project site include the following:
  - Mechanical storm water filtration measures, including oil and sediment separators or absorbent filter systems such as the Stormceptor® system, can be installed within the storm drainage system to provide filtration of storm water prior to discharge.
  - Vegetative strips, high infiltration substrates, and grassy swales can be used where feasible throughout the development to reduce runoff and provide initial storm water treatment.
  - Roof drains shall discharge to natural surfaces or swales where possible to avoid excessive concentration and channelizing storm water.
  - Permanent energy dissipaters can be included for drainage outlets.
  - The water quality detention basins shall be designed to provide effective water quality control measures including the following:
    - Maximize detention time for settling of fine particles;
    - Establish maintenance schedules for periodic removal of sedimentation, excessive vegetation, and debris that may clog basin inlets and outlets;
    - Maximize the detention basin elevation to allow the highest amount of infiltration and settling prior to discharge.
- Hazardous materials such as fuels and solvents used on the construction sites during excavation and other construction activities shall be stored in covered containers and protected from rainfall, runoff, vandalism, and accidental release to the environment. All stored fuels and solvents will be contained in an area of impervious surface with containment capacity equal to the volume of materials stored. A stockpile of spill cleanup materials shall be readily available at all construction sites. Employees shall be trained in spill prevention and cleanup, and individuals shall be designated as responsible for prevention and cleanup activities.
- Equipment shall be properly maintained in construction areas and designated areas with runoff and erosion control measures, in order to minimize accidental release of pollutants.

**Mitigation Measure 3.5-1b:** New septic systems shall be installed in accordance with County and State guidelines. Additionally, septic systems shall be located away from surface drainages, creeks, and other surface waterways in order to reduce potential migration of septic system leachate into surface waters.

**Significance after Mitigation:** Less than Significant

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**Impact 3.5-2: The proposed Master Plan would 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. (No Impact)**

Implementation of the proposed Master Plan would include construction of new buildings, parking lots, and other improvements that include impervious surfaces. Impervious surfaces reduce or eliminate groundwater infiltration and, if extensive, could negatively affect groundwater recharge. However, the proposed new impervious surfaces under the Master Plan would be isolated to only the relatively small areas where improvements are scheduled. These new impervious surfaces would not restrict groundwater infiltration throughout adjacent areas or undisturbed portions of Huddart and Wunderlich Parks. Therefore, no significant change in aquifer volume is anticipated as a result of interference with groundwater recharge. Also, implementation of the Master Plan would not result in additional groundwater pumping, and therefore would not directly affect groundwater levels.

**Mitigation:** None required

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**Impact 3.5-3: The proposed Master Plan would substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site. (Less than Significant with Mitigation)**

Implementation of the proposed Master Plan would result in construction/replacement of river crossings and bridges along West Union Creek. These improvements would be designed to minimize changes to stream flow, and to avoid alteration of the stream course. Therefore, construction/replacement of river crossings and bridges would result in less than significant erosion and siltation impacts.

Construction of proposed parking lot expansions or additional parking lots, construction or retrofit of buildings and other structures, fire roads, trails, horse facilities, and other improvements within Huddart and Wunderlich Parks could result in increased erosion or siltation on- or off-site. However, the proposed Master Plan also provides for construction or repair of drainage features including swales, drainage ditches, culverts, and other features that would substantially reduce erosion and siltation impacts. These impacts would be reduced to less than significant levels through erosion and sedimentation control measures prescribed within the proposed Master Plan, and through implementation of Mitigation Measure 3.5-1a. No further mitigation would be required.

### **Required Permits**

Construction or retrofit of bridges or culverts within Union Creek, McGarvey Gulch Creek, and other creeks within the Master Plan Area would require a Section 404 permit. The Project will need to obtain a Section 401 Water Quality Certification, issued by the SWRCB, to complete requirements for obtaining a Section 404 permit from the Corps or permits from other federal agencies. Installation of these facilities would also require a CDFG Streambed Alteration Agreement. Construction of the proposed facilities, including roadways, parking lots, trails, and structures, would require a General Construction Permit for stormwater discharges, issued by the State Water Resources Control Board.

**Mitigation Measure 3.5-3:** Implement Mitigation Measure 3.5-1a.

**Significance after Mitigation:** Less than Significant

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**Impact 3.5-4: The proposed Master Plan would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of runoff, or otherwise substantially degrade water quality. (Less than Significant with Mitigation)**

Increased impervious surfaces, including paved roadways, buildings, and other facilities that do not allow infiltration of water, could provide substantial additional sources of stormwater runoff. Additionally, construction or relocation of trails, roadways, and other park facilities, as described within the Master Plan, could result in increased localized runoff that would impact stormwater drainage systems. However, adherence to the erosion and sedimentation control provisions outlined in the discussion of Impact 3.5-1 and detailed within the Master Plan would partially reduce these potential impacts, while implementation of Mitigation Measure 3.5-1a would reduce these impacts to less than significant levels. No further mitigation is required.

**Mitigation Measure 3.5-4:** Implement Mitigation Measure 3.5-1a.

**Significance after Mitigation:** Less than Significant

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**Impact 3.5-5: The proposed Master Plan would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other delineation map. (No Impact)**

The proposed Master Plan would result in construction of a single residence in Huddart Park for use by park personnel. This residence would not be located within any portion of a 100-year flood area, as designated on a Flood Insurance Rate Map, or any other delineation map. Therefore, no impact would occur.

**Mitigation:** None required

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**Impact 3.5-6: The proposed Master Plan would place within a 100-year flood hazard area structures which would impede or redirect flood flows. (Less than Significant with Mitigation)**

No portion of Huddart or Wunderlich Parks is located within a 100-year flood zone. However, new or replacement bridges proposed for Union Creek or within other portions of Huddart Park could be located within areas subject to flooding, and could therefore potentially impede or redirect flood flows. Implementation of Mitigation Measure 3.5-6 would reduce these potential impacts to less than significant levels. Other potential sources of localized flooding are discussed within Impact 3.5-4 of this Chapter.

**Mitigation Measure 3.5-6:** Project-level plans for all new or replacement bridges shall incorporate design measures that site bridges above 100-year flood heights, in order to eliminate potential interference with flood flows.

**Significance after Mitigation:** Less than Significant

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**Impact 3.5-7: The proposed Master Plan would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. (No Impact)**

Two dams are located within the vicinity of the Project Area. These include Crystal Springs Reservoir, which is located approximately 2.5 miles northwest of Huddart Park, and approximately 6 miles northwest of Wunderlich Park, and Bear Gulch Reservoir, which is located approximately 2.5 miles east of Huddart Park, and 2.5 miles northeast of Wunderlich Park. Failure of this dam would result in inundation of San Mateo Creek or portions of Menlo Park, for Crystal Springs Reservoir and Bear Gulch Reservoir, respectively. However, due to the relatively steep topographical relief between these areas and Huddart and Wunderlich Parks, inundation of the Master Plan Area due to dam failure would not be anticipated to occur. There are no leveed areas located within or directly adjacent to the Master Plan area that would be anticipated to produce flooding within Huddart or Wunderlich Parks in the event of levee failure. Therefore, no impact is anticipated.

**Mitigation:** None required

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**Impact 3.5-8: Proposed Master Plan improvements would not be subject to inundation by seiche, tsunami, or mudflow. (No Impact)**

Seiche is defined as earthquake-induced wave action within a large body of water. Given its close proximity to the San Andreas Fault, Crystal Springs Reservoir, located approximately 2.5 miles

northwest of Huddart Park, and approximately 6 miles northwest of Wunderlich Park, would be subject to seiche during seismic movement. Bear Gulch Reservoir, located approximately 2.5 miles east of Huddart Park and approximately 2.5 miles northeast of Wunderlich Park, would also be subject to seiche during seismic movement. However, the area of the proposed Master Plan is not located adjacent to or downstream of the Crystal Springs Reservoir or Bear Gulch Reservoir, and therefore would not be inundated by a large wave within the lake.

Because the proposed Master Plan area is not located adjacent to the Pacific Ocean or the San Francisco Bay, and is within an area of relatively high topographic relief, it would not be inundated by a tsunami occurring within either water body.

Because the proposed Master Plan area is located within a region of relatively high topographic relief, and is not located downstream of a large water body or within the floodplain of a river or other hydrologic feature anticipated to produce mudflow, no inundation of the proposed Master Plan area by mudflow would be anticipated to occur. Potential impacts related to landslides are discussed under Impact 3.4-3 in Chapter 3.4 of this EIR pertaining to Geology, Soils, and Geohazards. Therefore, no impact from seiche, tsunami, or mudflow would be anticipated.

**Mitigation:** None required

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## References – Hydrology and Water Quality

- County of San Mateo, 1986. General Plan Policies. Department of Environmental Management, Planning and Building Division, San Mateo County, CA, November, 1986.
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- Governor's Office of Planning and Research, California Environmental Quality Act, *CEQA Guidelines*, Appendix G, 2007.
- San Francisco Bay Regional Water Quality Control Board, 2006. Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), Effective December 22, 2006. Available at: [www.waterboards.ca.gov/sanfranciscobay/basinplan.htm](http://www.waterboards.ca.gov/sanfranciscobay/basinplan.htm)
- San Mateo County Department of Public Works (SMCDPW), Watershed Protection Program, Maintenance Standards, Accessed online June 21, 2007 [http://www.co.sanmateo.ca.us/smc/departments/dpw/home/0,,5562541\\_5562589\\_16435276,00.html](http://www.co.sanmateo.ca.us/smc/departments/dpw/home/0,,5562541_5562589_16435276,00.html), 2004.

## 3.6 Biological Resources

### Introduction

This chapter identifies the existing biological resources at Huddart and Wunderlich Parks (parks) and surrounding areas, identifies the federal, state, and local regulations pertaining to biological resources within the region, and at a program-level of detail, describes impacts to those biological resources as well as mitigation measures to reduce project-related potentially significant impacts. Information used in the preparation of this section was primarily obtained from existing documents pertaining to the parks, including the *Draft Huddart and Wunderlich Parks Master Plan* (Plan) (County of San Mateo, 2006), the *San Mateo County Parks Vegetation Resources* (Rana Creek, 2002), and the *Decision Making Guidelines for Vegetation Management* (County of San Mateo, 2006). Additional information was obtained from the California Natural Diversity Database (CNNDDB, 2007), California Native Plant Society Electronic Inventory (CNPS, 2007), U.S. Fish and Wildlife Service (USFWS, 2007); the National Resources Conservation Service Soil Survey, (NRCS, 2007), the National Wetlands Inventory (USFWS, 2007), a reconnaissance-level field survey, and standard biological literature.

Vegetation types and wildlife habitats were identified by Rana Creek Habitat Restoration biologists in 2002 using aerials and field observations. Environmental Science Associates (ESA) conducted a reconnaissance-level field survey focusing on many of the potential project sites proposed under the Master Plan on January 11, 2007 to gather first-hand information and verify existing data on vegetative communities and wildlife habitats within the parks.

### 3.6.1 Setting

#### Regional Setting

The Huddart and Wunderlich Parks regional setting was described in detail in Chapter II, *Project Description*. The parks are located in the Bay Area-Delta Bioregion (as defined by the State's Natural Communities Conservation Program). This Bioregion is comprised of a variety of natural communities, which range from salt marshes to chaparral to oak woodlands. The high diversity of vegetation and wildlife found in San Mateo County, which reflects that of the region as a whole, is a result of topographic and micro-climate diversity that promote relatively high levels of endemism<sup>1</sup>. This, in combination with the rapid pace of development in the region, has resulted in a relatively high degree of endangerment for local flora and fauna.

#### Local Setting

Huddart and Wunderlich Parks are located on the steep eastern slopes of the Santa Cruz Mountains, which are dissected by numerous small drainages. Sandstone derived soils support a mosaic of native vegetation types at both parks, depending on slope position and aspect, as well as soil depth. These include coyote brush scrub, chaparral, live oak woodland, mixed evergreen forest, and redwood forest. Non-native vegetation types mapped by Rana Creek Habitat Restoration (2002) include non-native grasslands, eucalyptus stands, and developed, landscaped

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<sup>1</sup> *Endemism* refers to the degree to which the distribution of organisms or taxa are restricted to a geographical region or locality and are thus individually characterized as endemic to that area.

areas. Vegetation types occurring at each Park are presented below in Table 3.6-1, along with approximate acreages for each, and are shown in Figures 3.6-1 and 3.6.2. The various communities are then described in the following section.

**TABLE 3.6-1  
 VEGETATION TYPES WITHIN THE PLAN AREA**

Vegetation Type	Acreage	
	Huddart Park	Wunderlich Park
Developed/Landscaped	20.5	11.5
Non-native grassland	0	21
Coastal scrub	0	54
Chaparral	70	0
Coast live oak woodland	24	8
Mixed evergreen forest	580	645
Redwood forest	300	165
Eucalyptus woodland	0	18

SOURCE: Rana Creek, 2002

## Vegetation Communities and Wildlife Habitats

### *Developed/Landscaped*

#### **Huddart Park**

Developed and landscaped areas in Huddart Park include campgrounds, picnic areas, buildings, parking areas, trails, and the Werder “meadow”. Developed areas are vulnerable to invasion by non-native species, such as French broom (*Genista monspessulana*), which occurs in open areas along trails and roads in several areas of the park. The perimeter of the Werder meadow has been planted with Monterey pine (*Pinus radiata*). The highly invasive yellow starthistle (*Centaurea solstitialis*) occurs at the Oak Group Area and jubata grass (*Cortaderia jubata*) occurs along Richard’s Road (Rana Creek, 2002).

#### **Wunderlich Park**

Developed and landscaped areas in Wunderlich Park include the boarding stables and paddocks, other riding facilities, and parking lots, as well as park buildings. Overstory here includes native oak and walnut mixed with non-native eucalyptus and non-native horticultural and ruderal species, such as vinca, non-native grasses, and Italian thistle dominate the understory.

Developed and landscaped areas provide foraging or nesting habitat for generalist, and sometimes non-native, wildlife species that can tolerate human presence and activities. These include birds and small mammals such as western scrub jay (*Aphelocoma californica*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), raccoon (*Procyon lotor*), and house mouse (*Mus musculus*). For example, the Werder meadow has been colonized by pocket gophers (*Thomomys bottae*). Although these areas often do not provide suitable habitat for native wildlife

due to higher human activity levels, under appropriate conditions they may support sensitive wildlife species.

### ***Non-native grassland***

#### **Huddart Park**

This vegetation type was not mapped as occurring in Huddart Park (Rana Creek, 2002) and was not observed in reconnaissance done for this EIR.

#### **Wunderlich Park**

The largest areas of non-native grassland within Wunderlich Park occur in the area known as the Meadows. These grasslands are dominated by introduced grasses and forbs including wild oat (*Avena* spp.), annual fescue (*Vulpia* spp.), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*). Filaree (*Erodium* spp.) and plantain (*Plantago* spp.) are also common. Most of the grassland areas of Wunderlich Park also contain a native perennial grass component, which includes California oat grass (*Danthonia californica*) and blue wildrye (*Elymus glaucus*). These grasslands were most likely occupied by native perennial grasslands, before non-native species gained a foothold in the area.

Most of Wunderlich Park's grasslands occur in a mosaic with coyote brush scrub and, consistent with ecological successional processes observed throughout the Bay Area, in the absence of regular fire or other disturbance, scrub shrubs are colonizing the grasslands (McBride, 1974). Over time, with a lack of management practices aimed at maintaining these areas in grassland cover, the Park's remaining grasslands will convert to coyote brush scrub and then eventually to oak or mixed evergreen woodlands. Invasive weeds occur within or at the edges of grasslands within the park include bull thistle (*Cirsium vulgare*), Italian thistle, yellow starthistle, and Spanish broom (*Spartium junceum*). Although mowing has prevented these weeds from invading many of the flatter areas, they are common along grassland edges and steep slopes where tractor mowing is not possible (Rana Creek, 2002).

Non-native annual grasslands, can provide refuge for reptiles such as western fence lizard (*Sceloporus occidentalis*), alligator lizard (*Elgaria multicarinata*), and gopher snake (*Pituophis melanoleucus*) as well as grassland birds such as mourning dove (*Zenaida macroura*) and golden-crowned sparrow (*Zonotrichia atricapilla*). Grasslands also serve as important foraging grounds for aerial and ground-foraging insect eaters such as *Myotis* bat species. Mammals such as Botta's pocket gopher, California ground squirrel (*Spermophilus beecheyi*), and western harvest mouse (*Reithrodontomys megalotis*), commonly forage within both native and non-native grasslands. These small rodents may attract raptors, including red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and white-tailed kite (*Elanus leucurus*).

### ***Coastal scrub***

#### **Huddart Park**

This vegetation type was not mapped as occurring in Huddart Park (Rana Creek, 2002) and was not observed in reconnaissance done for this EIR.

### **Wunderlich Park**

Coastal scrub is a highly variable plant community and often intergrades with various chaparral types, with the vegetation type determined by dominant species. At Wunderlich Park, this vegetation type is dominated by coyote brush (*Baccharis pilularis*), with scrub and chaparral associates that include chamise (*Adenostoma fasciculatum*), toyon (*Heteromeles arbutifolia*), coffeeberry (*Rhamnus californica*), yerba santa (*Eriodictyon californicum*), poison oak (*Toxicodendron diversilobum*), golden chinquapin (*Chrysolepis chrysophylla*), chaparral pea (*Pickeringia montana*), and young coast live oak (*Quercus agrifolia*). Coyote brush scrub is typically found between grasslands and mixed evergreen forest or oak woodland on poor, thin soils. Fire plays an important role in the composition and maintenance of coastal scrub and chaparral community types. Understory species are sparsely distributed in mature scrub stands. Fire or other disturbance serves to open up the shrub canopy and volatilize allelopathogens<sup>2</sup> in the soil, allowing a diversity of understory ferns, grasses, and flowering herbs to emerge. As the shrub canopy re-establishes, often through stump sprouting of burned shrubs, the herbaceous understory is unable to persist. Similarly, in the absence of fire or other disturbance, successional processes at the Park are trending towards a conversion of scrub habitats to woodland and eventually mixed evergreen forest.

Coastal scrub provides nesting and foraging habitat for various birds, including spotted towhee (*Pipilo maculatus*) and California towhee, common bushtit (*Psaltriparus minimus*), western scrub jay, wren-tit (*Chamaea fasciata*) and California quail (*Callipepla californica*). Raptors may forage over such areas and prey upon some of these small birds, as well as small mammals and reptiles such as California ground squirrel, brush rabbit (*Sylvilagus bachmani*), and western fence lizard. Coastal scrub and chaparral, described below, provide important foraging habitat for Columbian black-tailed deer (or mule deer) (*Odocoileus hemionus columbianus*).

### **Chaparral**

#### **Huddart Park**

At Huddart Park chaparral is typically found on relatively thin soils on steep ridges and mature stands form a nearly impenetrable mass of shrubs. Similar to coastal scrub, chaparral is adapted to fire and in the absence of disturbance will convert to adjacent woodland types as long as soils will allow the establishment of trees. According to Rana Creek (2002) this conversion is occurring throughout the Park and most chaparral stands also support scattered madrone, tan oak, or fir. As a further illustration of the successional process, chaparral species persist in the understory of mixed evergreen forest in some areas.

A number of shrub species characterize the chaparral within the park. Manzanita (*Arctostaphylos* sp.) is the dominant species within this community. Shrub associates include chamise (*Adenostoma fasciculatum*), toyon (*Heteromeles arbutifolia*), coffeeberry (*Rhamnus californica*), yerba santa (*Eriodictyon californicum*), golden chinquapin (*Chrysolepis chrysophylla*), and chaparral pea (*Pickeringia montana*).

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<sup>2</sup> Toxic chemicals produced by many scrub and chaparral species that inhibit the germination and/or growth of other plants.

Wildlife utilizing chaparral habitat is expected to be similar to that described for coastal scrub above.

### **Wunderlich Park**

This vegetation type was not mapped as occurring in Wunderlich Park (Rana Creek, 2002) and was not observed in reconnaissance done for this EIR.

### **Coast live oak woodland**

#### **Huddart Park**

Coast live oak woodland covers approximately 24 acres of Huddart Park, with the only large area of this vegetation type occurring in the eastern section of the park along Kings Mountain Road. The overstory of this community is dominated by coast live oak (*Quercus agrifolia*) and interior live oak (*Q. wislizenii*). Additional associated tree species include California black oak (*Q. kelloggii*), California buckeye (*Aesculus californica*), and bigleaf maple (*Acer macrophyllum*). Poison oak (*Toxicodendron diversilobum*) and blackberry (*Rubus ursinus*) are common in the understory, with herbaceous associates including hound's tongue (*Cynoglossum grande*), yerba buena (*Satureja douglasii*), and blue wildrye. Sudden Oak Death Syndrome (SODS), a fungal pathogen that attacks and kills oak, tanoak, and a number of other species, is becoming an increasing threat to oak woodlands throughout coastal California. Trees have been tested several times in the parks recently and to date, this disease has not been detected (Priscilla Alvarez, pers. communication January 11, 2006).

#### **Wunderlich Park**

Coast live oak woodland accounts for approximately 8 acres at Wunderlich Park, occurring primarily in the central area of the park known as The Meadows. Coast live oak dominates the overstory and tree layer associates are similar to those found at Huddart Park, but lacking interior live oak. The understory here is also similar to that described above for Huddart park.

In general, oak woodland communities in the area support an abundant assortment of common reptiles, amphibians, and small mammals such as western skink (*Eumeces skiltonianus*), Pacific chorus frog (*Hyla regilla*), northern alligator lizard (*Elegaria coerulea*), gopher snake (*Pituophis melanoleucus*), Pacific slender salamander (*Batrachoseps attenuatus*), and dusky-footed woodrat (*Neotoma fuscipes*). Resident and migratory bird species found in oak woodlands include spotted towhee, brown creeper (*Certhia americana*), oak titmouse (*Parus inornatus*), Hutton's vireo (*Vireo huttoni*), western scrub jay, northern flicker (*Colaptes auratus*), dark-eyed junco (*Junco hyemalis*), downy woodpecker (*Picoides pubescens*), and orange-crowned warbler (*Vermivora celata*). These areas may also provide important roosting habitat for *Myotis* bat species, which can roost in hollow trees and crevices in bark. Raptors that may breed and nest in local woodland communities include red-tailed hawk (*Buteo jamaicensis*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), and others. The woodlands and mixed evergreen forest (described below) at Huddart and Wunderlich Parks are known to support raccoon and black-tailed deer. These species provide prey for coyote (*Canis latrans*), bobcat (*Felis rufus*), and mountain lion (*Felis concolor*), which range the mountains and can be found in a number of other habitat types, including scrub and chaparral, as well as mixed evergreen forest.

## **Mixed evergreen forest**

### **Huddart Park**

Mixed evergreen forest at Huddart Park ranges from a relatively open canopy to a dense canopy. Overstory composition also varies according to slope position (elevation) and aspect and resulting micro-climate conditions. This vegetation type covers the largest portion of the Park (Figure 3.6-1). The most common tree species found in this community are coast live oak, tan oak (*Lithocarpus densiflora*), madrone (*Arbutus menziesii*), and California bay (*Umbellularia californica*). Douglas fir (*Pseudotsuga menziesii*), California black oak, interior live oak, and bigleaf maple occur as scattered associates. Typical understory species in the park include wood rose (*Rosa gymnocarpa*), coastal wood fern (*Dryopteris arguta*), ocean spray (*Holodiscus discolor*), western bracken fern (*Pteridium aquilinum*), yerba buena, hazelnut (*Corylus cornuta*), creeping snowberry (*Symphoricarpos mollis*), and poison oak. Blue blossom (*Ceanothus thyrsiflorus*) and toyon are common in sunnier openings. Mixed evergreen forest covers most of the Park. This prevalence may be a result of historic logging in the area.

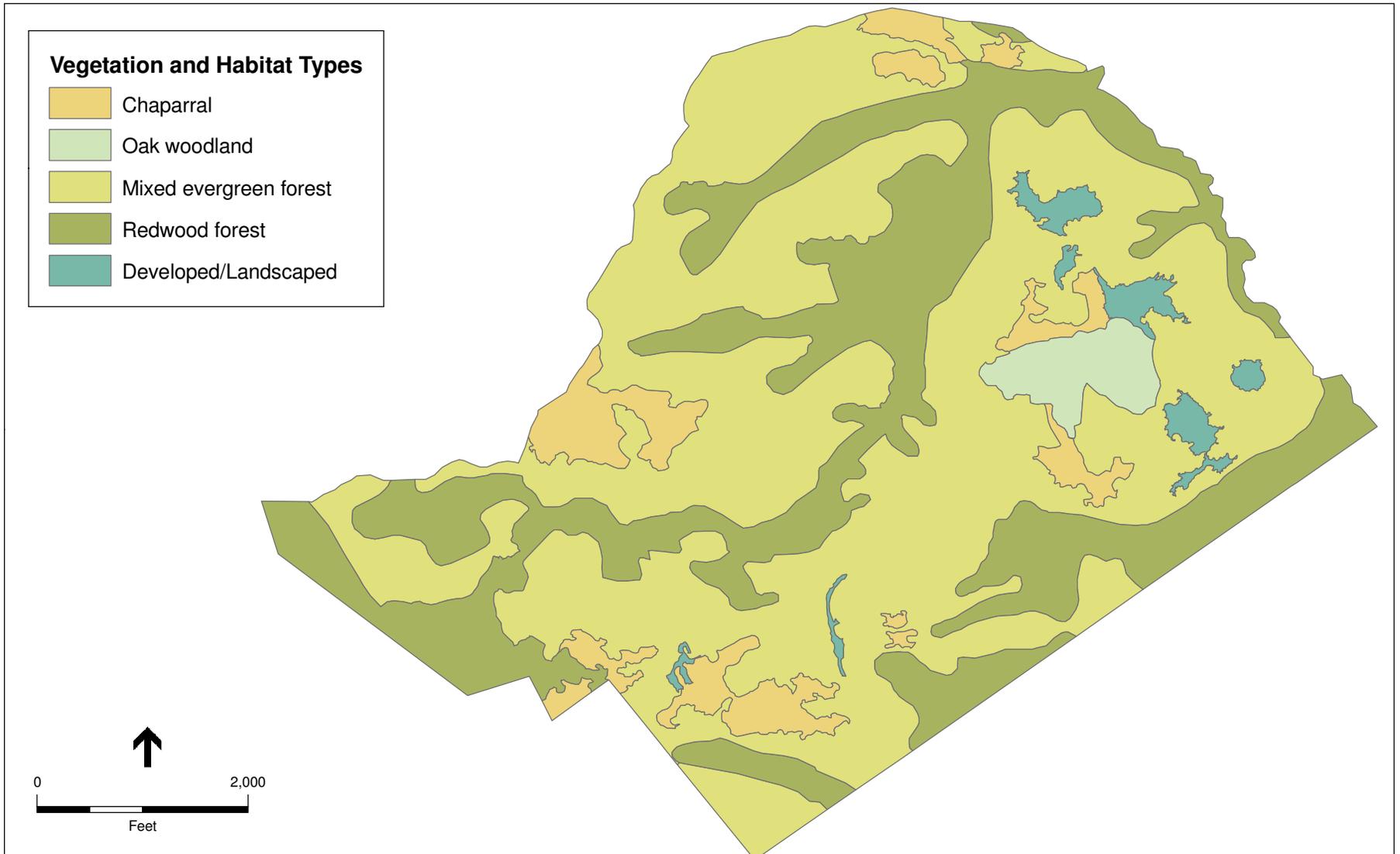
Mixed evergreen forest supports a diversity of wildlife similar to that described above for oak woodlands. This community also includes birds such as band-tailed pigeon (*Columba fasciata*), brown creeper (*Certhia americana*), and varied thrush (*Ixoreus naevius*) that utilize the resources provided by the additional types of trees found there.

### **Wunderlich Park**

Mixed evergreen forest also provides the largest cover type at Wunderlich Park (Figure 3.6-2). Community composition here is similar to that described above for Huddart Park.

Mixed evergreen forest is the dominant plant community in the western portion of Wunderlich Park where topography consists of rolling hills. It is also dominant in the central portions of the Park. As described above, composition varies from mesic areas where Douglas fir or redwood dominate to drier slopes dominated by coast live oak, tan oak, madrone, and California bay. These areas have only scattered fir and redwood (Rana Creek, 2002).

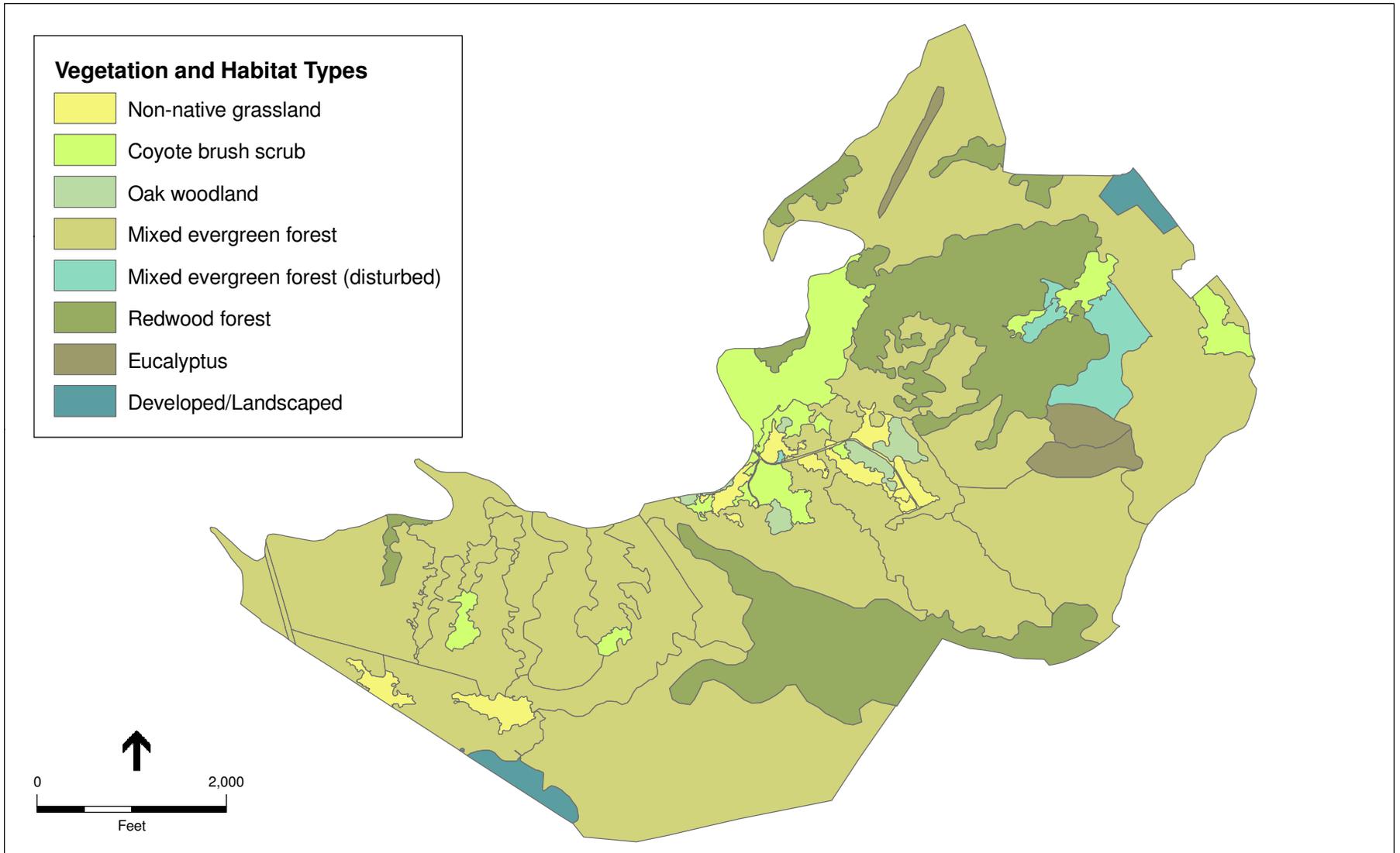
There are several areas mapped as mixed evergreen forest (disturbed) where the overstory contains a relatively high non-native component, including blue-gum eucalyptus (*Eucalyptus globulus*) and acacia (*Acacia decurrens*). Most of these areas are directly next to, or within approximately 300 feet of trails, with the Alambique trail and Meadow trail as particular problem areas. Short sections of the Alambique trail also have periwinkle (*Vinca major*) growing as ground cover along a narrow strip on the sides of the trail. There are also small areas of French broom (*Genista monspessulana*), and more extensive areas of Spanish broom (*Spartium junceum*) on the edges of the forest that should be a high priority for control.



SOURCE:Rana Creek Habitat Restoration, 2002

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**Figure 3.6-1**  
Huddart Park: Vegetation and Habitat Types



SOURCE: Rana Creek Habitat Restoration, 2002

Huddart-Wunderlich Master Plan EIR . 206310

**Figure 3.6-2**  
Wunderlich Park: Vegetation and Habitat Types

## **Redwood forest**

### **Huddart Park**

Redwood forest typically occupies coastal areas where fog drip and precipitation create humid conditions. Redwood (*Sequoia sempervirens*) and Douglas fir (*Pseudotsuga menziesii*) dominate the canopy, their fallen needles forming a thick layer of duff. Several hardwood tree species are also associated with redwood forest including tan oak, California bay, big leaf maple, madrone, and interior live oak. The redwood forest understory is often sparse where canopy is dense and slopes are steep, but contain a diversity of species generally not found in adjacent plant communities. These include huckleberry (*Vaccinium ovatum*), hazelnut, thimbleberry (*Rubus parviflorus*), sword fern (*Polystichum munitum*), and redwood sorrel (*Oxalis oregana*). Redwood violet (*Viola sempervirens*), western trillium (*Trillium ovatum*), red clintonia (*Clintonia andrewsiana*), and several fern species often occur on moister slopes along ravines. Unlike more coastal areas of redwood forest, inland redwood forest is often restricted to canyons and north-facing slopes. Huddart Park is isolated from coastal fog and, as a result, the Park's redwood forest is found primarily in the larger creek canyons: Squealer Gulch Creek, McGarvey Gulch Creek, West Union Creek, and their tributaries. Redwood forest transitions into the predominant mixed evergreen forest on the upper slopes of these canyons where conditions are drier and more exposed. The park was logged between 1850 and 1860 and most of the trees today are stump sprouts, which accounts for the density of the redwood forest. However, remnants of old growth forest can still be found within the Park and some of the largest trees are located at the upper end of McGarvey Gulch.

Redwood forest wildlife is generally lower in diversity than other forest types, in part because the canopy density of second-growth forest precludes the establishment of many understory plants. Moist conditions in the understory support amphibians such as yellow-eyed salamander (*Ensatina eschscholzii xanthopicta*), California slender salamander (*Batrachoseps attenuatus*), and giant salamander (*Dicamptodon ensatus*), as well as coastal rubber boa (*Charina bottae*). Birds found in the redwood forest include brown creeper, varied thrush, chestnut-backed chickadee, and Stellar's jay.

### **Wunderlich Park**

Redwood forest community composition at Wunderlich Park is similar to that described at Huddart Park. This community is found along the upper reaches of Alambique Creek and in the north central portions of the Park along canyons between the Meadows and the Stables.

## **Eucalyptus woodland**

### **Huddart Park**

This vegetation type was not mapped as occurring in Huddart Park (Rana Creek, 2002) and was not observed in reconnaissance done for this EIR.

### **Wunderlich Park**

An 18-acre stand of blue gum eucalyptus grows at the eastern end of Wunderlich Park, southwest of the Folger Stables. Beginning in the late 1800's this species was widely planted throughout California for lumber, shade, or as a windbreak. Eucalyptus and acacia have spread north of the

main stand (see discussion of mixed evergreen forest above) and have the potential to spread further into native mixed evergreen forest.

Mature blue gum eucalyptus is the primary species in the overstory canopy. Other invasive species growing in this area include acacia and common periwinkle. Mature eucalyptus groves provide nesting habitat for a number of raptors, including red-tailed hawks, red-shouldered hawks (*Buteo lineatus*), and great horned owls (*Bubo virginianus*). Eucalyptus may also provide roosting and nursery sites for several bat species, including fringed myotis and long eared myotis.

### ***Aquatic Habitat***

#### **Huddart Park**

Three intermittent creeks large enough to support aquatic life run through Huddart Park: West Union Creek and its two main tributaries, McGarvey Gulch Creek, and Squealer Gulch Creek. Except in drought years West Union Creek usually retains a low surface flow that connects deeper pools. McGarvey Gulch and Squealer Gulch often lack surface flow completely during the summer months but do maintain pool habitat. All of the creeks occur in redwood forest, with bay also occurring in the overstory. California newt (*Taricha torosa*) and Pacific giant salamander (*Dicamptodon ensatus*) were found in all creeks and the only fish species observed have been steelhead (or rainbow) trout (*Onchorhynchus mykiss*).

#### *West Union Creek*

Aquatic habitat in West Union Creek is almost equally proportioned between pool and riffle habitat. Undercut banks and large woody debris provide good cover for fish. This creek provides the greatest amount of spawning and juvenile rearing habitat in the Park, with the best habitat located upstream of the Crystal Springs Trail crossing (County of San Mateo, 2006). Numerous observations of steelhead in West Union Creek have been documented (Leidy et al., 2005). Juvenile steelhead were common from the confluence with McGarvey Creek downstream to the point where the stream leaves the Park in the 2004 fisheries surveys. Additional stream surveys (reported in Leidy et al. 2005) report juvenile steelhead in West Union Creek both above and below Huddart Park.

#### *McGarvey Gulch Creek*

By midsummer most of McGarvey Gulch Creek is apparently without surface flow (County of San Mateo, 2006). However the creek retains isolated pool habitat large enough to support juvenile steelhead. Areas with appropriate spawning habitat are infrequent. Due to a number of fish passage impediments further upstream, including a 20 foot high waterfall, the extent of steelhead use of McGarvey Gulch Creek is a short distance above the Crystal Springs Trail crossing, and during some years may be limited to the Richards Road trail crossing. No steelhead were observed in this creek during the 2004 surveys but they have been previously reported from the lower 0.3 mile of the creek (Leidy et al., 2005).

#### *Squealer Gulch Creek*

Aquatic habitat in Lower Squealer Gulch Creek is dominated by riffles and cascades, with 25 percent in pool habitat. As elevation increases the stream becomes confined to a narrow ravine and debris jams are common. A log jam approximately 0.5 mile upstream limits further upstream

migration of steelhead but juveniles are common below this passage barrier. Upper Squealer Gulch Creek is dominated by plunge pools and cascades, with limited riffle habitat also available but no fish have been observed here in recent years (County of San Mateo, 2004).

### **Wunderlich Park**

Alambique Creek is the only named stream within the boundaries of Wunderlich Park. Most of this first order creek runs through a steep ravine vegetated with second growth redwood and bay trees. The Master Plan maps two additional streams that are tributary to Alambique Creek. These streams were not included in the habitat assessment and fisheries surveys conducted for the Master Plan (County of San Mateo, 2006), probably due to their size and steep gradients.

Aquatic habitat in Alambique Creek is composed primarily of cascades, pools, and riffles. The creek transports a great deal of fine sediment, which chokes potential spawning gravels. In addition, the steep gradient and the presence of multiple and frequent debris jams all combine to make this creek less than sub-optimal habitat for steelhead. As noted in the Master Plan there are multiple barriers deemed impassable for fish passage between San Francisquito Creek and Wunderlich Park, including the inundation of the historical confluence of Alambique Creek with Corte Madera Creek by the formation of Searsville Lake and a culvert on Alambique Creek at Highway 84. Nonetheless, there may be a few rainbow trout remaining in the lower reaches of Alambique Creek descended from steelhead trapped upstream of Searsville Lake after dam construction. California newt and Pacific giant salamander were observed in Alambique Creek but no fish of any kind were found during surveys conducted for the Master Plan (County of San Mateo, 2004). However, Leidy et al. (2005) discuss evidence suggesting a non-anadromous population of rainbow trout (which is undoubtedly small given the habitat conditions) may be present.

### *Freshwater Pond*

There is a concrete lined irrigation reservoir at Salamander Flat in Wunderlich Park. It is at least in part straight sided and does not seem to support emergent vegetation but is covered by algae. The water supply for this pond comes from a spring and is delivered to the pond through pipes from the hillside above. The Folger Estate owns the water rights to Salamander Flat and maintains the reservoir and a 3 inch overland water pipe from the reservoir to their property at Bear Gulch Road and Woodside Road. The reservoir is fenced but still provides a water source for wildlife and apparently supports a breeding population of California newts. Although this pond has a natural water source, it is unlikely to be considered jurisdictional by the Corps or California Department of Fish and Game (CDFG) as it is a manmade feature and does not support aquatic or riparian vegetation.

To date no seasonal wetlands or seeps have been identified in the parks. Seasonal wetlands are characterized by indicators of seasonal inundation (algal mats, mineral deposits, and sometimes bare soils) and hydrophytic vegetation, including iris-leaved rush, sedge (*Cyperus eragrostis*), willow, and Himalaya blackberry (*Rubus discolor*). Seasonal wetlands may provide habitat for aquatic invertebrates and hydrophytic plant species. Seep habitat with perennial water can provide an important source of water for animals during the dry season, including amphibians such as slender salamander and Pacific treefrog, raccoon, and a wide variety of birds.

### ***Waters of the United States***

The term “waters of the United States,” as defined in the Code of Federal Regulations (33 C.F.R. § 328.3[a]; 40 C.F.R. § 230.3[s]), refers to:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
  - which are or could be used by interstate or foreign travelers for recreational or other purposes; or
  - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under the definition;
5. Tributaries of waters identified in paragraphs (1) through (4);
6. Territorial seas; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6).
8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area’s status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA (33 CFR 328.3[a][8]).

Wetlands are ecologically productive habitats that support a rich variety of both plant and animal life. The importance of wetlands has increased due to their value as recharge areas and filters for water supplies and to their widespread filling and destruction to enable urban and agricultural development. In a jurisdictional sense, there are two commonly used definitions of a wetland, one definition adopted by the Army Corps of Engineers and a separate definition, originally developed by U.S. Fish and Wildlife Service (USFWS), which has been adopted by the agencies in the State of California that have regulatory authority over wetlands. Both definitions are presented below.

### **Federal Wetland Definition**

Wetlands are a subset of “waters of the United States” and receive protection under Section 404 of the Clean Water Act (CWA). Wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetland determination under the federal wetland definition adopted by the Corps requires the presence of three factors: (1) wetland hydrology, as defined above under point 2, (2) plants adapted to wet conditions, and (3) soils that are routinely wet or flooded [33 C.F.R. § 328.3(b)]. In January 2001, the Supreme Court of the United States ruled that certain isolated wetlands do not fall under the jurisdiction of the CWA (*Solid Waste Agency of Northwestern Cook County v. United States Army Corps of Engineers et al.*).

### **California Wetland Definition**

CDFG has adopted the Cowardin *et al.*<sup>3</sup> definition of wetlands. The federal definition of wetlands requires three wetland identification parameters to be met, whereas the Cowardin definition can be satisfied under some circumstances with the presence of only one parameter. Thus, identification of wetlands by CDFG consists of the union of all areas that are periodically inundated or saturated, or in which at least seasonal dominance by hydrophytes may be documented, or in which hydric soils are present. The CDFG does not normally assert jurisdiction over wetlands unless they are subject to Streambed Alteration Agreements (CDFG Code Sections 1600–1616) or they support state-listed endangered species.

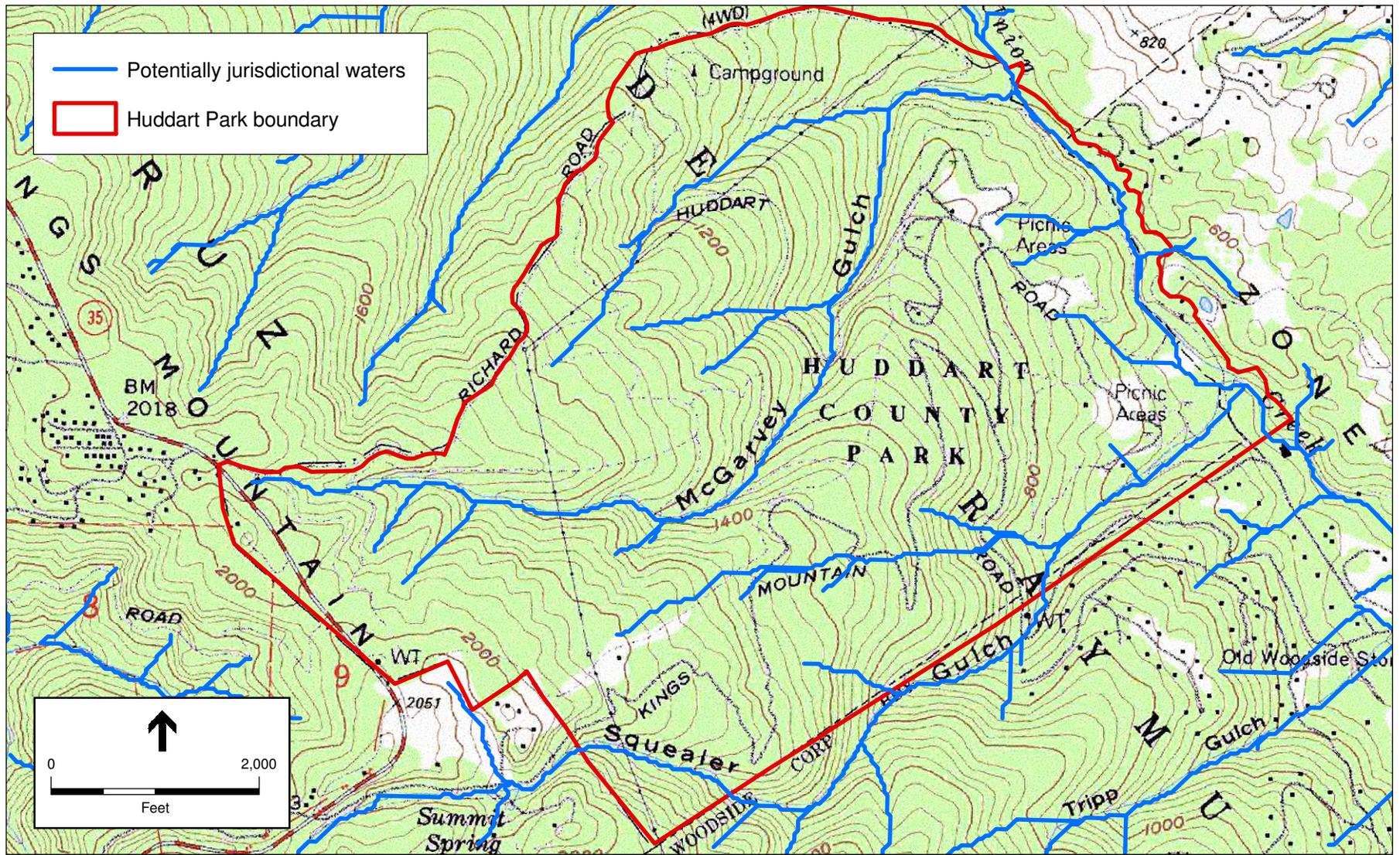
### **Jurisdictional Waters within the Plan Area**

The drainages and streams in Huddart Park and Wunderlich Park are located at the upper reaches of the San Francisquito Creek watershed (Figure 3.6-3). The streams of Huddart Park flow to Bear Creek, which in turn joins San Francisquito Creek below Searsville Lake. Therefore, these streams have a relatively direct connection to San Francisco Bay. The streams of Wunderlich Park once flowed northeast to Corte Madera Creek, but their historical confluence was inundated by the formation of Searsville Lake. Bear Creek and Corte Madera Creek join below Searsville Lake to form San Francisquito Creek, which flows to San Francisco Bay. Because of this hydrologic connection to navigable waters and because several of these streams support the federally listed California Central Coastal steelhead, all of these streams will be considered jurisdictional by the Army Corp of Engineers. Because these streams provide aquatic habitat for steelhead, as well as other species, they will also be considered jurisdictional by the CDFG.

#### *Huddart Park*

Three intermittent creeks run through Huddart Park: West Union Creek and its two main tributaries, McGarvey Gulch Creek, and Squealer Gulch Creek (Figure 3.6-3). West Union Creek constitutes the northeast Park boundary for a length of 0.6 miles before exiting the Park. McGarvey Gulch Creek drains most of the Park watershed and flows through the park for a distance of 1.75 miles to enter

<sup>3</sup> Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. US Fish and Wildlife Service, Office of Biological Services, Washington, D.C. Publ. No. FWS/OBS-79/31.



SOURCE:USGS; County of San Mateo; ESA, 2007

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**Figure 3.6-3**

Huddart Park: Potentially Jurisdictional Waters

West Union Creek. The middle reaches of Squealer Gulch Creek lie outside the Park boundaries within Teague Hill Preserve to the southeast of the Park. Lower Squealer Gulch Creek flows northward through the Park for 0.5 miles to enter West Union Creek a short distance to the east of the Park boundary. Upper Squealer Gulch Creek runs for 0.31 miles through the southeast corner of the Park. These streams also have a number of unnamed ephemeral tributaries that are also likely to be considered jurisdictional.

#### *Wunderlich Park*

Alambique Creek, the only named stream in Wunderlich Park, is an intermittent stream and runs for 1.1 miles through the Park until it exits at the La Honda Road crossing (Figure 3.6-4). It then flows to the northeast and into Searsville Lake. Alambique Creek has numerous tributaries and most, if not all of these, are ephemeral drainages with small watersheds. The Parks Master Plan maps two additional streams in the northeastern portion of the Park that are also tributary to Alambique Creek. The northernmost of these drainages begins to the northwest of Salamander Flat and runs for approximately 0.7 mile through the Park until it reaches the Folger Stables complex. Here it appears to be culverted for a short reach and then re-emerges in a highly eroded channel that is crossed by the access road into the Stables and then leaves the Park at Portola Road. The second mapped creek arises to the northeast of Salamander Flat and flows for approximately 0.5 mile through the Park to Portola Road and Alambique Creek; however, considering the steep topography and physical conditions of these creeks, it is unlikely they would support these resources.

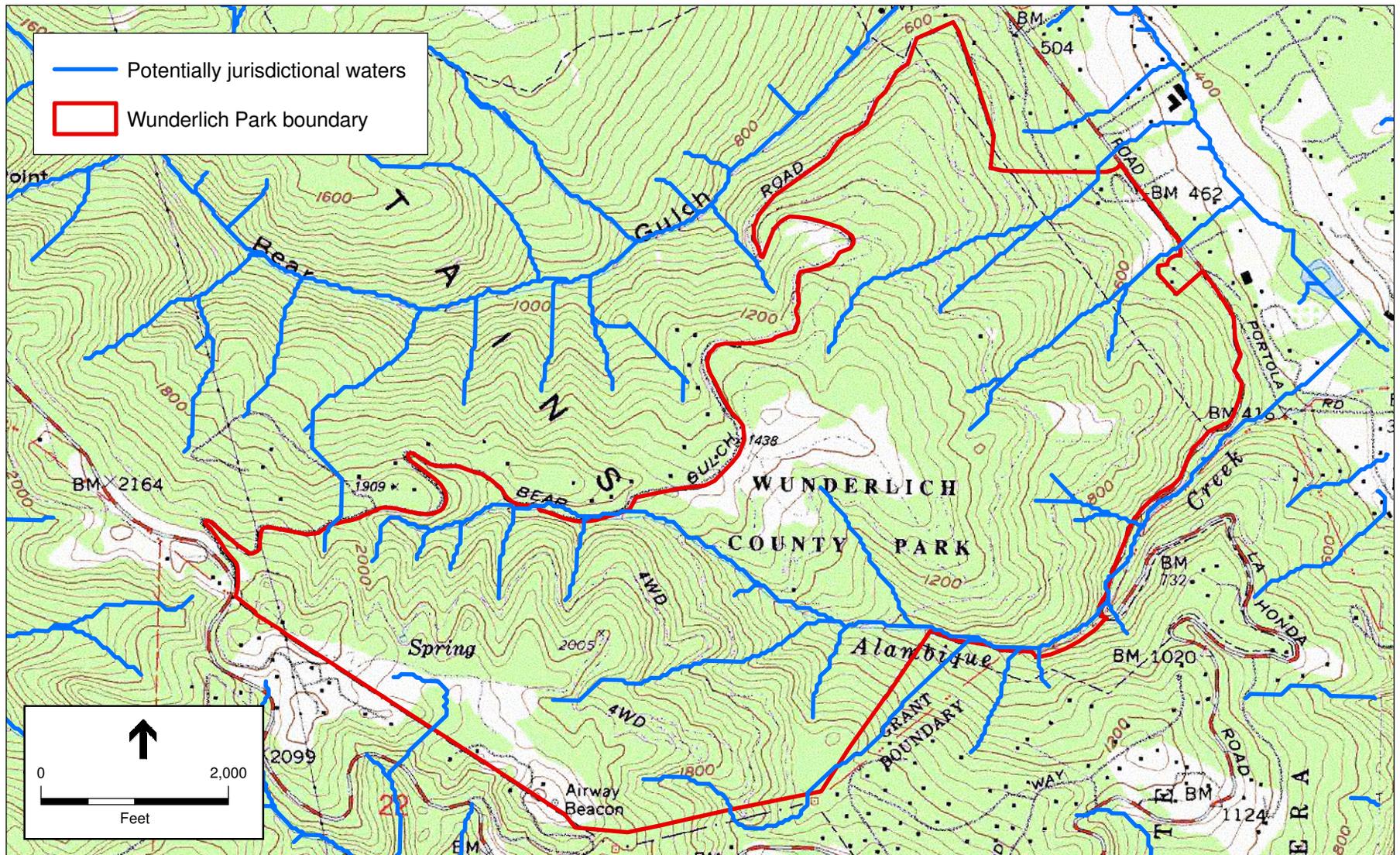
To date no formal wetland delineation has been conducted in association with the Parks Master Plan. Activities that may result in impacts on these potentially jurisdictional waters will be subject to permitting from a number of agencies (see *Regulatory Setting* discussion).

### **Special-Status Species**

A number of species known to occur in the project vicinity are protected pursuant to federal and/or State endangered species laws, or have been designated Species of Special Concern by the CDFG. In addition, Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides a definition of rare, endangered or threatened species that are not included in any listing<sup>4</sup>. Species recognized under these terms are collectively referred to as “special-status species.” For the purposes of this EIR, special-status species include:

- Plant and wildlife species listed as rare, threatened or endangered under the federal or State endangered species acts;
- Species that are candidates for listing under either federal or State law;
- Species formerly designated by the USFWS as Species of Concern or by CDFG as Species of Special Concern;
- Species protected by the federal Migratory Bird Treaty Act (16 U.S.C. 703-711);
- Species such as candidate species that may be considered rare or endangered pursuant to Section 15380(b) of the CEQA *Guidelines*.

<sup>4</sup> For example, vascular plants listed as rare or endangered or as List 1 or 2 by the California Native Plant Society (CNPS) are considered to meet Section 15380(b).



SOURCE:USGS; County of San Mateo: ESA, 2007

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**Figure 3.6-4**

Wunderlich Park: Potentially Jurisdictional Waters

Appendix A provides comprehensive lists of the special status species that have been documented from, or have potential to occur in suitable habitat within, the general project area. These lists were obtained from the California Natural Diversity Database (CDFG, 2007), California Native Plant Society Electronic Inventory (CNPS, 2007), and the U.S. Fish and Wildlife Service (USFWS, 2007). Based on ESA's review of the biological literature of the region, previous EIRs and surveys in the project vicinity, and an evaluation of the habitat conditions of the proposed project sites, many of these species were eliminated from further evaluation because (1) the project site or the immediate area does not provide suitable habitat, or (2) the known range for a particular species is outside of the project site and/or the immediate area.

The special status species list presented in Table 3.6-2 includes species for which potential habitat (i.e. general habitat types) occurs within or in the vicinity of Huddart and Wunderlich Parks. Species for which generally suitable habitat occurs but that were nonetheless determined to have low potential to occur in the parks are listed in Table 3.6-2. This table also explains the reasoning behind the low-occurrence determination. Species observed or with a moderate to high potential to occur in one or both parks are discussed in detail below.

### ***Species Assessed in Detail***

Potential impacts of the project on special status species were assessed based on the literature review, professional judgment, and the following criteria:

- 1) A determination of susceptibility. This determination is a three-level process that evaluated for each species: a) potential occurrence in the study area (generally, the terrestrial and aquatic habitats of the project site); b) potential occurrence within the project footprint; or, c) absence from either the study area or proposed construction sites. If the species was determined unlikely to be found in the study area, for example, if no potential habitat exists for the species in the project vicinity, then the species was given no further consideration.
- 2) If a species was determined to have the potential to occur in the project study area, further analyses were made of life history and habitat requirements, as well as the suitability of habitat for the species found within the study area or its immediate vicinity. The results of this determination for each species are provided in the "Potential for Occurrence" column of Table 3.6-2.
- 3) If suitable habitat was determined present within the proposed project vicinity and the species has been documented as observed within the project area or has at least a moderate potential to occur, additional analysis considered whether the species would be impacted by the project. Both direct effects (e.g., displacement of habitat) and indirect effects (e.g. noise) were considered. In addition, life history and habitat requirements were evaluated to ascertain the likelihood and severity of impact.

**TABLE 3.6-2  
SPECIAL STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PROJECT SITE**

<b>Common Name Scientific Name</b>	<b>Listing Status USFWS/ CDFG/CNPS</b>	<b>General Habitat</b>	<b>Potential for Species Occurrence Within the Project Area</b>	<b>Period of Identification</b>
Species Listed or Proposed for Listing				
<b>Animals</b>				
<i>Invertebrates</i>				
Bay checkerspot butterfly <i>Euphydras editha bayensis</i>	FT/--	Restricted to native grasslands on outcrops of serpentine, with dwarf plantain and owl's clover host plants	<b>Low.</b> Suitable native serpentine grasslands do not occur in either Park. Critical habitat is located in San Mateo County but not within the parks.	February–May
<i>Fish</i>				
Central California coast steelhead <i>Oncorhynchus mykiss</i>	FT/CSC	Spawns and rears in coastal streams between the Russian River and Aptos Creek, as well as drainages tributary to San Francisco Bay, where gravelly substrate and shaded riparian habitat occurs.	<b>Present.</b> Known to occur in streams in Huddart Park. Potential to occur in Alambique Creek in Wunderlich Park (Leidy et al., 2005).	Year-round
<i>Amphibians</i>				
California tiger salamander <i>Ambystoma californiense</i>	FE/CSC	Wintering sites occur in grasslands occupied by burrowing mammals; breed in ponds and vernal pools	<b>Low.</b> Available aquatic habitat is not suitable. The nearest recently documented locations for this species are at Lagunitas Lake at Stanford University.	During winter rains and March–April
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams	<b>Low.</b> Aquatic habitat present in the parks is marginal for this species. Stream flow is too flashy and there is little instream vegetation.	May–August
<i>Reptiles</i>				
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	FE/CE	Most often observed in the vicinity of standing water; ponds, lakes, marshes and sloughs. Temporary ponds and seasonal bodies of water are also used. Banks with emergent and bankside vegetation are preferred and used for cover.	<b>Low.</b> Aquatic habitat present in the parks is marginal for this species. Streams are subject to flashy flows and there is little to no instream vegetation for cover.	March–November

**TABLE 3.6-2 (continued)  
SPECIAL STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PROJECT SITE**

<b>Common Name Scientific Name</b>	<b>Listing Status USFWS/ CDFG/CNPS</b>	<b>General Habitat</b>	<b>Potential for Species Occurrence Within the Project Area</b>	<b>Period of Identification</b>
<i>Birds</i>				
Marbled murrelet <i>Brachyramphus marmoratus</i>	FT/CE	Primarily a marine species, this bird nests in coniferous forests along the coast, sometimes up to 24 miles inland	<b>Moderate.</b> Old growth and/or large redwood and Douglas fir in Huddart Park, and possibly Wunderlich, may provide nesting habitat for this species. Huddart Park is designated as critical habitat for the murrelet but the species has not been documented as occurring there.	May–August
<b>Plants</b>				
San Mateo thorn-mint <i>Acanthomintha duttonii</i>	FE/CE/List 1B.1	Generally on serpentine soils in valley and foothill grassland or cismontane woodland	<b>Low.</b> Although grasslands are present they do not support a strong native component. Serpentine soils are not present within the parks. Closest extant populations are at Edgewood Park, northeast of the project area (CNDDDB, 2007).	April–June
Fountain thistle <i>Cirsium fontinale</i> var. <i>fontinale</i>	FE/CE/List 1B.1	Serpentine seeps in valley and foothill grassland or cismontane woodland.	<b>Low.</b> Serpentine soils are not present within the parks.	June–October
Marin dwarf-flax <i>Hesperolinon congestum</i>	FT/CT/List 1B.1	Chaparral, valley and foothill grassland. In serpentine barrens and in serpentine grassland and chaparral, 30-365m.	<b>Low.</b> No serpentine derived soils present at project sites, limited grassland habitat available.	May–July
Dudley's lousewort <i>Pedicularis dudleyi</i>	--/CR/List 1B.2	Valley and foothill grassland, maritime chaparral, cismontane woodland, and North Coast coniferous forest	<b>Moderate.</b> Suitable habitat for this species exists primarily in redwood forest in both parks, it is currently known from only ten occurrences.	April–June
White-rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE/CE/List 1B.1	Grasslands, usually dry rocky or grassy slopes with serpentine soils; 115 to 2030 feet.	<b>Low.</b> Limited grasslands provide only marginal habitat. Serpentine soils not present at either Park.	March–May

**TABLE 3.6-2 (continued)  
SPECIAL STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PROJECT SITE**

<b>Common Name Scientific Name</b>	<b>Listing Status USFWS/ CDFG/CNPS</b>	<b>General Habitat</b>	<b>Potential for Species Occurrence Within the Project Area</b>	<b>Period of Identification</b>
<b>Other Special Status Species</b>				
<b>Animals</b>				
<i>Invertebrates</i>				
Edgewood blind harvestman <i>Calicina minor</i>	FSC/*	Harvestmen are generally restricted to microhabitats exhibiting high humidity, total darkness, and warmth in a variety of mesic habitat types. This species is restricted to serpentine soils.	<b>Low.</b> This species is restricted to serpentine grasslands and currently only known from Edgewood Park in San Mateo County. Because of its habitat restrictions and small size, its dispersal potential is very low (CDFG, 2006).	Coincident with rainy season
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC/*	This species has been found in areas capable of ponding water, including freshwater seeps, springs, farm ponds, and slow-moving streams.	<b>Low.</b> The pond at Salamander Flat in Wunderlich Park provides potentially suitable habitat for this species. However, although documented historically from the Bay Area, recent surveys failed to locate the species. Where and if the species still exists is unknown (CDFG, 2006).	January–July
Edgewood Park microblind harvestman <i>Microcina edgewoodensis</i>	FSC/*	Harvestmen are generally restricted to microhabitats exhibiting high humidity, total darkness, and warmth in a variety of mesic habitat types. This species is restricted to serpentine soils.	<b>Low.</b> Known only from open serpentine at Edgewood Park in San Mateo County. Species is endemic to serpentine soils, which do not occur at the project site.	Coincident with rainy season
<i>Reptiles</i>				
Northwestern pond turtle <i>Emmys (= Clemmys) marmorata marmorata</i>	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs.	<b>Low.</b> Aquatic habitat available in the parks is not suitable for this species.	Year–round
<i>Birds</i>				
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in conifers or deciduous stands near riparian areas	<b>High.</b> Suitable nesting habitat occurs in eucalyptus in Wunderlich Park as well as redwoods and Douglas fir in both parks. May also nest in large oaks along Union Creek in Huddart Park.	March– August

**TABLE 3.6-2 (continued)**  
**SPECIAL STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PROJECT SITE**

<b>Common Name</b> <i>Scientific Name</i>	<b>Listing Status</b> USFWS/ CDFG/CNPS	<b>General Habitat</b>	<b>Potential for Species Occurrence Within the Project Area</b>	<b>Period of Identification</b>
Sharp-shinned hawk <i>Accipiter striatus</i>	--/CSC	Nests in forest canopy	<b>Low.</b> Do not generally breed in the region. May winter in the area.	Winter
Great horned owl <i>Bubo virginianus</i>	--/3503.5	Often uses abandoned nests of corvids or squirrels; nests in large oaks, conifers, eucalyptus	<b>High.</b> Suitable nesting habitat occurs in eucalyptus in Wunderlich Park as well as redwoods and Douglas fir in both parks.	Year-round
Red-shouldered hawk <i>Buteo lineatus</i>	--/3503.5	Usually nests in large trees, often in woodland or riparian deciduous habitats. Forages over open grasslands and woodlands	<b>High.</b> Suitable nesting habitat occurs in eucalyptus in Wunderlich Park as well as redwoods and Douglas fir in both parks.	Year-round
Red-tailed hawk <i>Buteo jamaicensis</i>	--/3503.5	Usually nests in large trees, often in woodland or riparian deciduous habitats	<b>High.</b> Suitable nesting habitat occurs in eucalyptus in Wunderlich Park as well as redwoods and Douglas fir in both Parks.	Year-round
Wrentit <i>Chamaea fasciata</i>	FSC/AWLY	Habitat preferences include coastal scrub and chaparral.	<b>High.</b> Suitable nesting and foraging habitat occurs in scrub communities in both parks.	Year-round
Olive-sided flycatcher <i>Contopus cooperi</i>	FSC/* (AWLY)	Frequents open conifer or mixed woodlands; nests in large coniferous trees	<b>High.</b> Suitable nesting habitat occurs in redwood forest and mixed evergreen forest at both parks as well as in eucalyptus forest in Wunderlich Park.	April–August
Yellow warbler <i>Dendroica petechia</i>	--/CSC	Nest in shrubby growth by swamps and watercourses, in wet scrub, tree foliage, gardens, shrubberies and berry patches.	<b>Low.</b> Very limited habitat present. Stream course vegetation generally does not consist of the willow or other dense shrubs this species prefers.	April–August
Pacific-slope flycatcher <i>Empidonax difficilis</i>	FSC/--	Warm, moist woodlands, including valley foothill and montane riparian, coastal and blue oak woodlands, and montane hardwood-conifer habitats	<b>High.</b> Suitable nesting habitat occurs in mixed evergreen forest, redwood forest, and oak woodland habitat in both parks.	March–August

**TABLE 3.6-2 (continued)  
 SPECIAL STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PROJECT SITE**

<b>Common Name Scientific Name</b>	<b>Listing Status USFWS/ CDFG/CNPS</b>	<b>General Habitat</b>	<b>Potential for Species Occurrence Within the Project Area</b>	<b>Period of Identification</b>
Nuttall's woodpecker <i>Picoides nuttallii</i>	--/* (AWLR)	Can be found in a variety of habitats, including oak woodland, mixed evergreen and coniferous forests.	<b>High.</b> Suitable habitat present at both parks.	Year-round
Allen's hummingbird <i>Selasphorus sasin</i>	FSC/* (AWLY)	Inhabits coastal scrub and a variety of woodlands and riparian habitat.	<b>High.</b> Suitable nesting and foraging habitat is present in both parks.	January–July
<i>Mammals</i>				
Pallid bat <i>Antrozous pallidus</i>	FSC/CSC	Pallid bat occurs in various habitats including grasslands, scrubs, woodlands, mixed conifer forests, but it is most common in open, dry habitats with rocky areas for roosting. Day roosts include hollow trees, buildings, caves, crevices, and mines.	<b>Moderate to High.</b> Potential roosting habitat is available at the Folger Stables. Good foraging habitat is available over the Meadows at Wunderlich and the Zwierlein picnic area at Huddart Park, as well as over coastal scrub and chaparral habitat.	March–August
Townsend's Pacific big-eared bat <i>Corynorhinus townsendii townsendii</i>	FSC/CSC	Inhabits a variety of habitats, requires caves or man-made structures for roosting	<b>Moderate to High.</b> Potential roosting habitat is available at the Folger Stables. Good foraging habitat is available over the Meadows at Wunderlich and the Zwierlein picnic area at Huddart Park, as well as over coastal scrub and chaparral habitat.	April–August
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Inhabits woodlands and forests up to approximately 8,200 feet in elevation; roosts in crevices and snags	<b>Moderate to High.</b> Roosting habitat is available in woodlands and forests at both parks. Good foraging habitat is available over the Meadows at Wunderlich and the Zwierlein picnic area at Huddart Park, as well as over coastal scrub and chaparral habitat.	March–August

**TABLE 3.6-2 (continued)  
SPECIAL STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PROJECT SITE**

<b>Common Name Scientific Name</b>	<b>Listing Status USFWS/ CDFG/CNPS</b>	<b>General Habitat</b>	<b>Potential for Species Occurrence Within the Project Area</b>	<b>Period of Identification</b>
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	Inhabits a variety of woodland habitats, roosts in crevices or caves, and forages over water and open habitats	<b>Moderate to High.</b> Roosting habitat is available in woodlands and forests at both Parks. Good foraging habitat is available over the Meadows at Wunderlich and the Zwielerlein picnic area at Huddart Park, as well as over coastal scrub and chaparral habitat.	March–August
Yuma myotis <i>Myotis yumanensis</i>	FSC/CSC	Open forests and woodlands below 8,000 feet in close association with water bodies	<b>Low to Moderate.</b> For the most part, forests are likely too dense for this bat species and there are no large water bodies present. However, areas of more open woodlands next to streams may offer limited habitat.	March–August
Dusky-footed woodrat <i>Neotoma fuscipes</i>	FSC/CSC	Woodlands with well developed shrubby understory, chaparral, and coastal scrub. Build houses from plant materials and man-made debris.	<b>High.</b> Suitable habitat exists in both parks in shrub dominated vegetation types as well as open woodlands with shrubby understory.	Year–round
<b>Plants</b>				
Franciscan onion <i>Allium peninsulare</i> var. <i>franciscanum</i>	--/--/List 1B.2	Found in clay soils derived from volcanic or serpentine bedrock in valley and foothill grassland or cismontane woodland.	<b>Low.</b> Although suitable plant communities occur at the site, soils are loams and sand loams derived from sandstone, thus not providing typical substrate for the species.	May–June
Santa Cruz manzanita <i>Arctostaphylos andersonii</i>	--/--/List 1B.2	Occurs as a component of chaparral or at edges or in openings of broadleafed upland forest or coniferous forest.	<b>Present.</b> Identified in Wunderlich Park (Rana Creek, 2002). Likely occurs in Huddart Park as well.	November–April
King's Mountain manzanita <i>Arctostaphylos regismontana</i>	--/--/List 1B.2	Found on soils derived from granite or sandstone in chaparral or openings in broadleafed upland forest or coniferous forest.	<b>Present.</b> Documented from Huddart Park (CNDDDB, 2007). May occur in the upper regions of Wunderlich Park as well.	January–April

**TABLE 3.6-2 (continued)**  
**SPECIAL STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PROJECT SITE**

<b>Common Name Scientific Name</b>	<b>Listing Status USFWS/ CDFG/CNPS</b>	<b>General Habitat</b>	<b>Potential for Species Occurrence Within the Project Area</b>	<b>Period of Identification</b>
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	--/--/List 1B.2	Sandy soils in coastal bluff scrub, coastal dunes, coastal prairie, or coastal scrub.	<b>Low.</b> Although coastal scrub is present in Wunderlich Park this species documented primarily from coastal areas.	April–July
San Francisco collinsia <i>Collinsia multicolor</i>	--/--/List 1B.2	Sometimes on serpentine soils in coastal scrub and closed-cone coniferous forest.	<b>Low to Moderate.</b> May occur in coastal scrub habitat within Wunderlich Park. Nearest documented location is Edgewood Park (CNDDDB, 2007).	March–May
Western leatherwood <i>Dirca occidentalis</i>	--/--/List 1B.2	Occurs in mesic situations in a variety of habitats, including riparian woodland and forest, chaparral, broadleafed upland forest, and cismontane woodland.	<b>High.</b> Potential habitat exists in both parks. Nearest known populations are at Edgewood Park to the north and Los Trancos Open Space Preserve to the south. (CNDDDB, 2007)	January–March
Fragrant fritillary <i>Fritillaria liliacea</i>	FSC/--/List 1B.2	Coastal prairie and scrub, grasslands, often on serpentine soils; 10 to 1350 feet.	<b>Low.</b> Serpentine soils are not present. Scrub habitat is generally not open enough and grasslands are of marginal suitability for this species.	February–April
Crystal Springs lessingia <i>Lessingia arachnoidea</i>	--/--/List 1B.2	Grows in serpentine soils in valley and foothill grassland, coastal scrub, and cismontane woodland. Often on roadsides.	<b>Low.</b> Serpentine soils do not occur at either park.	July–October
Arcuate bush mallow <i>Malacothamnus arcuatus</i>	--/--/List 1B.2	Chaparral, cismontane woodland	<b>High.</b> Suitable habitat for this species exists in chaparral at Huddart Park and in open woodlands at both parks.	April–September
Davidson’s bush mallow <i>Malacothamnus davidsonii</i>	--/--/List 1B.2	Coastal scrub, chaparral, cismontane woodland, riparian woodland	<b>Low to Moderate.</b> Suitable habitat for this species exists at both parks. However, documented local occurrences are all historical.	June–January
Hall’s bush mallow <i>Malacothamnus hallii</i>	--/--/List 1B.2	Coastal scrub and chaparral	<b>Low to Moderate.</b> Suitable habitat for this species exists at both Parks. However, only local documented occurrence is from 1891.	May–September

**TABLE 3.6-2 (continued)  
SPECIAL STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PROJECT SITE**

<b>Common Name Scientific Name</b>	<b>Listing Status USFWS/ CDFG/CNPS</b>	<b>General Habitat</b>	<b>Potential for Species Occurrence Within the Project Area</b>	<b>Period of Identification</b>
Choris' popcorn-flower <i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	--/--/List 1B.2	Mesic areas in coastal prairie, coastal scrub, and chaparral	<b>Low to Moderate.</b> Potential habitat exists within both parks, however, most shrub communities are densely canopied and do not generally support a diverse understory.	March–June
San Francisco champion <i>Silene verecunda</i> ssp. <i>verecunda</i>	--/--/List 1B.2	Sandy soils in valley and foothill grassland, coastal scrub, and chaparral	<b>Low to Moderate.</b> Suitable habitat exists for this species in both parks. It would be most likely to occur in open areas within scrub communities.	March–June

**STATUS CODES:**

FEDERAL: (U.S. Fish and Wildlife Service)

FE = Listed as Endangered (in danger of extinction) by the Federal Government.  
 FT = Listed as Threatened (likely to become Endangered within the foreseeable future) by the Federal Government.  
 FP = Proposed for Listing as Endangered or Threatened.  
 FC = Candidate to become a *proposed* species.  
 FSC = Former Federal Species of Concern. The USFWS no longer lists Species of Concern but recommends that species considered to be at potential risk by a number of organizations and agencies be addressed during project environmental review.

STATE: (California Department of Fish and Game)

CE = Listed as Endangered by the State of California  
 CT = Listed as Threatened by the State of California  
 CR = Listed as Rare by the State of California (plants only)  
 CSC = California Species of Special Concern  
 3503.5=Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls)  
 \*Special animal—listed on CDFG's Special Animals List

California Native Plant Society

List 1A=Plants presumed extinct in California  
 List 1B=Plants rare, Threatened, or Endangered in California and elsewhere  
 List 2= Plants rare, Threatened, or Endangered in California but more common elsewhere

An extension reflecting the level of threat to each species is appended to each rarity category as follows:

- .1 – Seriously endangered in California
- .2 – Fairly endangered in California
- .3 – Not very endangered in California

Audubon Watch List (AWL)

AWLR=Red List; Species that are declining rapidly, have very small populations or limited ranges, and face major conservation threats. These typically are species of global conservation concern.  
 AWLY=Yellow List; Species that are also declining but at a slower rate than those in the red category. These typically are species of national conservation concern.

SOURCE: CDFG, 2006; CNDDDB, 2007; CNPS, 2007; Leidy et al., 2005; Rana Creek, 2002; USFWS, 2007

Of the special-status plants and animals presented in Table 3.6-2, along with the regulatory basis for their status, only the following species, which were observed or determined to have a

moderate to high potential to occur within the project vicinity, were fully considered in the impact analysis:

- Dudley's lousewort
- Santa Cruz manzanita
- King's Mountain manzanita
- San Francisco collinsia
- Western leatherwood
- Arcuate bush mallow
- Davidson's bush mallow
- Hall's bush mallow
- Choris' popcorn-flower
- San Francisco campion
- Central California coast steelhead
- Cooper's hawk
- Great horned owl
- Red-shouldered hawk
- Red-tailed hawk
- Wrentit
- Olive-sided flycatcher
- Pacific-slope flycatcher
- Nuttall's woodpecker
- Allen's hummingbird
- Pallid bat
- Townsend's big-eared bat
- Long-eared myotis
- Fringed myotis
- Yuma myotis

These species are described in detail below.

### **Special-Status Plants**

**Dudley's lousewort** (*Pedicularis dudleyi*). This species is listed by the State of California as Rare and by CNPS as a List 1B.2 plant. Dudley's lousewort is a deciduous perennial herb with pinnately compound leaves and light pink to purple flowers that appear from April to June. It can be found in chaparral and coniferous forest. At Portola State Park it occurs on steep cut banks in redwood forest, in the company of typical redwood herbaceous associates including inside-out flower (*Vancouveria planipetala*), redwood sorrel (*Oxalis oregana*), starflower (*Trientalis latifolia*), and fetid adder's tongue (*Scoliopus bigelovii*). Although the species is known from fewer than 10 occurrences, many of its associates occur in redwood forest in Huddart and Wunderlich Parks, suggesting that there is a relatively high potential for Dudleys' lousewort to occur there as well.

**Santa Cruz manzanita** (*Arctostaphylos andersonii*). Santa Cruz manzanita has no federal or state status but is a CNPS List 1B species and thus merits consideration under CEQA. This species occurs as a component of chaparral or at edges or in openings of broadleaved upland or coniferous forest. This member of the heather family (Ericaceae) is an evergreen shrub that can reach up to 15 feet in height and has stems with long gland-tipped bristles. Unlike some other members of the genus, this manzanita does not have a basal burl and thus depends solely on seeds for reproduction<sup>5</sup>. White to pink urn-shaped flowers are borne in clusters from November to April. Santa Cruz manzanita has been identified in Wunderlich Park (Rana Creek, 2002) and very likely occurs in chaparral in Huddart Park as well.

**King's Mountain manzanita** (*Arctostaphylos regismontana*). This manzanita is also a CNPS List 1B.2 species and has been documented as occurring along King's Mountain Road in, or in the immediate vicinity of, Huddart Park (CNDDDB, 2007). This species may well occur in the upper reaches of Wunderlich Park as well. King's Mountain manzanita grows on soils derived

<sup>5</sup> Species with a burl can stump sprout after a fire or other disturbance.

from granite or sandstone in chaparral or openings in broadleaved upland or coniferous forest types. This evergreen shrub grows to 12 feet in height and has clasping, strongly overlapping leaves. Urn-shaped flowers grow in clusters and appear from January to April.

**San Francisco collinsia** (*Collinsia multicolor*). This member of the figwort family (Scrophulariaceae) is an herbaceous annual that favors coastal scrub and moist, shady woodlands and can tolerate serpentine soils. Stems are loosely branched, weak, and sometimes trailing. Lavender and white flowers can be seen from March to May. This CNPS List 1B.2 species may occur in coastal scrub or woodland habitat in both parks but the closest documented location is at Edgewood Park to the north.

**Western leatherwood** (*Dirca occidentalis*). This early flowering, deciduous woody shrub occurs on shaded, moist slopes in chaparral, mixed evergreen and oak woodlands, or in riparian woodlands and forest. This CNPS List 1B.2 species blooms in January to April, with the bright yellow flowers generally appearing before the shrubs leaf out. Branches are smooth, light gray, and very pliable. The closest documented locations for western leatherwood are at Edgewood Park to the north and Los Trancos Open Space Preserve to the south (CNDDDB, 2007).

**Arcuate bush mallow** (*Malacothamnus arcuatus*). This CNPS List 1B.2 species grows in chaparral and cismontane woodlands. Arcuate bush mallow is an upright shrub with gray-green hairy leaves that reaches up to 15 feet in height. The inflorescence is spike-like and bears numerous sessile rose-pink flowers from April through July. This species can grow in serpentine or other ultramafic soils. Arcuate bush mallow may occur in scrub habitats in both parks.

**Davidson's bush mallow** (*Malacothamnus davidsonii*). Davidson's bush mallow is a six to eight foot tall, evergreen shrub with two inch pink flowers and gray-green to tawny foliage. This species prefers full sun and sandy soil in coastal scrub, chaparral, or woodland habitats. This CNPS List 1B.2 species may occur in suitable habitat in either Park but all documented locations in the vicinity are historical (CNDDDB, 2007).

**Hall's bush mallow** (*Malacothamnus hallii*). Hall's bush mallow, a CNPS List 1B.2 species, is primarily known from scrub and chaparral on ultramafic soils. This is an upright white-tawny shrub that ranges from three to 15 feet tall. The lower leaf surface is covered with stellate scales and pink flowers occur in spikes from May to July. Hall's bush mallow may occur in scrub communities in both parks but the single locally documented occurrence is from 1891 (CNDDDB, 2007).

**Choris' popcorn-flower** (*Plagiobothrys chorisianus* var. *chorisianus*). This CNPS List 1B.2 herbaceous annual prefers moist, grassy areas in coastal scrub and chaparral. Unlike many popcorn-flower species Choris's popcorn-flower has no basal rosette of leaves. This species blooms from April to June and has white flowers that are 6-10 millimeters wide. Choris's popcorn flower could occur in scrub communities on north or east facing slopes in both parks.

**San Francisco campion** (*Silene verecunda* ssp. *verecunda*). This member of the pink family (Caryophyllaceae) is a CNPS List 1B species. It is a multi-stemmed perennial with dense gland-

tipped hairs and ranges between 4 to 20 inches in height. This species produces white to pink or rose to purple tubular flowers from March to June. San Francisco campion prefers sandy or rocky soils and can be found in scrub communities and grasslands but is known from fewer than 20 occurrences.

### ***Special-Status Animals***

#### **Fish**

**Central California Coast ESU steelhead trout** (*Oncorhynchus mykiss*). Steelhead populations in the Central California Coast ESU are listed as threatened under FESA. Anadromous rainbow trout, or steelhead, occur in California from the Smith River south along the coast to San Mateo Creek, San Diego County, and in streams of the San Francisco Estuary and Central Valley (Moyle 2002). These fish possess the ability to spawn repeatedly and maintain the mechanisms to return to the Pacific Ocean after spawning in freshwater. Juvenile steelhead may spend up to four years residing in fresh water prior to migrating to the ocean as smolts. Tributaries to the San Francisco Estuary support the ocean-maturing steelhead ecotype, as well as non-anadromous, or resident, forms of rainbow trout (Leidy et al., 2005). Following accepted convention, the term “steelhead” is used in this EIR to refer to fish with an anadromous life history and “resident” is used to refer to non-anadromous life history forms of rainbow trout. Juvenile steelhead and adult resident fish have been observed in all three main streams at Huddart Park. Juvenile resident trout were observed in Alambique Creek at Wunderlich Park in 1981 (Leidy et al., 2005) but no fish have been documented in that creek since that time (County of San Mateo, 2006).

#### **Birds**

**Cooper’s hawk** (*Accipiter cooperi*). Cooper’s hawk ranges over most of North America and may be seen throughout California, most commonly as a winter migrant. Nesting pairs have declined throughout the lower-elevation, more populated parts of the state. Cooper’s hawk forages in open woodlands and wooded margins and nests in tall trees, often in riparian areas (Ehrlich et al., 1988). Coast live oak, as well as Douglas’ fir, redwood, and eucalyptus may provide nesting habitat for the species at both parks.

**Marbled murrelet** (*Brachyramphus marmoratus*). This federally threatened and State endangered species occurs along the Pacific coast from Alaska to California, with San Mateo County populations constituting the southernmost extension of its range (USFWS, 1997). Huddart Park is designated as critical habitat for this small seabird that nests in redwood trees. Marbled murrelet spend most of their lives at sea but move to terrestrial habitat in order to reproduce and rear their young. Preferred nesting habitat is in old growth redwood or Douglas’ fir (greater than 32” in diameter), usually in fairly close proximity, but not directly adjacent, to the ocean (USFWS, 2007). However, they will also use mature forests that have a remaining old growth component, such as occurs at Huddart Park. While nesting, adults must make daily trips to the ocean in order to feed themselves as well as their young. While this species is known to nest locally in San Mateo County’s Memorial Park at Pescadero, at Big Basin Redwoods, and in the Pilarcitos Creek watershed (McShane et al., 2004), there are no known documented occurrences of the species within Huddart or Wunderlich Parks (CNDDDB, 2007). The central California population of marbled murrelet is thought to be at high risk of extirpation, or local extinction, due

to small population size and high levels of nest failures (McShane et al., 2004). One of the largest threats to any murrelets that may nest in Huddart or Wunderlich Parks are the large numbers of ravens (corvids), which are known to be a predator of eggs and nestlings of many bird species and have been implicated in declining murrelet numbers (McShane et al., 2004). Memorial Park presently has a grant to reduce corvid populations in the Park in order to protect marbled murrelet nests from predation (County of San Mateo, 2006)

**Great horned owl (*Bubo virginianus*).** Great horned owls occur throughout North America and are found in a variety of wooded habitats. These large raptors prey on small to medium-sized mammals such as voles, rabbits, skunks, and squirrels. Great horned owls can often be seen and heard at dusk, perched in large trees. They roost and nest in large trees such as pines or eucalyptus. They often use the abandoned nests of crows, ravens, or sometimes squirrels (Erlich et al., 1988; Sibley, 2000). Great horned owls may use large eucalyptus or conifers located within both parks for roosting or nesting and may forage over grassland and scrub habitat for voles and other small mammals.

**Red-tailed hawk (*Buteo jamaicensis*).** Red-tailed hawks are commonly found in woodlands and open country with scattered trees. These large hawks feed primarily on small mammals, but will also prey on other small vertebrates, such as snakes and lizards, as well as on small birds and invertebrates. Red-tailed hawks nest in a variety of trees in urban, woodland, and agricultural habitats. Large coast live oaks, as well as taller non-native trees such as eucalyptus, may be used by red-tailed hawks for nesting within both parks.

**Red-shouldered hawk (*Buteo lineatus*).** Red-shouldered hawks are relatively common in both rural and urban situations and can be found in residential neighborhoods and along riparian corridors or other waterbodies. These hawks hunt primarily for mammals, reptiles, and amphibians (Sibley, 2001). Large eucalyptus and conifers provide potential nesting habitat for this species within the project area.

**Wrentit (*Chamaea fasciata*).** Wrentits inhabit scrub habitat types, such as coastal scrub and chaparral, along the Pacific coast from Oregon through California to northern Baja California. They may also use streamside brushy edges of parks and some suburban settings adjacent to undisturbed chaparral or other dense scrub communities. Wrentits are secretive and generally hard to see. However, they are very vocal and have a distinctive and easily recognized call. Wrentits prey primarily on insects but they will also take berries when insects are in short supply. Local populations of wrentits disappear or decline in numbers with increasing pressures from suburbanization. Since they nest close to the ground, feral cats and other wildlife associated with developments are a growing threat to this species. Other concerns are overgrazing, off-road vehicles and fire. Most likely, however, it is habitat destruction that has led to its decline and current status. This species likely inhabits chaparral in Huddart Park and coastal scrub in Wunderlich Park.

**Olive-sided flycatcher (*Contopus cooperi*).** Olive-sided flycatcher frequents a variety of forest and woodland habitats throughout most of California. Preferred nesting habitat includes coniferous and mixed hardwood-conifer forests. The species forages for insects over the forest

canopy or adjacent grasslands and prefers tall conifers for both nesting and roosting. These flycatchers will often use the tallest trees in a locale for singing posts and hunting perches. Olive-sided flycatcher may make use of tall conifers, eucalyptus, grasslands, and scrub communities within both parks for nesting and foraging purposes.

**Pacific-slope flycatcher** (*Empidonax difficilis*). Pacific-slope flycatcher nests locally in riparian or other moist habitat in woodlands and forests with dense canopy cover. This migrant may be found outside of riparian habitat in the non-breeding season; however, shade is an important habitat requirement during both nesting and migration. Potential nesting habitat for this species is located along the drainages within both parks, and tall trees preferred for perching and foraging are present as well.

**Nuttall's woodpecker** (*Picoides nuttallii*). Nuttall's woodpecker is a permanent resident with a range limited to west of the Sierra Nevada, extending from northern California to Baja California. They inhabit a mix of deciduous riparian and adjacent oak habitats, occurring in oak woodlands or forests and chaparral. Snags and dead limbs are required for nest excavation. Nest cavities may be located anywhere from 3 - 65 feet above the ground. Although Nuttall's Woodpeckers forage preferentially in oaks, acorns make up only a small part of their diet. They also eat insects, fruits, berries, poison oak seeds, nuts, and sap. Habitat loss from development is the greatest threat to the species.

**Allen's hummingbird** (*Selasphorus sasin*). Allen's hummingbirds inhabit chaparral, scrub, riparian, and woodland habitats that support nectar-producing plants. Insects and spiders are consumed as well. Scrub and woodland habitat types within both parks provide abundant nesting and foraging habitat for this tiny bird.

## Mammals

**Special status bat species.** Huddart and Wunderlich Parks provide potential foraging and roosting habitat for five special-status bat species. **Pallid bat** (*Antrozous pallidus*) occurs throughout much of California. This species occurs in various habitats including grasslands, scrubs, woodlands, and forests from sea level up through mixed conifer forests, but it is most common in open, dry habitats with rocky areas for roosting. Day roosts for Pallid bats include hollow trees, buildings, caves, crevices, and mines. **Townsend's Pacific big-eared bats** (*Corynorhinus townsendii townsendii*) occur in a variety of habitats and utilize caves, mines, tunnels, buildings, or other human-made structures for roosting. **Yuma myotis** (*Myotis yumanensis*) also roost in buildings and mines and have been observed roosting in abandoned swallow nests and under bridges (Zeiner et al, 1990). The **fringed myotis** (*Myotis thysanodes*) occurs throughout California and is most frequent in coastal and montane forests and near mountain meadows (Jameson and Peeters, 1988). This species uses echolocation to find moths, beetles, and other prey and forms nursery colonies in caves and old buildings (Jameson and Peeters, 1988). The **long-eared myotis** (*Myotis evotis*) inhabits nearly all brushlands, woodlands, and forests, seeming to prefer coniferous forests and woodlands. Roosts include caves, buildings, snags, and crevices in tree bark. This species is highly maneuverable in its forays for arthropods over water, open terrain, and in habitat edges. These bat species may utilize buildings, especially the Folger Stables, or trees of nearly any species for roosting throughout both parks.

**Dusky-footed woodrat** (*Neotoma fuscipes*). The San Francisco dusky-footed woodrat is one of 11 subspecies inhabiting California. While woodrats are locally common in parts of the Bay Area this subspecies is a former federal species of concern and a State species of concern. These rodents are of medium-size, with a body around 7 inches long and a furred tail. They inhabit a variety of brushy and forested habitats. Woodrats build mounded stick lodges that range in size up to 8 feet across at the base and up to 6 feet tall. The availability of suitably-sized sticks may limit the number of woodrat houses in an area.

Adult female woodrats occupy the same nest until they die, when the nest is taken over by female offspring. Nests can thus be occupied and maintained for decades by related woodrats. Individual lodges may persist for 20 to 30 years. Reptiles, amphibians, small mammals, and invertebrates often share woodrat lodges as they provide protection from temperature and moisture extremes.

### ***Sensitive Natural Communities***

The CNDDDB (2007) lists one sensitive natural community as occurring in the Woodside USGS quadrangle: serpentine bunchgrass grassland. This community, as described by Holland (1986), does not occur in either of the parks. Due to a number of factors, including development, agricultural conversion, and sudden oak death syndrome (SODS), oak woodlands are generally considered sensitive by the State and are often designated as such by local governmental entities as well. In addition, CDFG considers redwood forest to be a high priority community for inventory in the CNDDDB and thus it is considered sensitive under CEQA. Finally, most wetland and riparian habitats (including both vegetation and aquatic habitat associated with streams) are considered sensitive by a variety of agencies.

### ***Designated Critical Habitat***

The purpose of designating critical habitat is to contribute to the conservation of threatened and endangered species and the ecosystems upon which they depend. The designation of an area as critical habitat provides additional protection to habitat only when there is a federal nexus. The protection is only relevant when other statutory or regulatory protections, policies, or other factors relevant to agency decision-making would not prevent the destruction or adverse modification of habitat. Designation of critical habitat triggers the prohibition of destruction or adverse modification of that habitat, but it does not require specific actions to restore or improve habitat.

The National Marine Fisheries Services (NMFS) designated critical habitat for central California coast steelhead on September 2, 2005. West Union Creek, located within the Santa Clara Hydrologic Unit, is designated as critical habitat under this ruling. The USFWS designated critical habitat for the marbled murrelet on May 24, 1996 (USFWS, 1997). Critical Habitat Unit CA-13 corresponds with the Huddart Park boundaries. The USFWS is currently proposing to revise the previous critical habitat designation. The proposed revisions maintain the designation for Huddart Park in addition to adding contiguous lands in Purisima Creek Redwoods Open Space to the west.

Several other critical habitat designations include units located within San Mateo County, including critical habitat for Bay checkerspot butterfly (USFWS, 2001) and California red-legged frog (USFWS, 2006). However, neither Huddart nor Wunderlich Parks are located within critical habitat units for these two species.

## 3.6.2 Regulatory Setting

This section briefly describes federal, state, and local regulations, permits, and policies pertaining to biological resources and wetlands as they apply to the proposed project.

### Special-Status Species

#### Federal Endangered Species Act

The USFWS, which has jurisdiction over plants, wildlife, and most freshwater fish, and the National Marine Fisheries Service (NMFS), which has jurisdiction over anadromous fish, marine fish, and mammals, oversee implementation of the Federal Endangered Species Act (FESA). Section 7 of the Act mandates that all federal agencies consult with the USFWS and NMFS to ensure that federal agencies actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species. A federal agency is required to consult with USFWS and NMFS if it determines a “may effect” situation will occur in association with the proposed project. The FESA prohibits the “take”<sup>6</sup> of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery.

Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the removal, possession, damage or destruction of any Endangered plant from federal land. Section 9 also prohibits acts to remove, cut, dig up, damage, or destroy an Endangered plant species in nonfederal areas in knowing violation of any state law or in the course of criminal trespass. Candidate species and species that are proposed or under petition for listing receive no protection under Section 9 of the FESA.

Section 10 of the FESA requires the issuance of an “incidental take” permit before any public or private action may be taken that would potentially harm, harass, injure, kill, capture, collect, or otherwise hurt (i.e., take) any individual of an Endangered or Threatened species. The permit requires preparation and implementation of a habitat conservation plan that would offset the take of individuals that may occur, incidental to implementation of the project by providing for the overall preservation of the affected species through specific mitigation measures.

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<sup>6</sup> “Take,” as defined in Section 9 of the FESA, is broadly defined to include intentional or accidental “harassment” or “harm” to wildlife. “Harass” is further defined by the U.S. Fish and Wildlife Service as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, and sheltering. “Harm” is defined as an act which actually kills or injures wildlife. This may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

## Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 USC, Section 703, Supplement I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

## California Environmental Quality Act

The intent of the California Environmental Quality Act (CEQA) is to maintain “high-quality ecological systems and the general welfare of the people of the state.” It is the policy of the state to “prevent the elimination of fish or wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.” CEQA forbids agencies from approving projects with significant adverse impacts when feasible alternatives or feasible mitigation measures can substantially reduce such impacts.<sup>7</sup>

CEQA requires consultation with CDFG on any project an agency initiates that is not statutorily or categorically exempt from CEQA. The CEQA *Guidelines* (Section 15065a) indicate that impacts to state- and federally listed rare, threatened, or endangered plants or animals are significant. Under Section 15380 of the *Guidelines*, impacts to other species that meet certain criteria (i.e. it can be shown that the species’ survival in the wild is in jeopardy or it is at risk of becoming endangered in the near future) but are not officially listed may also be considered significant by the lead agency (for an EIR), depending on the applicability of other laws (e.g., Migratory Bird Treaty Act) and the discretion of the agency. For example, CDFG interprets Lists 1A, 1B, and 2 of the California Native Plant Society’s *Inventory of Rare and Endangered Vascular Plants of California* to consist of plants that, in a majority of cases, would qualify for listing as rare, threatened, or endangered. However, the determination of whether an impact is significant is a function of the lead agency, absent the protection of other laws. Projects subject to CEQA review must specifically address potential impacts to listed species and provide mitigation measures if the impact is significant.

## California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFG has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code 2070). CDFG also maintains a list of “candidate species,” which are species formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. In addition, CDFG maintains lists of “species of special concern,” which serve as “watch lists.” Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present on the project site and determine whether the proposed project could have a potentially

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<sup>7</sup> CEQA also provides that a project might be approved in spite of residual, unmitigated significant impacts, by adoption of a statement of overriding social and economic considerations in situations where mitigations or alternatives are deemed infeasible.

significant impact on such species. In addition, CDFG encourages informal consultation on any proposed project that may impact a candidate species.

### **CEQA Guidelines Section 15380**

Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines section 15380(b) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the Guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a "candidate species" that has not yet been listed by either the USFWS or CDFG. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

### **California Native Plant Protection Act**

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed CDFG to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. The California Endangered Species Act expanded upon the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, there are three listing categories for plants in California: rare, threatened, and endangered.

### **California Fish and Game Code**

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.3 of the California Fish and Game Code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs.

Fish and Game Code (Sections 3511-birds, 4700-mammals, 5050-reptiles and amphibians and 5515-fish) allows the designation of a species as Fully Protected. This is a greater level of protection than is afforded by the California Endangered Species Act, since such a designation means the listed species cannot be taken at any time.

### **Special-Status Natural Communities**

Special-status natural communities are identified as such by CDFG's Natural Heritage Division and include those that are naturally rare and those whose extent has been greatly diminished through changes in land use. The California Natural Diversity Database (CNDDB) tracks 135

such natural communities in the same way that it tracks occurrences of special-status species: information is maintained on each site in terms of its location, extent, habitat quality, level of disturbance, and current protection measures. CDFG is mandated to seek the long-term perpetuation of the areas in which these communities occur. While there is no statewide law that requires protection of all special-status natural communities, CEQA requires consideration of the potential impacts of a project to biological resources of statewide or regional significance.

## Jurisdictional Waters including Wetlands

### U.S. Army Corps of Engineers and U.S. Environmental Protection Agency

The Corps and EPA regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under Sections 404 and 401 of the Clean Water Act. Projects that would result in the placement of dredged or fill material into waters of the United States require a Section 404 permit from the Corps<sup>8</sup>. Some classes of fill activities may be authorized under General or Nationwide permits if specific conditions are met. Nationwide permits do not authorize activities that are likely to jeopardize the existence of a Threatened or Endangered species (listed or proposed for listing under the FESA). In addition to conditions outlined under each Nationwide Permit, project-specific conditions may be required by the Corps as part of the Section 404 permitting process. When a project's activities do not meet the conditions for a Nationwide Permit, an Individual Permit may be issued.

Section 401 of the Clean Water Act requires an applicant for a Corps permit to obtain state certification that the activity associated with the permit will comply with applicable state effluent limitations and water quality standards. In California, water quality certification, or a waiver, must be obtained from the Regional Water Quality Control Board, for both Individual and Nationwide Permits.

Finally, the federal government also supports a policy of minimizing “the destruction, loss, or degradation of wetlands.” Executive Order 11990 (May 24, 1977) requires that each federal agency take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

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<sup>8</sup> Based on the Supreme Court ruling (SWANCC) concerning the Clean Water Act (January 9, 2001), jurisdiction over non-navigable, isolated, intrastate waters can no longer be based solely on the use of such waters by migratory birds. Jurisdiction of non-navigable, isolated, intrastate waters may be asserted if their use, degradation, or destruction could affect other waters of the United States, or interstate or foreign commerce. Jurisdiction over such waters is analyzed on a case-by-case basis. Impoundments of waters, tributaries of waters, and wetlands adjacent to waters should be analyzed on a case-by-case basis. A more recent Supreme Court case, *Rapanos v. United States* (2006), also questioned the definition of “waters of the United States” and the scope of federal regulatory jurisdiction over such waters, but left open the question as to whether the CWA extends to those waters and wetlands that have a ‘significant nexus’ to navigable waters of the United States, or whether it is limited to waters with a continuous connection. The implications of this ruling are still being tested in the courts. For example, the California Ninth Circuit Court of Appeals decision, in *Northern California River Watch v. City of Healdsburg* (August 10, 2006), relied on the “significant nexus” definition, an interpretation that suggests little change in the scope of the CWA. To date, neither the USEPA nor the USACE have issued guidelines as to how to implement the CWA in light of these latest rulings. In practice, USACE jurisdictional authority remains as it was prior to *Rapanos*, although the potential exists for changes in the future based on Court decisions and pending regulatory guidance.

## State Policies and Regulations

State regulation of activities in waters and wetlands resides primarily with the CDFG and the State Water Resources Control Board (SWRCB). In addition, the California Coastal Commission has review authority for wetland permits within its planning jurisdiction. CDFG provides comment on Corps permit actions under the Fish and Wildlife Coordination Act. CDFG is also authorized under the California Fish and Game Code, Sections 1600-1616, to enter into a Streambed Alteration Agreement with applicants and develop mitigation measures when a proposed project would obstruct the flow or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams. The SWRCB, acting through the nine Regional Water Quality Control Boards, must certify that a Corps permit action meets state water quality objectives (Section 401, Clean Water Act).

## Other Plans and Policies

### San Mateo County General Plan

The San Mateo County General Plan sets forth a number of goals and objectives relating to the protection of the County's natural resources. The following are included as they are relevant to the project and this Chapter:

#### 1.1 Conserve, Enhance, Protect, Maintain and Manage Vegetative, Water, Fish and Wildlife Resources

**Objective:** Promote the conservation, enhancement, protection, maintenance and managed use of the County's Vegetative, Water, Fish and Wildlife Resources.

#### 1.2 Protect Sensitive Habitats

**Objective:** Protect sensitive habitats from reduction in size or degradation of the conditions necessary for their maintenance.

#### 1.3 Protection and Productive Use of Economically Valuable Vegetative, Water, Fish and Wildlife Resources

**Objective:** Protect the availability and encourage the productive use of the County's economically valuable vegetative, water, fish and wildlife resources in a manner which minimizes adverse environmental impacts.

#### 1.4 Access to Vegetative, Water, Fish and Wildlife Resources

**Objective:** Protect and promote existing rights of public access to vegetative, water, fish and wildlife resources for purposes of study and recreation consistent with the need to protect public rights, rights of private property owners and protection and preservation of such resources.

### ***Relevant Policies***

The San Mateo County General Plan includes the following policies related to habitats, fisheries and wildlife, as relevant to the project and this Chapter:

### **1.19. Designation of Sensitive Habitats**

Designate as sensitive habitats those areas which meet the definition of sensitive habitats. Recognize the Sensitive Habitats Map (dated December 1984) or subsequent updates or refinements as indicative of the distribution of sensitive habitats within San Mateo County, based upon the best and most current information available.

### **1.20. Importance of Sensitive Habitats**

Consider areas designated as sensitive habitats as a priority resource requiring protection.

### **1.21. Importance of Economically Valuable Vegetative, Water, Fish and Wildlife Resources**

Consider Vegetative, Water, Fish and Wildlife Resources which are economically valuable as a priority resource to be enhanced, utilized, managed and maintained for the needs of present and future generations.

### **1.22. Regulate Development to Protect Vegetative, Water, Fish and Wildlife Resources**

- a) Regulate land uses and development activities to prevent, and if infeasible mitigate to the extent possible, significant adverse impacts on vegetative, water, fish and wildlife resources.
- b) Place a priority on the managed use and protection of vegetative, water, fish and wildlife resources in rural areas of the County.

### **1.23. Regulate Location, Density and Design of Development to Protect Vegetative, Water, Fish and Wildlife Resources**

Regulate the location, density and design of development to minimize significant adverse impacts and encourage enhancement of vegetative, water, fish and wildlife resources.

### **1.24. Protect Vegetative Resources**

Ensure that development will: (1) minimize the removal of vegetative resources and/or; (2) protect vegetation which enhances microclimate, stabilizes slopes or reduces surface water runoff, erosion or sedimentation; and/or (3) protect historic and scenic trees.

### **1.25. Protect Water Resources**

Ensure that development will: (1) minimize the alteration of natural water bodies, (2) maintain adequate stream flows and water quality for vegetative, fish and wildlife habitats; (3) maintain and improve, if possible, the quality of groundwater basins and recharge areas; and (4) prevent to the greatest extent possible the depletion of groundwater resources.

### **1.26. Protect Fish and Wildlife Resources**

Ensure that development will minimize the disruption of fish and wildlife and their habitats.

### **1.27. Regulate Development to Protect Sensitive Habitats**

Regulate land uses and development activities within and adjacent to sensitive habitats in order to protect critical vegetative, water, fish and wildlife resources; protect rare,

endangered, and unique plants and animals from reduction in their range or degradation of their environment; and protect and maintain the biological productivity of important plant and animal habitats.

#### **1.28. Establish Buffer Zones**

Establish necessary buffer zones adjacent to sensitive habitats which include areas that directly affect the natural conditions in the habitats.

#### **1.29. Uses Permitted in Sensitive Habitats**

Within sensitive habitats, permit only those land uses and development activities that are compatible with the protection of sensitive habitats, such as fish and wildlife management activities, nature education and research, trails and scenic overlooks and, at a minimum level, necessary public service and private infrastructure.

#### **1.30. Uses Permitted in Buffer Zones**

Within buffer zones adjacent to sensitive habitats, permit the following land uses and development activities: (1) land uses and activities which are compatible with the protection of sensitive habitats, such as fish and wildlife management activities, nature education and research, trails and scenic overlooks, and at a minimum level, necessary public and private infrastructure; (2) land uses which are compatible with the surrounding land uses and will mitigate their impact by enhancing or replacing sensitive habitats; and (3) if no feasible alternative exists, land uses which are compatible with the surrounding land uses.

#### **1.31. Regulate the Location, Siting and Design of Development in Sensitive Habitats**

Regulate the location, siting and design of development in sensitive habitats and buffer zones to minimize to the greatest extent possible adverse impacts, and enhance positive impacts.

#### **1.32. Performance Criteria and Development Standards**

Establish performance criteria and development standards for development permitted within sensitive habitats and buffer zones, to prevent and if infeasible mitigate to the extent possible significant negative impacts, and to enhance positive impacts.

#### **1.33. Regulate Productive Uses of Vegetative, Water, Fish and Wildlife Resources**

Regulate resource productive uses which are subject to local control in order to prevent and if infeasible mitigate to the extent possible significant adverse impacts on vegetative, water, fish and wildlife resources and to maintain and enhance the (1) productivity of forests and other vegetative resources; (2) productive capacity and quality of groundwater basins and recharge areas, streams, reservoirs, and other water bodies; (3) productivity of fisheries and other fish and wildlife resources; and (4) the recreational value and aesthetic value of these areas.

#### **1.34. Protect Productive Uses of Vegetative, Water, Fish and Wildlife Resources**

Regulate development in order to protect and promote the managed use of vegetative, water, fish and wildlife resources.

**1.36. Protect the Productive Use of Water Resources**

Ensure that land uses and development on or near water resources will not impair the quality or productive capacity of these resources.

**1.38. Control Incompatible Vegetation, Fish and Wildlife**

Encourage and support the control of vegetation, fish and wildlife resources which are harmful to the surrounding environment or pose a threat to public health, safety and welfare.

**1.39. Minimize Adverse Impacts of Programs Controlling Incompatible Vegetation, and Fish and Wildlife**

Minimize the negative impacts and risks of programs controlling incompatible vegetation, fish and wildlife.

**1.40. Encourage Coordinated, Countywide Management of Vegetative, Water, Fish and Wildlife Resources**

Encourage all Federal, State, Regional, County, and City agencies with jurisdiction in San Mateo County to cooperate and coordinate the management and protection of vegetative, water, fish and wildlife resources.

**1.41. Encourage Public Agencies and Private Groups to Acquire Significant Sensitive Habitats**

Encourage public agencies and private groups to acquire and manage significant sensitive habitats because of the (1) biological and scientific significance of the habitat, (2) degree of endangerment from development or other activities, and (3) accessibility for educational and scientific uses and vulnerability to overuse.

**San Mateo County Tree Ordinances**

***Heritage Tree Ordinance***

§ 11.000 of the San Mateo County Code protects heritage trees, which are defined as either:

- a) Any tree or grove of trees designated by the County Board of Supervisors or;
- b) Trees that are indigenous to the County that meet the minimum diameter at breast height as set forth in the Ordinance.

The County requires a permit for cutting, removal, or trimming of any heritage tree.

***Significant Tree Ordinance***

§ 12.000 of the San Mateo County Code provides protection to trees designated as ‘significant’ by the County. As defined in the ordinance a significant tree is:

- a) any tree with a single stem or trunk of 38” or more circumference measured at a height of 4.5 feet above the ground or;

- b) any tree in the RH/DR Zone Districts larger than 19” in circumference.

The County requires a permit for the removal of any significant tree or community of trees, whether they are indigenous or exotic. Indigenous trees are broadly defined as those known to be native to the County, while exotic trees are those that are not native to the County.

## San Mateo County Trails Plan

This document provides guidelines for trail planning, design and trail management within San Mateo County. The trail design and management guidelines primarily pertain to the construction of new trails. However, are also relevant to ongoing or long-term management activities for existing trails. Policies relevant to protection of biological resources are presented here:

**6.4.1** – Locate, design and develop trail routes with sensitivity to their potential environmental, recreational and other impacts on adjacent lands, private property, and utilities.

**6.4.2** – Levels-of-use and types-of-use on trails shall be controlled to avoid unsafe use conditions or risk severe environmental degradation.

**6.4.7** – Locate trails to recognize the resources and hazards of the areas they traverse, and to be protective of sensitive habitat areas such as estuaries, wetlands, riparian corridors, erodible soils and other areas where sensitive species may be adversely affected.

**6.4.8** – Develop design guidelines to ensure that sensitive species and the habitats they rely on shall be protected, and where possible, enhanced by trail development and trail use.

**6.29.4** – Develop a monitoring program for use by the lead agency in evaluating current conditions and determining whether or not new trails or trail management programs (including maintenance, reconstruction, education, and use regulations) are effective in addressing user conflicts, safety issues, and environmental impacts.

## San Mateo County Watershed Protection Program

This program sets forth Best Management Practices to employ throughout the County during maintenance activities to prevent water quality impairment within watersheds. The goals for each of the maintenance activities prescribed by the program that relate to biological resources are presented below:

### **Maintenance Activity 8.15: Stream Crossings.**

- Preserve surface and sub-surface drainage characteristics.
- Minimize culvert and road-related sedimentation.
- Preserve or enable fish passage.
- Reduce sedimentation to watercourses.
- Reduce stormwater pollution.
- Reduce potential for flooding of roadways, thereby reducing potential for vehicle accidents and water pollution.

### **Maintenance Activity 8.17: Watercourses and Streams.**

- Protect habitat and vegetation.

- Minimize damage to stream banks and adjacent facilities.
- Reduce potential sedimentation to watercourses.
- Preserve or improve habitat for aquatic species.

**Maintenance Activity 8.21: Vegetation Management.**

- Minimize the introduction of organic material to water bodies.
- Recycle/reuse vegetative matter where practicable.
- Protect endangered and sensitive plant species.
- Protect water quality by preserving native vegetation, thereby reducing erosion/sedimentation.
- Contribute to restoration of sensitive habitats by reducing erosion/sedimentation and revegetating disturbed areas.

### 3.6.3 Impacts and Mitigation Measures

#### Significance Criteria

To determine the level of significance of an identified impact, the following significance thresholds were used. These thresholds are based upon the criteria for significant effects identified in Appendix G of the CEQA Guidelines. The proposed project would therefore have a significant impact on biological resources if it were to:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations; or
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations; or
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means; or
- 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; or
- Conflict with any local ordinances protecting biological resources, such as a tree preservation ordinance; or
- Conflict with any applicable habitat conservation plan or natural community plan.

Additionally, the following approaches to, and definitions of, significance of impacts to biological resources, drawn from several distinct *Guidelines* sections, were considered in the impacts analysis for this EIR.

- §15065 provides for mandatory findings of significance if projects "...substantially 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, substantially reduce the number or restrict the range of an endangered, rare or threatened species...."
- §15206 (b) (5) defines projects as being of statewide, regional, or area-wide significance if they "would substantially affect sensitive wildlife habitats including but not limited to riparian lands, wetlands, bays, estuaries, marshes, and habitats for endangered, rare, and threatened species as defined by §15380...."

- §15380 states that a plant or animal species, even if not on an official list, may be treated as “rare or endangered” if, for example, it is likely to become so in the foreseeable future.
- §15382 states that a project has a significant effect on the environment if there would be “...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.”

## Approach to Analysis

Potential impacts resulting from implementation of the proposed Huddart and Wunderlich County Parks Master Plan were evaluated based on a field reconnaissance surveys performed by qualified ESA biologists and a review of the following sources:

- Existing resource maps (including GIS layers provided by the County) and aerial photographs of the project site;
- Data presented in the CNDDDB and the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California, and an official species list for the parks’ vicinity from the USFWS (2007)
- Standard biological references (e.g., field guides);
- Existing San Mateo County documents relating to parks resources and management; and
- Other available literature regarding the natural resources of the area.

For the analysis presented below, impacts resulting from implementation of the Huddart and Wunderlich County Parks Master Plan were considered to be significant if they had the potential to:

- Have a substantial adverse effect on special-status species that were known to occur or found to have moderate or high potential to occur on or in the vicinity of the parks;
- Result in the fill of or otherwise cause degradation of potentially jurisdictional waters located within or in the vicinity of the parks;
- Have a substantial adverse effect on areas designated as sensitive habitat in this EIR; or
- Otherwise exceed the significance criteria outlined above.

## Impacts and Mitigation Measures

**Impact 3.6-1: Implementation of proposed project components, as well as implementation of vegetation management, fire hazard reduction, and erosion control activities during Phases I through III of the Master Plan, could result in temporary disturbance to, or mortality of, special-status species at both Huddart and Wunderlich Parks. (Less than Significant with Mitigation)**

### Special-status Fish

Both resident and anadromous ecotypes of rainbow trout are known to inhabit the streams of Huddart Park and may also be present in those of Wunderlich Park. The anadromous ecotype, otherwise known as steelhead, are protected under the federal endangered species act. While many of the proposed Plan elements will ultimately result in beneficial impacts for the parks’ fisheries, initial implementation of some actions, such as replacing bridges and culverts to reduce erosion and sediment or improve fish passage, have the potential to result in temporary

degradation of water quality and spawning habitat and could also potentially result in mortality of individual steelhead. Excavation, grading, stockpiling, and placement of riprap associated with potential instream project components would result in soil disturbance. Soil disturbance could increase runoff and erosion, especially in areas of steeper slopes, which could lead to downstream sedimentation of aquatic habitat. Erosion and sedimentation can have direct and indirect adverse effects on fish. Increases in turbidity and total suspended solids resulting from soil disturbance and erosion may reduce foraging success, irritate soft tissue such as gills, alter the substrate composition of the channel, smother eggs, and fill interstitial substrate spaces.

Equipment refueling, fluid leakage, and other construction-related activities within or near aquatic habitat pose a risk of accidental water contamination that could result in injury or death to special-status fish species downstream of potential project sites. Many commonly used hydraulic fluids contain organophosphate ester additives that are toxic to salmonids and other fish species. Acute lethal and sublethal effects have been documented in salmonids in particular (as opposed to warmwater species). Leaks or spills of petroleum hydrocarbon products found in construction equipment have similar effects on fish.

When surface waters come into contact with uncured concrete, either through accidental spills of concrete (e.g., via bedrock fissures) or through contact with recently poured structures, alkaline substances in the concrete can leach into the water, resulting in potential increases in the natural hydrogen ion concentration (pH). Rapid changes in the pH of stream water can have adverse effects on fish, particularly if the pH concentration is raised above 9.

Should instream construction activities occur, special-status fish species, if present, could be crushed by earthmoving equipment, construction debris, and worker foot traffic. It is therefore necessary to isolate the work area from actively flowing water, either through the use of coffer dams and dewatering pumps, or via piping extending from a point upstream of a given project site to the area downstream of the construction site. However, dewatering activities in and of themselves can cause fish to become concentrated or stranded in residual wetted areas. Thus, if fish are present in the project area, capture and relocation procedures would be implemented prior to construction. Capture and relocation efforts, in turn, could also result in injury or mortality to fish if not conducted by a qualified biologist according to established guidelines. Capture and relocation of central California coast steelhead might require an incidental take authorization from the NMFS. Any of these potential impacts would be considered significant. Implementation of Mitigation Measure 3.6-1a would reduce potentially significant impacts on the parks' fisheries to less-than-significant levels.

**Mitigation Measure 3.6-1a:** Avoid direct and indirect impacts on central California coast steelhead.

- All activity involving work within the bed or banks of a stream channel will be restricted to low-flow periods of June 15 through November 1. If the channel is dry, construction can occur as early as June 1. Restricting construction activities to this work window will minimize impacts to migrating adult and smolt steelhead.
- Construction activities will comply with adopted County Watershed Protection Program Maintenance Standards (2004).

- Construction activities within and adjacent to all creeks and associated riparian habitat will be confined to the minimum disturbance area required for the proposed project.
- If the channel is not dry, water will be diverted around the stream reach where work is occurring. This will reduce the potential for sediment or other pollutants to enter the waterways and to impact downstream resources.
- Sediment curtains will be placed downstream of the construction or maintenance zone to prevent sediment disturbed during construction activities from being transported and deposited outside of the construction zone.
- Prior to construction of a diversion and placement of sediment curtains, a qualified biologist will conduct fish relocation activities, and immediately release captured fish to a suitable habitat downstream of the project site. Capture and relocation measures will be conducted in accordance with the *Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act* (NMFS, 2000).
- If groundwater is encountered, or if water remains within the worksite after flows are diverted, it will be pumped out of the construction area and into a retention basin constructed of hay bales lined with filter fabric. The pump(s) will be screened according to NMFS fish screening criteria for anadromous salmonids (NMFS, 1997) in case individual fish eluded prior capture and relocation efforts.
- Silt fencing will be installed in all areas where construction occurs within 100 feet of actively flowing water.
- Spoil sites, if necessary, will be located so they do not drain directly into the waterways. If a spoil site drains into a water body, catch basins will be constructed to intercept sediment before it reaches the channels. Spoil sites will be graded to reduce the potential for erosion.
- When concrete is to be used in bridge construction or other construction within 100 feet of streams, concrete wash areas will be located so they do not drain directly into streams. If a concrete wash area drains into a water body, catch basins will be constructed to intercept sediment before it reaches the channels. Concrete wash areas will be graded if necessary to reduce the potential for erosion.
- If used in bridge construction, fresh concrete will be isolated from wetted channels for a period of 30 days after it is poured. If a 30-day curing period is not feasible, a concrete sealant approved for use in fishery habitat may be applied to the surfaces of the concrete structure. If a sealant is used, the manufacturer's guidelines for drying times will be followed before reestablishing surface flows within the work area.
- Equipment and materials will be stored at least 50 feet from waterways. No debris (such as trash and spoils) will be deposited within 100 feet of creeks. Staging and storage areas for equipment, materials, fuels, lubricants, and solvents will be located outside of the stream channel and banks. Any equipment or vehicles driven and/or operated within or adjacent to the stream will be checked daily and maintained as needed to prevent leaks of materials that, if introduced to water, could be deleterious to aquatic life. Vehicles will be moved away from the stream prior to refueling and lubrication.
- A qualified biological monitor will be on site during all open trench stream crossing activities. The biological monitor will be authorized to halt construction if impacts to steelhead are evident.

- Project sites will be restored to pre-construction channel conditions, including streambed composition, compaction, and gradient. Channel banks will be returned to original grade slope and appropriate bank stabilization techniques will be implemented to reduce the potential for erosion and sedimentation. A plan describing pre-project conditions and restoration methods will be prepared prior to construction.
- Project sites will be revegetated with an appropriate assemblage of native upland vegetation and, if necessary, riparian and wetland vegetation suitable for the area. A plan describing pre-project conditions as well as restoration and monitoring success criteria will be prepared prior to construction.

### Special-status Birds

As noted in the Setting section above, there are many special-status birds that may breed in the abundant suitable habitat provided in Huddart and Wunderlich Parks, including marbled murrelet, which is protected under the federal and State endangered species acts; red-tailed hawks, red-shouldered hawks, and great-horned owls; and a variety of special status passerines. All raptors, their nests, and eggs are protected under CDFG Code 3503.5. In addition, CDFG Code 3503 protects the needless destruction of nests or eggs of most bird species, whether they are considered to be special-status or not. More common birds that could be found nesting in the parks include chestnut-backed chickadee, Steller's jay, brown creeper, black phoebe, varied thrush, and others.

Increased noise and activity resulting from proposed project components could cause nest abandonment and death of young or loss of reproductive potential at active nests. In addition, grading and removal of trees or other vegetation, whether in association with vegetation management or fuel reduction programs or proposed project components, could result in direct losses of nests, eggs, or nestlings. Such impacts to special-status birds would be considered significant. Implementation of Mitigation Measure 3.6-1b would reduce any direct or indirect effects on special-status bird species to less than significant levels.

**Mitigation Measure 3.6-1b:** Avoid direct losses of nests, eggs, and nestlings and potential indirect impacts to avian breeding success.

- During the breeding bird season (February 1 through August 31) a qualified biologist will survey activity sites for nesting marbled murrelet, raptors, and passerine birds not more than 14 days prior to any ground-disturbing activity, vegetation removal, or construction.
- If ground-disturbing activity, vegetation removal, or construction occur only during the non-breeding season between August 31 and February 1, no surveys will be required.
- Results of the surveys will be forwarded to CDFG and/or USFWS (as appropriate) and avoidance procedures will be adopted, if necessary, on a case-by-case basis. These can include construction buffer areas (up to several hundred feet in the case of marbled murrelet or raptors) or seasonal avoidance.

### Special-status Mammals

Parks Master Plan activities resulting in the destruction of abandoned or underutilized buildings or large tree removal within the parks could adversely impact special status bat species. While it

is virtually impossible to avoid potential impacts to individual bats that may be roosting under tree bark or in crevices or small cavities in trees in forested situations, it is possible to avoid impacts in situations where bats are roosting or hibernating colonially, or have established colonial maternity roosts. For example, bats very likely use the Folger Stable attic for roosting purposes and may use this structure as a nursery or winter hibernaculum as well. Bats could also potentially establish roosting and maternity colonies in large trees, especially larger, live or dead trees with trunk cavities, or other vacant or underutilized buildings within both parks. Tree removal and building demolition or rehabilitation could result in the direct mortality of special-status bats if present. Such activities could also result in disturbance of maternity roosts or winter hibernacula. These would be considered to be significant impacts. Implementation of Mitigation Measure 3.6-1c will reduce impacts to special status bats to less than significant levels.

**Mitigation Measure 3.6-1c:** Avoidance of direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula.

- A qualified bat biologist, acceptable to the CDFG, shall conduct surveys to locate colonial roosts prior to initiation of work on any buildings with potential for bat occupation. Potentially suitable habitat shall be located visually. Bat emergence counts shall be made at dusk as the bats depart from any suitable habitat. In addition, an acoustic detector shall be used to determine any areas of bat activity. At least four nighttime emergence counts shall be undertaken on nights that are warm enough for bats to be active. The bat biologist shall determine the type of each active roost (i.e., maternity, winter hibernaculum, day or night).
- Removal of trees or demolition of buildings showing evidence of bat activity will occur during the period least likely to impact the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula and between August 15 and April 15 for maternity roosts). If active day or night roosts are found, the bat biologist shall take actions to make such roosts unsuitable habitat prior to tree removal or building demolition.
- A no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in consultation with CDFG. Bat roosts initiated during construction are presumed to be unaffected, and no buffer is necessary. However, “take” of individuals will be prohibited.
- If preconstruction surveys indicate that roosts are inactive or potential habitat is unoccupied, no further mitigation is required. Trees and buildings that have been determined to be unoccupied by special status bats and that are located outside the no-disturbance buffer for active roosts may be removed or demolished.

There is a high potential for dusky-footed woodrat to occur in scrub and woodland habitat types in both parks. While this species can be locally common it is a species of concern and warrants consideration under CEQA. Because woodrat lodges are passed from one generation to the next they can be occupied and maintained for decades by related woodrats and individual lodges may persist for 20 to 30 years. Destruction of woodrat nests is thus considered to be a potentially significant impact in this EIR. Implementation of Mitigation Measure 3.6-1d would serve to reduce this impact to less-than-significant levels.

**Mitigation Measure 3.6-1d:** Avoid destruction of woodrat nests.

- Activity areas with the potential to result in adverse impacts to woodrat lodges should be surveyed prior to action taking place. Potential actions triggering woodrat nest surveys could include prescribed fires, new trail construction, maintenance of fire roads or existing trails, and utility line rehabilitation.
- Destruction of individual woodrat nests should be avoided wherever possible through, for example, relocation of new trails or trail segments to be built through previously undisturbed scrub habitat or working around nests when conducting vegetation management activities. If woodrat nests can be avoided by project activities, suitable buffer areas for avoidance would be delineated with orange construction fencing around nests.
- Active woodrat nests found within 10 feet of project disturbance areas that cannot be avoided would be relocated to adjacent suitable habitat under the supervision of a qualified wildlife biologist. Understory vegetation would first be cleared from around the nest. Next, the biologist would disturb the nest and allow woodrats to leave the nest. Finally, the biologist would remove the nest sticks offsite to the base of an adjacent suitable oak, bay, or other tree. Sticks would be placed at a suitable distance determined by the biologist.

**Special-status Plants**

Plant species at Huddart and Wunderlich Parks are not well documented and, although species lists have been compiled (see Rana Creek, 2002), they are not comprehensive. Two special-status plant species, Kings Mountain manzanita and Santa Cruz manzanita have been reported from Huddart Park (CNDDDB, 2007) and Wunderlich Park (Rana Creek, 2002), respectively. This EIR has identified an additional seven plant species with potential to occur in the parks. These plants are primarily associated with coastal scrub and chaparral communities but some of them may occur in woodland habitat or coniferous forest as well. Implementation of specific project elements may result in damage to, or mortality of, special-status plants. This is considered to be a potentially significant impact. Implementation of Mitigation Measures 3.6-1e and 3.6-1f would serve to reduce these impacts to less-than-significant levels.

**Mitigation Measure 3.6-1e:** Prior to each Master Plan phase and during the planning for specific projects requiring further analysis presence/absence surveys for special-status plants will be conducted by a qualified botanist within areas to be disturbed.

- Surveys will be conducted in accordance with CNPS and CDFG rare plant survey guidelines. Surveys will include collection of GPS data on plant locations so they can be mapped and readily re-located.
- Surveys will be conducted prior to the start of each Master Plan phase or in conjunction with further project-specific CEQA analysis, during the flowering period when the species are most readily identifiable (February – July, depending on the species).
- The results of the surveys will be filed as part of the parks' administrative record; results will include mapped locations of all populations; if the presence of any of these species is confirmed, a copy of the survey results will be forwarded to CDFG along with CNDDDB field survey forms.

- In the event that special-status plants are proven absent in an area of impact, then no additional mitigation is necessary.

**Mitigation Measure 3.6-1f:** In the event that special-status plant populations are found, park staff, in coordination with a qualified biologist, will avoid disturbance to the species by establishing a visible buffer zone of not less than 25 feet prior to work or by relocating project activities.

- If it is not feasible to avoid disturbance or mortality, then special-status plant habitat and/or sensitive plant communities will be restored or enhanced on-site at a 1:1 ratio in areas that are currently disturbed or in areas that will be temporarily disturbed as a result of Plan implementation.
- If feasible, special-status plants and/or seeds will be salvaged from areas of disturbance.
- A five-year restoration mitigation and monitoring program will be developed and implemented. Appropriate performance standards may include, but are not limited to: a 75 percent survival rate of restoration plantings or plant cover; absence of invasive plant species; and a functioning, self-sustaining plant community at the end of five years.

**Significance after Mitigation:** Less than Significant

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**Impact 3.6-2: Implementation of proposed project components during Phases I through III of the Master Plan, may result in the loss of sensitive native communities at both Huddart and Wunderlich Parks, including oak woodland and redwood forest. (Less than Significant with Mitigation)**

Project components implemented in Phases I through III such as construction of new buildings and trails or replacement or undergrounding of aging Park utilities may result in the loss of sensitive native vegetation. In addition, vegetation management, fire hazard management, and erosion control activities could also result in potential impacts to sensitive native vegetation. Implementation of Mitigation Measure 3.6-2 will reduce this potentially significant impact to less than significant levels.

**Mitigation Measure 3.6-2:** Avoid removal of sensitive native vegetation to the extent feasible through project redesign and, when avoidance is not possible, replace native vegetation lost as a result of implementation of proposed project components at a 1:1 ratio.

- Avoid permanent removal of sensitive native vegetation, including oak woodland and redwood forest, to the extent feasible. Where avoidance is not feasible, quantify the amount of each of these vegetation types permanently removed and replace on a 1:1 basis in areas of the site that are to remain as open space. Replacement plant materials shall be from locally collected stock and shall be species specific to the community that was removed. Whenever feasible, plant materials (i.e., shrubs, trees, seeds, cuttings) to be removed should be salvaged and stored properly until they can be re-planted.

- Revegetate any sensitive habitat areas that are temporarily disturbed due to project activities using locally collected stock and plant materials specific to the disturbed community.
- Planting will be implemented in the fall following reclamation activities at a given site.
- All revegetated sites will be monitored for five years. Success criteria to be met at the end of five years may include: at least 80 percent survival of plantings, 75 percent vegetative cover by desirable species, and a viable, self-sustaining plant community.

**Significance after Mitigation:** Less than Significant

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**Impact 3.6-3: Implementation of proposed project components, as well as implementation of vegetation management, fire hazard reduction, and erosion control activities, during Phases I through III of the Master Plan could result in substantial adverse effects on wetlands and waters of the U.S. under the jurisdiction of the Corps and waters of the State under the jurisdiction of CDFG and the Regional Water Quality Control Board (RWQCB). (Less than Significant with Mitigation).**

As described above in the biological resources setting, there are numerous named and unnamed streams and drainages considered other waters of the U.S. or waters of the State and under the regulatory jurisdiction of the Corps, CDFG, and RWQCB. No wetlands have been identified to date in either of the parks. A number of proposed activities under the Parks Master Plan have the potential to impact jurisdictional waters within the parks.

Fill and excavation within, or adjacent to, areas considered to be jurisdictional waters, such as might occur with bridge replacement, culvert replacement, new trail construction, and placement of riprap within the bed and banks of a stream for erosion control would likely require permits and agreements from the appropriate regulatory agencies. In addition, accidental discharge of toxic materials or sediment during such projects could impact streams by degrading water quality and aquatic habitat.

Failure to proceed without permits or approvals would be in violation of clean water regulations. A verified wetland delineation would be required prior to the submittal of regulatory permit applications, therefore a wetland delineation would be conducted and verified prior to initiation of any project that would have potential for direct permanent or temporary impacts on jurisdictional waters. Impacts to jurisdictional waters resulting from project activities would be considered significant. Implementation of Mitigation Measures 3.6-3a, 3.6-3b, and 3.6-3c would serve to reduce potential impacts to less-than-significant levels.

**Mitigation Measure 3.6-3a:** Proposed project components or programs implemented under the Parks Master Plan will avoid or minimize adverse effects on jurisdictional waters to the full extent feasible.

- All jurisdictional areas to be avoided shall be protected by a 50 foot minimum setback throughout project implementation

- Areas that are avoided and provided with setbacks will be further protected by Best Management Practices (BMPs), as described in Mitigation Measure 3.6-3b below.

**Mitigation Measure 3.6-3b:** Standard BMPs shall be employed to maintain water quality and control erosion and sedimentation during construction.

BMPs will include those set forth in the San Mateo County Watershed Protection Program and in Mitigation Measures set forth in the *Hydrology* section of this EIR, to address impacts to water quality. BMPs will include, but not be limited to, installing silt fencing between jurisdictional waters and project related activities, locating fueling stations away from potentially jurisdictional features, and otherwise isolating construction work areas from any identified jurisdictional features.

**Mitigation Measure 3.6-3c:** The project applicant shall provide compensation for temporary impacts to, and permanent loss of, waters of the U.S., as required by permits issued by the Corps and RWQCB.

Many of the proposed projects that would result in direct construction-related impacts to streams are intended to restore and enhance stream function and aquatic habitat for steelhead. As such, they will essentially be self-mitigating. However, since the Master Plan includes a number of projects with direct-impact potential, the permitting agencies may require the development of a Stream Impact Mitigation and Monitoring Plan prior to the start of Phase 1. This would include park staff preparing and submitting a mitigation and monitoring plan to regulatory agencies for approval that includes: baseline information, anticipated habitat to be enhanced, performance and success criteria, anticipated mitigation obligations for temporary and permanent impacts to waters of the U.S. resulting from Master Plan implementation, monitoring and reporting requirements, and conceptual site-specific plans to compensate for impacts resulting from the project.

**Significance after Mitigation:** Less than Significant

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**Impact 3.6-4: Implementation of proposed project components, as well as implementation of vegetation management, fire hazard reduction, and erosion control activities, during Phases I through III of the Master Plan could result in damage to or removal of significant or heritage trees protected by the County of San Mateo that are within or adjacent to action areas. (Less than Significant with Mitigation)**

Activities that could result in the direct removal of, or damage to, protected trees in the parks include vegetation management, fire hazard management, regrading of roads or trails, construction or replacement of buildings and other facilities, and campground expansion. Significant or heritage trees protected by the County Tree Ordinance that occur within, or immediately adjacent to, areas of proposed activity could be damaged by excavation, grading, and soil compaction. Extensive damage to branches, trunks, or roots has the potential to result in tree mortality. The closer the construction activity is to the trunk of the tree, the greater the potential for damage. Each root that is damaged reduces the tree's capacity to supply water and nutrients to its leaves.

In compliance with the County's Tree Ordinances, park rangers generally submit a map of trees proposed for removal to the park planning department prior to their removal. The map shows the location and size (in circumference or diameter at breast height (dbh)) of trees to be removed. If approved for removal, trees are posted for a 10-day comment period, and, if no comments are received within that time period, are then removed. If comments are received, Park staff waits an additional 10 days during which they respond to comments received before proceeding with removal or cancelling removal, as appropriate. Hazard and dead trees do not require posting. Trees are typically replaced at a ratio of 1:1 and replacement trees are native trees of the same or similar species. Heritage trees are typically treated in a slightly different manner, based on species, as described in the tree ordinance, and as prescribed by park staff. These standard practices, in combination with Mitigation Measures 3.6-4a, 3.6-4b, and 3.6-4c would reduce impacts to protected trees to less than significant levels.

**Mitigation Measure 3.6-4a: Tree Mapping and Protection.** For each Master Plan Phase and for specific Plan components requiring further CEQA analysis, following standard operating procedures, park staff will prepare a map indicating the size and species of trees to be removed. In addition, the map will locate trees to be retained (i.e. preserved) within a given action area.

- Prior to the start of any clearing, stockpiling, excavation, grading, compaction, paving, change in ground elevation, construction, or similar activities, protected trees to be retained, that occur adjacent to, or within, project construction shall be identified in the field as "retained" and clearly delineated by constructing short post and plank walls, or other protective fencing material, at the dripline of each tree.
- The delineation markers shall remain in place for the duration of the work.
- Where proposed development or other site work must encroach upon the dripline of a retained tree, special construction techniques will be required to allow the roots of remaining trees within the project site to breathe and obtain water (examples include, but are not limited to, use of hand equipment for tunnels and trenching, and/or allowance of only one pass through a tree's dripline). Tree wells or other techniques may be used.
- Excavation adjacent to any retained trees, when permitted, will be in such a manner that will cause only minimal root damage.
- The following shall not occur within the dripline of any retained tree: parking; storage of vehicles, equipment, machinery, stockpiles of excavated soils, or construction materials; or dumping of oils or chemicals.

**Mitigation Measure 3.6-4b: Tree Pruning and Replacement.** All pruning of designated retained trees shall be performed by a certified arborist.

- No more than 25% of a tree's canopy shall be removed during pruning of retained trees.
- If any retained tree is damaged, then the project proponent shall replace the tree as required by the County Tree Ordinance.

- All removed trees that meet the criteria of a protected tree, under the County Ordinance, shall be replaced with the same species removed or as required by the County at a 1:1 ratio.

**Mitigation Measure 3.6-4c: Park staff shall develop and implement a five-year monitoring program for any required replacement plantings.** Applicable performance standards may include, but are not limited to: 75 percent survival rate of restoration plantings; absence of invasive plant species; and self-sustaining trees at the end of five years.

**Significance after Mitigation:** Less than Significant

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## 3.7 Cultural Resources

The assessment of project impacts on cultural resources under CEQA (CEQA Guidelines, Section 15064.5) is a two-step process: (1) determine whether the project sites contain cultural resources (defined as prehistoric archaeological, historic archaeological, or historic architectural resources). If the sites are found to contain a cultural resource, then (2) determine whether the proposed Master Plan would cause a substantial adverse change to the resource. The setting discussion describes the existing properties identified within the Huddart and Wunderlich Parks, and assesses whether the properties are historical resources for the purposes of CEQA. The impact discussion reviews the criteria for significant impacts on cultural resources and assesses the impact of the project on cultural resources.

### 3.7.1 Setting

#### Prehistoric Setting

Categorizing prehistoric times into broad cultural stages (for example, the Early and Middle Periods) allows researchers to describe a wide number of archaeological sites with similar cultural patterns and components during a given period of time, thereby creating a regional chronology. This section provides a brief discussion of this chronology for the project area.

Many of the original surveys of archaeological sites in the San Francisco Bay Area were conducted between 1906 and 1908. These surveys yielded the initial documentation of nearly 425 “earth mounds and shell heaps” along the San Francisco Bay shoreline (Nelson, 1909). From these beginnings, the most notable sites in the Bay Area were excavated scientifically, like the Emeryville shell mound (designated as CA-Ala-309), the Ellis Landing Site (CA-CCo-295) in Richmond, and the Fernandez Site (CA-CCo-259) in Rodeo Valley (Moratto, 1984). These dense midden sites are vast accumulations of domestic debris and date back to over 2,000 years ago; the Emeryville shell mound, for example, is dated at approximately 2,310 years old ( $\pm 220$  years). Other evidence suggests that human occupation in the region dates back farther, to approximately 5,000 BC (Jones, 1992). While there are many interpretations as to the function of the shell mounds, much of the evidence suggests that they served as territorial landmarks as well as ceremonial features.

Archaeological sites in the Bay Area that date to the Early Period (about 3,000 to 500 BC) reveal an almost exclusive use of cobble mortars and pestles, which is often associated with a heavy reliance on acorns in the economy (Moratto, 1984). Such unusually intensive reliance on one food source indicates that a shift away from the earlier reliance on a broad spectrum of dietary sources to supply food was needed by around 1,000 years ago. The abundance of available food along lakeshores and estuaries during the late Pleistocene/early Holocene likely led to an overexploitation of the resources, which subsequently resulted in population increases; this may explain the shift toward exploiting a readily available yet less-favored food resource like acorns or seeds (Jones, 1991). Nevertheless, given the burgeoning size of Early Period settlements, the populations were probably denser and more sedentary, yet continued to exploit a diverse resource

base—from woodland, grassland, and marshland to shoreline resources throughout the Bay Area (King, 1974). Many of the Early Period traits diffused throughout the region and spread to the interior areas of central California during this time period.

The population increases and larger, more complex settlements that began in the late-Early Period typify the Middle Period (about 500 BC to AD 1,000) (Arnold et al., 2004). The sociopolitical climate also appears to have become more elaborate, with clear differentiations in wealth. During the Late Period (about AD 1,000 to 1,700), however, there was a decline in new sites and the large shell mounds were abandoned. The population also declined during the Late Period, along with associated changes in resource use that were likely caused by humans depleting some terrestrial food sources during the Middle Period (Broughton, 1994).

### ***San Mateo County Archaeology***

The San Francisco Peninsula represents a complex prehistoric settlement pattern. Traditional approaches to understanding settlement in this area have proposed that each tribelet (discussed below) had a main village at the bay shore and maintained seasonal camps in the hills for exploiting acorns and other resources. However, the majority of the evidence now indicates that local tribelets were organized along a particular watershed, like San Francisquito Creek and San Mateo Creek, but the seasonal mobility was limited to the bayshore and oak woodlands, not further up the watershed into the mixed evergreen elevations (Bocek, 1991). Of the approximate 180 site locations discovered on the southern Peninsula, about 75% are located within 100-meters of a creek or former creek bed (Bocek, 1992). It appears that the density of resources and the ease of access at the lower reaches of the watershed favored settlement in these areas, i.e. the bayshore and the contiguous oak woodlands to the bayshore and grasslands zones. The higher reaches that were less accessible and steep, i.e. mixed evergreen forest, was apparently less frequently used. However, periods of drought or annual dry periods during the summer months may have encouraged greater upland use due to the availability of water in the upper reaches. All in all, while it appears that the higher elevations of the Santa Cruz Mountains along the Peninsula, including present-day Huddart and Wunderlich Parks, were less intensively used, small, ephemeral sites may still exist within the landscape. This is made more probable given the lack of available data along these elevations.

### **Ethnographic Setting**

The project area was inhabited by the Costanoan, ethnographically by 500 A.D., whose territory was comprised of mostly the coastal region south of the San Francisco Bay to Monterey (Levy, 1978). The Costanoans of the San Francisco Bay Area was collectively inhabited by eight subgroups. Despite having a common language base, they were not bound together in any political sense. Therefore, they did not have a single term or word in their language by which they referred to themselves as a whole. Europeans referred to them as Costanos or “people of the coast” from which the name “Coastanoan” was derived (Levy, 1978). Today, the surviving descendents of these people frequently use a native language term “Ohlone” to designate themselves (Margolin, 1978). The project area falls within the ethnographic boundaries of the *Tamyen* territory.

The ethnic groups recognized within the Costanoan culture were sets of tribelets that spoke a common language—yet unique in dialect to other neighboring tribelets—and lived in a circumscribed, contiguous area. The tribelet served as the basis of sociopolitical organization and generally had at least one permanent village. Indeed, the slight variations in dialect exhibited by each village further distinguished tribelet membership and its ethos.

The Costanoans maintained a consistent output of yield from plant and animal foods through many techniques of land management. For instance, controlled burning of extensive areas was conducted each fall to promote the growth of seed-bearing annuals. The frequent use of fires selects for certain types of grasses that are quick to grow back and for fire-retardant bushes and shrubs. As the frequency of fires increases, the overall composition of the plant communities change, and hence the animal population as well. The amount of land available for grazing animals, such as deer, elk, and antelope, thus increases, along with their populations.

The acorn was the most important dietary staple of the Costanoan—specifically the coast live oak (*Quercus agrifolia*) and valley oak (*Quercus lobata*) for their prolific acorn production. The acorns were ground to produce a meal that was leached to remove the bitter tannin. Technologically, the Costanoan crafted tule balsa, basketry, lithics such as mortars and metates, and household utensils. Riverine and littoral resources were also exploited when available or economically suitable.

### ***Paleontologic Resources***

Paleontologic resources are the fossilized evidence of past life found in the geologic record. Despite the prodigious volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils – particularly vertebrate fossils – are considered to be nonrenewable resources. Because of their rarity, and the scientific information they can provide, fossils are highly significant records of ancient life. Paleontologic resource localities are those sites where the fossilized remains of extinct animals and/or plants have been preserved.

### **Historic Setting**

San Mateo County bears the Spanish name for Saint Matthew, which appears on maps of the area as early as 1776. The settlements around the unofficial San Mateo Mission are also designated on these early maps. Until about 1850, the place name appears as San Mateo. San Mateo County was formed from parts of San Francisco County and Santa Cruz County in 1856.

### ***History of Wunderlich Park***

Woodside Valley entered current recorded history on November 6, 1769, when the first Portola expedition camped in the valley. In August 1840, the Governor of Spanish California granted the 12,545-acre Rancho Canada de Raymundo to John Coppinger, an Irishman who had become a naturalized Mexican citizen. This rancho consisted of most of the eastern slopes and valleys in the

Woodside area, including today's Wunderlich Park. In 1846, Charles Brown received from Copinger a formal deed to 2,880 acres of timbered slopes and valley range, which contained Wunderlich Park.

In 1872 Simon Jones purchased 1,500 acres of the western portion of the property and named it "Hazel Wood Farm". Utilizing Chinese labor, he cleared the matted natural growth, built rock retaining walls, planted grapes and fruit trees and developed the property into a working ranch. Some of the buildings from the Jones era still remain to this day.

When Jones died in 1890, his son Everett sold the property to James A Folger II on October 12, 1902. Folger came to California in 1850 and had gone into the coffee business in San Francisco. Under Folger's ownership, the land changed roles, becoming a recreation area suited to the family's taste. In about 1905, Folger built the stables, garage, and blacksmith barn that exist in the Park today, as well as a large mansion that is now on private property adjacent to the Park. Folger also built a reservoir, now known as Salamander Pond, to store water before it was piped to Folger Mansion, into the remnants of Jones' fields, or into the millrace for a small sawmill that Folger maintained on site (no longer extant). Wagon trails and old skid roads became riding and carriage trails. Weekend campouts were quite common in the area of Alambique Creek.

The next owner of the property was contractor Martin Wunderlich, who purchased the property from the Folger's in November 1956. In 1974, Wunderlich deeded 942 acres to San Mateo County for use as park and open space, for which it is used today.

### ***History of Huddart Park***

Also contained within Coppinger's original Rancho Canada de Raymundo was the 973 acres which now encompasses Huddart Park. In 1850, the California Gold Rush demand for lumber to build San Francisco resulted in extensive logging operations in the rancho area. Near the present borders of the parks, five sawmills operated between 1853 and 1860. Richard's sawmill, built in 1853, operated just outside the present park boundary west of Skyline Boulevard. Wagons loaded with lumber and drawn by teams of oxen traveled down it towards Redwood City, where the lumber was barged to San Francisco. Richard's Road Trail in today's park follows the route of this old road. Near the park is the historic Woodside Store built in 1853 by Dr. Orville Tripp. Tripp's store was at the hub of activity during this early logging boom since about 15 sawmills were within five miles of its door.

James Huddart was a wealthy San Francisco lumberman and long-time resident of Woodside. He was raised in an orphanage with his sister, and desired to do something beneficial for the youth in the area with his holdings in San Mateo County.

Before his death on in 1935, Huddart deeded 900 acres of his property to the County of San Francisco with the provision that it would be accepted and developed into a public park. Due to water rights problems along Squealer Gulch Creek, San Francisco held it only two years. When the State of California also had problems with the water rights, the property was willed to the County of San Mateo, who has owned and operated the land as a public park since 1944.

In the hundred years since the Huddart Park area was logged, a new forest of redwoods and other trees have grown, covering much of the evidence of this early logging activity. However, still visible are large stumps of the virgin redwoods and “skid roads” over with the teams of oxen dragged logs to the sawmills.

Most of the buildings and structures in Huddart Park were installed by the County of San Mateo Department of Parks from the 1960s through the 1990s, including the entrance station and ranger’s residence, campground shelters, restrooms, campgrounds and picnic areas, roads and parking areas, an amphitheater, and a corporation yard.

## **Methodology**

### ***Cultural Resources Records Search***

ESA conducted a cultural resources records search of all pertinent survey and site data at the Northwest Information Center, Sonoma State University on January 2, 2007 [File No. 06-507]. The records search included a review of the Directory of Properties in the Historic Property Data File for San Mateo County for information on sites of recognized historical significance listed in the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Inventory of Historic Resources, California Historical Landmarks, and the California Points of Historical Interest. A host of additional sources were reviewed for archaeological, ethnographic, and historical information, such as *San Mateo County: Its History and Heritage* (1984) and the 1899 USGS San Mateo 15’-Minute Quadrangle.

### ***Field Surveys***

A site visit was conducted by an ESA Registered Professional Archaeologist on a reconnaissance-level field survey of the park properties in March, 2007. The survey was limited to the areas of proposed improvements and was not intended to serve as a comprehensive investigation of either Park. However, areas of exposed bedrock (e.g., bedrock mortars) and soils (e.g., lithic technology, organic residues) were more closely inspected for evidence of prehistoric use. Given the dense vegetation and areas of development, the visibility and thereby the effectiveness of the survey to identify archaeological deposits was limited. Nevertheless, an impression of the landscape and its potential to yield archaeological deposits was established through the reconnaissance survey. In addition, an ESA architectural historian/preservation planner conducted a reconnaissance-level field survey of the park properties in March 2007.

## **Results**

### ***Archaeological Resources***

No previously recorded archaeological sites occur within either Huddart and Wunderlich Parks. However, only Wunderlich Park has been subject to an archaeological survey, which was conducted by a single archaeologist over 30-years ago (Dietz, 1976). One prehistoric site, CA-

SMA-306, was recorded less than a quarter-mile north of the Wunderlich Park boundary. This site was described as a large boulder with three large, deep mortars<sup>1</sup> and five shallow cupules.

## ***Historic Architectural Resources***

### **Wunderlich Park**

In 2004, the Folger Estate Stable Historic District was listed in the NRHP (NPS, 2004). Located on a three-acre site just inside the entrance to Wunderlich Park, the district consists of five contributing resources; the large stable, a garage, and a blacksmith barn which date from the Folger era (1902 – 1956), as well as a dairy house and stone retaining walls which date from the earlier Jones era (1872 – 1902). Some of the original road alignments and storm drainage culverts are also elements of the District's historic setting. The non-contributing resources, scattered about the district, are small stables, a storage shed, and an outdoor pen, all built since 1974. These resources are identified in Figure 3.7-1.

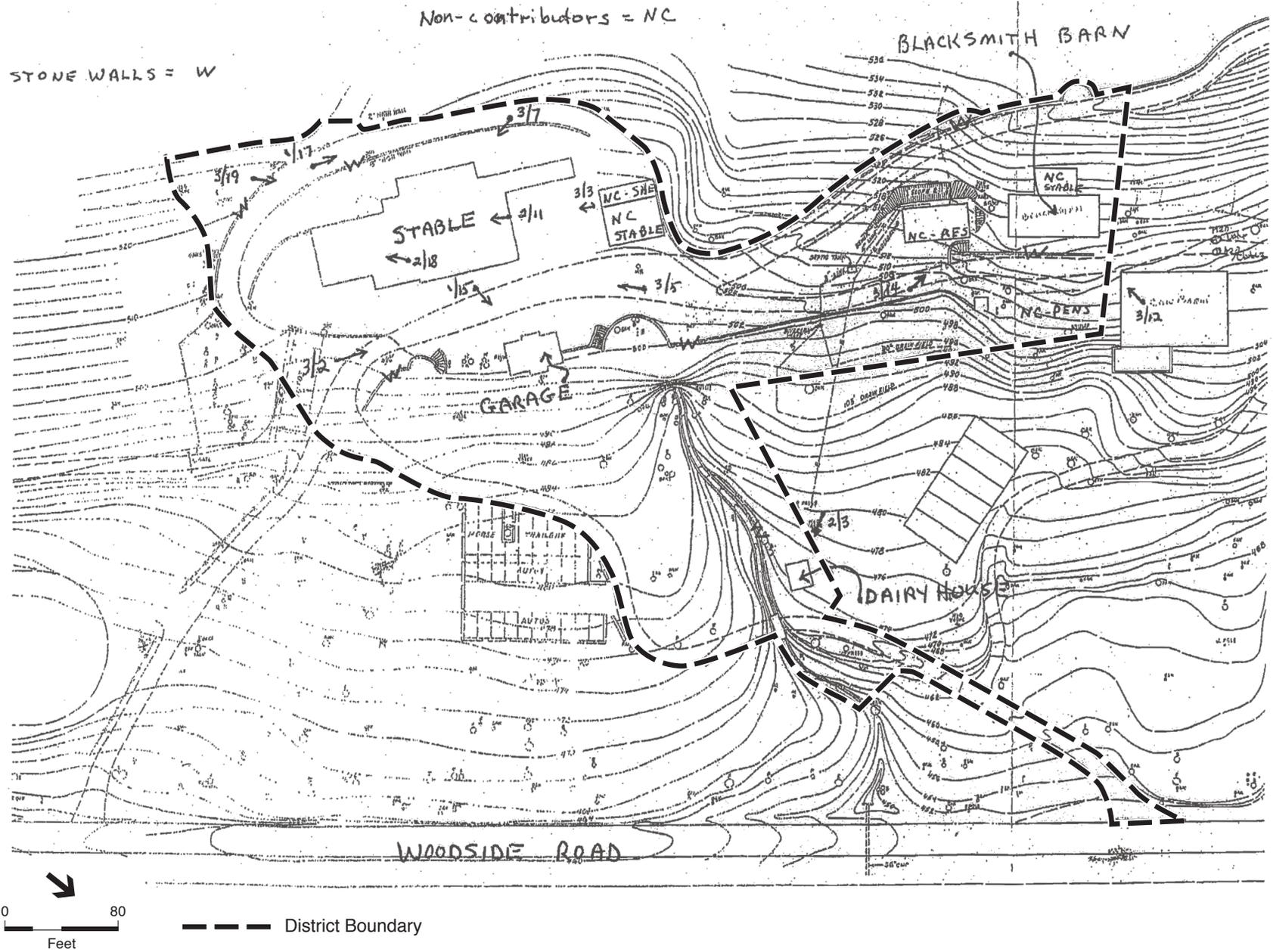
The Folger Estate Stable Historic District is eligible for the National Register under Criteria A and C at local level of significance. Under Criterion A, the district is eligible in the area of Entertainment/Recreation as the first of many major stables built for a twentieth century generation of wealthy San Franciscans who built homes in Woodside. Under Criterion C, the district is eligible in the area of Architecture both as an example of its type - an early twentieth century recreational stable for an elite client, and as an example of its style, based primarily on the teachings of the Ecole des Beaux Arts. The contributors to the historic district are described below:

**Stable.** Erected in circa 1905 by coffee magnate James A Folger II, and designed by Arthur Brown Jr. of the firm Shulze & Brown who designed the San Francisco Opera House and City Hall among other well-known buildings, the Folger Stable is the dominant feature of the Folger Estate Stable Historic District by virtue of its size and appearance. The building is a large, two-story wood structure about 188 feet long and 75 feet wide and nearly 50 feet tall at its maximum extremities. It has a complex hip roof, with numerous dormers, decorative eave brackets, ventilating towers, and chimneys, and a stylistic character derived from French Baroque architecture blended with elements of the Arts and Crafts movement.

Like many stables, the Folger stable is a two-story structure with a hay loft above. It is irregular in plan but its ground floor can be generally characterized as having three zones: at the center is an area that was built to accommodate carriages, tack, office, lounge, and living quarters. At the south end is a smaller wing where originally all the horse stalls were built. The central area and the south wing are linked and unified by a wide central corridor. At the north end, off center and at the rear, is a narrow wing built as a workshop area.

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<sup>1</sup> A deep basin set in granite or other large rock outcroppings, formed by the grinding or crushing of foods with stone.



SOURCE: NPS, 2004

Huddart and Wunderlich Parks Master Plan EIR . 206310

**Figure 3.7-1**  
Folger Estate Stable Historic District  
Sketch Map

The interior consists of brick floors, pink marble baseboards (partial) and redwood paneling stained to resemble mahogany. The stable is currently leased to a private operator for riding lessons and horse boarding. As in Folger's time, the building continues to be used as a horse stable and residence today. Other than newer interior horse stalls, few alterations to the building have occurred, although the structure is in general disrepair.

**Garage/Carriage House.** The Garage (also sometime referred to as the Carriage House) is located immediately northeast from the stable, and was also designed by Shulze & Brown in 1905 for automobiles used to travel between the railroad in Redwood City and Folger property in Woodside. The garage is a one-and-one-half story wood structure on a concrete foundation covered by a high hip roof with overhanging eaves and paneled soffits. The architectural treatment of the building is a simpler version of the main stable, expressing the hierarchical relationship between the two. On the interior of the first floor is a single, unobstructed space with a toilet room and a staircase to the attic. Upstairs there are two rooms lit by two dormer windows. The county enclosed the garage vehicle portal in 1976 so that it could be used for meetings or offices, a use which continues today.

**Blacksmith Barn.** The blacksmith barn also appears to have been designed by Shulze & Brown in 1905. This barn, located further north from the stable and garage, is a one-story wood frame structure of post-and-beam construction resting on concrete footings. The building has a rectangular plan and a complex, high hip roof with ventilating monitors and exposed rafters tails. The architectural treatment of the building is a simpler version of the main stable or the garage, again expressing the hierarchical relationship among the three buildings. Although previously used as a blacksmith barn, the building now contains horse stables. The building was rehabilitated several years ago after a tree fell on the south end of the building.

**Dairy House.** The dairy house is a small rectangular stone building with a wood gable roof and a central ventilating cupola located near the entrance road and Alambique Creek. The building was constructed in 1874 during the Jones tenure of the property, and is about 19 feet by 21 feet. Its 10" thick stone walls are sandstone rubble laid with mortar. The building is covered by a wood gable roof clad in wood shingles. The interior consists of a single open room with few openings intended to keep the perishable dairy products cool. There are few alterations to the building, although it is in general disrepair, with previous attempts to stabilize the stone walls through the use of steel corner brackets and wire rope.

**Stone Retaining Walls.** There are numerous stone walls throughout the historic district at Wunderlich Park that were either built or begun by Simon Jones in the nineteenth century. The walls are all dry laid rubblestone without coping or mortar. Anecdotal evidence suggests that they were built using Chinese labor, used extensively in the area to clear land and build roads. The stone walls were also added to or modified during the Folger era. The walls were built for a variety of purposes. Some are retaining walls on a site with steep slopes, while others appear to be part of the design of roads or to help with drainage and erosion. Other stone walls also line the creek between culverts. The stone walls are primarily located behind the main stable, below the

garage, in the vicinity of the blacksmith barn, and along an old driveway above. The walls appear to be in good condition.

**Historic Setting – Road and Culverts.** While not specifically identified as contributory resources to the District, Wunderlich Park has a number of roads and culverts that contribute to the District’s historic setting, and are associated with both the Jones era and the Folger era of the property. Like the walls, roads were built in the nineteenth century by the Jones family to provide access to the property from the public road and to provide internal circulation on the property. During the Jones era, the area in and around the historic district was the site of the owner’s residence and farm buildings (no longer extant, except for the Dairy House). From old maps and views, the principal entrance drive to the property appears to be essentially the same as that built by Jones to his house. This drive enters the property from Woodside Road and, traveling generally to the south in a curvilinear path, crosses the creek below the dairy House and continues to the main parking lot, the site of the former Jones House (demolished by the Department in 1976). From the parking lot, the road curves up the hill, turns north, and divides around both sides of the main stable, with the lower road leading back to the Folger House. Nothing is known about the original design or appearance of the roads. Today they are gravel and dirt or mud, and their widths have varied over time. Their alignments, rather than their current materials, are historically associated with the property, and are often associated with other features such as stone walls, culverts, and the buildings to which they lead (NPS, 2004).

One original storm drainage culvert beneath the Folger Stable yard (between the Stable and the Carriage House/Garage), which is used to carry water from the hillside above to the open creek below, is associated with the historic development of the district. This culvert also probably collected water from the drainage system installed with the Stable around 1905. A second culvert under the entrance drive (i.e., below the bridge over Alambique Creek) was historically associated with the Jones era resources, but was recently replaced due to flood damage and would not be considered a historic element to the property.

### **Huddart Park**

No historic architectural resources have been recorded in Huddart Park. A reconnaissance-level field survey of the park property by ESA cultural resources staff in March, 2007, indicated that none of the buildings or structures at Huddart Park would qualify for listing as historic resources due to their relatively recent construction dates (within the past 50 years). The oldest structure in the Park, however, appears to be one of the buildings in the corporation yard, called the “Ranger’s Station.” This modest structure about 15 feet by 20 feet in size is likely a 1920’s-era former shed which may have been associated with the previous logging activities in the area. This building, however, has been substantially altered with recent exterior additions and interior renovations, changes to its original setting with newer structures, and was likely moved to its present location by the Department to become a part of the corporation yard. As a result, this building would not be considered a historic resource for CEQA purposes (ESA, 2007). As described above, none of the other Park buildings or structures would be considered historic resources due to their recent construction dates.

## 3.7.2 Regulatory Framework

Regulations that apply to the proposed project for cultural resources are discussed below.

### Federal

#### ***National Register of Historic Places***

The NRHP, the nation's master inventory of known historic resources, is administered by the National Park Service in conjunction with the State Historic Preservation Office. The National Register includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The National Register criteria and associated definitions are outlined in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation*. Bulletin 15 indicates that resources (i.e., structures, sites, buildings, districts, and objects) over 50 years of age can be listed in the National Register provided that they meet the evaluative criteria described below.

However, properties under 50 years of age that are of exceptional importance or are contributors<sup>2</sup> to a district, and that also meet the evaluative criteria, can also be included in the National Register. Resources can be listed individually in the National Register or as contributors to a historic district.

When nominating a resource to the National Register, one must evaluate and clearly state the significance of that resource to American history, architecture, archaeology, engineering, or culture. The National Register includes four criteria under which a structure, site, building, district or object can be considered significant for listing in the register. These include:

- A. Resources that are associated with events that have made a significant contribution to the broad patterns of history; or
- B. Resources that are associated with the lives of persons significant in our past; or
- C. Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Resources that have yielded or may likely yield information important in prehistory or history.

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<sup>2</sup> A "contributor" is a building, site, structure, or object that adds to the historic associations or historic architectural qualities for which a property is significant. The contributor was present during the period of significance, relates to the documented significance of the property, and possesses historic integrity or provides important information about a period; or the contributor independently meets the National Register criteria. A "non-contributor" does not add to the historic associations or historic architectural qualities, as it was not present during the period of significance; has experienced alterations, disturbances, additions, or other changes; or does not independently meet the National Register criteria.

A resource may be considered eligible for listing in the National Register if it meets one or more of the above-listed criteria for significance *and* it possess integrity. Historic properties must retain their integrity to convey their significance. Although the evaluation of integrity is sometimes a subjective judgment, it must be grounded in an understanding of the resource's physical features and how they relate to its significance. The National Register recognizes seven aspects or qualities that define integrity; location, design, setting, materials, workmanship, feeling, and association.

### ***National Historic Preservation Act***

Federal involvement in a local project through permitting, approval, or funding requires project compliance with Code of Federal Regulations (CFR), Section 36, Part 800, Protection of Historic Properties. If future Master Plan projects require a permit from, say, the U.S. Army Corps of Engineers, completion of cultural resource studies in compliance with Section 106 of the National Historic Preservation Act. Results of these studies would require concurrence from the State Historic Preservation Officer (SHPO) and would be supplied to the Corps or other federal permitting/funding agency for incorporation into its National Environmental Policy Act (NEPA) process.

## **State**

### ***California Register of Historical Resources***

The CRHR is a listing of resources that are significant within the context of California's history. The California Register is a statewide program of similar scope to the National Register. All resources listed in or formally determined eligible for the National Register are also eligible for listing in the California Register. In addition, properties designated under municipal or county ordinances are also eligible for the California Register. A historic resource must be significant at the local, state, or national level under one or more of the following criteria defined in the California Code of Regulations (CCR), Title 14, Chapter 11.5, Section 4850.

- It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
- It is associated with the lives of persons important to local, California, or national history; or
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

The California Register criteria are similar to National Register criteria, and are tied to CEQA, as any resource that meets the above criteria is considered a historical resource under CEQA.

### **California Environmental Quality Act Statute and Guidelines**

The CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts on cultural resources, which include all resources listed in or formally determined eligible for the National Register, the California Register, or local registers.

CEQA requires the lead agency to consider the effects of a project on archaeological resources and to determine whether any identified archaeological resource is a historical resource (i.e., if the archaeological resource meets the criteria for listing in the California Register) (CEQA Guidelines Sections 15064.5[a][1] and [3] and [c][1] and [2]). An archaeological resource that qualifies as a historical resource under CEQA generally qualifies for listing under Criterion D of the California Register (CEQA Guidelines Section 15064.5[a][3][D]). An archaeological resource may qualify for listing under Criterion D when it can be demonstrated that the resource has the potential to significantly contribute to questions of scientific or historical importance.

Archaeological resources that are not historical resources according to the above definitions may be “unique archaeological resources,” as defined in Public Resources Code Section 21083.2, which generally provides that “non-unique archaeological resources” do not receive any protection under CEQA. If an archaeological resource is neither a unique archaeological resource nor a historical resource, the effects of a project on those resources are not considered significant.

CEQA defines a historical resource as a resource that meets any of the following criteria:

- A resource listed in, or determined to be eligible for listing in, the National Register or California Register.
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, unless the *preponderance* of evidence demonstrates that it is not historically or culturally significant.
- A resource identified as significant (e.g., rated 1 through 5) in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1(g) (Department of Parks and Recreation Form 523), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered “historically significant” if it meets the criteria for listing in the California Register (CEQA Guidelines Section 15064.5).
- A resource that is determined by a local agency to be historically or culturally significant even though it does not meet the other four criteria listed here (e.g., Article 10 and Article 11 of the San Francisco Planning Code).

According to the CEQA Guidelines (Section 15064.5[a][3]), a resource is generally considered historically significant if the resource meets the criteria for listing in the California Register (Public Resources Code Section 5024.1, CCR, Title 14, Section 4852). A historical resource is defined as any site that:

1. Is listed in, or determined to be eligible by the State Historical Resources Commission for listing in the California Register, or is determined to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California; and
2. Meets any of the following criteria:
  - a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
  - b. Is associated with the lives of persons important in our past;
  - c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
  - d. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, a resource included in a local register of historical resources, as defined by Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, is presumed to be historically or culturally significant. Archaeological resources may be historical resources under CEQA.

CEQA Guidelines Section 15064.5 provides that, in general, a resource not listed in state or local registers of historical resources shall be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the California Register. This section also provides standards for determining what constitutes a "substantial adverse change" on archaeological or historical resources, including physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (CEQA Guidelines Section 15064.5[b][1]). The significance of a historical resource is considered to be materially impaired when a project demolishes or materially alters in an adverse manner those characteristics that convey its historical significance and that justify its inclusion on a historical resource list (CEQA Guidelines 15064.5[b][2]).

CEQA Guidelines Section 15064.5(b)(3) indicates that projects that are consistent with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* generally "shall be considered as mitigated to a level of less than a significant impact on the historic resource".

## Local

The San Mateo County General Plan (San Mateo County, 1986) contains a number of policies related to the identification and protection of cultural resources. Policies that are applicable to the proposed project include the following:

- 5.1 Protect historic resources for their historic, cultural, social and educational values and the enjoyment of future generations.

- 5.2 Encourage the rehabilitation, preservation and use of historically significant structures.
- 5.3 Protect archaeological/paleontological sites from destruction in order to preserve and interpret them for future scientific research, and public educational programs.
- 5.4 Encourage the development of inventories of historical resources which have national, State and Countywide significance.
- 5.5 Integrate historical preservation into the planning process of the County.
- 5.6 Develop increased public awareness of the County's heritage to foster widespread support and understanding for the need to preserve historical.

## **Approach to Analysis**

### ***Archaeological Resources***

Due to the geographic scale of the project areas and the wide range of actions that falls within the scope of the potential future actions under the Master Plan Projects, this impact analysis is intended as a preliminary assessment of potential impacts on important cultural resources that could occur as a result of the Master Plan projects. Because this is a preliminary analysis, the level of impacts on specific cultural resources that could result from individual projects are not addressed in this document, but need to be assessed through additional analysis as projects are identified and defined. A qualitative assessment of a given cultural resource and its significance is a necessary precondition to conclude whether a project may adversely affect an "historic resource" or "unique archaeological resource".

The impacts and mitigation measures identified in this section address types of activities that could significantly impact cultural resources including archaeological sites and historic buildings and structures. Master Plan projects that include these types of activities would be required to implement the identified mitigation measures in an effort to reduce any impacts to a less-than-significant level.

The identification of specific impacts and mitigation measures that are appropriate for a specific project will depend on both the nature of the cultural resources that are present and on the nature of the project. In some instances, mitigation measures must be developed in consultation with multiple agencies and other interested parties.

### ***Historic Architectural Resources***

The identification of facilities that could be affected by implementation of the Master Plan is based on the field reconnaissance discussed above and a review of previously recorded and evaluated historical resources within the Master Plan project areas. At Wunderlich Park, the location and condition of previously-identified historic resources (i.e., the Folger Estate Stable Historic District) was confirmed through the reconnaissance-level survey by an ESA architectural historian/preservation planner. At Huddart Park, because no previous architectural surveys had

occurred, the approach to analysis focused on potential effects to those resources that were 50 years old or older; the minimum threshold for consideration for listing in the NRHP/CRHR. Those resources which appeared to be 50 years old or older were recorded through photography, and an evaluation was made as to whether they would meet the other criteria for NRHP/CRHR eligibility.

**Impact Mechanisms**

In general, projects that include ground-disturbing activities such as grading and excavation have the potential to impact historic and prehistoric archaeological resources. Projects that entail minor surface disturbance or construction would likely result in negligible impacts to cultural resources, but not in every case. On the other hand, large-scale impacts can result from projects that require the movement of large quantities of sediment. In essence, as the intensity of construction impacts increases, the potential to impact cultural resources increases.

Projects that would demolish, move, or alter historic architectural resources, or would substantially alter their historic setting, would have a significant impact to historic architectural resources and thereby to the environment. In addition, projects that would alter historic properties in a manner that is inconsistent with the guidance provided in the *Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Weeks and Grimmer, 1995), would have a significant impact to historic architectural resources (see Appendix D for a list of the *Standards*).

Table 3.7-1 summarizes the types of activities that can potentially cause significant impacts to cultural resources and lists mitigation approaches that typically would reduce or eliminate significant impacts to identified significant cultural resources. However, not all circumstances would result in reducing an impact to a level that is less than significant.

**TABLE 3.7-1  
SUMMARY OF POTENTIAL IMPACT MECHANISMS AND  
POSSIBLE MITIGATION STRATEGIES FOR CULTURAL RESOURCES**

Potential Impact Mechanisms	Mitigation Strategies
<ul style="list-style-type: none"> <li>■ Impacts on cultural resources from ground-disturbing activities (1-6);</li> <li>■ Impacts on cultural resources from alteration of existing structures (1-3, 7);</li> <li>■ Impacts on cultural resources from construction of new facilities (1-7);</li> <li>■ Introduction of elements to the historic setting of a cultural resource site (1, 2, 7).</li> </ul>	<ol style="list-style-type: none"> <li>1. Conducting cultural resource inventories and evaluations;</li> <li>2. Avoiding sites through project redesign;</li> <li>3. Accidental discovery mitigation;</li> <li>4. Monitor excavation work;</li> <li>5. Conducting auger (probing) survey;</li> <li>6. Conducting data recovery;</li> <li>7. Documenting historic resources per HABS/HARE* standards.</li> </ol>

\*HABS/HAER - Historic American Building Survey/Historic American Engineering Record.

### 3.7.3 Impacts and Mitigation Measures

#### Significance Criteria

According to Appendix G of the CEQA Guidelines, the proposed project could have a significant impact on cultural resources if it would result in any of the following:

- A substantial adverse change in the significance of a historical resource that is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, or a local register of historic resources;
- A substantial adverse change in the significance of a unique archaeological resource;
- Disturbance or destruction of a unique paleontological resource or site or a unique geologic feature; or
- Disturbance of any human remains, including those interred outside of formal cemeteries.

CEQA provides that a project may result in a significant environmental effect if it would cause a substantial adverse change in the significance of a historical resource (Public Resources Code, Section 21084.1). CEQA Guidelines Section 15064.5, subdivision (b)(1), defines a “substantial adverse change” in the significance of a historical resource to mean “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.”

CEQA Guidelines, Section 15064.5, subdivision (b)(2), defines “materially impaired” for purposes of the definition of “substantial adverse change...” as follows:

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

- (A) demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
- (B) demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- (C) demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Historic resources are usually 50 years old or older and must meet at least one of the criteria for listing in the California Register (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity (CEQA Guidelines Section 15064.5[a][3]).

## Impacts Discussion

### *Archeological Resources*<sup>3</sup>

**Impact 3.7-1: Impacts to archaeological resources. Ground disturbing construction activities at both Huddart and Wunderlich Parks could cause damage to, disrupt, or adversely affect archaeological resources.**

#### **Impacts Common to all Phases and to Both Parks**

As discussed in Table 3.7-1, the types of activities associated with Master Plan projects vary in terms of their potential to disturb both known and unknown archaeological resources. However, program-wide mitigation strategies are presented below to allow for the greatest flexibility regarding the treatment of archaeological resources.

Construction activities have the potential to directly affect unknown buried cultural resources in the project area by disturbing subsurface soils. Such disturbance could result in the loss of integrity of cultural deposits, loss of information, and the alteration of a site setting. Potential indirect impacts, primarily vandalism, could result from increased access to and use of the general area during both construction and operation. Without mitigation, construction activities could cause damage to, disrupt, or adversely affect any unknown buried cultural resources at all Master Plan project sites involving excavation or soil disturbance. Implementation of the following Measures would reduce this potential impact to a less-than-significant level.

**Mitigation Measure 3.7-1a: Cultural Resources Inventory.** In order to adequately address the level of potential impacts for a specific Master Plan project, and thereby design appropriate mitigation measures, the significance and nature of the cultural resources must be determined. The following are steps typically taken to assess and mitigate potential impacts to cultural resources for the purposes of CEQA:

- Identify both previously recorded cultural resources and those not previously recorded.
- Evaluate the significance of cultural resources using CEQA guidelines.
- Identify the significance of impacts under CEQA of the proposed project within the Project Area.
- Develop and implement mitigation measures designed to avoid, minimize, rectify, or reduce or eliminate the effects of the project on significant cultural resources.

<sup>3</sup> For ease of discussion, the term “archaeological resources” refers to those resources recognized as either historical resources or unique archaeological resources as defined by CEQA and the Public Resources Code (see section 4.6.2 Significance Criteria above).

Minimally, a cultural resources inventory shall consist of a cultural resources records search to be conducted at the appropriate office of the California Historical Resources Information System; consultation with the Native American Heritage Commission (NAHC) and with interested Native Americans identified by the NAHC; a field survey (if one has not previously been conducted); recordation of all identified archaeological sites and historic buildings and structures on California Department of Parks and Recreation 523 Site Record forms; and preparation of a cultural resources inventory report describing the project setting, methods used in the investigation, results of the investigation, and recommendations for management of identified resources. Certain agencies, such as the Federal Highway Administration and California Department of Transportation (Caltrans), have specific requirements for inventory areas and documentation format.

Identified cultural resources that may be impacted by a proposed project shall be evaluated for eligibility for listing on the CRHR. Cultural resources that are eligible for the CRHR are considered to be significant cultural resources. Cultural resources that are identified within project areas subject to federal approval, permits, or funding shall also be evaluated for eligibility for listing on the NRHP. Cultural resources determined to be eligible for listing on the NRHP are automatically eligible for listing on the CRHR and are considered to be significant cultural resources.

**Mitigation Measure 3.7-1b: Avoid Impacts to Cultural Resources.** If feasible, impacts on identified cultural resources including prehistoric and historic archaeological sites, human remains, and historical buildings and structures shall be avoided. Methods of avoidance may include, but not be limited to, project re-design, project cancellation, or identification of protection measures such as capping or fencing.

If avoidance is not feasible, the following Mitigation Measures 3.7-2, 3.7-3a, 3.7-3b, 3.7-3c, 3.7-4a, and/or 3.7-4b are provided to be implemented as necessary.

**Significance after Mitigation:** Less than Significant

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**Impact 3.7-2: Possible substantial effects can occur to known, but unevaluated prehistoric and historic archaeological deposits from ground disturbing construction operations. (Less than Significant with Mitigation)**

Trenching and other subsurface excavation in areas known to contain archaeological sites, or suspected to have such sites, would disturb or destroy significant cultural resources. Cultural resource sites known to exist within project boundaries, that have not been previously tested for significance, and that cannot be avoided, should be tested for their distribution, integrity, and significance, prior to construction. Pre-construction testing is preferable to monitoring for these sites given their potential to be important resources. Further, Native American concerns that construction could affect sacred sites or burials that may be present contribute to the sensitivity of a site to excavation without data recovery. Because data recovery can be time consuming and impede construction if it is left until construction is underway, testing to determine the need, if any, for such recovery should be performed as early as possible in the planning stages but after a 75-80% engineering threshold is met.

For sites of concern within the disturbance area of individual Master Plan projects, particularly in existing right-of-ways or under paved urban roads, construction monitoring by a Native American and qualified archaeologist, followed by either avoidance of resources encountered during monitoring or scientific excavation and analysis of recovered materials in the sensitive areas could serve to mitigate the impacts. In some cases, excavation as mitigation will not result in reducing impacts to a level of less than significant.

**Mitigation Measure 3.7-2a: Archaeological Testing and Data Recovery.** If it is infeasible to avoid impacts on archaeological sites that have been determined to be eligible for listing on the CRHR or the NRHP (significant resources), additional research including, but not necessarily limited to, archaeological excavation shall be conducted (CCR Section 15126.4 (b)(3)(C)). This work shall be conducted by a qualified archaeologist and shall include preparation of research design, additional archival and historical research, archaeological excavation, analysis of artifacts, features, and other attributes of the resource, and preparation of a technical report documenting the methods and results of the investigation in accordance with the California Office of Historic Preservation *Guidelines for Archaeological Research Design* (1991). The purpose of this work is to recover a sufficient quantity of data to compensate for damage to or destruction of the resource. The procedures to be employed in this data recovery program will be determined in consultation with responsible agencies and interested parties, as appropriate. Where necessary, the County would seek Native American input and consultation.

**Mitigation Measure 3.7-2b: Conduct Archaeological Monitoring.** Ground-disturbing activities that have the potential to impact archaeological remains will occur in an area that has been determined by a qualified archaeologist to be an area that is sensitive for the presence of buried archaeological remains, a qualified archaeologist shall be retained to monitor those activities. Archaeological monitoring shall be conducted in areas where there is a likelihood that archaeological remains may be discovered but where those remains are not visible on the surface. Monitoring shall not be considered a substitute for efforts to identify and evaluate cultural resources prior to the project initiation. Where necessary, the County would seek Native American input and consultation.

**Significance after Mitigation:** Less than Significant

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**Impact 3.7-3: Project construction could adversely affect currently unknown historical resources, including unique archaeological resources. (Less than Significant with Mitigation)**

No previously recorded archaeological sites exist within the project area and none have been identified through reconnaissance-level surveys. However, there is a possibility that previously unknown archaeological sites, such as shell midden soils, stone artifacts, and historic trash scatters, may occur within the project area. Inadvertent damage to significant buried archaeological deposits during construction would be a significant impact. Implementation of Mitigation Measure 3.7-3, however, would reduce the impact to a less-than-significant level.

**Mitigation Measure 3.7-3:** If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources will be halted and the project proponent will consult with a qualified archaeologist to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the project proponent and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. The County or County's agent will make the final determination. All significant cultural materials recovered will be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.

In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the County or County's agent will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out.

**Significance after Mitigation:** Less than Significant

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### ***Paleontological Resources***

#### **Impacts Common to all Phases and to Both Parks**

#### **Impact 3.7-4: The proposed project could adversely affect unidentified paleontological resources. (Less than Significant with Mitigation)**

Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils—particularly vertebrate fossils—are considered to be nonrenewable resources. Due to their rarity and the scientific information they can provide, fossils are highly significant records of ancient life. The paleontological review and survey conducted on the project site did not identify any paleontologic site or any geologic phenomena that may predict such resources.

While fossils are not expected to be discovered during project construction, significant fossils could be discovered during excavation activities, even in areas with a low likelihood of occurrence. Fossils encountered during excavation could be inadvertently damaged. If a paleontological resource is discovered, the impact to the resource could be substantial. However, implementation of Mitigation Measure 3.7-4 would minimize the impact.

**Mitigation Measure 3.7-4:** In the event that paleontological resources are discovered, the County or County's agent will notify a qualified paleontologist. The paleontologist will

document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. If fossil or fossil bearing deposits are discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology, 1995)). The paleontologist will notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to the project proponent for review and approval prior to implementation.

**Significance after Mitigation:** Less than Significant

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### ***Human Remains***

#### **Impacts Common to all Phases and to Both Parks**

##### **Impact 3.7-5: Project construction could result in damage to previously unidentified human remains. (Less than Significant with Mitigation)**

There is no indication that any particular site in the project area has been used for human burial purposes in the recent or distant past. Therefore, it is unlikely that human remains would be encountered during construction of the proposed project. However, in the unlikely event that human remains were discovered during project construction, including those interred outside of formal cemeteries, the human remains could be inadvertently damaged, which could be a significant impact. However, this impact would be minimized by implementation of Mitigation Measure 3.7-5.

**Mitigation Measure 3.7-5:** If human skeletal remains are uncovered during project construction, the County or County's agent will immediately halt work, contact the San Mateo County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent will contact the NAHC, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). Per Public Resources Code 5097.98, the County shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further activity until the County has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendents regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

**Significance after Mitigation:** Less than Significant

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## **Architectural Resources**

### **Potential Impacts during Phase I, II, and III at Wunderlich Park**

**Impact 3.7-6: The Master Plan may adversely affect historic resources within the Folger Estate Stable Historic District at Wunderlich Park, which is listed in the National Register of Historic Resources and considered a historic resource for CEQA purposes. (Less than Significant Impact with Mitigation)**

**Phase I Impacts.** The specific Phase I projects with the potential to affect historic resources at Wunderlich Park are; 1) Folger Stable Building Seismic Retrofit and Restoration, 2) Vehicular Entrance/Exit and Parking Area Improvements, 3) ADA Upgrades at the Carriage House/Garage, and potentially, 4) New Vault-Type Restroom at the parking lot. Each of these potential impacts is described below:

- 1) Folger Stable Seismic Retrofit and Restoration. As a contributor to the Folger Estate Stable Historic District, the seismic retrofit and restoration plan could adversely affect the historic significance of the Folger Stable if such plans were carried out in a manner that was inconsistent with the guidance provided in the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Weeks and Grimmer, 1995) (see Appendix D for a list of the Standards). For example, the seismic retrofit plan could significantly alter the exterior or interior character defining features such that the stable could no longer qualify for listing in NRHP or CRHR, which would be considered a significant impact. Although the stable could ultimately benefit from seismic retrofit and restoration activities, since no detailed plans for these activities are currently available, this portion of the Master Plan is conservatively assumed to cause a significant impact to the Folger Stable. Implementation of Mitigation Measure 3.5-6 would reduce this potentially significant impact to historic resources to a less-than-significant level.
- 2) Vehicular entrance/exit and parking area improvements. The vehicular entrance to the Park from Woodside Road is located within the Folger Estate Stable Historic District, while the parking lot is immediately adjacent to it (see Figure 3.7.1). As nothing is known about the original design or appearance of the roads, the road alignment rather than its current materials are historically associated with the property. While the entrance road itself is not considered a contributor to the District, substantial changes to the road's alignment has the potential to alter the historic setting of the District if they are carried out in a manner inconsistent with the guidance provided in the *Secretary of the Interior's Standards*. Since no detailed plans for these roadway or parking area improvements are currently available, this portion of the Master Plan is conservatively assumed to cause a significant impact to the Folger Estate Stable Historic District. Implementation of Mitigation Measure 3.5-6 would reduce this potentially significant impact to historic resources to a less-than-significant level.
- 3) ADA Upgrades at the Carriage House/Garage. The Carriage House/Garage is a contributor to the Folger Estate Stable Historic District. The Accessibility improvements could adversely affect the historic significance of the Folger Carriage House/Garage if such plans were carried out in a manner that was inconsistent with the guidance provided in the *Secretary of the Interior's Standards*. For example, the ADA plan could significantly alter the exterior or interior character defining features such that the building could no longer qualify for listing in NRHP or CRHR, which would be considered a significant impact. Although the building could ultimately benefit from accessibility improvements, since no detailed plans for these activities are currently available, this portion of the Master Plan is

conservatively assumed to cause a significant impact to the Carriage House/Garage. Implementation of Mitigation Measure 3.5-6 would reduce this potentially significant impact to historic resources to a less-than-significant level.

- 4) New Vault-Type Restroom at the Parking Lot. Although the parking lot is outside of the Folger Estate Stable Historic District, it is unknown exactly where the new restroom would be located, or how the building would ultimately appear. New construction, including restroom improvements immediately adjacent to the District, could adversely affect the historic setting of the District if carried out in a manner that was inconsistent with the guidance provided in the Secretary of the Interior's Standards. Since no detailed plans for the proposed new restroom facilities are currently available, this portion of the Master Plan is conservatively assumed to cause a significant impact to the historic setting of the Folger Estate Stable Historic District. Implementation of Mitigation Measure 3.5-6 would reduce this potentially significant impact to historic resources to a less-than-significant level.

**Phase II Impacts.** The specific Phase II projects with the potential to affect historic resources at Wunderlich Park are the site improvements, including paddocks, arena, drainage, caretaker's residence, and other components. Such improvements, to the extent that they would occur within or immediately adjacent to the Folger Estate Stable Historic District, could affect the District's historic setting to the degree that it would no longer qualify for listing in the NRHP if carried out in a manner that was inconsistent with the guidance provided in the *Secretary of the Interior's Standards*. For example, the proposed drainage improvements could alter the stone walls or culverts, which are contributory features of the District. Since no detailed plans for the proposed Folger Stable area site improvements are currently available, this phase of the Master Plan is conservatively assumed to cause a significant impact to the historic setting of the Folger Estate Stable Historic District. Implementation of Mitigation Measure 3.7-6 would reduce this potentially significant impact to historic resources to a less-than-significant level.

**Phase III Impacts.** No long term Phase III projects at Wunderlich Park, such as the new trail connection between Alambique and Skyline Trails, or the placement of utility lines underground has the potential to affect historic architectural resources, as none are located in these improvement areas. The placement of utility lines underground, in particular, would have a beneficial visual effect to the District, as it would remove an intrusive element that was likely added after the area's period of significance (post-1940). The ground disturbance associated with the placement of utility lines underground may, however, have potential impacts to prehistoric or historic archaeological resources, which are described above.

#### **Potential Impacts during Phase I, II, and III at Huddart Park**

As described in the Setting section, above, no historic resources were identified in Huddart Park. As a result, none of the proposed projects under Phases I, II, or III would have the potential to adversely affect historic resources. No mitigation required.

#### **Impacts Common to Both Parks**

The only change common to both parks that have the potential to significantly affect historic resources is the capital improvement program for storm drainage culvert replacement. At Wunderlich Park, there is one original storm drainage culvert beneath the Folger Stable yard

(between the Stable and the Carriage House/Garage), which is used to carry water from the hillside above to the open creek below. This culvert also collected water from the drainage system installed with the Stable in circa 1905. A second culvert under the entrance drive (i.e., the bridge over Alambique Creek) was historically associated with the Jones era resources, but was recently replaced due to flooding damage and would not be considered a historic element to the property.

Improvements to, or replacement of, the storm drainage culvert beneath the Folger Stable yard could affect the District's historic setting to the degree it would no longer qualify for listing in the NRHP if carried out in a manner that was inconsistent with the guidance provided in the Secretary of the Interior's Standards. Since no detailed plans for the proposed culvert improvements are currently available, this portion of the Master Plan is conservatively assumed to cause a significant impact to the historic setting of the Folger Estate Stable Historic District. Implementation of Mitigation Measure 3.5-6 would reduce this potentially significant impact to historic resources to a less-than-significant level.

### **Mitigation Measures**

**Mitigation Measure 3.7-6:** The San Mateo County Parks Department shall ensure that the Phase I and II plans for projects within or immediately adjacent to the Folger Estate Stable Historic District, including improvements to the Folger Stable, Carriage House/Garage, vehicular entrance, parking lot (including new restrooms), and site drainage improvements are designed in a manner consistent with the *Secretary of the Interior's Standards* by hiring, or causing to be hired, a qualified architectural consultant to review the plans prior to construction. The consultant shall report back to the County on their findings and the plans shall be modified, as necessary, to ensure compliance with the Standards. Application of the California State Historic Building Code (CSHBC) by the County or their consulting architects, which provides some degree of flexibility in implementing improvements to historic buildings, should also be implemented as necessary during the in design process for these improvements.

**Significance after Mitigation:** Less than Significant

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## 3.8 Transportation, Circulation, and Parking

### Introduction

This chapter describes: (1) the existing and planned transportation system in the vicinity of the proposed project, including roadway, bicycle, pedestrian, and transit facilities; (2) the anticipated impacts of the project on these facilities; and (3) associated mitigation measures.

The parks are located west of Interstate 280 in the Santa Cruz Mountains in central San Mateo County.

### 3.8.1 Setting

#### Roadway Network

Regional access to both parks is provided by Interstate 280 (I-280) and State Route 84 (SR 84). I-280 is a north-south interstate that connects San Jose and Silicon Valley, with San Francisco. State Route 84 (SR 84) is a two-lane east-west state highway in the project vicinity. It connects SR 1 to the west with I-680 to the east, via the Dumbarton Bridge. Access to both parks is taken from SR 84.

The main entrance to Huddart Park is approximately 3.5 miles west of SR 84 on Kings Mountain Road. A secondary entrance is located on Greer Road. Kings Mountain Road is a two-lane roadway with both vertical and horizontal curvature.

Access to Wunderlich Park is located on SR 84 (Woodside Road) near Portola Road, approximately two miles southwest of the town of Woodside.

#### Alternative Transportation Network

Due to the parks location in a rural area with limited demand, transit service is not provided. Pedestrian and bicycle facilities are also limited. Although there are no formal bicycle facilities in the project vicinity, recreational road bicyclist are present on roadways in and around the Town of Woodside, especially on weekends and holidays. Pedestrian facilities are also infrequent and are found in the form of unpaved paths along some local roadways. School crosswalks and warning signs are present near Woodside Elementary School on SR 84, west of downtown Woodside.

#### On-Street Parking

On-street parking in the vicinity of both parks is limited due the constraints of the roadways. Minimal paved shoulders are available due to topographic constraints and roadway design. However, some on-street parking by park users occurs on Kings Mountain Road, Tripp Road, and Woodside Road. It is assumed that most of these users are parking offsite to avoid the parking fees imposed at Huddart Park or are entering the parks through alternative trails. There are no existing parking restrictions along these roadways and therefore, parking outside the parks is not illegal.

## **Circulation and Parking**

### ***Huddart Park***

The main vehicular entrance to Huddart Park is approximately 3.5 miles west of SR 84 on Kings Mountain Road. A secondary entrance is located on Greer Road. The vehicular access to the park would not change under the Master Plan.

However, parking and internal roadways would be improved and realigned. Specifically, traffic circulation and parking improvements would be made at the Redwood and Oak picnic areas. Under existing conditions, up to 100 vehicles can be accommodated in the two Oak parking lots. Master Plan recommendations include establishing a one-way loop roadway in this area, which would not only reduce the required pavement width, reduce vehicular conflicts and congestion, but would also allow for approximately 30 additional parking spaces. The lower Oak parking lot would be repositioned closer to the slope and reduce the paved area which would create additional open space that would offset open space lost by the realignment of the access road.

Similarly, the Redwood picnic area parking configuration would be realigned to accommodate more efficient vehicular flow and reconfigure parking.

In addition, horse trailer parking for three to five vehicles would be provided at both the Oak and Redwood picnic areas.

Access and parking would be reconfigured at the Miwok, Dean Trail Head, and Toyon Group Campground. Master Plan improvements include realigning access roadways and reconfiguring existing parking arrangements to better service these areas.

The addition the creation of a trail head on the south side of Kings Mountain Road, would serve as a trailhead for Teague Hill and that would also provide parking for access to trails in Huddart Park.

### ***Wunderlich Park***

Vehicular access to Wunderlich parking is from Woodside Road (SR 84). Access and egress is taken from a narrow road, recently reopened at the north end of the park's frontage on SR 84. A secondary entrance at the south end of the park provided substandard access during a temporary failure of the bridge on the north access, which has recently been replaced. The secondary access is unpaved and substandard.

The Master Plan recommends improvement to access at Wunderlich Park. The existing southern access would become an entrance, and the northern driveway would become exclusively an exit. As configured, the entrance and exit driveways would be separated by approximately 700 feet.

Under the proposed Master Plan the entrance to Wunderlich parking would introduce a self-pay fee collection station. Currently, parking at this park is free.

## 3.8.2 Regulatory Setting

### ***San Mateo County General Plan***

The following are a list of County of San Mateo's *General Plan* transportation goals and policies applicable to the proposed project.

- Goal 12.1:** Plan for a transportation system that provides for the safe, efficient, and convenient movement of people and goods in and through San Mateo County.
- Goal 12.2:** To the extent possible, plan for accommodating future transportation demand in the County by using existing transportation facilities more efficiently, or improving and expanding them before building new facilities.
- Goal 12.3:** Provide for a balanced and integrated transportation system in the County which allows for travel by various modes and easy transfer between modes.
- Goal 12.4:** Plan for increasing the proportion of trips using public transit or ridesharing.
- Goal 12.5:** Balance and attempt to minimize adverse environmental impacts resulting from transportation system improvements in the County.
- Goal 12.6:** Promote the development of energy-conserving transportation systems in the County.
- Goal 12.7:** Coordinate transportation planning with adjacent jurisdictions.

### **Automobile Travel**

The Master Plan contains the following policies addressing automobile travel:

- 12.8. Additional Capacity.** When providing additional capacity for automobile traffic where needed, give priority to upgrading and expanding existing roads before developing new road alignments.
- 12.9. Rural Road Improvements.** In rural areas, where improvements are needed due to safety or congestion, support improved traffic control measures such as signing, lane markings, and speed controls and the construction of operational and safety improvements, such as adequate passing lanes, elimination of sharp curves, lane widening, or paved shoulders.
- 12.10. Urban Road Improvements.** In urban areas, where improvements are needed due to safety concerns or congestion, support the construction of interchange and intersection improvements, additional traffic lanes, turning lanes, redesign of parking, channelization, traffic control signals, or other improvements.
- 12.13. Circulation East of Highway 101.** Encourage the cities and Caltrans to develop an adequate circulation system, including bikeways, to serve new development east of Highway 101 and which, to the maximum extent feasible, does not adversely affect baylands or wetlands.

**12.14. Financing Local Road Improvements.** Utilize all available techniques for funding local road improvements in unincorporated areas, including assessment districts, developer contributions, and County road funds. Ensure road improvements are consistent with adopted land use plans and area plans.

**12.15. Local Circulation Policies.** In unincorporated communities, plan for providing:

- a) Maximum freedom of movement and adequate access to various land uses;
- b) Improved streets, sidewalks, and bikeways in developed areas;
- c) Minimal through traffic in residential areas;
- d) Routes for truck traffic which avoid residential areas and are structurally designed to accommodate trucks;
- e) Access for emergency vehicles;
- f) Bicycle and pedestrian travel;
- g) Access by physically handicapped persons to public buildings, shopping areas, hospitals, offices, and schools;
- h) Routes and turnouts for public transit;
- i) Parking areas for ridesharing;
- j) Coordination of transportation improvement with adjacent jurisdictions.

**12.16. Local Road Standards.** Allow for modification of road standards for sub-areas of the County, which respond to local needs and conditions as identified in area plans.

**12.19. Parking Standards.** Review and update the County's off-street and on-street parking standards in order to reflect current conditions and requirements. Consider the needs of each individual land use, the potential for joint use of parking areas, fees in lieu of parking, spaces for smaller cars, and parking management strategies.

**12.20. Funding for Road Maintenance.** Utilize all funds available for roadway repair and maintenance, and seek additional funding, if necessary, to prevent further deterioration of the County's road system.

**12.21. Off-Peak Operations.** Encourage freight carriers (rail and truck) and roadway construction crews to operate during off-peak periods.

### **Bicycle and Pedestrian Travel**

The Master Plan contains the following policies addressing bicycle and pedestrian travel:

**12.34. Bicycle Routes.** Encourage the cities to develop local bikeway plans, obtain funding, and construct and maintain a system of local bikeways that is consistent with the County Bikeways Plan.

**12.35. Bicycle Trails in Rural Areas.** Support the development of bicycle trails in rural and Coastal areas.

**12.36. Bicycle Storage Facilities.** Promote the provision of bicycle lockers and other storage facilities at transit stops, schools, shopping areas and other activity centers.

**12.38. Facilities for Bicyclists.** Encourage large employers to provide shower and locker facilities for their employees who bike to work as part of a commute alternative program.

**12.39. Pedestrian Paths.** Encourage the provision of safe and adequate pedestrian paths in new development connecting to activity centers, schools, transit stops, and shopping centers.

### ***Town of Woodside General Plan***

The following are a list of Town of Woodside's *General Plan* transportation goals and policies applicable to the proposed project.

#### **Policy 2255: Actions for preservation:**

- 1) Maintain liaison with San Mateo County and urge the County to review the "carrying capacity" of the park (i.e. to determine how intensively the park can be used before its attractive natural features become damaged) and then establish appropriate limitations on the use of the park.
- 2) Review access problems with San Mateo County and work toward solutions designed to decrease vehicular traffic through Woodside.

**Policy 2420:** A large volume of recreational traffic flows through Woodside, especially on summer weekends. Kings Mountain Road carries traffic from the urban areas to Huddart Park and Skyline Boulevard; La Honda Road carries traffic to Skyline Boulevard and to recreational areas to the west, and Woodside, Sand Hill and Portola Roads carry traffic to Wunderlich Park.

#### **Policy 2423: Suggest responses to these problems are:**

- a) Encourage, to the extent feasible, use of regional state routes by private auto recreational traffic.
- b) Continue fair and effective enforcement of regulations governing vehicular movement, both motorized and non-motorized, and noise;
- c) Utilize forms of transportation alternative to the private auto (riding, hiking, and bicycling) to the fullest extent possible.

### ***Caltrans***

Caltrans has authority over the state highway system, including mainline facilities and interchanges. Caltrans must be involved in and approve the planning and design of all improvements involving state highway facilities. State highway facilities in the project site vicinity include SR 84.

## 3.8.3 Impacts and Mitigation Measures

### Significance Criteria

For the purposes of this EIR (and consistent with Appendix G of the *CEQA Guidelines*), the proposed project would be considered to result in a significant traffic and circulation impact if it would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips or congestion at intersections);
- Substantially increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

### Impacts

#### **Impact 3.8-1: Project construction outlined in the Master Plan would result in temporary increases in truck traffic and construction worker traffic. (Less than Significant after Mitigation)**

Construction activities would generate off-site traffic that would include the initial delivery of construction vehicles and equipment to the parks, the daily arrival and departure of construction workers, and the delivery of materials throughout the construction period and removal of construction debris. Deliveries would include shipments of concrete, lumber, and other building materials for onsite structures, utilities (e.g., plumbing equipment and electrical supplies) and paving and landscaping materials.

Construction-generated traffic would be temporary, and therefore, would not result in any long-term degradation in operating conditions on roadways in the vicinity of the parks. The impact of construction-related traffic would be a temporary and intermittent lessening the capacities of streets in the project site vicinity because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. However, given the proximity of the parks to regional roadways (i.e., I-280 and SR 84), construction trucks would have relatively direct routes. Most construction traffic would be dispersed throughout the day and over the life of the Master Plan. Thus, the temporary increase would not significantly disrupt daily traffic flow on roadways in the vicinity of the parks in the long term.

Although the impact would be temporary, truck movements could have an adverse effect on traffic flow in the project site vicinity. As such, the impact is considered to be significant.

**Mitigation Measure 3.8-1:** For larger scaled construction projects at the parks, the construction contractor(s) shall develop a construction management plan for review and approval by the County's Engineering Department. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible and traffic congestion during construction:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.
- Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular, bicycle and pedestrian traffic, circulation and safety, and specifically to minimize impacts to the greatest extent possible on streets in the project area.
- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures would occur.
- Provisions for accommodation of bicycle flow.
- Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.

**Significance after Mitigation:** Less than Significant

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**Impact 3.8-2: Implementation of the Master Plan would increase traffic on roadways in the Park vicinity. (Less than Significant)**

Improvements recommended under the Master Plan are not expected to significantly increase usage of either Huddart Park or Wunderlich Park. The enhancements at the parks are not designed to increase use of the park, but to improve the facilities for existing users of the parks. Although a slight increase in available parking is proposed, an increase in traffic due to implementation of the Master Plan is expected to be minimal, if any. The contribution to traffic on roadways in the Park vicinity would increase delays incrementally, but would not be apparent to the average driver.

**Mitigation:** None required.

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**Impact 3.8-3: Implementation of the Master Plan would increase the demand for parking in the vicinity of the Parks. (Less than Significant)**

On-street parking by park users occurs on Kings Mountain Road, Tripp Road, and Woodside Road. It is assumed that most of these users are parking offsite to avoid parking fees imposed at

Huddart Park or are entering the parks through alternative trails. There are no existing parking restrictions along these roadways and therefore, parking outside the parks is not illegal. Implementation of the Master Plan is not expected to significantly increase patrons to the park, however, implementing a paid parking program at Wunderlich Park, and possible fee increases at Huddart Park could increase the demand for parking outside the parks.

Although it is not illegal to park vehicles outside the parks, for safety and neighborly reasons, San Mateo County Parks should work with the City of Woodside, and County residents to decrease the number of users that park outside the parks. Programs such as residential parking permits and time limits could discourage off-site parking. As parking on these streets is currently legal and no restricts are posted, the increase in demand for parking in the vicinity of the parks is a less than significant impact.

**Mitigation:** None required

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**Impact 3.8-4: Implementation of the Master Plan would increase the demand for parking in the Parks. (Less than Significant)**

Improvements recommended under the Master Plan are not expected to significantly increase usage of either Huddart Park or Wunderlich Park. The enhancements at the parks are not designed to increase use of the park, therefore, would not be expected to increase the demand for parking within the parks themselves. However, implementation of the Master Plan would address the existing deficiencies at the Parks by realigning access roads and reconfiguring existing parking lots. This is a less than significant impact.

**Mitigation:** None required

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**Impact 3.8-5: Implementation of the Master Plan would result in inadequate site access and circulation for passenger vehicles. (Less than Significant with Caltrans approval of Mitigation; Significant and Unavoidable without Caltrans approval)**

Under the Master Plan, the Wunderlich Park driveway access would be reconfigured to provide separate ingress and egress. The southern driveway would serve as the main entrance to the park and the northern driveway would serve as the exit.

The alignment of Woodside Road along the Wunderlich Park frontage is constrained by vertical and horizontal curvatures, making sight distance a safety concern. This is a significant impact. Implementation of Mitigation Measure 3.8-5a would address site access issues at Wunderlich Park.

Under the Master Plan, onsite circulation would be realigned and reconfigured at both Huddart and Wunderlich Parks. Roadway design changes could constrain access within the park and could create unsafe design features. Implementation of Mitigation Measure 3.8-5b would reduce this impact to a less than significant level.

**Mitigation Measure 3.8-5a:** The final driveway design shall be developed to remain consistent with the public works department and fire department approvals, and shall include the following to provide adequate vehicular circulation:

- Adequate vehicle turning radii to accommodate emergency vehicles and the largest vehicle anticipated to access the site. (American Association of State Highway and Transportation Officials [AASHTO]).
- Posting of “no parking” signs along both sides of Woodside Road along the park frontage.
- Construction of a deceleration lane in the southbound direction on the driveway entrance approach.
- Posting of Side Road (Caltrans Standard Drawing W2-2) intersection warning signs shall be posted in advance of each intersection. The addition of a flashing beacon light if required by Public Works.
- Posting of advance Park Entrance and Park Exit signs at a minimum of 500 feet from the intersection.

**Mitigation Measure 3.8-5b:** The final roadway designs shall be developed to remain consistent with the public works department and fire department approvals, and the project shall include the following to provide adequate on-site vehicular circulation:

- Roadway widths and cul-de-sac lengths that meet fire department standards.
- Internal intersections should not offset or intersect below 60 degrees, unless constrained by topography, as should have excellent sight distance.
- Adequate vehicle turning radii to accommodate emergency vehicles and the largest vehicle anticipated to access the site (AASHTO).
- Adequate internal traffic control based on the *Manual on Uniform Traffic Control Devices* (FHWA, 2003).

With implementation of the **Mitigation Measures 3.8-5a** and **3.8-5b**, the impact of the proposed Master Plan projects would be reduced to a less-than-significant level. However, SR 84 is under Caltrans jurisdiction. Because the County of San Mateo, as lead agency for this EIR, could not implement **Mitigation Measures 3.8-5a** without the approval of Caltrans, this would be a **significant and unavoidable** impact. It is the County’s practice to work with Caltrans to meet criteria for mitigation approval.

**Significance after Mitigation:** Significant and Unavoidable (Less than Significant with Caltrans approval of Mitigation)

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**Impact 3.8-6: Implementation of the Master Plan would result in inadequate access for public transit, bicycle access, or pedestrian access. (Less than Significant)**

Access to the parks by alternatives transportation modes is limited to bicycle and pedestrian access under current conditions. There is currently no public transit to the parks. Implementation of the Master Plan would enhance access to the parks for both bicycles and pedestrians through additional trailheads, driveway improvements, and increased signage. This would be a less than significant impact.

**Mitigation:** None required

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**Impact 3.8-7: Implementation of the Master Plan would contribute to cumulative increases in traffic at intersections in the Park vicinity. (Less than Significant)**

Improvements recommended under the Master Plan are not expected to significantly increase usage of either Huddart Park or Wunderlich Park in the future, beyond what the parks would experience under their existing development. As the enhancements at the parks are not designed to increase use of the park, but to improve the facilities for existing users of the parks and because an increase in traffic due to implementation of the Master Plan is expected to be minimal, if any, the contribution to traffic on roadways in the vicinity of the parks in the future would not be cumulatively considerable. This is a less than significant impact.

**Mitigation:** None required

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## References – Transportation

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## 3.9 Air Quality

### Introduction

This section discusses both the short-term construction and long-term operational impacts of the implementation of the Huddart/Wunderlick Master Plan project on the local and regional air quality. The setting section provides an overview of the regulatory context, plans, policies, and regulations, followed by region-specific information related to climate and topography and existing air quality conditions. The air pollutants of concern in the San Francisco Bay Area are ozone, carbon monoxide, and particulate matter.

### 3.9.1 Regulatory Setting

The U.S. Environmental Protection Agency (EPA) is responsible for implementing the programs established under the federal Clean Air Act, such as establishing and reviewing the federal ambient air quality standards and judging the adequacy of State Implementation Plans (SIP). However, the EPA has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented. In California, the California Air Resources Board (CARB) is responsible for establishing and reviewing the state ambient air quality standards, developing and managing the California SIP, securing approval of this plan from U.S. EPA, and identifying toxic air contaminants (TACs). CARB also regulates mobile emissions sources in California, such as construction equipment, trucks, and automobiles, and oversees the activities of air quality management districts, which are organized at the county or regional level. An air quality management district is primarily responsible for regulating stationary emissions sources at facilities within its geographic areas and for preparing the air quality plans that are required under the federal Clean Air Act and California Clean Air Act. The Bay Area Air Quality Management District (BAAQMD) is the regional agency with regulatory authority over emission sources in the Bay Area, which includes all of San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Marin, and Napa counties and the southern half of Sonoma and southwestern half of Solano counties.

#### ***Criteria Air Pollutants***

As required by the federal Clean Air Act passed in 1970, the U.S. EPA has identified six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. EPA calls these pollutants criteria air pollutants because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM), and lead are the six criteria air pollutants.

Some criteria air pollutants are considered regional in nature, some are considered local, and some have characteristics that are both regional and local. Air pollutants are also characterized as “primary” and “secondary” pollutants. Primary pollutants are those emitted directly into the atmosphere (such as carbon monoxide, sulfur dioxide, lead particulates, and hydrogen sulfide).

Secondary pollutants are those formed through chemical reactions in the atmosphere; these chemical reactions usually involve primary pollutants, normal constituents of the atmosphere, and other secondary pollutants. O<sub>3</sub> is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) compounds and nitrogen oxides (NO<sub>x</sub>). ROG and NO<sub>x</sub> are known as precursor compounds for O<sub>3</sub>. O<sub>3</sub> is a regional air pollutant because its precursors are transported and diffused by wind concurrently with O<sub>3</sub> production.

Ambient CO concentrations normally are considered a local effect and typically correspond closely to the spatial and temporal distributions of vehicular traffic. Wind speed and atmospheric mixing also influence CO concentrations. Under inversion conditions, CO concentrations may be distributed more uniformly over an area out to some distance from vehicular sources.

### **Ozone**

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NO<sub>x</sub>. ROG and NO<sub>x</sub> are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO<sub>x</sub> under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone. Ground level ozone in conjunction with suspended particulate matter in the atmosphere leads to hazy conditions generally termed as “smog”.

### **Carbon Monoxide**

Carbon monoxide, a colorless and odorless gas is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicles. High carbon monoxide concentrations develop primarily during winter when periods of light wind combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased carbon monoxide emission rates at low air temperatures. When inhaled at high concentrations, carbon monoxide combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease or anemia.

### **Nitrogen Dioxide**

Nitrogen dioxide is an air quality concern because it acts a respiratory irritant and is a precursor of ozone. Nitrogen dioxide is produced by fuel combustion in motor vehicles, industrial stationary sources (such as industrial activities), ships, aircraft, and rail transit.

### **Sulfur Dioxide**

Sulfur dioxide is a combustion product of sulfur or sulfur-containing fuels such as coal and oil, which are restricted in the Bay Area. Its health effects include breathing problems and may cause permanent damage to lungs. SO<sub>2</sub> is an ingredient in acid rain (acid aerosols), which can damage trees, lakes and property. Acid aerosols can also reduce visibility.

### **Particulate Matter**

PM-10 and PM-2.5 consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. A micron is one-millionth of a meter, or less than one-25,000th of an inch. For comparison, human hair is 50 microns or larger in diameter. PM-10 and PM-2.5 represent particulate matter of sizes that can be inhaled into the air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of aerosol-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles (PM-2.5) of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility.

PM-10 emissions in the project area are mainly from urban sources, dust suspended by vehicle traffic and secondary aerosols formed by reactions in the atmosphere. Particulate concentrations near residential sources generally are higher during the winter, when more fireplaces are in use and meteorological conditions prevent the dispersion of directly emitted contaminants.

### **Lead**

Leaded gasoline (currently phased out), paint (houses, cars), smelters (metal refineries), manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects; children are at special risk. Some lead-containing chemicals cause cancer in animals.

### ***Ambient Air Quality Standards***

Regulation of criteria air pollutants is achieved through both national and state ambient air quality standards and emissions limits for individual sources. Regulations implementing the federal Clean Air Act and its subsequent amendments established national ambient air quality standards (national standards) for the six criteria pollutants. California has adopted more stringent state ambient air quality standards for most of the criteria air pollutants. In addition, California has established state ambient air quality standards for sulfates, hydrogen sulfide, vinyl chloride, and

visibility-reducing particles. Because of the unique meteorological problems in the state, there is considerable diversity between state and federal standards currently in effect in California, as shown in Table 3.9-1. The table also summarizes the related health effects and principal sources for each pollutant.

The ambient air quality standards are intended to protect the public health and welfare, and they incorporate an adequate margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

### ***Attainment Status***

Under amendments to the federal Clean Air Act, U.S. EPA has classified air basins or portions thereof, as either “attainment” or “nonattainment” for each criteria air pollutant, based on whether or not the national standards have been achieved. The California Clean Air Act, which is patterned after the federal Clean Air Act, also requires areas to be designated as “attainment” or “nonattainment” for the state standards. Thus, areas in California have two sets of attainment / nonattainment designations: one set with respect to the national standards and one set with respect to the state standards.

The Bay Area is currently designated “nonattainment” for state 1-hour and national 8-hour ozone standards and for the state PM-10 and PM-2.5 standards. The Bay Area is “attainment” or “unclassified” with respect to the other ambient air quality standards. Table 3.9-1 also shows the attainment status of the Bay Area with respect to the national and state ambient air quality standards for different criteria pollutants.

### ***Air Quality Plans***

The 1977 Clean Air Act Amendments require that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards specified in the Clean Air Act. The 1988 California Clean Air Act also requires development of air quality plans and strategies to meet state air quality standards in areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated nonattainment in order to ensure continued attainment of the standards. Air quality plans developed to meet federal requirements are referred to as State Implementation Plans.

**TABLE 3.9-1  
 AMBIENT AIR QUALITY STANDARDS AND BAY AREA ATTAINMENT STATUS**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>State Standard</b>	<b>Bay Area Attainment Status for California Standard</b>	<b>Federal Primary Standard</b>	<b>Bay Area Attainment Status for Federal Standard</b>	<b>Major Pollutant Sources</b>
Ozone	8 hour	0.07 ppm	Unclassified	0.08 ppm	Nonattainment	Motor vehicles,
	1 hour	0.09 ppm	Non-Attainment	---	---	Other mobile sources, combustion, industrial and commercial processes
Carbon Monoxide	8 hour	9.0 ppm	Attainment	9 ppm	Attainment	Internal combustion engines, primarily gasoline-powered motor vehicles
	1 Hour	20 ppm	Attainment	35 ppm	Attainment	
Nitrogen Dioxide	Annual Average	0.03 ppm	---	0.053 ppm	Attainment	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads
	1 Hour	0.18 ppm	Attainment	---	---	
Sulfur Dioxide	Annual Average	---	---	0.03 ppm	Attainment	Fuel combustion, chemical plants, sulfur recovery plants and metal processing
	24 Hour	0.04 ppm	Attainment	0.14 ppm	Attainment	
	1 Hour	0.25 ppm	Attainment	---	---	
Particulate Matter (PM-10)	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	Non-Attainment	---	---	Dust- and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays)
	24 hour	50 µg/m <sup>3</sup>	Non-Attainment	150 µg/m <sup>3</sup>	Unclassified	
Particulate Matter (PM <sub>2.5</sub> )	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Non-Attainment	15 µg/m <sup>3</sup>	Attainment	Same as above
	24 hour	---	---	35 µg/m <sup>3</sup>	Attainment	
Lead	Calendar Quarter	---	---	1.5 µg/m <sup>3</sup>	Attainment	Lead smelters, battery manufacturing & recycling facilities
	30 Day Average	1.5 µg/m <sup>3</sup>	Attainment	---	---	

NOTE: ppm = parts per million; and µg/m<sup>3</sup> = micrograms per cubic meter

SOURCE: BAAQMD, 2007, CARB, 2007a

Bay Area plans are prepared with the cooperation of the Metropolitan Transportation Commission (MTC), and the Association of Bay Area Governments (ABAG). Currently, there are three plans for the Bay Area, These are:

- The *Ozone Attainment Plan for the 1-Hour National Ozone Standard* (ABAG, 2001) developed to meet federal ozone air quality planning requirements
- The recently adopted *Bay Area 2005 Ozone Strategy* (BAAQMD, 2006) developed to meet planning requirements related to the state ozone standard; and
- The *1996 Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas*, developed by the air districts with jurisdiction over the ten planning areas including the BAAQMD to ensure continued attainment of the federal carbon monoxide standard. In June 1998, the EPA approved this plan and designated the ten areas as attainment. The maintenance plan was revised most recently in 2004.

The Bay Area 2001 Ozone Attainment Plan was prepared as a proposed revision to the Bay Area part of California's plan to achieve the national ozone standard. The plan was prepared in response to US EPA's partial approval and partial disapproval of the Bay Area's 1999 Ozone Attainment Plan and finding of failure to attain the national ambient air quality standard for ozone. The Revised Plan was adopted by the Boards of the co-lead agencies at a public meeting and approved by the ARB in 2001. In July 2003, EPA signed a rulemaking proposing to approve the Plan. EPA also made an interim final determination that the Plan corrects deficiencies identified in the 1999 Plan.

Following three years of low ozone levels (2001, 2002 and 2003), in October 2003, EPA proposed a finding that the Bay Area had attained the national one-hour standard and that certain elements of the 2001 Plan (attainment demonstration, contingency measures and reasonable further progress) were no longer required. In April 2004, EPA made final the finding that the Bay Area had attained the one-hour standard and approved the remaining applicable elements of the 2001 Plan: emission inventory; control measure commitments; motor vehicle emission budgets; reasonably available control measures; and commitments to further study measures.

EPA recently transitioned from the national one-hour standard to a more health protective 8-hour standard. In April 2004, EPA designated regions for the new national 8-hour standard. Defined as "concentration-based," the new national ozone standard is set at 85 parts per billion averaged over eight hours. The new national 8-hour standard is considered to be more health protective because it protects against health effects that occur with longer exposure to lower ozone concentrations.

In April 2004, EPA designated regions as attainment and nonattainment areas for the 8-hour standard. These designations took effect on June 15, 2004. EPA formally designated the Bay Area as a nonattainment area for the national 8-hour ozone standard, and classified the region as "marginal" according to five classes of nonattainment areas for ozone, which range from marginal to extreme. Marginal nonattainment areas must attain the national 8-hour ozone standard by June 15, 2007. While certain elements of Phase 1 of the 8-hour implementation rule

are still undergoing legal challenge, EPA signed Phase 2 of the 8-hour implementation rule on November 9, 2005. It is not currently anticipated that marginal areas will be required to prepare attainment demonstrations for the 8-hour standard. Other planning elements may be required. The Bay Area plans to address all requirements of the national 8-hour standard in subsequent documents.

For state air quality planning purposes, the Bay Area is classified as a serious non-attainment area for ozone. The serious classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the Bay Area update the Clean Air Plan (CAP) every three years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The Bay Area's record of progress in implementing previous measures must also be reviewed. On January 4, 2006, the BAAQMD adopted the most recent revision to the CAP - the Bay Area 2005 Ozone Strategy. The control strategy for the *2005 Ozone Strategy* is to implement all feasible measures on an expeditious schedule in order to reduce emissions of ozone precursors and consequently reduce ozone levels in the Bay Area and reduce transport to downwind regions.

In April 2005, ARB established a new eight-hour average ozone standard of 0.070 ppm. The new standard took effect in May 2006 but the Bay Area is currently designated "unclassified" with respect to this standard. The one-hour state standard has been retained. BAAQMD will be taking action as necessary to address those standards as appropriate once the planning requirements have been established.

## ***Local Standards***

### **BAAQMD Rules and Regulations**

The BAAQMD is the regional agency responsible for rulemaking, permitting and enforcement activities affecting stationary sources in the Bay Area. Specific rules and regulations adopted by the BAAQMD limit the emissions that can be generated by various uses and/or activities, and identify specific pollution reduction measures that must be implemented in association with various uses and activities. These rules regulate not only emissions of the six criteria air pollutants, but also toxic emissions and acutely hazardous non-radioactive materials emissions.

Emissions sources subject to these rules are regulated through the BAAQMD's permitting process and standards of operation. Through this permitting process, including an annual permit review, the BAAQMD monitors generation of stationary emissions and uses this information in developing its air quality plans. Any sources of stationary emissions constructed as part of the proposed project would be subject to the *BAAQMD Rules and Regulations*. Both federal and state ozone plans rely heavily upon stationary source control measures set forth in BAAQMD's *Rules and Regulations*.

With respect to the construction phase of Master Plan projects, applicable BAAQMD regulations would relate to portable equipment (e.g., Portland concrete batch plants, and gasoline- or diesel-powered engines used for power generation, pumps, compressors, pile drivers, and cranes),

architectural coatings, and paving materials. Equipment used during project construction would be subject to the requirements of BAAQMD Regulation 2 (Permits), Rule 1 (General Requirements) with respect to portable equipment unless exempt under Rule 2-1-105 (Exemption, Registered Statewide Portable Equipment); BAAQMD Regulation 8 (Organic Compounds), Rule 3 (Architectural Coatings); and BAAQMD Regulation 8 (Organic Compounds), Rule 15 (Emulsified and Liquid Asphalts). With respect to the operational phase of the project, BAAQMD Regulation 2, *Permits* would apply to sources in the central utility plant proposed as part of the project.

### **General Plan**

There are no policies in the San Mateo County General Plan that pertain to air quality (San Mateo County, 1986).

## **3.9.2 Physical Setting**

### **Climate and Meteorology**

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. Huddart and Wunderlich parks are located in San Mateo County within the boundaries of the San Francisco Bay Area Air Basin (Bay Area). The Bay Area Air Basin encompasses the nine-county region including all of Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin and Napa counties, and the southern portions of Solano and Sonoma counties. The climate of the Bay Area is determined largely by a high-pressure system that is almost always present over the eastern Pacific Ocean off the West Coast of North America. During winter, the Pacific high-pressure system shifts southward, allowing storms to pass through the region. During summer and fall, emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are conducive to the formation of photochemical pollutants, such as ozone and secondary particulates, such as nitrates and sulfates.

More specifically, the project site lies within the Peninsula climatological sub-region. This sub-region stretches from the area northwest of San Jose to the Golden Gate. The Santa Cruz Mountains extend up the center of the peninsula, with elevations exceeding 2000 feet at the south end, and gradually decreasing to 500 feet elevation in South San Francisco, where it terminates. On the east side of the mountain range lie the larger cities and towns including Woodside and Portola Valley. Cities in the southeastern peninsula experience warmer temperatures and few foggy days, because the marine layer is blocked by the mountain ridge to the west. Protected from the winds that readily disperse pollutants, this area has the most air pollution potential in the peninsula.

## Existing Air Quality

### **Criteria Air Pollutants**

The BAAQMD operates a regional monitoring network that measures the ambient concentrations of the six criteria air pollutants. Existing and probable future levels of air quality in Woodside can generally be inferred from ambient air quality measurements conducted by the BAAQMD at its nearby monitoring stations. The Redwood City station at 897, Barron Avenue in Redwood City is nearest to the project site (located approximately 6 miles to the southwest) and can be considered to be representative of the air quality in the project area. This station monitors ozone, PM-10, PM-2.5 and carbon monoxide. Table 3.9-2 shows a five-year summary of monitoring data for these pollutants from the Redwood City station. The table also compares these measured concentrations with state and federal ambient air quality standards.

Motor vehicle transportation, including automobiles, trucks, transit buses, and other modes of transportation, is the major contributor to regional air pollution. Stationary sources were once important contributors to both regional and local pollution. Their role has been substantially reduced in recent years by pollution control programs, such as those of the BAAQMD. Any further progress in air quality improvement now focuses heavily on transportation sources.

Based on the data shown in Table 3.9-2, there have very infrequent exceedances of the state one-hour ozone standard in the project vicinity over the last five years. Bay Area emissions of the ozone precursors ROG and NO<sub>x</sub> are expected to decrease by approximately 24 and 36 percent, respectively, between 2005 and 2020 (CARB, 2007c) largely as a result of the State's onroad motor vehicle emission control program. The Bay Area has a significant motor vehicle population and these reductions are projected as vehicles meeting more stringent emission standards enter the fleet, and all vehicles use cleaner burning gasoline and diesel fuel or alternative fuels. ROG and NO<sub>x</sub> emissions from other mobile sources and stationary sources are also projected to decline as more stringent emission standards and control technologies are adopted and implemented.

Table 3.9-2 shows that there have been no exceedances of state and federal ambient carbon monoxide ambient air quality standards at the Redwood City station over the last five years. The Bay Area is expected to continue to be in attainment of this standard as carbon monoxide emissions are expected to decrease due to attrition of older, high polluting vehicles, improvements in the overall automobile fleet, and improved fuel mixtures.

Based on data shown in Table 3.9-2, with the exception of 2003, state PM-10 standards have continued to be exceeded occasionally at the Redwood City monitoring station. There has been only one exceedance of the PM-2.5 while there have been no exceedances of the national PM-10 standard over the last five years. Direct PM-10 emissions in San Mateo County are expected to increase by approximately 23 percent between 2005 and 2020 (CARB, 2007c). This change would be primarily from increases in fugitive dust from an anticipated increase in the vehicle miles traveled as well as stationary sources (such as industrial activities) and area sources (such as construction and demolition, road dust and other miscellaneous processes). PM-2.5 emissions in San Mateo County are projected to increase 26 percent over the same period (CARB, 2007c).

**TABLE 3.9-2  
AIR QUALITY DATA SUMMARY (2001-2005) FOR THE PROJECT AREA**

Pollutant	Standard <sup>b</sup>	Monitoring Data by Year				
		2001	2002	2003	2004	2005
<b>Ozone<sup>a</sup>:</b>						
Highest 1 Hour Average (ppm) <sup>c</sup>		0.09	<b>0.113</b>	<b>0.097</b>	0.084	0.085
Days over State Standard	0.09	0	1	1	0	0
Highest 8 Hour Average (ppm) <sup>c</sup>		0.063	0.078	0.071	0.061	0.063
Days over State Standard	0.07 <sup>f</sup>	0	NA	NA	0	0
Days over National Standard	0.08	0	0	0	0	0
<b>Carbon Monoxide<sup>a</sup>:</b>						
Highest 1 Hour Average (ppm) <sup>c</sup>		7.1	5.8	5.4	4.8	4.5
Days over State Standard	20	0	0	0	0	0
Days over National Standard	35	0	0	0	0	0
Highest 8 Hour Average (ppm) <sup>c</sup>		2.84	2.61	2.13	2.26	2.13
Days over State/National Standard	9.0/9	0	0	0	0	0
<b>Particulate Matter (PM-10)</b>						
Highest 24 Hour Average – State/National ( $\mu\text{g}/\text{m}^3$ ) <sup>b,d</sup>	50/150	67.5/64.5	55.9/53.2	37.5/37.1	64.8/61.8	80.8/78.1
Estimated days over State Standard <sup>c</sup>		18	6	0	6	10
Estimated days over National Standard <sup>c</sup>		0	0	0	0	0
State Annual Average <sup>d</sup>	20	24.8	24.6	19.8	20.5	20.9
National Annual Average <sup>d</sup>	50	22.5	22.1	19.3	19.7	19.5
<b>Particulate Matter (PM-2.5)</b>						
Highest 24 Hour Average – National ( $\mu\text{g}/\text{m}^3$ ) <sup>b</sup>	65/35 <sup>e</sup>	70.9	43.0	31.9	35.8	30.9
Estimated days over National Standard <sup>c,e</sup>		1	0	0	0	0
State Annual Average <sup>d</sup>	12	NA	11.5	8.9	9.3	8.8
National Annual Average <sup>d</sup>	15	11.3	11.5	8.9	9.3	8.8

<sup>a</sup> Generally, state standards are not to be exceeded and federal standards are not to be exceeded more than once per year.

<sup>b</sup> ppm = parts per million;  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

<sup>c</sup> PM-10 and PM-2.5 are not measured every day of the year. "Number of samples" refers to the number of days in a given year during which PM-10 and PM-2.5 were measured at the Redwood City monitoring station.

<sup>d</sup> State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.

<sup>e</sup> U.S. EPA lowered the national 24 hour PM-2.5 standard from 65  $\mu\text{g}/\text{m}^3$  to 35  $\mu\text{g}/\text{m}^3$  in 2006. Though the current standard is 35  $\mu\text{g}/\text{m}^3$ , the estimated days over the national standard refers to days above the 65  $\mu\text{g}/\text{m}^3$  standard.

<sup>f</sup> The new 8-hour state standard was approved by CARB in 2005 and became effective in May 2006. Air Quality data statistics with respect to this standard are not yet available.

NA = Not Available.

SOURCE: CARB, 2007b.

The standards for nitrogen dioxide, sulfur dioxide, and lead are being met in the Bay Area, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future (ABAG, 2001).

## **Sensitive Land Uses**

Some persons are considered more sensitive than others to air pollutants. The reasons for heightened sensitivity may include health problems, proximity to the emissions source, and duration of exposure to air pollutants. Land uses such as schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people are often at home for extended periods. Recreational land uses are moderately sensitive to air pollution, because vigorous exercise associated with recreation places a high demand on the human respiratory system.

Huddart and Wunderlich Parks are large, rural, rustic areas set within a regional greenbelt of open space lands. The parks are located in the Santa Cruz Mountains in central San Mateo County, west of the towns of Woodside and Portola Valley. The sensitive receptors that would be most affected by project construction activities are the users of the parks. There are single-family residences located adjacent to Wunderlich park, who would also be affected by project construction activities.

## **3.9.3 Impacts and Mitigation Measures**

### **Significance Criteria**

For the purposes of this EIR (and consistent with Appendix G of the CEQA *Guidelines*), the proposed project would be considered to result in a significant traffic and circulation impact if it would:

Consistent with the Appendix G of the CEQA Guidelines, a project would result in a significant impact on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any nonattainment pollutant;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

The following air quality analysis addresses the first four of these general criteria. The fifth is not discussed further within this section since the project would not include development of the types of land uses generally associated with potential odor impacts.

## Methodology

Project-related air quality impacts would be primarily from construction related activities associated with the proposed developments at the two parks. Implementation of the Master Plan is not expected to significantly increase vehicle trips generated by the two parks. Instead the improvements are aimed at improving facilities for existing users of the parks.

Using a phased approach, the Master Plan identifies three different implementation timelines – short, medium, and long-term – each of which correspond with a timeframe of 5, 10, and 20-years. Construction activities would take place over the duration of these three phases intermittently in different areas of the two parks. During project construction, the project would affect local particulate concentrations primarily due to fugitive dust sources. BAAQMD has published the *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, which are a set of recommendations that provide specific guidance on evaluating projects relative to the above general criteria (BAAQMD, 1999). For construction phase impacts, BAAQMD does not require quantification of construction emissions, but recommends that significance be based on a consideration of the control measures to be implemented (BAAQMD, 1999). Construction impacts are discussed qualitatively and the applicable BAAQMD recommended dust abatement measures are identified. Over the long term, the project would not generate any new motor vehicle trips. There would be a very minimal increase in missions from the increased use of on-site stationary sources (such as natural gas boilers for water and space heating) and area sources (such as landscaping and use of consumer products).

According to the methodology recommended by the BAAQMD for the evaluation of air quality impacts of plans, operational impacts resulting from the implementing the proposed Master Plan were evaluated by checking the consistency of the proposed Master Plan with the current regional Clean Air Plan – the 2005 Bay Area Ozone Strategy (BAAQMD, 1999). To ensure consistency with the regional Clean Air Plan, population increase due to the implementation of the plan should be consistent with the population assumptions in the 2005 Ozone Strategy, which is based on 2003 ABAG Projections for the Bay Area. In addition, the rate of increase in vehicle miles traveled (VMT) should not be greater than the rate of increase in population under the plan. Local carbon monoxide impacts at intersections in the vicinity of the entrances to the two parks have also been evaluated qualitatively.

## Impacts

### **Impact 3.9-1: Activities associated with demolition, site preparation and construction would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. (Significant without Mitigation)**

Construction activities would occur intermittently at different sites at the two parks throughout the period of implementation of the proposed Master Plan. Although the related impacts at any one location would be temporary, construction of individual projects under the Master Plan could cause adverse effects on the local air quality in the area. Construction activities would generate substantial amounts of dust (including PM-10 and PM-2.5) primarily from “fugitive” sources

(i.e., emissions released through means other than through a stack or tailpipe) and lesser amounts of other criteria air pollutants primarily from operation of heavy equipment construction machinery (primarily diesel operated) and construction worker automobile trips (primarily gasoline operated).

Fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the prevailing weather. Sources of fugitive dust during construction would include vehicle movement over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM-10 concentrations may be adversely affected on a temporary and intermittent basis during the construction period. In addition, the fugitive dust generated by construction would include not only PM-10, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts.

Demolition of buildings constructed prior to 1980 often involves hazardous materials such as asbestos used in insulation, fire retardants, or building materials (floor tile, roofing, etc.) and lead-based paint. Airborne asbestos fibers and lead dust pose a serious health threat.

The BAAQMD's approach to analyses of construction impacts is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. The BAAQMD considers any project's construction-related impacts to be less than significant if the required dust-control measures are implemented. Without these measures, the impact would be considered significant.

Construction activities would also result in the emission of other criteria pollutants from equipment exhaust, construction-related vehicular activity and construction worker automobile trips. Emission levels for construction activities would vary depending on the number and type of equipment, duration of use, operation schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NOx from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during project construction. BAAQMD CEQA Guidelines recognize that construction equipment emit ozone precursors, but indicate that such emissions are included in the emission inventory that is the basis for regional air quality plans. Therefore, with the implementation of the following mitigation measures, construction emissions are not expected to impede attainment or maintenance of the ambient air quality standards in the Bay Area (BAAQMD, 1999).

**Mitigation Measure 3.9-1.a:** Construction contractors shall be required to follow the BAAQMD's approach to dust abatement as specified in the most recent version of the *BAAQMD CEQA Guidelines*. The current version calls for "basic" control measures that should be implemented at all construction sites, "enhanced" control measures that should be implemented at construction sites greater than four acres in area, and "optional" control measures that should be implemented on a case-by-case basis at construction sites that are large in area, located near sensitive receptors or which, for any other reason, may warrant additional emissions reductions (BAAQMD, 1999). The nature of improvements

envisioned under the Master Plan and the absence of sensitive receptors in the immediate vicinity is not expected to require implementation of the “optional” control measures.

Elements of the “basic” dust control program for project components that disturb less than four acres shall include, but not necessarily be limited to the following:

- Water all active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep streets (with water sweepers using reclaimed water if possible) at the end of each day if visible soil material is carried onto adjacent paved roads.
- Sweep (with water sweepers) all paved access roads, parking areas and staging areas at construction sites at the end of the day.

Elements of the “enhanced” dust abatement program for project components that disturb four or more acres shall include all of the “basic” measures in addition to the following measures to be implemented by the construction contractor:

- All “basic” control measures listed above.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 miles per hour.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.
- Limit the amount of the disturbed area at any one time, where possible.
- Pave all roadways, driveways, sidewalks, etc. as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The

name and telephone number of such persons shall be provided to the BAAQMD prior to the start of construction.

**Mitigation Measure 3.9-1.b:** The demolition, renovation and removal of asbestos-containing building materials from buildings constructed prior to 1980 shall be conducted in accordance with the requirements of BAAQMD Regulation 11, Rule 2.

**Significance after Mitigation:** Less than Significant

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**Impact 3.9-2: Implementation of the Master Plan would conflict with the 2005 Bay Area Ozone Strategy and the attainment goals of the Bay Area. (Less than Significant)**

The proposed Master Plan would not result in an increase in population of the area. Improvements recommended under the Master Plan are not expected to significantly increase usage of either Huddart Park or Wunderlich Park. The enhancements at the parks are not designed to increase use of the park, but to improve the facilities for existing users of the parks. As such, an increase in vehicle miles traveled (VMT) due to implementation of the Master Plan is expected to be minimal, if any. Therefore, implementation of the Master Plan would not conflict with the 2005 Bay Area Ozone Strategy and its attainment goals.

**Mitigation:** None required

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**Impact 3.9-3: The project would increase carbon monoxide concentrations above the ambient air quality standards at local intersections in the project site vicinity. (Less than Significant)**

As discussed under Impact 9-2, the increase in traffic due to the proposed improvements at the parks is expected to be minimal. Ambient concentrations of carbon monoxide in the project area are well below the standards and a minimal increase in traffic is not expected to lead to or contribute to a violation of the carbon monoxide ambient air quality standards at intersections in the vicinity of the project area.

**Mitigation:** None required

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## 3.10 Noise

### Introduction

This section describes the existing noise environment and the potential impacts associated with the Huddart/Wunderlich Master plan Project. It analyzes potential noise impacts caused both during the construction and operational phases of the proposed project on the ambient noise environment.

Background information on environmental acoustics, including definitions of terms commonly used in noise analysis, is provided below.

### 3.10.1 Setting

#### Technical Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).<sup>1</sup> Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

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<sup>1</sup> All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

### **Noise Exposure and Community Noise**

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. Rather, community noise varies continuously with time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- $L_{eq}$ : The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The  $L_{eq}$  is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- $L_{max}$ : The instantaneous maximum noise level measured during the measurement period of interest.
- $L_{min}$ : The instantaneous minimum noise level measured during the measurement period of interest.
- $L_x$ : The sound level that is equaled or exceeded x percent of a specified time period. The  $L_{50}$  represents the median sound level.
- DNL: The energy average of the A-weighted sound levels occurring during a 24-hour period, and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.
- CNEL: Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dBA "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

### ***Effects of Noise on People***

The effects of noise on people can be placed into three categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants generally experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

### ***Noise Attenuation***

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 to 7.5 dBA per doubling of distance from the source, depending on the topography of the area and environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate, approximately 4 to 6 dBA.

### ***Noise Sources and Levels***

Transportation sources, such as automobiles, trucks, trains, and aircraft, are the principal sources of noise in the urban environment. Along major transportation corridors, noise levels can reach 80

DNL, while along arterial streets, noise levels typically range from 65 to 70 DNL. Industrial and commercial equipment and operations also contribute to the ambient noise environment in their vicinities.

Both the Huddart and Wunderlich parks are located within quiet, rural, rustic open space lands in the Santa Cruz Mountains in central San Mateo County. Primary noise sources within the parks are the activities associated with the use and maintenance of the parks themselves, in addition to occasional aircraft over flights. Noise from park users includes motor vehicular noise accessing the park, noise from parking areas from the opening and closing of vehicle doors, people conversing, etc.

To provide the basis for evaluating potential impacts of the project, ESA undertook noise measurements at different locations in the two parks. Six (6) short-term (15-minute) measurements were taken at different locations in the developed portions of the parks. Background noise levels in pristine areas void of development would be much lower, in the range of 35 to 45 dBA. The monitoring locations and the measured peak hour  $L_{eq}$  at the locations are listed in Table 3.10-1.

**TABLE 3.10-1  
EXISTING NOISE LEVELS AT THE PROJECT SITE**

	<b>Leq (dBA)</b>	<b>Location</b>
ST-1	63.2	At the Huddart parking lot
ST-2	53.4	At the Redwood picnic area in Huddart Park
ST-3	46.6	At the Toyon campground in Huddart
ST-4	59.4	In front of the Carriage House at Wunderlich Park
ST-5	62.6	At the training ring at Wunderlich Park
ST-6	68.5	At the current entrance to Wunderlich Park

SOURCE: Environmental Science Associates, 2007.

## **Sensitive Receptors**

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication; physiological and psychological stress; and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive.

Huddart Park is abutted by the GGNRA-managed Phleger Estate to the northwest, Purisima Creek Redwoods Open Space Preserve to the west, El Corte de Madera Creek Open Space Preserve to the southwest, California Water Service Company Watershed Land to the south, and Teague Hill Open Space Preserve and Wunderlich Park to the southeast.

Wunderlich Park is abutted by California Water Service Company Watershed Land to the north, Thornewood Open Space Preserve to the south, and El Corte de Madera Open Space Preserve to the west. Forested lands and rural residences are scattered in between each of the parks and preserves surrounding Huddart and Wunderlich County Parks.

### 3.10.2 Regulatory Framework

Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans identify general principles intended to guide and influence development plans; local noise ordinances establish standards and procedures for addressing specific noise sources and activities.

#### San Mateo County General Plan

The San Mateo County General Plan contains the following policies that address noise and are applicable to the project.

##### **9.36 Development Standards to Minimize Land Use Conflicts in Public Recreation Lands.**

d) Provide structural, visual, auditory and other buffering mechanisms to protect portions of the public recreation lands that are used by the public from non-recreational land uses.

##### **16.1 Strive Toward a Livable Noise Environment.**

##### **16.2 Reduce Noise Impacts Through Noise/Land Use Compatibility and Noise Mitigation.**

##### **16.3 Promote Protection of Noise Sensitive Land Uses and Noise Reduction in Quiet Areas and Noise Impact Areas.**

##### **16.4 Noise Reduction Priority**

Give priority to reducing noise at the source rather than at the receiver, recognizing that it is less expensive and more equitable to build noise mitigation into the source than providing for it along the path and at the receiver.

##### **16.5 Noise Reduction Along the Path and at the Receiver**

Promote noise reduction along the path and at the receiver through techniques which can be incorporated into the design and construction of new and existing development, including, but not limited to, site planning, noise barriers, architectural design, and construction techniques.

##### **16.16 Construction Techniques Noise Control**

Promote measures which incorporate noise control into the construction of existing and new buildings, including, but not limited to, use of dense noise insulating building materials.

The General Plan does not provide quantitative thresholds or standards for construction or operational noise.

However, according to the land use compatibility categories published in the State of California General Plan Guidelines, a noise environment of up to 65 dBA, DNL is considered “normally acceptable” for parks and open space areas. A noise environment between 65 and 75 dBA, DNL is considered “normally unacceptable and a noise environment of greater than 75 dBA, DNL is considered clearly unacceptable.

### 3.10.3 Impacts and Mitigation Measures

#### Significance Criteria

For the purposes of this EIR (and consistent with Appendix G of the CEQA *Guidelines*), the proposed project would be considered to result in a significant noise impact if it would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project and in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project and in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

The following noise analysis addresses the first four of these general criteria. The last two are not discussed further within this section since the project area is not located within 2 miles of a public or private airport.

#### Methodology

Noise impacts from the Master Plan improvements would be primarily from construction related activities at the two parks. Implementation of the Master Plan is not expected to increase vehicle

trips generated by the two parks. Instead, the improvements are aimed at improving facilities for existing users of the parks. Also, no new stationary sources of noise would be introduced to the parks that could affect the ambient noise environment.

Using a phased approach, the Master Plan identifies three different implementation timelines – short, medium, and long-term – each of which correspond with a timeframe of 5, 10, and 20 years. Construction activities would take place over the duration of these three phases intermittently in different areas of the two parks. Construction phase impacts have been evaluated using the State’s land use/noise compatibility standards for parks and open space areas. Construction activities resulting in noise levels greater than the standard for acceptable noise level (65 dBA) for such uses would be considered to have a significant impact. Traffic noise impacts have been discussed qualitatively.

## Impacts

### **Impact 3.10-1: Project construction activities would intermittently and temporarily generate noise levels above existing ambient levels. (Less than Significant with Mitigation)**

Construction can be a significant, although typically short-term, source of noise. Construction is most significant when it takes place near sensitive land uses, occurs at night, or in early morning hours. Due to the remote location of the parks, noise from construction activities would primarily affect park users. Depending on the location of the construction activity, any rural residences present in the near vicinity could also be affected.

Construction activities would occur intermittently at different sites at the two parks throughout the period of implementation of the proposed Master Plan. Although the related impacts at any one location would be temporary, construction of individual projects under the Master Plan could cause adverse effects on the local noise environment of the area. Noise generated by construction activities would fluctuate depending on the construction phase, the particular type, number, and duration of use of various pieces of construction equipment. The effect of construction noise would depend upon the level of construction activity on a given day and the related noise generated by that activity, the distance between construction activities and the nearest noise-sensitive uses, presence or absence of barriers between the noise source and receptor and the existing noise levels at those receptors.

Table 3.10-2 shows typical exterior noise levels at various phases of construction, and Table 3.10-3 shows typical noise levels associated with various types of construction related machinery. Table 3.10-3 also shows the noise levels resulting from the implementation of feasible noise control measures at the source. These reduced noise levels can be achieved by using quieter procedures or machines and implementing noise-control features requiring no major redesign or extreme cost. Tables 3.10-2 and 3.10-3 also show the distances over which noise would attenuate to the acceptable level of 65 dBA.

As shown in Table 3.10-2, the noisiest phase of construction would be during pile driving, which could generate noise levels of approximately 90-105  $L_{eq}$  at a distance of 50 feet from the source.

**TABLE 3.10-2  
TYPICAL COMMERCIAL CONSTRUCTION NOISE LEVELS**

Phase	Noise Level ( $L_{eq}$ ) <sup>a</sup> , dBA	Distance to 65 dBA (ft)
Ground Clearing	84	446
Excavation	89	792
Foundations	78	223
Erection	85	500
Exterior Finishing	89	792
Pile Driving	90-105	890 – 5,000

<sup>a</sup> Estimates correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase and 200 feet from the other equipment associated with that phase.

SOURCE: U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 1971; ESA, 2007.

**TABLE 3.10-3  
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS**

Construction Equipment	Noise Level (dBA) @ 50 Feet	Noise Level at 50 feet with Feasible Noise Control <sup>a</sup>	Distance to attenuate to 65 dBA (ft) <sup>b</sup>
<b>Earth Moving</b>			
Front Loader	79	75	160
Backhoe	85	75	160
Dozer	80	75	160
Tractor	80	75	160
Scraper	88	80	280
Grader	85	75	160
Paver	89	80	280
<b>Materials Handling</b>			
Concrete Mixer	85	75	160
Concrete Pump	82	75	160
Crane	83	75	160
<b>Stationary</b>			
Pump	76	75	160
Generator	78	75	160
<b>Impact Tools</b>			
Pile Driver	101	95	1,580
Jack Hammer	88	75	160
Rock Drill	98	80	280
Pneumatic Tools	86	80	160
<b>Other</b>			
Saw	78	75	160
Vibrator	76	75	160

<sup>a</sup> Estimated levels obtainable by selecting quieter procedures or machines and implementing noise-control features requiring no major redesign or extreme cost.

<sup>b</sup> Distances calculation assumes implementation of feasible noise control mitigation at the source.

SOURCE: U.S. Environmental Protection Agency, 1971; ESA, 2007

Excavation and exterior finishing may also generate a substantial amount of noise. The main noise sources associated with excavation are the operation of excavators removing material and trucks hauling excavated materials away. The main noise sources associated with exterior finishing would be operation of concrete mixers and pumps for application of stucco material to the building exterior. Pile driving is not expected to be required as part of the construction activities associated with the Master Plan improvements.

In the absence of use of impact tools such as pile drivers and rock drills, the dominant construction equipment noise source is usually a diesel engine, without sufficient muffling. Stationary equipment operate in one location for one or more days at a time, with either a fixed-power operation (pumps, generators, compressors) or a variable noise operation (pile drivers, pavement breakers). Mobile equipment move around the construction site with power applied in cyclic fashion (bulldozers, loaders), or to and from the site (trucks).

As construction noise levels of greater than 80 dBA would be well above the otherwise quiet ambient noise environment at the two parks as well as the maximum noise level considered acceptable for neighborhood parks and playgrounds according to the State's noise/land use compatibility guidelines. Therefore, this impact, though temporary and intermittent would be considered significant without the implementation of adequate mitigation measures.

**Mitigation Measure 3.10-1:** The County or its agent shall require construction contractors to implement the following measures throughout the duration of construction activity. With mitigation, the noise impacts of project construction would be less than significant.

- Limit all noise-generating construction activities to daytime hours between 7:00 a.m. and 6:00 p.m., from Monday through Friday. Construction activities shall not take place on weekends and legal holidays when park use would be higher.
- Disallow park uses within a radius of 500 feet from the site of construction activity over the duration of the activity.
- Equipment and trucks used for project construction shall utilize the best available noise control techniques (*e.g.*, improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- Impact tools (*e.g.*, jack hammers, pavement breakers, and rock drills), if any, used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.
- Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.

- Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the park in the event of problems.
- Neighbors located within 300 feet of the project construction area shall be notified at least 30 days in advance of construction activities about the estimated duration of the activity; and
- A preconstruction meeting shall be held with the job inspectors and the general contractor/onsite project manager to confirm that noise mitigation and practices are implemented.

**Significance after Mitigation:** Less than Significant

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**Impact 3.10-2: The project would increase traffic related noise along roadways leading up to the parks. (Less than Significant)**

Improvements recommended under the Master Plan are not expected to significantly increase usage of either Huddart Park or Wunderlich Park. The enhancements at the parks are not designed to increase use of the park, but to improve the facilities for existing users of the parks. As such, an increase in traffic due to implementation of the Master Plan is expected to be minimal, if any. The contribution to traffic on roadways in the Park vicinity would increase traffic noise incrementally.

A change in noise level of less than 3 dBA is not discernible to the general population; an increase in average noise levels of 3 dBA is considered barely perceptible, while an increase of 5 dBA is considered readily perceptible to most people (Caltrans, 1998). Generally, a doubling of traffic volume (100 percent increase) results in an increase of 3 dBA. This is due to the logarithmic nature of sound. Since the increase in traffic due to the proposed improvements of the Master Plan would be minimal (well below 100 percent increase), it would clearly result in less than 3 dBA increase in traffic related noise levels. This increase would not be perceivable and therefore impact would be less than significant.

**Mitigation:** None required

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## References – Noise

Caltrans, *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*, October 1998.

Governor's Office of Planning and Research, California Environmental Quality Act, *CEQA Guidelines*, Appendix G, 2007.

San Mateo County, Department of Environmental Management, Planning and Building Services, 1986, *San Mateo County General Plan*. Accessed online on March 15, 2007 at [http://www.co.sanmateo.ca.us/vgn/images/portal/cit\\_609/10073472gp\\_polis.pdf](http://www.co.sanmateo.ca.us/vgn/images/portal/cit_609/10073472gp_polis.pdf).

U.S. Environmental Protection Agency, *Noise from Construction Equipment and Building Operations, Building Equipment, and Home Appliances*, December 1971.

## 3.11 Fire Hazards, Fire Management and Hazardous Materials

### 3.11.1 Approach to Analysis

The assessment focuses on the following issues:

- The potential for wildland fires caused by construction activities
- The potential for encountering hazardous substances in soil and groundwater during construction activities based on a regulatory database search to identify permitted hazardous materials uses and environmental cases in the vicinity of ground-disturbing activities
- The potential for encountering hazardous building materials during construction
- The potential for a release of fuels or other construction-related chemicals during construction

### 3.11.2 Setting

#### Wildland Fire

The California Public Resources Code includes fire safety regulations that: restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors<sup>1</sup> on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. The Public Resources Code requirements would apply to construction activities at Huddart and Wunderlich Parks because these sites are located in an area designated as a “Wildland Area That May Contain Substantial Fire Risks and Hazards” (California Department of Forestry and Fire Protection, 2007).

#### *Fire Hazard Assessment*

There are many ways to assess fire hazard. Those features that cause damage from a fire, hinder containment, increase fire intensity, or spread rate are considered fire hazards because they influence the ability to suppress a fire. Most utilize the three main factors of fuels, weather and topography, with possible inclusions of elevation, or fire history. Fire behavior is an appropriate means to assess fire hazard because fire behavior integrates the effects of fuels, weather, and topography.

Factors that influence the ability to suppress fires are also included in a fire hazard assessment. Factors involved in the ability to suppress a fire are water availability and access.

<sup>1</sup> A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

Fire behavior predictions also denote areas where containment may be easiest, or where access may be precluded during a time of fire. Fire behavior predictions also can warn where natural resources may be unduly harmed by a wildfire and where it may be inconsequential to natural resources.

An assessment of hazard does not include an evaluation of the vulnerability of a feature, only whether the feature will contribute to the ferocity of the fire. For example, structures may be hazards because of their ignitability, or an area of low hazard because of its ignition-resistant construction and adjacent defensible space. Hazard assessment does not describe whether a fire may harm a natural or built feature (where fire may cause harm, the feature would be an asset at risk). Hazard assessment describes how severe a wildfire may be, but does not provide any information regarding the chance a fire will burn in the park. This section only addresses the hazards posed by the environment in Huddart and Wunderlich Parks.

### Wildland Vegetative Fuels

To a fire, all biomass is fuel. Many types of vegetation burn differently, a result of several characteristics: the way the plants in that community grow, the proportion of live biomass or dead material, the proportion in various size classes, and the distribution (in both vertical and horizontal planes) of the biomass. Vegetation types are categorized in terms of the above factors into fuel types sometimes labeled by numbers 1-13. The most significantly factor in distinguishing between fuel types is the amount and distribution of smaller diameter dead biomass, because it is this material that most commonly carries the fire, and drive fire spread. Accumulations of larger-diameter dead material promote hotter fires, and can promote tree torching and initiation of crown fires, which are extremely difficult to control. In some locations within the park, the interval between fires has become unnaturally long, allowing for an excess of fuels that could create a fire of unprecedented intensity and severity.

Fuels can be correlated to vegetation types; this allows the area to be mapped in more detail. The wildland fuels in Huddart and Wunderlich parks include large expanses of four different fuel types, based on vegetation types mapped by Rana Creek Habitat Restoration. The distribution of these fuel types within the parks and the fire behavior of each are described below. The wildland fuels at Huddart and Wunderlich Parks are (Figures 3.11-1 through Figure 3.11-4):

Vegetation Type	Fuel Type	Color/Hazard	Huddart Acreage	Wunderlich Acreage
Non-Native Grassland	Fuel Model 1	Yellow/Low		21.2
Coyote Bush Scrub	Fuel Model 5	Orange/Moderate	0	54.3
Chaparral	Fuel Model 4/5	Red/High		69.6
Oak Woodland	Fuel Model 8	Blue/Low	23.9	8.0
Mixed Evergreen Forest	Fuel Model 9	Green/Moderate	577.7	629.2
Redwood Forest	Fuel Model 9	Green/Moderate	302.9	162.9
Eucalyptus	Fuel Model 7	Purple/Highest	0	18.1
Mixed Evergreen Forest (w/eucalyptus, acacia & broom)	Fuel Model 7	Purple/Highest	0	16.9
Landscaped/Developed	No model	Gray/Not Applicable	20.5	11.5

Figure 3.11-1 Vegetation as Fire Hazard in Wunderlich Park

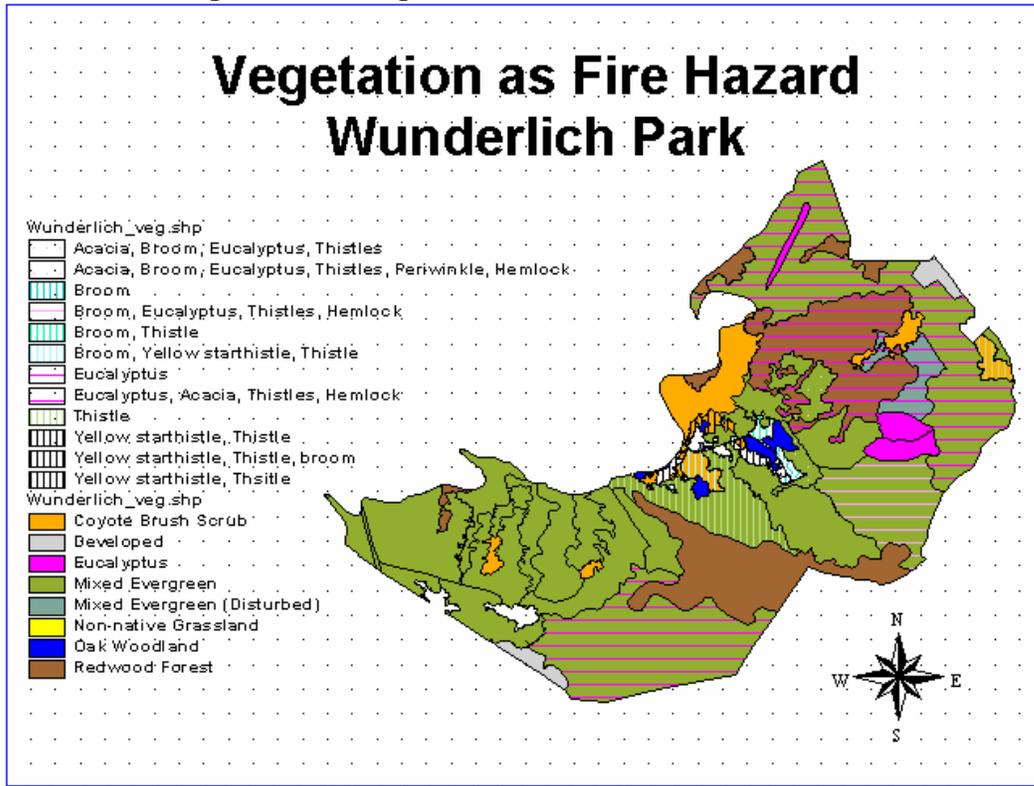


Figure 3.11-2. Fuel Models in Wunderlich Park

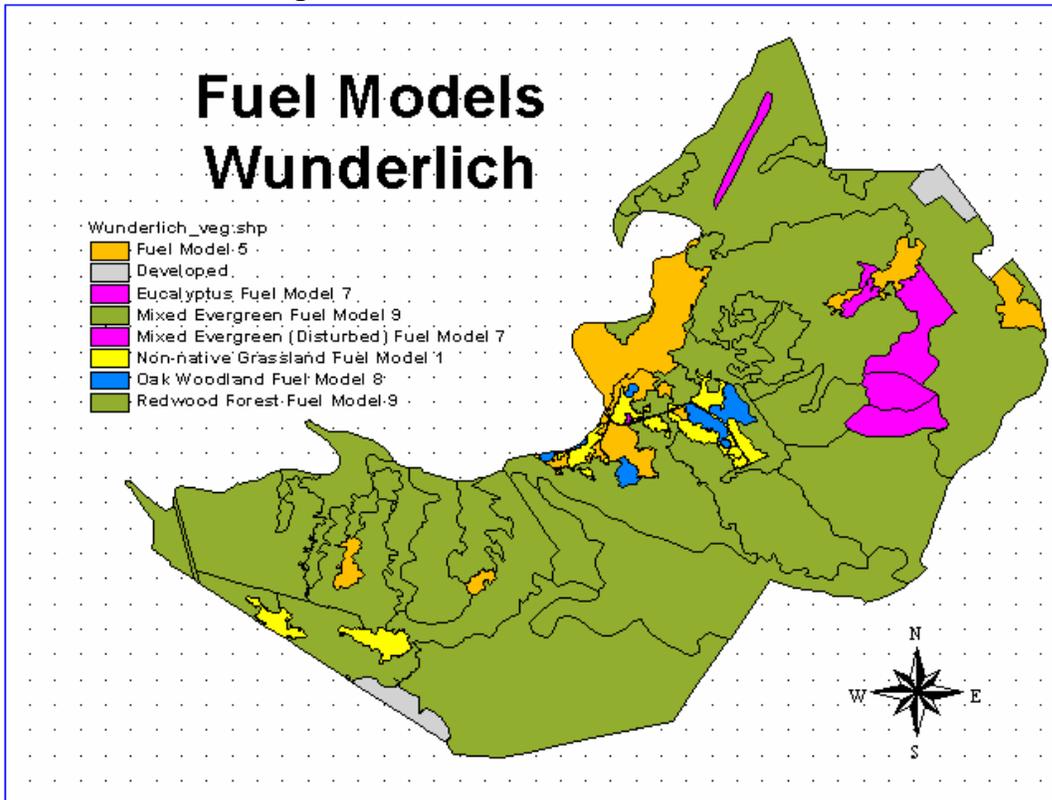


Figure 3.11-3 Vegetation as Fire Hazard in Huddart Park

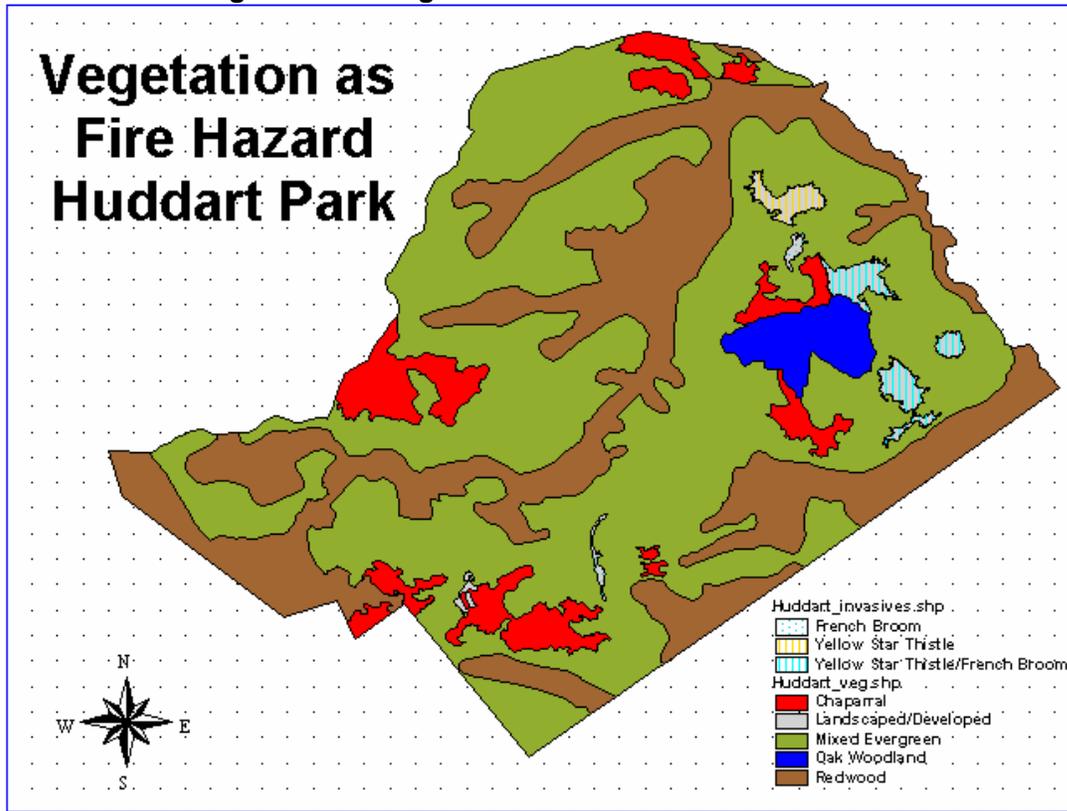
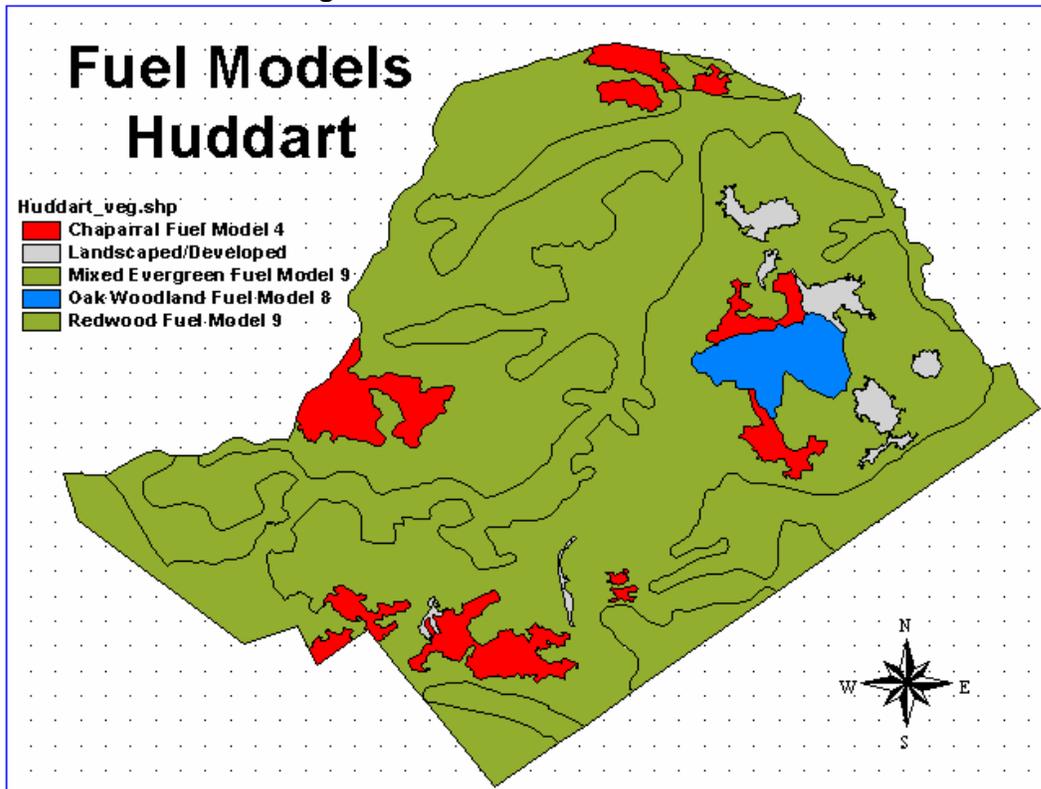


Figure 3.11-4. Fuel Models in Huddart Park



#### *Annual Grass (Fuel Model 1)*

The Annual Grass fuel type is comprised of the non-native grasslands in Wunderlich Park, which occurs only in small patches on Meadow Trail. This vegetation type also includes the irrigated meadows in Huddart Park if they were ever to dry out. Grassland fuels (both annual and perennial) are fairly uniform and homogeneous compared to other fuel types. Grasslands are generally characterized as having a light total fuel load made entirely of fine herbaceous material that cures in the summer. This material responds rapidly to changes in humidity and is easily ignited in dry periods. While the Annual grass fuel type will ignite easily and burn rapidly, the hazard posed by grassland is far less than any other fuel type (except Oak Woodland). Grasslands are often used as staging areas for fire response, and when mowed, as safety zones for fire response personnel.

Fire generally spreads rapidly and can exhibit dramatic flame lengths. However, the total heat output of grass is minor when compared to the fuel types. Fire behavior in grass is most responsible to changes in conditions, such as moisture, height, or continuity. Containment is often the greatest challenging in suppression. Grass tends to lead fire into less ignitable fuels with higher heat production. Structure survival is high when grass abuts buildings because of its low heat output and short burn-out time.

#### *North Coastal Scrub (Fuel Model 5)*

North Coastal Scrub is found where grasslands have not been disturbed in several years (such as at The Meadows) and as an understory in Mixed Evergreen Forests. Fire behavior in North Coastal Scrub is not normally explosive, however, it was this fuel type that fueled the Oakland Fire of 1991. Rates of spread are quite fast, but usually flame lengths are low (under five feet) and heat output minimal except when the stand is extremely old, as occurs in the parks. The dead to live ratio of mature stands is usually quite high and an equal proportion of living and dead material is often found. A preponderance of the dead fuel is smaller than 1/4 inch in diameter, which promotes the fast spread rate.

#### *Chaparral (Fuel Model 4)*

This fuel type constitutes the highest hazard, and produces the most severe fire behavior. Luckily, it occurs only in Huddart and only in small patches on the top of the slopes or on south-facing aspects. Flame lengths are predicted to range from 17 to 23 feet, which indicates explosive behavior. The spread rate is predicted to be approximately 50 to 100 feet per minute, with ember production ahead of the flaming front.

Direct attack would not be possible, and containment efforts would need to rely on air attack, backfiring or suppression strategies other than line building because the perimeter of the fire is likely to grow faster than a line could be built. In addition, spotting is likely in chaparral which will present even more challenges to suppression efforts.

#### *Oak Woodland (Fuel Model 8)*

The Oak Woodland fuel type encompasses stands of coast live oak, bay, and buckeye, with black oak, and interior live oak in Huddart and Wunderlich Parks.

Where no understory exists, slow-burning surface fires with low flame lengths (less than two feet) are the rule in this type, with isolated pockets of accumulated fuels flaring up and possibly starting crown scorch; the potential for crown fires is minimized. Closed canopies of hardwoods support densely compacted surface fuels composed mostly of leaves, and some twigs. Only under severe fire weather do these fuels pose significant fire hazards.

#### *Mixed Evergreen Forest (Fuel Model 9)*

The Mixed Evergreen Forest includes redwood forests, forests of Douglas fir/redwood mix, and hardwood-dominated stands such as bay, oak/bay mix and oak forests. This fuel type is the most common in both parks, and covers all aspects, and most conditions.

Where the Mixed Evergreen Forest does not support an understory slow burning fires with low flame lengths are the rule, as with the Oak Woodland. Wherever accumulations of dead fuels exist, fires will flare up and scorch tree crowns and produce localized torching (creating embers and potential spot fires). However, this fuel type does not usually pose significant hazards.

In contrast, where an understory is present in the Mixed Evergreen Forest, fires will burn with greater intensity than other fuel types due to greater volumes of fuel on or near the ground - both from tree deposition and understory vegetation, or deferred maintenance. This brush understory can carry fire into the canopy and result in crowning and torching, and potential mortality from cambial heating. When the canopy of the oaks is ignited, countless embers can be produced and carried in the wind to locations several hundred yards away. Even where oak forests do not have a shrubby understory, low branches may make them vulnerable to torching and torching from a grass fire on the site.

A closed canopy provides a moist environment which is usually resistant to ignition. However, should a crown fire initiate, this dense canopy is more likely to spread as a crown fire rather than torch and subsequently drop to the forest floor. This vegetation type responds slowly to changes in temperature and moisture so that the forest dries out slowly but also remains dry for a longer period of time.

A deep leaf litter layer – as much as 8 inches deep - consisting of oak, and blackberry leaves has accumulated within the Mixed Evergreen Forests. Long periods of smoldering can be expected due to volumes of large dead branches; this increases burn severity and ecological impacts. A thick understory contributes to the higher probability of crown fires and associated new spot fires. Both of these characteristics make this particular hazard in the parks under severe weather, both in terms of starting new fires via spotting and the difficulty of containment and extinguishment.

#### *Redwood Forest (Fuel Model 9)*

The Redwood Forest Fuel Type corresponds to the Redwood Forest vegetation type. This is found in the ravines and deeper parts of the canyons in both parks, such as below the Alambique Trail in Wunderlich Park, and McGarvey Gulch in Huddart Park.

Large fuel volumes from tree deposition and well-developed understory vegetation are throughout the forest. Consequently, this fuel type burns with intensity. The understory vegetation contributes to a higher probability of crown fires and associated spotting. Dead and down woody fuels include some larger (greater than three inches in diameter) that can pose occasional control and containment problems, isolated torching of trees. With severe dry winds, crowning and long-range spotting is likely due to long flame lengths and understory vegetation.

Both of these characteristics make this a significant vegetative fire hazard, both in terms of starting new fires via spotting and the difficulty of containment and extinguishment from smoldering fuels. However, the dangerous fire behavior is expected only under severe fire weather. In addition, the Redwood Forest has a low ignition potential because of the moist nature of the forest and generally remote location.

*Eucalyptus and Acacia Plantings and Mixed Evergreen Forest (disturbed) (Fuel Model 7)*

Wunderlich Park has a significant area of non-native vegetation, dating back to its origin as a farm and private garden. The previous owners established groves of *Eucalyptus globulus* and *Acacia spp.* which have expanded their original planting locations by aggressive seeding and vigorous sprouting. Almost 17 acres of Wunderlich Park are mapped as Mixed Evergreen Forest with a significant component of eucalyptus, acacia and broom.

The Eucalyptus Fuel Type contains the highest fuel volume in the park, as much as 30 tons/acre. The forest floor is covered with leaves, strips of bark, tree branches, decomposed forest litter and debris from previous road clearing operations. In some locations the forest litter exceeds two ft in depth and averages 6-12 inches depth. Eucalyptus litter is famous for its ignitability, and for the ferocity with which it burns. Further, if a fire were to ascend to the trees crowns, the burning leaves and bark will be distributed widely. In the 2001 Albion Fire, embers from this 3-acre fire were transported 1/2-3/4 miles eastward from Albion Road to Canada Lane in Woodside; the fire crossed Highway 280.

This is the most hazardous vegetation type/fuel type of those found in both parks. Extreme fire behavior can be expected under a wider range of conditions than any other fuel model. The combination of a build-up of dead material, and the highly ignitable nature of the litter creates the potential for fire behavior which could exceed the ability of the finest fire department to control.

*Roadsides in Eucalyptus and Acacia Plantings (disturbed) (Fuel Model 12) Not Shown on Map*

The debris from approximately 1000 trees that fall down each year adjacent to roads in Wunderlich Park poses a particular fire hazard due to the presence of a high proportion of dead material (from leaves, litter, and twigs). This explosive fuel type is located along the Loop, Alambique and Meadow Trails in Wunderlich Park. Three miles of the Loop Trail at Wunderlich were cleared in 2004, however much more remains.

The cuttings (also known as 'slash') are 3-5 feet deep, and contain debris from trees which are as large as 10 inches in diameter. More recent forest litter and debris are suspended over the slash, creating an elevated, highly aerated fuel bed more conducive to ignition and intense burning.

In *How to Predict the Spread and Intensity of Forest and Range Fires* by Richard Rothermel (1983), this fuel type is described as "Rapidly spreading fires with high intensities capable of generating firebrands can occur. When fire starts, it is generally sustained until a fuelbreak or change in fuels is encountered." This disturbed condition is the most hazardous place in Wunderlich Park. Like the eucalyptus stands, extreme fire behavior can be expected under a wider range of weather conditions than any other fuel type. The condition is adjacent to trails, a possible ignition location, making this the most urgent hazardous condition.

#### *Landscaping (no fuel model number)*

Landscaped areas, being closest to structures, may make the greatest impact on structure survivability during a fire originating in the wildlands. Landscaping in both parks is meager, and do not significantly contribute to the hazards posed to the structures or visitors.

### **Structural Hazards**

Structures that are constructed in a manner that could easily ignite pose a hazard to the parks. Very few structures exist in Huddart and Wunderlich Parks, which minimize this aspect of fire hazard. Most structures in the parks are ignition-resistant, and do not constitute a hazard. The recreational structures in Huddart (campground facilities such as restrooms and picnic structures) are generally non-combustible, thus pose no hazard. All operation buildings, e.g. the Corporation Yard of Huddart Park, or residences in the park, are moderately ignition resistant. The historic equestrian facility is made of wood, making it vulnerable to combustion and constituting a hazard to the park.

### **Topographic Features and Hazards**

Topographic features, such as slope, aspect, and the overall form of the land have a profound effect on local weather patterns and microclimatic conditions. Topography directly and indirectly affects the intensity, direction, and spread rate of wildfires by influencing the local wind, fuel moisture and heat availability.

Both Huddart and Wunderlich Parks are located on the same east-facing slope below Skyline Blvd. and both have relatively steep canyons, convoluted terrain and open meadows in flats or ridgelines. In fact, the western boundary for both parks coincides with the distinct, high north-south ridgeline which is defined by Skyline Blvd. Elevations within Huddart range from approximately 600 feet in elevation at the eastern boundary and West Union Creek, to approximately 2000 feet in elevation at the western boundary. Wunderlich Park also runs the entire length of the slope from 450 ft in elevation to 2280 ft, at Skyline Blvd.

These steep slopes would promote rapid fire spread uphill. Because fires burn more rapidly uphill, fires will tend to burn to Skyline Blvd, the high point on the hill. If a crown fire were to travel up these slopes, it would be very difficult to stop it from crossing Skyline Blvd. because of strong convective winds and likely cause mass ignitions throughout the area. The incised topography will also funnel winds into the "chimneys", concentrating fire heat, and directing fire spread up these canyons. Further, the convoluted topography can cause erratic winds and promote

cross-slope burning, where a fire will jump from one steep canyon side to the other. Prominent ridges will maximize the distance embers can spread downslope.

### **Weather Patterns and Hazards**

Like topography, weather conditions have a large influence on fire behavior. Weather conditions significantly impact the rate, intensity, and direction in which fires burn. Temperature, humidity and especially wind are the more important weather variables used to predict fire behavior.

San Mateo County has warm, dry summers (May – October) and cool, moist winters that are characteristic of the fog belt area. May to October is the time of highest fire danger and constitutes the fire season.

Summertime temperatures are usually quite warm, often well over 100 degrees however; it is common for the fog to roll in during the early summer evenings because of the proximity to the coast, and the steep ridge to the west that blocks the fog. According to weather data at WFPD Station 7 from 1960 to 1990, the average maximum temperatures in June through September exceed 80 degrees. Hot days associated with stagnant air and high pressures aloft pose times of extreme fire danger. During this time, periods of continuous high temperatures and low relative humidities dry fuels to a point where National Fire Danger Rating System (NFDRS) rating during these times are over 81 and indicate extreme resistance to control.

The Diablo, or Santa-Ana type winds do not blow with the same intensity in the east-facing hills of Huddart and Wunderlich Parks. However, this overall weather pattern creates extremely low humidities and enhances the possibilities of ignition and extreme fire behavior. Once a fire escapes initial attack, it generates its own wind, creating strong updrafts that entrains more wind into the burning environment.

### **Access**

Current access within Huddart and Wunderlich Parks is limited to narrow, windy dirt roads. In Huddart Park the main road links West Union Creek, McGarvey Gulch and Kings Mountain Road. There are significant restrictions to access in Wunderlich Park. Many fire engines with a longer wheel-base cannot make the first turn in the Loop Trail above the equestrian center. The engines simply could not travel further and may block the road if stuck.

Additionally, there is no place to turn engines around in Wunderlich on this same trail system. Some fire departments may not commit engines and firefighters without a turnaround because of a reasonable concern for firefighter safety. Last, water bars installed for erosion control measures slow fire suppression response because they cannot travel as quickly as otherwise possible, and may become stuck on high water bars.

In both parks, four-wheel-drive firefighting vehicles can traverse unpaved service roads for initial attack of a fire however larger and longer vehicles are precluded from making an effective contribution to fire suppression. Access is most closely tied to response times, so limited access

prevents timely deployment of most efficient firefighting resources and generally results in a larger fire where back-up of initial response apparatus is required.

### **Water Availability for Fire Suppression**

There is virtually no water available to firefighting resources in both Huddart and Wunderlich Parks. Hydrants are available within 300 feet of each structure in the parks and are located at the entrance to Wunderlich Park and on Greer Road at the upper entrance. In Wunderlich Park the shallow agricultural reservoir that exists at Salamander Flat is not suitable for firefighting purposes due to its shallow nature and unreliable supply. Another water storage tank is located off Skyline at the southwest corner of Wunderlich Park, but is a private water supply.

Despite the ability of four-wheel-drive vehicles to enter the parks, water for fire suppression would more likely be delivered via water tenders with fold-a-tank set-ups, helicopter buckets, and aerial support. With minimal water supply, fire suppression is more difficult and can easily result in a catastrophic fire with a greater potential for damage and loss of life.

### **Hazardous Materials**

Hazardous materials and wastes can result in public health hazards if released to the soil, groundwater, or air in vapors, fumes, or dust. Hazardous materials, defined in Section 25501(h) of the California Health and Safety Code, are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a substantial present or potential hazard to human health and safety or to the environment if released. Hazardous materials have been and are commonly used in commercial, agricultural, and industrial applications as well as in residential areas to a limited extent. A waste is any material that is relinquished, recycled, or inherently waste-like. Title 22 of the California Code of Regulations, Division 4.5, Chapter 11 contains regulations for the classification of hazardous wastes. A waste is considered a hazardous waste if it is toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases) in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including Resource Conservation and Recovery Act (RCRA) hazardous wastes, non-RCRA hazardous wastes, extremely hazardous wastes, and special wastes.

### ***Potential Presence of Hazardous Materials in Soil and Groundwater***

To evaluate the potential presence of hazardous materials in the vicinity of Huddart and Wunderlich parks, an environmental database review was conducted to identify permitted uses of hazardous materials, environmental cases and spill sites, where soil and/or groundwater contamination may be present. A description of each database reviewed is listed in Table 3.11-1.

**TABLE 3.11-1  
 DESCRIPTION OF ENVIRONMENTAL DATABASES**

<b>Acronym</b>	<b>Name and Description of Database</b>
LUFT	Leaking Underground Fuel Tank (LUFT) cleanup site. Facilities undergoing cleanup due to an unauthorized release from an UST system (LUFT). <sup>a</sup> Department of Toxic Substances Control (DTSC) EnviroStor database.
UST	Underground Storage Tanks (USTs). Facilities in a historical listing of active and inactive USTs. <sup>b</sup> DTSC EnviroStor database.
SLIC	Spills, Leaks, Investigation, and Cleanups (SLIC) sites. DTSC EnviroStor database.
Cortese List	Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). Annually updated list of hazardous materials release sites maintained by DTSC. <sup>a</sup>

<sup>a</sup> Search area: project property and adjacent area.  
<sup>b</sup> Search area: within 1/4 mile of property.

Huddart and Wunderlich Parks are not identified on any of the databases reviewed, and there were no other sites within the nearby vicinity of both parks. Specifically, there are no LUFT, UST, SLIC, Cortese or brownfield sites within one-half mile of either park. The LUFT site closest to the project areas is Skylonda Corners, located at 17288 Skyline Boulevard, approximately one-half mile southeast of the Wunderlich Park boundary. Although the status of this site is listed as open, the distance from the park, and the verification monitoring prescribed by the San Francisco Bay Regional Water Quality Control Board (RWQCB) indicate that there is no impact to Wunderlich Park.

### ***Hazardous Building Materials***

Old structures have the potential to contain hazardous building materials, including asbestos, polychlorinated biphenyls, and lead-based paints. For the proposed project, such materials could be encountered in the tunnel and outlet works during construction and outlet modification. State and federal laws control the removal and disposal of hazardous materials and require the generator to follow strict notification and abatement procedures prior to disturbance of these materials.

Asbestos is a common name for a group of naturally occurring fibrous silicate minerals that are made up of thin but strong, durable fibers used in building materials, including insulation, shingles, and floor and ceiling tiles. Asbestos could be present in adhesives or other surface treatments used in construction and the regular maintenance of the outlet works. PCBs are mixtures of synthetic organic chemicals with physical properties ranging from oily liquids to waxy solids. Until the use of PCBs was made illegal, they were used widely in hundreds of industrial and commercial applications, including use in hydraulic, electrical, and heat transfer equipment; as plasticizers in caulking, paints, plastic, and rubber compounds.

Lead-based paint is toxic to humans, particularly young children, and can cause a range of human health effects depending on the level of exposure. Lead-based paints were used on the surfaces of

many older structures; if such paint is separated from a structure, lead may also be found in nearby soil.

### 3.11.3 Regulatory Setting

#### Natural Hazards Regulations

##### *San Mateo County General Plan*

The San Mateo General Plan contains a number of goals and policies regarding natural hazards. The Plan defines fire hazards as “wildland or structural fires that occur in areas that are remote, have difficult access for fire vehicles, and/or contain potentially flammable vegetative communities” and designates fire hazard areas as “those areas which are defined by the California Department of Forestry/County Fire Department or other fire protection districts as hazardous, including but not limited to the area within the Hazardous Fire Areas boundaries illustrated on the Natural Hazards Map”.

##### **15.27 Appropriate Land Uses and Densities in Fire Hazard Areas**

- a) In rural areas, consider lower density land uses that minimize the exposure of significant numbers of people to fire hazards.
- b) Consider higher density land uses for fire hazard areas in the rural area if development is clustered near major roads, has adequate access for fire protection vehicles and can demonstrate adequate water supplies and fire flow.
- c) In urban areas, consider higher density land uses to be appropriate if development can be served by CDF/County Fire Department, a fire protection district or a city fire department, adequate access for fire protection vehicles is available and sufficient water supply and fire flow can be guaranteed.

##### **15.28 Review Criteria for Locating Development in Fire Hazard Areas**

- a) Wherever possible, cluster new development near existing developed areas where there are adequate water supplies and good access for fire vehicles.
- b) When development is proposed in hazardous fire areas, require that it be reviewed by the County Fire Warden to ensure that building materials, access, vegetative clearance from structures, fire flows and water supplies are adequate for fire protection purposes and in conformance to the fire policies of the General Plan.

##### **15.34 Vegetative Clearance around Structures**

- a) Require clearance of flammable vegetation around structures as a condition of approval to new development in accordance with the requirements of the agency responsible for fire protection.
- b) Conduct periodic inspections to ensure maintenance of required clearances.

##### **15.34 Fire Retardant Vegetation**

- a) Encourage the use of fire retardant vegetation when reviewing new development proposals.

### ***Building Codes: The 2005 Urban Wildland Interface Code In the Uniform Building Code and Uniform Fire Code***

The first phase of the Urban Wildland Interface Fire Code is in effect. Named “Public Resources Code Title 24, California Building Code (CBC) Part 2” and “the California Referenced Standards Code, Part 12 regarding Phase II – Wildland Urban Interface Fire Areas Building Standards,” these standards address exterior structural design and construction to become ignition resistant in places designated as high hazard severity. The code includes standards as follows:

**SFM 12-7A-1:** Exterior Wall Siding and Sheathing

**SFM 12-7A-2:** Exterior Window

**SFM 12-7A-3:** Under Eave

**SFM 12-7A-4:** Decking

### ***State-wide Fuel Management Codes***

Public Resources Code 4290 and 4291 apply to those lands under the fire protection responsibility of California Department of Forestry and Fire Protection (CDF). These codes are often used as a “de-facto” set of codes because they are seen as prudent and reasonable methods to achieve fire safety. PRC 4291 now requires owners of lands designated as high fire hazard in local and state jurisdiction need to create and maintain defensible space for 100 feet from each structure, or to the property line, whichever is closer. 14 CCR 1299 encompasses regulations for the expansion of defensible space to 100 feet in areas of high fire hazard. Guidelines to clarify actions compliant with the regulations are available from the CDF website.

### **Hazardous Materials Regulation**

Hazardous materials and hazardous wastes are extensively regulated by federal, state, and local regulations. In general, these regulations provide definitions of hazardous materials; establish reporting requirements; set guidelines for handling, storage, transport, remediation, and disposal of hazardous wastes; and require health and safety provisions for both workers and the public. Regulatory agencies also maintain lists, or databases, of sites that are permitted to handle hazardous wastes or store hazardous materials in underground storage tanks, as well as sites where soil or groundwater quality may have been affected by hazardous materials (referred to as “environmental cases”).

The major federal, state, and regional agencies enforcing hazardous material regulations include: the U.S. Environmental Protection Agency (federal); the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Boards (RWQCBs) of the California Environmental Protection Agency (state); and the Bay Area Air Quality Management District (regional). In addition, a number of local agencies at the county and city level are responsible for regulating hazardous materials in the project area. The San Mateo County Health Services Department is responsible for implementing most hazardous materials regulations in San Mateo County.

### ***Above-ground Storage of Petroleum Products During Construction***

The RWQCB requires registration of an above-ground fuel storage tank at a construction site if the tank is 20,000 gallons or larger, or if the aggregate volume of above-ground petroleum storage is greater than 100,000 gallons. As noted in Impact 3.11-5, discussed later in this document, the planned activities do not call for use of above-ground storage tanks of petroleum larger than approximately 1,000 gallons, so it will not be addressed in this report.

## **3.11.3 Impacts and Mitigation Measures**

### **Significance Criteria**

For the purposes of this analysis and consistent with Appendix G of the CEQA Guidelines, the proposed project would result in potentially significant impacts if it would:

- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.
- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Be located within an area covered by 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, and would result in a safety hazard for people residing or working in the project area;
- Be located within the vicinity of a private airstrip and would result in a safety hazard for people residing or working in the project area; or
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;

Title 40 of the Code of Federal Regulations (40 CFR) and Title 22 of the California Code of Regulations define and identify hazardous materials and wastes and provide threshold levels for these substances. Regulatory agencies determine what constitutes a “substantial” hazard or an “insignificant” level of hazardous materials on a case-by-case basis, depending on the proposed uses, potential exposure, and degree and type of hazard.

The following impacts were considered in this section, but were found to be absent from or not applicable to the proposed project; therefore, no further discussion of these impacts is provided.

- Except for the temporary use of diesel and other construction-related hazardous materials during construction periods, the operation of Huddart and Wunderlich Parks would not involve the long-term use of hazardous materials. Thus, there are no impacts related to the routine transport, use, or disposal of hazardous materials; upset and accident conditions involving the release of hazardous materials; or handling of hazardous materials, substances, or wastes within ¼ mile of an existing or proposed school. Impacts related to the temporary use of diesel and other construction related hazardous materials are addressed in Impact 3.11-4.
- Huddart and Wunderlich Parks are not located in the vicinity of a private airstrip, within an area covered by an airport land use plan, or within two miles of an airport or airstrip. The closest airport is San Carlos Airport, located near the intersection of US 101 and Skyway Road, which is more than 12 miles to the northeast.

## Impacts and Mitigation Measures

### **Impact 3.11-1: Implementation of proposed Master Plan projects could result in increased chance of ignition during construction. (Less than Significant with Mitigation)**

Both Huddart and Wunderlich Parks already have policies and practices that limit the chance of ignition, minimize potential damage of a fire, and comply with local ordinances. The most likely source of an ignition is during construction, and by construction-related activities. Mechanical activities, such as welding, or chain saw operations, re-fueling or mowing cause the greatest number of ignitions on coastal counties in California.

**Mitigation 3.11-1a:** The chance of ignition can be reduced through (1) equipment features, (2) fuel treatment and (3) management of behavior.

- 1) All equipment to be used during construction must have an approved spark arrestor.
- 2) Fuel modification is proven to be effective. Because grassland is the most ignitable fuel, cutting grass as it cures is the most common action to limit ignitions. Grass is typically cut and other fuel reduced or made less flammable around the construction site, along roads, along boundaries and in other locations where vehicles may park, cigarettes may land. Budget restrictions resulted in an emphasis on grass cutting, or simply clearing roads for access.
- 3) Minimizing the risks of construction operations, such as the use of mechanical equipment during hot, dry, windy weather, is also important because mechanical devices typically cause one-quarter of all fire starts in the county. Motor vehicles are permitted only on paved roadways and in established parking areas.
- 4) The contractor/staff responsible for construction will submit a Fire Safety Plan. This plan will include precautions to carry out during high fire danger, a list of tools to have on hand, a description of available communications, specifications for the supply of water to have on hand, and descriptions of other actions that will reduce the risk of ignition and immediate control of an incipient fire.

**Mitigation 3.11-1b:** During the design of the building, the architect should evaluate the exterior construction features (e.g. roofing, siding) for their ability to meet ignition resistant

construction standards set in the new Wildland/Urban Building Code. This would include installation of a Class A roof, installation of fire sprinklers in main buildings, and a fire alarm system in main buildings. Additional ignition resistant features to be evaluated include installation of double-paned windows, treatments to make the siding ignition resistant and the placement and design of eaves and vents.

**Significance after Mitigation:** Less than Significant

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**Impact 3.11-2: A fire started during project construction could cause damage to lives property, and resources. (Less than Significant with Mitigation)**

Should a fire start, the hazard could prevent speedy suppression. Damage within the parks and outside the park could result from a wildfire. Vegetation management can calm fire behavior and increase success of suppression. Strategies to reduce fire hazard are to reduce fuel volumes, reduce fuel flammability, establish/maintain fuel discontinuity, and reduce the possibility of fire traveling through tree crowns. However, actions to minimize fire's potential damage cannot be applied park-wide. Instead, areas around construction sites, structures or other high values at risk, areas of high public use, access areas, and park perimeters are foci of work. The vegetation management adjacent to the construction site must be complete before any construction begins.

**Mitigation 3.11-2a:** Methods to Hazard reduction can be done in a variety of ways, encompassing vegetation management, structure design and materials retrofit, education and training, and equipment purchase. Proposed Master Plan projects will incorporate guidance from the County's Decision-making Guidelines for Vegetation Management. Effective vegetation management includes, but is not limited to, the following options:

- Ensure landscape plans minimize wildland fire hazards and provide defensible space. Provide survivable space around each structure of 100 ft by mowing grass, pruning trees, and removing dead vegetation and other flammable materials from roofs, decks, grounds, propane tanks.
- Install fire-resistant plants in a fire-safe design that consists of groupings isolated by hardscape or mowed grass.
- Remove invasive and exotic plants that pose a fire hazard
- Pursue habitat restoration with native plants in the disturbed areas with higher fire hazard.
- Institute goat grazing in strategic locations that are not appropriate for other types of grazing. This is appropriate in Mixed Evergreen Forest where some understory persists in the coastal scrub (also called chaparral), and in the meadows.
- Continue horse grazing in Wunderlich Park..

**Mitigation 3.11-2b:** Fire hazard education and training increases support for vegetation management from the public, which facilitates the operations involved in vegetation management. Education and training of park staff increases the effectiveness of suppression actions by park personnel. Vegetation management can also be made more effective if adjacent landowners treat vegetation outside the park boundary, particularly if treatment is

adjacent. Mitigation measures that involve training and education will include the following:

- Ensure key on-site personnel, including Park Rangers, maintenance staff, caretakers and non-profit organization staff are trained in basic fire prevention.
- Include information regarding prevention and fire ecology at entrance and trail staging area kiosks, and in interpretive and educational materials.
- Meet with neighboring homeowner associations to collaborate on fire safety projects

**Mitigation 3.11-2c:** While wildfire suppression is the responsibility of the Woodside Fire Protection District and CDF, initial wildfire attack and response is most effective if started when the fire is small. Park personnel may be the first to become aware of a fire, and could most effectively limit the fire size. In order to accomplish this, appropriate equipment is necessary.

- Ensure the appropriate Park-owned initial attack firefighting equipment and personnel protective equipment is readily accessible.

**Significance after Mitigation:** Less than Significant

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**Impact 3.11-3: Construction activities and vehicles could impede fire suppression response. (Less than Significant with Mitigation)**

During the course of construction, either vehicles or activities could block access of emergency response vehicles, thereby increasing the chance of damage or the level of damage from a fire.

**Mitigation 3.11-3a:** The Construction Contractor will submit a fire safety plan that specifies, among other items that vehicles will be kept from lanes of fire response, and that no activities would be sited that would block emergency response.

**Significance after Mitigation:** Less than Significant

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**Impact 3.11-4: An accidental release of hazardous materials from construction equipment, such as oil, grease, or fuel, could enter West Union Creek, McGarvey Gulch Creek, Squealer Gulch Creek, or Alambique Creek and degrade water quality. (Less than Significant with Mitigation)**

If accidentally released, hazardous materials used during construction, such as oil, grease, or fuel, could enter these water bodies and degrade surface water quality. However, compliance with Measure 3.5-1a in Section 3.5, Hydrology and Water Quality, requiring a construction stormwater pollution prevention plan (SWPPP), would reduce the potential for release of construction-related

fuels and other hazardous materials to stormwater and receiving waters. The legally required SWPPP would identify potential pollutant sources as well as best management practices (BMPs) to prevent the discharge of these pollutants to stormwater and receiving waters and would include measures to prevent a release from temporary diesel storage tanks from reaching receiving waters. In addition, the SWPPP would specify the use of vegetable-oil-based hydraulic fluids in construction equipment. As specified in Measure 3.5-1b, the County would also require the contractor to grade staging areas to contain surface runoff, place drip pans under heavy equipment stored overnight, and conduct proper and timely maintenance of vehicles and equipment. With implementation of these measures, hazardous materials impacts associated with potential chemical spills or releases of petroleum products during construction would be less than significant.

Hazardous materials storage associated with the proposed project would involve the temporary storage of diesel fuel for construction equipment. The aboveground storage tanks used to temporarily store diesel during construction would be on the order of 1,000 gallons in size and would not be subject to RWQCB registration of the tanks. Methods for controlling a release from a temporary tank used during construction, and measures to clean up an accidental release and to prevent degradation of water quality, are addressed in the construction SWPPP prepared for the project, as described in Measure 3.5-1a.

**Mitigation:** Implement Measures 3.5-1a and 3.5-1b.

**Significance after Mitigation:** Less than Significant

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## 3.12 Public Services and Utilities

### Introduction

This chapter describes: (1) the existing and planned public services and utilities in the project area. Public services in the project area include fire and police protection, schools, parks; public utilities (including water, wastewater, solid waste disposal), and electrical facilities; (2) the anticipated impacts of the project on these facilities; and (3) associated mitigation measures.

### 3.12.1 Setting

#### Fire and Emergency Services

Fire protection services and emergency medical services for Huddart and Wunderlich Parks are provided by three agencies under a mutual aid agreement: the Woodside Fire Protection District (WFPD), California Department of Forestry (CDF), and the Kings Mountain Volunteer Fire Brigade (KMVFB). WFPD serves 32-square-miles of southern San Mateo County and a population of 25,000 people. WFPD operates three fire stations: Fire Station #7 (Headquarters) at 3111 Woodside Road in the Town of Woodside, Fire Station #8 at 135 Portola Road in the Town of Portola Valley, and Station #19 that has recently been relocated to 4091 Jefferson Avenue in Redwood City. WFPD employs a chief, four battalion chiefs, twelve captains, a fire marshal, 21 firefighters/paramedics, an accountant, an emergency preparedness coordinator, a public education officer, an administrator, and a historian. The firefighters work in three, 24-hour shifts with 14 personnel on each shift (WFPD, 2007).

The Citizens Emergency Response and Preparedness Program (CERPP) provides an emergency response resource within the WFPD. CERPP is an organized neighborhood program consisting of 25 self-reliant emergency response teams that assist WFPD in major disasters within the District. In an emergency, CERPP divisions are trained to communicate with town or County emergency personnel.

The California Department of Forestry (CDF) San Mateo and Santa Cruz Unit (Unit) responds upon request to all wildland fires in unincorporated areas of San Mateo County, including Huddart and Wunderlich Parks. During the declared fire season (June through October), CDF firefighting units respond to wildland fires in the project vicinity as available from throughout San Mateo County. Depending on point of origin, response times can vary dramatically. The Unit has developed the Fire Management Plan (FMP) to implement the statewide plan at the local level. The Unit covers a 1,000-square-mile area bounded by the Pacific Ocean to the west, San Francisco to the north, the San Francisco Bay and Santa Clara County to the east, and Pajaro River to the south. Battalion 5 of the Unit, located in southwest San Mateo County, serves the project area. The closest CDF station to the parks is the Sky Londa Fire Station, at 17290 Skyline Boulevard in Woodside.

The Kings Mountain Volunteer Fire Brigade (KMVFB) provides year-round support service to CDF in the vicinity of the Kings Mountain community above the town of Woodside. The

KMVFB's station is located at 13889 Skyline Boulevard and provides service from State Route 92 to State Route 84 up to two to five miles off the ridge depending on accessibility. The station is outfitted a Type 1 engine, a Type 3 engine for wildland and structure fires, a four-wheel drive rescue vehicle, and a water tender. The KMVFB consists of 16 volunteers from the Kings Mountain community and answers approximately 150 calls annually, of which 75 percent are medical assists or vehicle accidents, 20 percent are wildland or structure fires and the rest is for varied public assistance (Sullivan, 2007).

The San Mateo County Emergency Services Bureau provides search and rescue, law enforcement support services, and emergency management planning, preparedness, training and coordination in San Mateo County. The Bureau consists of 65 sworn deputy sheriffs and 270 volunteers who participate in 10 volunteer units.

### ***Fire Hazard Potential***

#### **Weather Patterns and Hazards**

The fire season in California usually begins in May or June, when vegetation has dried out due to lack of rain, and extends through to the first season al rains, typically in November. The time of greatest danger is usually during the late summer and early fall, when heat, wind patterns, and very low relative humidity create conditions ideal for the spread of wildfire. During this period, daily alerts or warnings of high fire danger may be issued, cautioning the public to curtail activities which could cause damaging wildfires. During times of high fire danger, CDF declares a Red-Flag warning. Under these conditions, the trails in Huddart and Wunderlich Parks are closed until such time the warning is removed. Further information on this topic can be found in Section 3.11, Hazards and Hazardous Materials.

#### **Access**

There are significant restrictions to emergency access at Huddart and Wunderlich Parks. Many segments of the existing access roads may be impassable to firefighting or other emergency equipment due to substandard surfaces, tight corners, steep grades, and bridges of inadequate structural integrity. Additionally, water bars installed for erosion control measures slow fire suppression response because they cannot travel as quickly. At Huddart Park, access by firefighting equipment is limited to narrow, windy dirt roads that link West Union Creek, McGarvey Gulch, and Kings Mountain Road. Vehicular access at Wunderlich Park is comprised of similar service roads. A specific restriction at Wunderlich Park is that fire engines cannot make the first turn in the Loop Trail above the Folger Stables. Also, there is no place to turn engines around on this same trail system, presenting a serious concern for firefighter safety because retreat from advancing fire is more challenging without turnarounds or safety zones.

#### **Water Availability for Water Suppression**

A limited amount of water is available to firefighting resources for the Parks. Hydrants are available within 300 feet of each structure in the parks and located at the entrance to Wunderlich Park and on Greer Road at the lower Huddart Park entrance. Two reservoirs used for private water supply are located within the vicinity of Wunderlich Park. Water for fire suppression would

likely be delivered via water tenders with fold-a-tank set-ups, helicopter buckets, and aerial support.

## **Police Services**

Police services for Huddart and Wunderlich Parks are provided by the County of San Mateo Sheriff's Department and County Park Rangers. The responsibilities are divided as follows: The County of San Mateo Sheriff's Department, located at 400 County Center in Redwood City, provides police services within all incorporated areas of San Mateo County, including the parks, and the towns of Portola Valley and Woodside. The parks are located in Beat 30 and are currently served by one sheriff. There is no physical office within the parks. The Department responds to specific calls for assistance from the Park Ranger or the public. Park Rangers conduct limited patrol services for the parks and can enforce infractions and misdemeanors within the parks. Six full-time ranger positions are assigned to Huddart Park. However, Park Rangers operate on an "area" concept with twelve full-time employees assigned to cover Huddart Park, Wunderlich Park, 25 miles of trail in southern San Mateo County (outside park boundaries), Bicycle Sunday, Flood Park, and the Woodside Store. Though Rangers are assigned to specific parks, all staff would be at hand for larger projects and emergencies within the "area". Staffing levels also vary based on the time of the year and fiscal considerations.

The Sheriff's Department is supplied with additional assistance from the California Highway Patrol (CHP) which provides service to State Route 92. The CHP has jurisdiction and law enforcement powers on all County roads and State highways outside the incorporated cities. The Golden Gate Communications Center in Benicia is the dispatch center for the nearest office of the CHP, which is located in Redwood City (California Highway Patrol, 2007).

## **Schools**

Woodside Elementary School District, Cabrillo Unified School District, Portola Valley Elementary School District, and Sequoia Union High School District provide public school education services in the vicinity of the project area. Nearby public schools include Kings Mountain Elementary located at 211 Swett Road in Woodside (approximately one mile west of Huddart Park and approximately two miles northwest of Wunderlich Park), Woodside Elementary located at 3195 Woodside Road in Woodside (approximately 1.5 miles east of Huddart Park and approximately one mile northeast of Wunderlich Park), Woodside High located at 199 Churchill Avenue in Woodside (approximately three miles east of Huddart Park and approximately three miles northeast of Wunderlich Park), Ormondale Elementary located at 200 Shawnee Pass in Portola Valley (approximately 3 miles southeast of Wunderlich Park and 5.5 miles southeast of Huddart Park), and Corte Madera Elementary at 4575 Alpine Road in Portola Valley (approximately 3.5 miles southeast of Wunderlich Park and 6 miles southeast of Huddart Park).

## **Parks and Recreation**

See Section 3.2, *Recreation*, for information regarding existing recreation resources in Huddart and Wunderlich Parks.

## **Utilities**

### ***Water Supply***

#### **Huddart Park**

Water service to Huddart Park is currently served by two water companies: Skyline County Water District (SCWD) and California Water Service Company (CWSC). SCWD, who provides water to the upper elevations of the park (above elevation 400), supplies water from water mains on Skyline Boulevard to the Huddart Park water storage tank (75,000 gallon). This tank is located at the west end of the park above the Archery Range (elevation 2000). From this tank, water is distributed to the upper area of the park via an on-site system constructed in the mid 1980s. The system includes a 6-inch PVC water main running down the existing Archery Fire Road from the storage tank to the Miwok Shelter area. A 2-inch galvanized line branches off from the 6-inch line, and services Toyon Campground. From the Miwok Shelter, the water is distributed through a 2-inch galvanized water pipe system to other areas of the park including Madrone, Werder, Zwierlien, and Sequoia Day Camp. The existing 2-inch galvanized water pipe was installed in the late 1950s during the development of Huddart Park and requires frequent repair due to breaks.

The CWSC, who provides water to the lower elevations of the park (below elevation 400), supplies water from a 1-inch meter located at Kings Mountain Road (50 feet left of 700 Kings Mountain Road). The water is piped via a 2-inch galvanized line from the meter to the lower areas of the park (including Redwood, Oak, Meadow, and the Park Maintenance Facility). The CWSC system delivers comparatively low water volume and pressure to the Maintenance Facility.

On an average basis, Huddart Park uses 300 (224,400 gallons) units per month from the SCWD and 90 units (67,320 gallons) per month from the CWSC. Generally, the usage in the winter months is lower than the peak season of May through October.

#### **Wunderlich Park**

Water service is provided at Wunderlich Park by CWSC and includes the existing stable facility and residence. Water is supplied from a 2-inch meter located on the west side of Woodside Road near the public fire hydrant at the existing park entrance. This meter provides domestic service and a Fire Department Connection. There is also a private fire hydrant adjacent to Folger Stables. The existing on-site water system from the meter to the park facilities is largely undocumented, save a 1976-site plan for the lower part of Wunderlich Park. These aging and undersized water mains require ongoing maintenance.

On an average basis, Wunderlich Park uses approximately 48,620 gallons per month. As with Huddart Park, the water usage in the winter months is much lower than the peak season of May through September.

### ***Sanitary Sewer***

Huddart and Wunderlich Parks are outside of the boundaries of any sewer maintenance and sanitation district and do not access a public sewer line. Sanitation waste at the Parks is disposed via on-site septic tanks and leach fields located in close proximity to existing restroom facilities.

As determined by San Mateo County Ordinance No. 037480 (Regulation of Individual Onsite Wastewater Treatment and Disposal Systems), permits issued by the San Mateo County Health Department are required for any new septic systems for new restroom areas within the Park (County of San Mateo Health Department, 2007).

### ***Solid Waste and Recycling Service***

The County of San Mateo Parks and Recreation Department provides and maintains trash cans and recycling bins throughout the parks, primarily located at restroom, campground, and picnic facilities. Waste is hauled to the Allied Waste Transfer Station at 225 Shoreway Road in the City of San Carlos.

At Wunderlich Park, the lessee of Folger Stable has a separate contract with a waste management service to pick up manure. The temporary housing of manure waiting for pickup occurs at a 30 cubic yard metal dumpster located in front of Folger Stable.

The nearest landfill to the project site is the Ox Mountain Sanitary Landfill, which is located northwest of the parks and received a total of 761,297 tons of waste in 2005. The latest data on amounts of solid waste sent from the unincorporated areas of San Mateo County to this landfill show that 77,390 tons were sent in 2000 (CIWMB, 2007). As indicated in the San Mateo General Plan, the landfill would have capacity for another 21 to 23 years (County of San Mateo, 1998).

In 2005, over 180 million tons of waste was recycled within San Mateo County (CIWMB, 2007). In 2002, the County of San Mateo also adopted an ordinance (No. 04099, Recycling and Diversion of Debris from Construction and Demolition; Chapter 4.105 of the San Mateo County Ordinance Code) requiring that Construction and Demolition (C&D) materials be recycled as a condition of building permits. Under this requirement, 100 percent of inert solids, and at least 50 percent of remaining construction and demolition debris tonnage must be diverted to approved mixed construction and demolition debris recycling facilities. In 2004, the diversion rate for unincorporated San Mateo County was 54% (CIWMB, 2007).

### ***Electricity and Natural Gas***

Electric service at the parks is provided by Pacific Gas & Electric (PG&E). PG&E has easement rights across the parks for their overhead electrical service lines. In Huddart Park, the lines run northerly from the southerly corner of the park through the Archery Range to Richard's Road Trail, then easterly through the park and the adjacent Phleger Estate to a substation along Canada Road near Edgewood Park. At Wunderlich Park, electric service extends from Woodside Road through the park via lines running both northerly across the western boundary near Skyline Boulevard (Highway 35) and also easterly along the southern boundary.

There are no natural gas services, nor facilities that require natural gas, at Huddart Park. At Wunderlich Park, natural gas is provided via propane storage tanks on Park property (one is located directly behind the Carriage House).

### ***Cable and Telephone***

AT&T provides telephone and DSL services to the parks. AT&T has an easement for underground communication lines through the parks. At Huddart Park, the lines run along the easterly side of Richard's Road Trail up to the westerly edge of Skyline Boulevard (Highway 35). At various places along Richard's Road Trail, the AT&T underground communication line is very shallow and in close proximity to the existing road surface.

### ***Storm Drainage***

See Section 3.5, *Hydrology and Water Quality*, for information regarding existing storm drainage services at Huddart and Wunderlich Parks.

## **3.12.2 Regulatory Setting**

### **Existing Plans and Policies**

#### ***State***

##### **Integrated Waste Management Act**

Assembly Bill 939 (AB 939), enacted in 1989 and known as the Integrated Waste Management Act, required each city and/or county's Source Reduction and Recycling Element to reduce the amount of waste being disposed to landfills, with diversion goals of 50 percent by the year 2000.

##### **Title 24 of the California Code of Regulations**

Buildings constructed after June 30, 1977 must comply with standards identified in Title 24 of the California Code of Regulations. Title 24, established by the California Energy Commission (CEC) in 1978, requires the inclusion of state-of-the-art energy conservation features in building design and construction including the incorporation of specific energy conserving design features, use of non-depletable energy resources, or a demonstration that buildings would comply with a designated energy budget.

#### ***Local***

##### **San Mateo County General Plan**

The San Mateo County General Plan provides county-wide guidance on regional parks and open space lands. The County has established the following goals and objectives in the Parks and Recreation Resources Element (San Mateo County General Plan, 1986):

##### **6.5 Access to Park and Recreation Facilities**

- c) Attempt to provide adequate access for emergency services.

##### **6.13 Development Plans**

- b) Encourage all development plans to include restroom facilities and ensure that these correspond in size and detail to the type of park and recreation facility proposed.

##### **6.30 Minimize Traffic and Litter Problems**

- b) Encourage recreationists to properly dispose of litter in park and recreation facilities.

The Wastewater Element of the San Mateo Countywide Plan (San Mateo County, 1985, amended 1988) includes the following policy pertaining to wastewater conservation:

**10.26 Wastewater Reuse**

- a) Encourage the reuse and recycling of water whenever feasible.
- b) Encourage the use of treated wastewater that meets applicable County and State health agency criteria.

**15.31 Standards for Road Access for Fire Protection Vehicles to Serve New Development**

- a) Consider the adequacy of access for fire protection vehicles during review of any new development proposal.
- b) Determine the adequacy of access through evaluation of length of dead end roads, turning radius for fire vehicles, turnout requirements, road widths and shoulders and other road improvement considerations for conformance with the standards of the agency responsible for fire protection for the site proposed for development.
- c) To the maximum extent possible, design access for fire protection vehicles in a manner which will not result in unacceptable impacts on visual, recreational and other valuable resources.

**15.33 Road Patterns**

- a) Ensure road patterns that facilitate access for fire protection vehicles and provide secondary access and emergency evacuation routes when reviewing proposals for new subdivisions.
- b) Encourage the Department of Public Works to study existing road patterns that have access problems to determine the feasibility and costs of access improvements.
- c) Encourage fire protection agencies to identify emergency access and evacuation routes for existing developed areas and to provide this information to area residents.

**San Mateo County Ordinance Code**

In 2002, the County of San Mateo also adopted an ordinance (No. 04099, Recycling and Diversion of Debris from Construction and Demolition; Chapter 4.105 of the San Mateo County Ordinance Code) requiring that Construction and Demolition (C&D) materials be recycled as a condition of building permits. Under this requirement, 100 percent of inert solids, and at least 50 percent of remaining construction and demolition debris tonnage must be diverted to approved mixed construction and demolition debris recycling facilities.

### 3.12.3 Impacts and Mitigation Measures

#### Significance Criteria

As stated in Appendix G of the *CEQA Guidelines*, a project would generally have a significant effect on the environment if it would:

- Interfere with or substantially change the demand for governmental services, such as parks or police and fire protection, or require alteration of these services;
- Substantially interfere with or change the demand for utilities;

- Exceed the disposal capacity of local landfills or cause wasteful, inefficient, or unnecessary consumption of energy; or
- Impair or prevent a city or county from complying with the waste diversion mandates of the California Integrated Waste Management Act of 1989.

The following public services and utilities analysis will address these general criteria. As indicated in Chapter 2, subsequent environmental documentation is required for implementation of the program-level components. In addition, potential parks impacts are discussed in Section 3.2, Recreation.

## Impacts

Implementation of the Master Plan includes expansion or improvement of public services and utilities to improve the facilities for better use of the parks. Demand for these services could increase due to increase visitation and use of the parks, though the amount of this increase is not expected to be significant. The Master Plan includes many measures to minimize waste and improve safety in the parks. Overall, the Master Plan is beneficial to public services and utility systems, as it will result in efficiency improvements to these systems.

**Impact 3.12-1: The increased population and density resulting from the project would not involve or require new or physically altered governmental facilities in order to maintain acceptable service ratios, response time, or other performance objectives for fire protection and emergency medical services and facilities. (Less than Significant with Mitigation)**

As discussed in the Setting section, fire protection and emergency medical services at the parks would be provided by the WFPD, CDF, and KMFVB, as well as other fire protection districts in the area that participate in automatic aid agreements. Demand for fire protection and emergency medical services in the parks could increase due to increased visitation and use of the park. However, visitation is not expected to substantially increase as the Master Plan enhancements are not designed to increase the use of the park, but to improve the facilities for better use. Additionally, fire protection and emergency medical services demand associated with recreational land uses is generally lower than residential land uses. Moreover, the Master Plan includes improvements to fire protection and emergency medical services that would be implemented over the next five to 20 years. Improvements identified in Phase I consist of vehicular access improvements including a new fire road connection between Loop and Alambique Trails and installation of fire safety zones and turn-arounds at Wunderlich Park. Additionally in Phase I, improvements to the water systems including water pressure, are proposed at both Huddart and Wunderlich Parks. Phase II of the Master Plan proposes to upgrade the fire hydrants at Oak picnic area in Huddart Park.

**Mitigation Measure 3.12-1:** Potential fire protection services impacts should be reviewed at the project-level for specific facilities proposed under the Master Plan.

Mitigation measures considered could include, but would not be limited to:

- Individual actions shall comply with all applicable State and local codes and ordinances, including the California Fire Code and California Building Code

regarding life safety. Requirement may relate to automatic fire extinguishing systems and smoke detectors.

- All buildings and facility design plans shall be reviewed by the applicable fire departments for a fire and life-safety review.
- Requirements for emergency vehicle access shall be incorporated into project design, including access to physical structures and fire hydrants or water supply tanks. Such requirements include road grade and lane width, paving of access roads, curb painting, emergency breakaway gates, vertical clearance, turning radii, turn-around areas, and signage.
- Adequate water supply for firefighting and water flow must be incorporated into the design of buildings and facilities in the park, and approved by the applicable fire departments. Ensuring adequate water supply for firefighting purposes may entail the implementation of fire hydrants and/or installation of large pressurized water storage tanks. The water supply system shall be in place prior to construction of any facilities.
- Emergency vehicle access shall be maintained at all times during construction phases.
- Access for fire fighting apparatus and personnel to and into all structures shall be required.

Implementation of the requirements described above would reduce the potential program-level fire protection services impacts associated with the implementation of the proposed Master Plan. However, further project-specific examination would be necessary to determine what level of mitigation would be required for facility improvements.

**Significance after Mitigation:** Less than Significant

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**Impact 3.12-2: The increased population and density resulting from the project would not involve or require new or physically altered governmental facilities in order to maintain acceptable service ratios, response time, or other performance objectives for police protection services. (Less than Significant with Mitigation)**

As discussed in the Setting section, police protection services at the parks would be provided by the San Mateo County Sheriff's Department, County Park Rangers, and CHP. As noted above, the proposed improvements are intended to enhance the park experience for existing visitors, and are not expected to draw a substantial number of new visitors to the parks. It is not expected that additional police enforcement will be required. Additionally, police protection services demand associated with recreational land uses is generally lower than residential land uses. Moreover, the Master Plan for the parks includes vehicular access improvements that would serve to improve overall vehicular flow and increase vehicular safety at this location. Park hours would also be limited to daytime only, except for scheduled events and camping in controlled areas. A signage system is also proposed for the parks that would enable easier access by public safety personnel.

**Mitigation Measure 3.12-2:** Potential police protection services impacts should be reviewed at the project-level for specific facilities proposed under the Master Plan.

Mitigation measures considered will include, but not be limited to:

- Public safety services shall be coordinated to provide cooperation between park police, state park rangers and all jurisdictions serving the park and includes management actions for providing additional protection and safety services that meet the demands of increased use and activity in the park.

**Significance after Mitigation:** Less than Significant

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**Impact 3.12-3: Construction may increase fire protection, emergency medical, and police protection services. (Less than Significant with Mitigation)**

Construction of proposed facilities would generate truck and employee traffic along haul routes and at the proposed sites, temporarily increasing the accident potential in these areas. However, this increased potential for accidents would result in a limited, short-term demand for fire or police services, and only on an as-needed and emergency basis. This short-term increase in demand could be accommodated by existing resources within the Project area. Construction of facilities in or adjacent to roadways could result in partial or complete road closure and would impair local fire, police, or other emergency access during this period (see Section 3.8, Traffic and Circulation). Implementation of the following Mitigation Measures would reduce potential impacts to a less-than-significant level.

**Mitigation Measure 3.12-3a:** The County shall coordinate with applicable emergency service providers prior to construction to ensure that construction activities and associated lane closures would not significantly affect emergency response vehicles. Contractors shall submit verification of its consultation with emergency service providers to the County.

**Mitigation Measure 3.12-3b:** The County or its contractors will notify local fire departments any time damage to a gas utility results in a leak or suspected leak, or whenever damage to any utility result in a threat to public safety.

**Significance after Mitigation:** Less than Significant

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**Impact 3.12-4: Project construction could result in the temporary, planned, or accidental disruption of utility services including water, sewer, storm drain, electricity, natural gas, telephone, and television services. (Less than Significant with Mitigation)**

In general, water, sewer, storm drain, electricity, natural gas, telephone, and television cables and pipelines of varying sizes are located throughout the parks. As discussed in the Setting, numerous utility lines of varying sizes are located throughout the parks and could potentially be disrupted as a result of project construction. In most cases, impacts to utilities and services involve temporary disruption which would not exceed one day in duration. All utility lines and cables that would be

disrupted during construction activities would be identified during the pre-design and permitting stages for each project. Implementation of the following mitigation measures would reduce this impact to a level of insignificance. Moreover, in Phase I, it is proposed to coordinate with AT&T to protect communication facilities and repair any damage in Huddart Park.

**Mitigation Measure 3.12-4:** Potential impacts to utility services should be reviewed at the project-level for specific facilities proposed under the Master Plan.

Mitigation Measures will include, but not be limited to:

- Prior to excavation, the County or its contractors will locate overhead and underground utility lines, such as natural gas, electricity, sewage, telephone, fuel, and water lines, that may reasonably be expected to be encountered during excavation work.
- While any excavation is open, the County or its contractors will protect, support, or remove underground utilities as necessary to safeguard employees.
- The County or its contractors will contact utility owners if any damage occurs as a result of the project and promptly reconnect disconnected cables and lines with approval of owner.
- The County or its contractors will coordinate final construction plans and specifications with affected utilities, such as PG&E and AT&T.

**Significance after Mitigation:** Less than Significant

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**Impact 3.12-5: Implementation of the Master Plan may increase water demand. (Less than Significant with Mitigation)**

Demand for water in the park could increase incrementally due to increased visitation and use of the park, though the amount of this increase is not expected to be significant. Additionally, there are several improvements to park facilities which could potentially increase water usage. For instance, in Phase I, a new restroom with running water would be constructed at Wunderlich Park.

Many projects in Phases II and III would require additional water supply and have a potential impact on the Parks' existing water supply system. These projects include additional restroom facilities, restroom replacement (including running water), installation of potable water sources at the upper end of each park, new buildings (interpretive center, day-use rental center), a crafts sink at Sequoia Day Camp, and expansion of Toyon Campground (including construction of one additional restroom for the new lower loop and replacement of existing restroom and shower buildings).

Water demand associated with recreational land uses is generally lower than residential land uses. Moreover, the Master Plan includes many improvements to water supply and water conservation elements that could potentially accommodate and/or decrease impacts on water demand. For

example, in Phase I, low-flow toilets would be installed at Sequoia, Redwood, and Oak restrooms at Huddart Park. Additionally, in Phase I, assessments of the 2-inch water systems in the Parks would be prepared. Segments of the water systems would be replaced on an annual basis to improve water supply. A vault toilet would be installed at the new restroom at Wunderlich Park.

Projects in Phases II and III would also include water supply improvements and water conservation elements. These projects include installation of a vault toilet at Sequoia Day Camp and improvements to the water distribution system that services Toyon Campground. Coin-operated controls could be installed at the shower building at Toyon Campground which would limit water use. Additionally, while the installation of potable water sources at the upper end of each park would potentially increase water demand, it would also alleviate the demand in other areas of the parks.

The County shall review all projects proposed in the Master Plan at the project level to determine the degree to which they will increase the demand for water and their associate impact on water supply. Implementation of the following mitigation measure would reduce any water demand impacts to a less-than-significant level.

**Mitigation Measure 3.12-5:** The County shall develop project-level mitigation measures to ensure adequate and efficient use of available water supply for these projects. Such measures may include, but are not limited to:

- Ensure an adequate water supply for all projects.
- Enforce time limits on shower use.
- Utilize native, drought-resistant plants in landscaping.
- As proposed, install vault or low-flow toilets in all new park facilities and consider composting toilets in place of flush toilets.
- New water distribution systems shall be installed only with the correct permits.
- Best Management Practices shall be applied to the operation and maintenance of the existing water supply system.

**Significance after Mitigation:** Less than Significant

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**Impact 3.12-6: Operation of projects included in the Master Plan could generate additional solid waste. (Less than Significant with Mitigation)**

Projects to be implemented under the Master Plan could increase the use of the Parks and in turn generate additional solid waste. Construction activities associated with the proposed improvements to the Parks would also result in the generation of construction waste material.

However, these increases would be small compared to total landfill capacity serving the County. As previously described, the nearest landfill to the project site, Ox Mountain Sanitary Landfill, would have capacity for another 21 to 23 years (County of San Mateo, 1998). Moreover, use of

some of the facilities is not expected to occur year-round. In addition, construction activities would not be expected to generate substantial volumes of solid waste, as much of the waste generated could be recycled.

Overall, it is expected that the landfill serving the parks could accommodate solid waste disposal needs after implementation of the proposed improvements. However, because the design and use of the proposed facilities and improvements is not fully planned, the amount of waste generated by them cannot be determined; therefore, each project should undergo individual project-level review. Implementation of the following Mitigation Measure would reduce any solid waste impacts to a less than significant level.

**Mitigation Measure 3.12-6:** Facilities and plans implemented under each phase of the Master Plan shall undergo further review with respect to their impact on solid waste services in the County at the project level.

Appropriate mitigation measure, as deemed necessary, shall be applied to the design and operation of each facility, including but not limited to:

- Construction activities will be conducted in compliance with County Ordinance No. 04099, which addresses recycling and diversion of debris from construction and demolition. The Ordinance includes deconstruction, salvage and recovery guidelines, diversion requirements, and information requirements before a permit is issued.
- Organic wastes such as lawn cuttings, landscaping debris, straw, and horse manure shall be composted. Wood debris from landscaping shall be made available for campfires to visitors at the park's campgrounds.
- All park facilities, landscaped areas, picnic areas, parking lots, buildings and other visitor-serving uses should be equipped with recycling and trash bins.
- All projects should comply with all federal, state, and local statutes and regulations related to solid waste.

**Significance after Mitigation:** Less than Significant

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**Impact 3.12-7: Implementation of the Master Plan may increase wastewater flows to the Parks' existing septic systems. (Less than Significant with Mitigation)**

Implementation of the Master Plan could increase visitation to the Parks, therefore increasing the demand for wastewater treatment. However, many of the Master Plan improvements would offset wastewater treatment. In Phase I of the Master Plan, improvements include a vault-type restroom at Wunderlich Park and low-flow toilets at Sequoia, Redwood and Oak picnic area restrooms at Huddart Park which would reduce the demand on the septic systems. In Phases II and III, improvements include a vault toilet at Sequoia Day Camp (located near the parking lot to facilitate access for sewage disposal trucks) and construction of an additional restroom at Redwood picnic area with a vault toilet to accommodate the demand and reduce septic system impacts to the surrounding terrain. Water treatment demand is not expected to significantly increase, and would therefore not necessitate the construction of additional wastewater treatment

facilities. However, the development of facilities to be implemented in each phase of the Master Plan should undergo project-level review to ensure adequate capacity to handle peak wastewater flows. Implementation of the following mitigation measure would reduce any impact to wastewater treatment facilities to a less than significant level.

**Mitigation Measure 3.12-7:** The County shall develop program-level mitigation measures to ensure adequate and efficient use of wastewater flow capacity for projects implemented under the Master Plan.

Such measures shall include, but are not limited to:

- All faucets should be low-flow and have automatic shut off valves.
- Installation of additional septic systems for each facility.
- Consider composting toilets in place of flush toilets.
- Use of reclaimed water for all irrigation and other non-potable water uses.

**Significance after Mitigation:** Less than Significant

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**Impact 3.12-8: Operation of the facilities to be implemented under the Master Plan could consume additional energy. (Less than Significant with Mitigation)**

As discussed in the Setting section, electrical services at the parks would be provided by PG&E. Demand for electrical services in the park could indirectly increase due to increased visitation and use of the park because of park improvements, though the amount of this increase is not expected to be significant. Facility improvements proposed under the Master Plan would result in the increased consumption of energy. Of the projects proposed under Phase I, installation and operation of a new restroom at Wunderlich Park could result in a slight increase in energy consumption.

Proposed projects that would consume additional energy in Phases II and III include restroom improvements (installation of electric lights), Toyon Campground improvements (construct one additional restroom for the new lower loop and replace existing restroom and shower buildings), new interpretive and day-use rental centers at Huddart Park, connecting the archery facility to electric service at Huddart Park (contingent upon KMA Priority Planning and Funding), Folger Stable improvements at Wunderlich Park, and other proposed improvements throughout the Parks. The degree to which these facilities will rely on additional electricity and/or natural gas will depend on their design and should undergo further review at the project-level.

Energy demand associated with recreational land uses is generally lower than residential land uses. Moreover, the Master Plan includes energy conservation elements that could potentially accommodate and/or decrease impacts on electricity demand. For example, in Phases II and III, power for electricity for all new restrooms facilities should be generated by solar-voltaic systems and installation of coin-operated showers at Toyon Campground to limit hot water consumption.

While the addition of these facilities to the park may increase the number of people who visit the park, it would not result in an increase in the population effect overall energy consumption rates. Overall, the existing energy supply to the parks should accommodate the operation of these new facilities and efficient use of these energy sources would continue. However, because the design and use of the proposed facilities and improvements is not fully planned, the amount of energy consumed by them cannot be determined; therefore, each project should undergo individual project-level review. Implementation of the following Mitigation Measure would reduce any energy impacts to a less-than-significant level.

**Mitigation Measure 3.12-8:** The County shall develop program-level Mitigation Measures to ensure they do not result in the wasteful, inefficient, and unnecessary consumption of energy.

Some measures could include but would not be limited to:

- The County shall ensure energy efficiency in the operation of its park facilities.
- The County will coordinate final construction plans and specifications with affected utilities, such as PG&E.
- All projects should comply with all federal, state, and local statutes and regulations related to energy consumption.

**Significance after Mitigation:** Less than Significant

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# CHAPTER 4

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## Alternatives

### 4.1 Criteria for Selecting Alternatives

The California Environmental Quality Act (CEQA) requires that the EIR compare the effects of a “reasonable range of alternatives” to the effects of the project. The alternatives selected for comparison would attain most of the basic objectives of the project and avoid or substantially lessen one or more significant effects of the project (CEQA Guidelines Section 15126.6). The “range of alternatives” is governed by the “rule of reason” which requires the EIR to set forth only those alternatives necessary to permit an informed and reasoned choice by the decision-making body and informed public participation (CEQA Guidelines Section 15126.6[f]). CEQA generally defines “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors.

The alternatives addressed in this EIR were selected based on the following factors:

1. The extent to which the alternative would accomplish most of the basic objectives of the project (identified in Chapter 2),
2. The extent to which the alternative would avoid or lessen any of the identified significant environmental effects of the project (discussed throughout Chapter 3),
3. The feasibility of the alternative, taking into account consistency with applicable plans and regulatory limitations,
4. The extent to which an alternative contributes to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
5. The requirement of the CEQA Guidelines to consider a no project alternative and to identify an environmentally superior alternative in addition to the no-project alternative (CEQA Guidelines, Section 15126.6(e)).

### Significant Project Impacts

To determine alternatives that would avoid or lessen any of the identified significant environmental effects of the project, the significant impact of the project must be considered and are listed below. This list is intended to provide context for the extent to which an alternative would avoid or lessen any of the identified significant environmental effects of the project.

- Visual Quality
- Geology, Seismicity and Soils
- Hydrology and Water Quality
- Biological Resources
- Cultural Resources
- Transportation and Circulation
- Public Services and Utilities

The significant environmental effects of the project and each alternative are summarized in Table 4-1 at the end of this chapter.

## State Law Compliance / No Project

The purpose of the “no project” alternative is to allow a comparison of the environmental impacts that would result if the project were not approved with those that would occur if the project is approved. In some situations, the existing environment (the existing development and uses on the property) would not change if a project is rejected, and the “no project” alternative would be a continuation of existing uses.

## 4.2 Alternatives Selected for Consideration

With consideration given to the selection criteria identified above, the County selected the following range of project alternatives to be fully addressed in this EIR:

**Alternative 1:** No Project / Continue Using Existing Plans for Park Improvements

**Alternative 2:** Trails, Signage and Folger Estate Stable Historic District Improvements

Each alternative is discussed in Section 4.3 below.

## 4.3 Description and Analysis of Alternatives

Throughout this section, a description of each alternative is followed by a discussion of impacts and how those impacts differ from those of the project. Given the factors necessary to ensure the many requirements of a County Park, a discussion called *Ability to Meet County Park Objectives* is also provided for each project alternative or scenario, where appropriate, in order to provide the reader with as complete information as possible. However this discussion does not mean the County has ruled out from consideration the possible adoption of any of the alternatives analyzed in this EIR.

As permitted by CEQA, the significant effects of the alternatives are discussed in less detail than the effects of the project (CEQA Guidelines Section 15126.6[d]). However, the alternatives analysis is conducted at a sufficient level of detail to provide the public, other public agencies, and County decision-makers adequate information to fully evaluate the alternatives and for the County to approve any of the alternatives without further environmental review.

## **Alternative 1: No Project / Continue Using Existing Park Plans**

### **Description**

Under the No Project Alternative, the Master Plan would not be implemented. The County would continue to implement existing protection, operations, and maintenance policies. The facilities and trails system at Huddart and Wunderlich Parks would remain as is. Circulation and parking would also remain the same. Public access to this area would likely increase in proportion to population growth and recreational demand. Some Master Plan improvements could occur, but on an ad-hoc basis. Park patrols and operation, erosion control, treatment of non-native species and pests, and road and facilities maintenance would continue at existing levels and intensities.

### **Impacts (Alternative 1)**

#### ***Land Use, Plans and Policies***

Existing buildings and land uses are assumed to remain under the No Project Alternative. No significant impacts would occur relative to land use compatibility or the applicable Zoning Regulations and General Plan.

#### ***Recreation***

The County would continue to implement existing protection, operations, and maintenance policies for the two parks. The facilities and trails system at Huddart and Wunderlich Parks would remain as is. Circulation and parking would also remain the same. Site improvements including trails, facilities, circulation, and parking would occur on an ad-hoc basis as funds become available. While the No Project Alternative would not result in an increase in the use of existing park facilities, physical deterioration of the facilities would occur or be accelerated as many facilities and related infrastructure currently require repair and upgrade. The No Project Alternative would not prioritize projects nor facilitate funding requests for recreational improvements.

#### ***Visual Resources***

The existing visual condition is assumed to remain under the No Project Alternative. There would be no significant impacts that would occur relative to visual quality policies.

#### ***Geology, Soils, and Geohazards***

Construction of new facilities and rehabilitation of existing facilities would occur on a project-by-project basis under the No Project Alternative. A similar level of significance compared to the proposed project could occur over time, depending on what projects were funded. Environmental review and related mitigation measures would be required for all projects.

#### ***Hydrology and Water Quality***

Construction activities (grading, road building and realignment, etc.) associated with the project would occur with the No Project Alternative, but in an ad-hoc fashion. Any new development would be required to adhere to all agency standards, requirements, and specific project management measures to reduce or avoid soil erosion, the amount and speed of storm runoff, and

the release of hazardous materials into watercourses or the storm drain system. Thus, existing runoff volumes and velocities and amount of impervious site coverage would not be expected to change (or be reduced) to the extent that would occur with the proposed project. Therefore, the No Project Alternative is considered to have the same less-than-significant water quality impacts (after standard conditions and mitigation) during construction as the proposed project.

### ***Biological Resources***

Limited new construction would occur under the No Project Alternative, dependent on funding. The less than significant (with standard conditions) impacts resulting from new construction, remodeling, trail improvements, site utility improvements, as well as vegetation management, fire hazard reduction and erosion control activities may result in the loss of sensitive native communities at both Huddart and Wunderlich Parks, including oak woodland and redwood forest. It may also result in the temporary disturbance to, or mortality of, special-status species.

Similar to the proposed Master Plan, implementation of vegetation management, fire hazard reduction, and erosion control activities could result in substantial adverse effects on wetlands and waters of the U.S. under the jurisdiction of the Corps and waters of the State under the jurisdiction of CDFG and the Regional Water Quality Control Board. These activities could also result in damage to or removal of significant or heritage trees protected by the County of San Mateo that are within or adjacent to action areas. Park management activities would be of a similar range and scope, but in an uncoordinated manner. Therefore, the No Project Alternative is considered to have the same less-than-significant biological resource impacts (after standard conditions and mitigation) during construction as the proposed project.

### ***Cultural Resources***

Changes to the project site, specifically the historic preservation of the Folger Estate, would still occur with No Project, but without the benefit of a Master Plan process. It will continue to have its own environmental review process for various project components. Therefore, the less than significant (after standard conditions) impacts related to cultural resources that would occur with the project would still occur with this alternative.

### ***Transportation, Circulation, and Parking***

Transportation conditions would be comparable to what exists today, and the significant unavoidable traffic impacts (without Caltrans approval) associated with the project would be avoided. The site conditions would remain essentially the same as discussed in the setting sections of Chapter 3.

### ***Air Quality***

Limited construction and changes to the project site would occur with the No Project Alternative, and uses would be similar to existing conditions. Therefore, air quality conditions would be comparable to what exists today.

## **Noise**

Limited construction and changes to the project site would occur with the No Project Alternative, and uses would be similar to existing conditions. Therefore, the noise environment would be comparable to what exists today (and as forecast for future conditions). Less than significant impacts (with standard conditions) related to construction noise would occur.

## **Fire Hazards, Fire Management and Hazardous Materials**

The No Project Alternative could result in some chance of ignition during construction as projects are implemented on an ad-hoc basis. There could be some damage to lives, property and resources, and construction activities and vehicles could impede fire suppression response. Both Huddart and Wunderlich Parks already have policies and practices that limit the chance of ignition, minimize potential damage of a fire, and comply with local ordinances. The most likely source of an ignition would be during construction, by construction-related activities. Mechanical activities, such as welding, or chain saw operations, re-fueling or mowing cause the greatest number of ignitions on coastal counties in California. Therefore, fire hazard conditions would be comparable to what exists today.

## **Public Services and Utilities**

Some development would occur under the No Project Alternative. Population on the site (employees, visitors) would likely be the same as with the project, but would result in the same less-than-significant impact resulting from increased demand for police, fire, and emergency services over time as the surrounding population grows.

There would not be a significantly increased demand for water, wastewater, and storm drain service and facilities, solid waste, and gas and electricity services with the No Project Alternative, however the proposed project would have less impact because the system would be improved in a strategic manner.

## **Ability to Achieve the County's Objectives (Alternative 1)**

The No Project Alternative would not address the objective of the County to develop a master plan that could be implemented over time, taking into account available financial resources, potential phasing, and long-term management implications. The County would not have a working tool that would: 1) continue to provide multiple recreational opportunities that are consistent with the regional nature of the parks and protection of the environmental, cultural, and historic resources of the land; 2) increase the revenue generation capability of each park; 3) identify physical improvements that would decrease ongoing operation and maintenance costs; 4) make public safety a top priority; 5) ensure the continued equestrian use of the parks; nor 6) improve vehicular and pedestrian circulation within each park.

The No Project / Use Existing Plans Alternative is not feasible because the County needs a framework for making strategic decisions surrounding use of public resources, staff time, protection of public safety, natural and cultural resources.

## Alternative 2: Trails, Signage, and Folger Estate Stable Historic District Improvements Only

Alternative 2 is a variation of the proposed Master Plan that would prioritize resource management and restoration activities that are linked to the pedestrian and equestrian use of the park over drop-in and reservable picnicking and campground amenities. It would direct County expenditures and staff resources to address trail improvements and related activities park-wide, in order to respond to the public demand for continued pedestrian and equestrian access. The alternative would include trail improvements such as:

- new trail connections and access points
- erosion and sediment controls (relating to roads, fire trails, hiking trails, and equestrian trails)
- bridge repair
- trailside amenities, such as horse watering bibs, drinking fountains, and benches
- horse keeping measures
- a park-wide signage program

This alternative would also concentrate facility improvements to be implemented within the federally listed Folger Estate Stable Historic District, in-lieu of park-wide improvements to Huddart and Wunderlich Parks. Under this alternative, park-wide site utilities would not be improved, new facilities would not be constructed at Huddart Park, and the rehabilitation of existing structures at Huddart Park would be deferred.

### ***Land Use, Plans and Policies***

Existing buildings and land uses are assumed to remain under Alternative 2. No significant impacts would occur relative to land use compatibility or the applicable Zoning Regulations and General Plan.

### ***Recreation***

The County would continue to implement existing protection, operations, and maintenance policies for the two parks – including vegetation management, fire hazard reduction and erosion control activities. This alternative would prioritize trail system improvements at Huddart and Wunderlich Parks to address existing erosion and sedimentation issues, way-finding, and connectivity to other regional parks. Trails signage and other amenities would be installed, and new access points would be constructed. The Folger Estate Stable Historic District would be rehabilitated to address existing deterioration.

Car circulation, parking, and other site improvements (particularly Huddart Park picnicking and camping facilities) would remain the same under Alternative 2, unless special funds became available. Alternative 2 would not result in an increase in the use of existing park such that significant physical deterioration of the facilities would occur or be accelerated. Many of the existing facilities and infrastructure currently require repair and upgrade.

### ***Visual Resources***

The existing visual condition is assumed to remain under Alternative 2. No new buildings would be constructed as part of this Master Plan alternative, nor would existing facilities be remodeled (outside of the protected Folger Estate Stable Historic District). Vegetation management and fire hazard reduction would occur at the same rate as is currently being implemented. Trail signage would be installed that is in character with the rustic aesthetic of its surroundings. There would be no significant impacts that would occur relative to visual quality policies.

### ***Geology, Soils, and Seismicity***

Under Alternative 2, construction of new facilities and rehabilitation of existing facilities (outside of the Folger Estate Stable Historic District) would not occur as part of this Master Plan. The only grading and filling that would occur under the Master Plan would relate to trail modifications, new access points, and Folger Estate Stable complex improvements. A similar level of significance compared to the proposed project could occur over time, depending on project funding. Environmental review and related mitigation measures would be required for any projects.

### ***Hydrology and Water Quality***

A limited suite of construction activities associated with the proposed project (grading, trail realignment, building rehabilitation, etc.) would occur with Alternative 2. Rehabilitation at Folger Estate Stable Historic District would be required to adhere to all agency standards, requirements, and specific project management measures to reduce or avoid soil erosion, the amount and speed of storm runoff, and the release of hazardous materials into watercourses or the storm drain system. The primary difference is that there would be less construction activities over time, because there would be no new facilities or rehabilitation of existing Huddart facilities. Alternative 2 is considered to have the same less-than-significant water quality impacts (after standard conditions and mitigation) during construction. Existing runoff volumes and velocities and amount of impervious site coverage would not be expected to change (or be reduced) in comparison to the proposed project because only existing buildings would be rehabilitated and trail improvements would address erosion and sedimentation problems.

### ***Biological Resources***

Under Alternative 2, construction would be limited to the Folger Estate Stable Historic District (within the existing footprint) and the trail network. The less than significant (with standard conditions) impact resulting from building rehabilitation, trail improvements, new access points, and signage may result in the loss of sensitive native communities at both Huddart and Wunderlich Parks, including oak woodland and redwood forest.

Erosion control activities associated with trail maintenance and realignment could result in substantial adverse effects on wetlands and waters of the U.S. under the jurisdiction of the Corps and waters of the State under the jurisdiction of CDFG and the Regional Water Quality Control Board. These activities could also result in damage to or removal of significant or heritage trees protected by the County of San Mateo that are within or adjacent to action areas. Vegetation management and fire hazard reduction is not a prioritized objective under this Alternative. While

the impacts are similar to the proposed project, as described, improvements cover a slightly smaller footprint, thus Alternative 2 is considered to have fewer less-than-significant biological resource impacts (after standard conditions and mitigation) during construction.

### ***Cultural Resources***

Changes to the project site, specifically the historic preservation of the Folger Estate Stable Historic District, would still occur with Alternative 2. Like the preferred project, it will have its own environmental review process for various project components. Therefore, the less than significant (after standard conditions) impacts related to cultural resources that would occur with the project would still occur with this alternative.

### ***Transportation, Circulation, and Parking***

Transportation conditions would be comparable to what exists today, and the significant unavoidable traffic impacts (without Caltrans approval) associated with the project would be avoided. The site conditions would remain essentially the same as discussed in the setting sections of Chapter 3.

### ***Air Quality***

Limited construction and changes to the project site would occur with Alternative 2, and uses would be similar to existing conditions. Therefore, air quality conditions would be comparable to what exists today.

### ***Noise***

Limited construction and changes to the project site would occur with Alternative 2, and uses would be similar to existing conditions. Therefore, the noise environment would be comparable to what exists today (and as forecast for future conditions). Less than significant impacts (with standard conditions) related to construction noise would occur.

### ***Fire Hazards, Fire Management and Hazardous Materials***

Alternative 2 could result in some chance of ignition during construction. There could be some damage to lives, property and resources, and construction activities and vehicles could impede fire suppression response. Both Huddart and Wunderlich Parks already have policies and practices that limit the chance of ignition, minimize potential damage of a fire, and comply with local ordinances. The most likely source of an ignition would be during construction, by construction-related activities. Mechanical activities, such as welding, or chain saw operations, re-fueling or mowing cause the greatest number of ignitions on coastal counties in California. Therefore, fire hazard conditions would be comparable to what exists today.

### ***Public Services and Utilities***

Minimal development would occur under Alternative 2. Population on the site (employees, visitors) would likely be the same as with the project, and would result in the same less-than-significant impact resulting from increased demand for police, fire, and emergency services over time as the surrounding population grows.

There would not be a significantly increased demand for water, wastewater, and storm drain service and facilities, solid waste, and gas and electricity services with Alternative 2, however this alternative does not address the system inefficiencies including water conveyance, energy usage, and sewage treatment in a strategic manner. Alternative 2 would not address these existing issues in a strategic manner.

### **Ability to Achieve the County's Objectives (Alternative 2)**

This Alternative would not address the goal of the Master Plan to decrease ongoing operations and maintenance costs associated with aging facilities and site utilities across the two parks. While it does create many achievable proposals to address each park's unique challenges and problems, it does not address many of the parks' inefficiencies – particularly at Huddart Park facilities. These include the restroom upgrades, shelter improvements, water supply and sewage treatment, Archery Range improvements, circulation and parking. It also does not facilitate creating a safer entrance and exit to Wunderlich Park. Therefore, this alternative was not selected.

## **4.4 Environmentally Superior Alternative**

The No Project Alternative would avoid all impacts associated with the project and Alternative 2. This includes impacts related to biological impacts, site access and circulation, air quality (PM-10 emissions), and noise. Conditions related to erosion and sedimentation that currently exist at Huddart and Wunderlich Parks would remain instead of being improved by the project as proposed (and with implementation of identified mitigation measures and/or standard conditions).

Alternative 2 would also avoid site access and circulation, air quality (PM-10 emissions), and noise impacts that would occur with the project. However, other potential impacts relating to would occur to the same degree as the proposed project.

Overall Alternative 2, in some impact areas such as biological resources and fire hazards, slightly reduces what are considered less than significant impacts under the proposed project. Under Alternative 2 significant unavoidable traffic impacts (without Caltrans approval) associated with the project would be avoided. For these reasons, and for purposes of this EIR, Alternative 2 is considered the environmentally superior alternative. It should be noted however, that this alternative does not meet the primary objectives of the Master Plan and the severity of impacts under Alternative 2 as compared to the proposed project is quite similar. In addition, the environmentally superior alternative is the alternative with the fewest negative impacts under CEQA. However, the associated environmental benefits of alternatives are not evaluated in determining the environmentally superior alternative. While both alternatives evaluated in this section would have environmental benefits, the greatest net benefit would be achieved by the alternative with the greatest environmental benefits and least negative impacts, which in this case is the proposed project.

**TABLE 4-1  
SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES**

Impacts	No Project Alternative	Proposed Project	Trails, Signage and Folger Estate Stable Alternative
<b>3.1 Land Use and Planning</b>			
<b>Impact 3.1-1:</b> The project would not have the potential to physically divide an established community.	N	N	N
<b>Impact 3.1-2:</b> The project would not conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.	N	N	N
<b>Impact 3.1-3:</b> The project would not conflict with existing adjacent land uses.	N	N	N
<b>Impact 3.1-4:</b> The project would not conflict with an applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP).	N	N	N
<b>Impact 3.1-5:</b> The project would not impact agricultural resources.	N	N	N
<b>3.2 Recreation</b>			
<b>Impact 3.2-1:</b> The project has the potential to increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated.	LTS	LTS	LTS↑
<b>Impact 3.2-2:</b> The Project would include recreational facilities and would require the construction and expansion of recreational facilities that might have an adverse physical effect on the environment.	LTS↓	LTS	LTS↓
<b>3.3 Visual Quality</b>			
<b>Impact 3.3-1:</b> Implementation of the Master Plan would result in short-term adverse visual impacts associated with project construction.	N	LTS	LTS
<b>Impact 3.3-2:</b> The proposed Master Plan would substantially degrade the existing scenic character or quality of Huddart and Wunderlich Park and its surroundings.	N	LTS	LTS
<b>Impact 3.3-3:</b> The proposed Master Plan would introduce sources of light and glare to each park.	N	LTS	N
<b>Impact 3.3-4:</b> The proposed Master Plan would substantially damage scenic resources, including, but not limited to trees, rock outcroppings and historic buildings within a state scenic highway.	N	N	N

**Legend**

LTS	Less than significant impact, after mitigation
SU	Significant and unavoidable adverse impact, after mitigation
N	No impact
↑↓	Impact is more severe or less severe than project impact, after mitigation

**TABLE 4-1 (continued)**  
**SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES**

Impacts	No Project Alternative	Proposed Project	Trails, Signage and Folger Estate Stable Alternative
<b>3.4 Geology, Soils and Seismicity</b>			
<b>Impact 3.4-1:</b> The project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction; and landslides.	LTS	LTS	LTS
<b>Impact 3.4-2:</b> The project could result in substantial soil erosion or the loss of topsoil.	LTS	LTS	LTS
<b>Impact 3.4-3:</b> The project could 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.	LTS	LTS	LTS
<b>Impact 3.4-4:</b> The project is not located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property.	N	N	N
<b>Impact 3.4-5:</b> The project could be located within areas that include soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	N	N	N
<b>3.5 Hydrology and Water Quality</b>			
<b>Impact 3.5-1:</b> The proposed Master Plan includes projects that would violate water quality standards or waste discharge requirements.	LTS	LTS	LTS
<b>Impact 3.5-2:</b> The proposed Master Plan would 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.	N	N	N
<b>Impact 3.5-3:</b> The proposed Master Plan would substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.	LTS	LTS	LTS
<b>Impact 3.5-4:</b> The proposed Master Plan would create or contribute runoff	LTS	LTS	LTS

**Legend**

LTS	Less than significant impact, after mitigation
SU	Significant and unavoidable adverse impact, after mitigation
N	No impact
↑↓	Impact is more severe or less severe than project impact, after mitigation

**TABLE 4-1 (continued)**  
**SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES**

Impacts	No Project Alternative	Proposed Project	Trails, Signage and Folger Estate Stable Alternative
water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of runoff, or otherwise substantially degrade water quality.			
<b>Impact 3.5-5:</b> The proposed Master Plan would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other delineation map.	N	N	N
<b>Impact 3.5-6:</b> The proposed Master Plan would place within a 100-year flood hazard area structures which would impede or redirect flood flows.	LTS	LTS	LTS
<b>Impact 3.5-7:</b> The proposed Master Plan would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.	N	N	N
Impact 3.5-8: Proposed Master Plan improvements would not be subject to inundation by seiche, tsunami, or mudflow.	N	N	N
<b>3.6 Biological Resources</b>			
<b>Impact 3.6-1:</b> Implementation of proposed project components, as well as implementation of vegetation management, fire hazard reduction, and erosion control activities during Phases I through III of the Master Plan, could result in temporary disturbance to, or mortality of, special-status species at both Huddart and Wunderlich Parks.	LTS↓	LTS	LTS↓
<b>Impact 3.6-2:</b> Implementation of proposed project components during Phases I through III of the Master Plan, may result in the loss of sensitive native communities at both Huddart and Wunderlich Parks, including oak woodland and redwood forest.	LTS	LTS	LTS↓
<b>Impact 3.6-3:</b> Implementation of proposed project components, as well as implementation of vegetation management, fire hazard reduction, and erosion control activities, during Phases I through III of the Master Plan could result in substantial adverse effects on wetlands and waters of the U.S. under the jurisdiction of the Corps and waters of the State under the jurisdiction of CDFG and the Regional Water Quality Control Board (RWQCB).	LTS	LTS	LTS
<b>Impact 3.6-4:</b> Implementation of proposed project components, as well as implementation of vegetation management, fire hazard reduction, and erosion	LTS	LTS	LTS

**Legend**

LTS	Less than significant impact, after mitigation
SU	Significant and unavoidable adverse impact, after mitigation
N	No impact
↑↓	Impact is more severe or less severe than project impact, after mitigation

**TABLE 4-1 (continued)**  
**SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES**

Impacts	No Project Alternative	Proposed Project	Trails, Signage and Folger Estate Stable Alternative
control activities, during Phases I through III of the Master Plan could result in damage to or removal of significant or heritage trees protected by the County of San Mateo that are within or adjacent to action areas.			
<b>3.7 Cultural Resources</b>			
<b>Impact 3.7-1:</b> Impacts to archaeological resources. Ground disturbing construction activities at both Huddart and Wunderlich Parks could cause damage to, disrupt, or adversely affect archaeological resources.	LTS	LTS	LTS
<b>Impact 3.7-2:</b> Possible substantial effects can occur to known, but unevaluated prehistoric and historic archaeological deposits from ground disturbing construction operations.	LTS	LTS	LTS
<b>Impact 3.7-3:</b> Project construction could adversely affect currently unknown historical resources, including unique archaeological resources.	LTS	LTS	LTS
<b>Impact 3.7-4:</b> The proposed project could adversely affect unidentified paleontological resources.	LTS	LTS	LTS
<b>Impact 3.7-5:</b> Project construction could result in damage to previously unidentified human remains.	LTS	LTS	LTS
<b>Impact 3.7-6:</b> The Master Plan may adversely affect historic resources within the Folger Estate Stable Historic District at Wunderlich Park, which is listed in the National Register of Historic Resources and considered a historic resource for CEQA purposes.	N	LTS	LTS
<b>3.8 Traffic and Circulation</b>			
<b>Impact 3.8-1:</b> Project construction outlined in the Master Plan would result in temporary increases in truck traffic and construction worker traffic.	LTS	LTS	LTS
<b>Impact 3.8-2:</b> Implementation of the Master Plan would increase traffic on roadways in the Park vicinity.	N	N	N
<b>Impact 3.8-3:</b> Implementation of the Master Plan would increase the demand for parking in the vicinity of the Parks.	N	N	N
<b>Impact 3.8-4:</b> Implementation of the Master Plan would increase the demand for parking in the Parks.	N	N	N

**Legend**

LTS	Less than significant impact, after mitigation
SU	Significant and unavoidable adverse impact, after mitigation
N	No impact
↑↓	Impact is more severe or less severe than project impact, after mitigation

**TABLE 4-1 (continued)**  
**SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES**

Impacts	No Project Alternative	Proposed Project	Trails, Signage and Folger Estate Stable Alternative
<b>Impact 3.8-5:</b> Implementation of the Master Plan would result in inadequate site access and circulation for passenger vehicles.	LTS	SU (LTS with Caltrans approval of Mitigation)	LTS
<b>Impact 3.8-6:</b> Implementation of the Master Plan would result in inadequate access for public transit, bicycle access, or pedestrian access.	N	N	N
<b>Impact 3.8-7:</b> Implementation of the Master Plan would contribute to cumulative increases in traffic at intersections in the Park vicinity.	N	N	N
<b>3.9 Air Quality</b>			
<b>Impact 3.9-1:</b> Activities associated with demolition, site preparation and construction would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions.	LTS	LTS	LTS↓
<b>Impact 3.9-2:</b> Implementation of the Master Plan would conflict with the 2005 Bay Area Ozone Strategy and the attainment goals of the Bay Area.	N	N	N
<b>Impact 3.9-3:</b> The project would increase carbon monoxide concentrations above the ambient air quality standards at local intersections in the project site vicinity.	N	N	N
<b>3.10 Noise and Vibration</b>			
<b>Impact 3.10-1:</b> Project construction activities would intermittently and temporarily generate noise levels above existing ambient levels.	LTS	LTS	LTS↓
<b>Impact 3.10-2:</b> The project would increase traffic related noise along roadways leading up to the parks.	N	N	N
<b>3.11 Hazards and Hazardous Materials</b>			
<b>Impact 3.11-1:</b> Implementation of proposed Master Plan projects could result in increased chance of ignition during construction.	LTS↓	LTS	LTS↓
<b>Impact 3.11-2:</b> A fire started during project construction could cause damage to lives property, and resources.	LTS	LTS	LTS
<b>Impact 3.11-3:</b> Construction activities and vehicles could impede fire	LTS	LTS	LTS

**Legend**

LTS	Less than significant impact, after mitigation
SU	Significant and unavoidable adverse impact, after mitigation
N	No impact
↑↓	Impact is more severe or less severe than project impact, after mitigation

**TABLE 4-1 (continued)**  
**SUMMARY OF IMPACTS: PROJECT AND ALTERNATIVES**

Impacts	No Project Alternative	Proposed Project	Trails, Signage and Folger Estate Stable Alternative
suppression response.			
<b>Impact 3.11-4:</b> An accidental release of hazardous materials from construction equipment, such as oil, grease, or fuel, could enter West Union Creek, McGarvey Gulch Creek, Squealer Gulch Creek, or Alambique Creek and degrade water quality.	LTS	LTS	LTS
<b>3.12 Public Services and Utilities</b>			
<b>Impact 3.12-1:</b> The increased population and density resulting from the project would not involve or require new or physically altered governmental facilities in order to maintain acceptable service ratios, response time, or other performance objectives for fire protection and emergency medical services and facilities.	LTS	LTS	LTS
<b>Impact 3.12-2:</b> The increased population and density resulting from the project would not involve or require new or physically altered governmental facilities in order to maintain acceptable service ratios, response time, or other performance objectives for police protection services.	LTS	LTS	LTS
<b>Impact 3.12-3:</b> Construction may increase fire protection, emergency medical, and police protection services.	LTS	LTS	LTS
<b>Impact 3.12-4:</b> Project construction could result in the temporary, planned, or accidental disruption of utility services including water, sewer, storm drain, electricity, natural gas, telephone, and television services.	LTS	LTS	LTS
<b>Impact 3.12-5:</b> Implementation of the Master Plan may increase water demand.	LTS	LTS	LTS
<b>Impact 3.12-6:</b> Operation of projects included in the Master Plan could generate additional solid waste.	LTS	LTS	LTS
<b>Impact 3.12-7:</b> Implementation of the Master Plan may increase wastewater flows to the Parks' existing septic systems.	LTS	LTS	LTS
<b>Impact 3.12-8:</b> Operation of the facilities to be implemented under the Master Plan could consume additional energy.	LTS	LTS	LTS

**Legend**

LTS	Less than significant impact, after mitigation
SU	Significant and unavoidable adverse impact, after mitigation
N	No impact
↑↓	Impact is more severe or less severe than project impact, after mitigation

# CHAPTER 5

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## CEQA Statutory Sections

### 5.1 Introduction

This section summarizes the findings with respect to short-term versus long-term productivity of Huddart and Wunderlich Parks, significant, unavoidable environmental impacts, growth-inducing impacts, and cumulative impacts of the proposed Master Plan.

### 5.2 Short Term versus Long Term Productivity

CEQA Section 21100 requires the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity to be discussed in an EIR. This discussion includes the cumulative and long-term effects of the proposed project which adversely affect the environment. Special attention is given to impacts which narrow the range of beneficial uses of the environment or pose long-term risks to health or safety, as described below.

Construction and remodeling of new and existing facilities proposed under the Master Plan would maintain the existing use of these sites for the future. Protection of undeveloped areas, would maintain existing habitat value for wildlife. Implementation of the proposed Master Plan would result in a long-term commitment of energy resources to build, operate, and maintain proposed facilities. Where possible, the Master Plan emphasizes solar energy for long-term facilities operations.

### 5.3 Significant Irreversible Effects

CEQA states that impacts associated with a proposed project may be considered to be significant and irreversible for the following reasons:

- Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes the removal or non-use thereafter unlikely;
- Primary impacts and, particularly, secondary impacts (such as highway improvement that provides access to a previously inaccessible area) generally commit future generations to similar uses; and,
- Irreversible damage can result from environmental accidents associated with the project.

Implementation of the Master Plan would allow construction of new facilities that in turn could result in short-term, construction-related impacts and impacts associated with increased public access and use. The implementation of mitigation measures identified herein would reduce the identified effects and therefore would not result in significant irreversible environmental impacts or commitment of resources. The commitment of land, resources, and energy for project facilities would be a long-term commitment. Once specific projects have been constructed, it is unlikely that circumstances would arise that could justify the return of the land occupied by Huddart and Wunderlich Parks to its original condition. However, this commitment of resources is aimed at improving an existing, previously approved use.

## **5.4 Growth Inducement**

Section 15126.2 (d) of the CEQA Guidelines requires agencies to address potential growth-inducing effects of their actions. Growth-inducing effects are defined as those effects that could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth-inducing effects could result from projects that would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in population could tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. The Guidelines also require analysis of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The primary purpose of the Master Plan is to direct future management of the two parks for the next 20 years. An important component of this purpose is to protect the natural and cultural resources of the park. This purpose, goals, and management direction included in the Master Plan have no potential to foster population growth either directly or indirectly, or the construction of additional housing (with the exception of building a single residential home to replace the existing ranger residence which may be converted to an interpretive center in Phase III). The Master Plan's potential to foster economic growth through revenue generating facilities is minimal and would not result in growth-inducing effects.

## **5.5 Cumulative Impacts**

Cumulative environmental effects are multiple individual effects that, when considered together are considerable or that compound or increase other environmental impacts. The individual effects may result from a single project or a number of separate projects and may occur at the same place and point in time or at different locations and over extended periods of time. Cumulative impacts can result from individually minor but collectively significant projects. The purpose of this cumulative analysis is to determine whether potentially significant cumulative environmental impacts would occur from implementation of the Master Plan in combination with other projects or conditions, and to indicate the severity of the impacts and their likelihood of occurrence. The CEQA Guidelines require that EIRs discuss the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's

incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. The discussion does not need to be in as great detail as is necessary for project impacts, but it is to be “guided by the standards of practicality and reasonableness”. The purpose of the cumulative analysis is to allow decision makers to better understand the potential impacts which might result from approval of past, present and reasonably foreseeable future projects, in conjunction with the proposed project. The discussion of cumulative impacts should include:

- (1) Either: (A), a list of past, present, and probable future projects producing related or cumulative impacts; or (B), a summary of projections contained in an adopted General Plan or similar document, or in an adopted or certified environmental document, which described or evaluated conditions contributing to a cumulative impact;
- (2) A discussion of the geographic scope of the area affected by the cumulative effect;
- (3) A summary of expected environmental effects to be produced by these projects; and
- (4) Reasonable, feasible options for mitigating or avoiding the project’s contribution to any significant cumulative effects.

It should be noted that a cumulative impact analysis can only look at what is “reasonably foreseeable”. Projects which are proposed now will be built in phases, contingent upon available funding. The actual date at which all of this development would be completed is unknown. For this reason, this cumulative analysis relies on projections included in the County’s General Plan (1986). Short-term, Phase I components of the Master Plan at Huddart Park include: 1) Phase I Archery Range improvements; 2) Directional signage to the AIDS Grove; 3) Horse trailer parking; 4) Possible transfer of park land located south of Kings Mountain Road; 5) New connector trail and pedestrian crosswalks in lower picnic area; 6) 20-year phased park bridge replacement program; 7) New crossing on McGarvey Gulch Creek at Richards Road to eliminate fish passage barrier; 8) Alternate park entrance from the Phleger Estate; 9) Replace the existing bridge across West Union Creek in collaboration with Town of Woodside and private property owners; 10) Annual assessment of 2-inch water system and segment replacement; 11) Water pressure and volume at the Park Maintenance Yard; 12) Low-flow toilet fixtures at Sequoia, Redwood, and Oak restrooms; and, 13) Coordination with AT&T to protect communications facilities and repair any damage.

Short-term, Phase I components of the Master Plan at Wunderlich Park include: 1) Folger Stable Building seismic retrofit and restoration; 2) Horse-keeping measures at Folger Stable complex; 3) Vehicular entrance/exit and parking area improvements, including horse trailer parking, and traffic safety improvements on Woodside Road; 4) New vault-type restroom at parking lot, with running water; 5) Entrance signage; 6) ADA upgrades at Carriage House; 7) Fee collection station at parking lot; 8) Annual assessment of 2-inch water system and segment replacement, in coordination with the Folger Stable Improvement Project; 9) Loop Trail fuel reduction program; 10) New fire road connection between Loop and Alambique Trails; and, 11) Fire safety zones and turn-arounds.

Phase I projects common to both parks include: 1) Creation of a Blue Ribbon Panel to work with County Parks to prepare an update to the 2001 County Trails Plan; 2) Studying a potential safe crossing of Skyline Boulevard; 3) Additional hose bibs for horse watering; 4) Interpretive and educational signage; 5) Preparation of a Sediment Assessment Study; beginning phased implementation of sediment reduction measures; 6) Development of a prioritized capital improvement program for storm drainage culvert replacement; and, 7) Establishment of benches on trails, with bench donation program.

Medium-term, Phase II projects at Huddart Park include: 1) Vault toilet at Sequoia Day Camp; 2) Oak Area improvements, including restroom replacement, road realignment, and parking; 3) New rental building at Zwierlein Area; 4) Parking at Miwok, picnic shelter and restroom replacement; 5) Flagpole and crafts sink at Sequoia Day Camp; 6) Phase II Archery Range improvements; and, 7) All-weather single track trails. Medium-term, Phase II projects at Wunderlich Park include: 1) Folger Stable area site improvements, including paddocks, arena, drainage, caretakers residence, and other components; and, 2) All-weather single track trails. Phase II projects common to both parks include a potable water source installation at upper end of each park.

Long-term, Phase III projects at Huddart Park include: 1) Closure of Archery Fire Road; New loop trail connection between Archery Range and Chinquapin Trail; 2) Redwood Area improvements, including restroom and shelter replacements, road realignment, and parking; 3) Meadow Area improvements, including restroom replacement; 4) Werder picnic shelter replacement; 5) Restroom replacement at Madrone, Werder, and Zwierlein; 6) Solar photo-voltaic electric power at new structures; 7) Toyon Campground expansion, restroom and shower building replacement; 8) Ranger residence relocation; 9) Interpretive center; 10) Phase III Archery Range improvements; 11) Underground electric facilities; and 11) New trail connections in locations shown within Master Plan. Long-term, Phase III projects at Wunderlich Park include: 1) New trail connection between Alambique and Skyline Trails; and, 2) Underground electric facilities

Construction at both Parks would be concentrated in already developed portions of the park. In some cases, projects would be limited to the existing footprint, while other projects would require developing new entrances, connector trails, pedestrian crosswalks, and visitor amenities (signage, crossing, horse-bibs, etc.) Some of these activities could require grading. In Huddart Park, construction would be most intensive for establishing an amphitheater at Upper Oak, establishing an interpretive creek overlook at Squealer Gulch Creek, and the construction of an indoor-outdoor rental facility at Zwerlein. In Wunderlich Park, construction would be most intensive at the Folger Estate Stables and its surrounding area. Construction of new facilities could result in temporary and permanent effects to resources. All construction, as noted above, would be phased over time.

Generally, cumulative projects include development and construction projects within adjacent unincorporated San Mateo County, the towns of Portola Valley and Woodside, and Redwood City. Cumulative projects could include residential, commercial, and industrial projects, as well as continuing development of recreation and public areas in the vicinity of, and within Huddart and Wunderlich County Parks. Looking at the surrounding areas, there are no pending or

approved developments located directly adjacent to the Park. Scoping further out, the towns of Woodside (Mallison, pers. comm.) and Portola Valley (Borck, pers. comm.) do not have any major projects pending or approved. Further east, on the opposite side of I-280, the community of Redwood City has three project proposals, 2 Precise Plans, and one General Plan update underway, including:

**885 Woodside Road - Proposed Condominium Project** – This proposed project is for a five-story 43-unit condominium building at 885 Woodside Road. It includes 96 parking stalls and bicycle storage within both at-grade parking and in an underground parking garage. This proposal went to City Council in early 2007 for consideration of the Precise Plan Approval.

**Costco Warehouse Expansion and Gas Station Proposal** – In 2005, Costco submitted an application to Redwood City to demolish their existing building on Middlefield Road and replace it with a new, larger Costco retail warehouse building in the back corner of their existing property. Their proposal includes a new Costco gas station with 16 vehicle fueling positions.

**Peninsula Park.** The initial concept for this 33-acre development includes 796 residential units, 200 hotel rooms, 10,000 square feet of retail space, public park acreage and promenades, and public access to the waterfront. The subject 33-acres is currently an impound car storage lot used by a car towing company, several paved parking lots, five partially occupied office buildings, a restaurant, and other storage uses. It includes a marina basin which ceased operations in 2001. This 33-acre property was a portion of the Marina Shores Village (MSV) proposal.

**North Main Street Precise Plan** - The North Main Street Precise Plan area is approximately 9.5 acres in size. It encompasses lands bounded by Highway 101 and Redwood Creek on the north and east, Veterans Boulevard on the south, and Main Street on the west. The area contains nine individually-owned properties, the most northerly a creek bank area owned by the City of Redwood City. A major objective of the *North Main Street Precise Plan* is to create a strong physical link between Downtown and the Bayfront via a potential Highway 101 crossing -- i.e., infill development and pedestrian- and bicycle-oriented access improvements would create a spine between these two important, evolving districts. The Precise Plan provides for increased-density infill residential and office land uses, limited locally-oriented commercial space, frontage streetscape improvements, and creation of a publicly accessible Redwood Creek Trail segment.

**Redwood City Downtown Precise Plan** – This planning document is considered the "roadmap" for how Redwood City wants to define its downtown area. The Plan contains development guidelines that cover all aspects of sites and building, including specific recommendations for massing, entrance design, landscaping, architectural style, appropriate colors, and all other aspects of a prospective development. The Downtown Precise Plan also examines and outlines standards of open space in private development, including the size, public accessibility, and design.

**Redwood City General Plan Update** - Working with the community, the Planning Commission, and the City Council, Redwood City is in the process of updating its

General Plan. Guiding Principles for the General Plan were adopted by the Redwood City Planning Commission in May of 2006 to address planning for sustainability within considering the area's finite resources including but not limited to open space, water, energy, and air quality; ensuring that change harmonizes with existing development to preserve the City's historic and neighborhood character; strengthening economic vitality to provide jobs, services, revenues and opportunities, among others.

Because specific timelines for implementation of park facilities that could be developed under the Master Plan are dependent on available funding and no projects are currently planned within the adjacent jurisdictions, assessing the expected environmental effects that these projects would produce entails speculation. However, there are two general categories of effects that could be expected. The first and most widespread would be general construction impacts, such as temporary air quality degradation and increased erosion resulting from earth movement. However, construction impacts would be temporary and local in nature and thus unlikely to constitute cumulatively considerable contributions to cumulative significant impacts. The second category of impacts is related to operational effects on regional traffic, air quality, and potential habitat alterations and effects on wildlife.

Many of the projects described in the Master Plan are intended to address existing environmental impacts from ongoing operations. Additional mitigation measures identified in Chapter 3 and included as part of the Master Plan would reduce any impacts, including cumulative impacts, to a less than significant level. In addition, the County would require review of projects at the time they are proposed for implementation to determine if further environmental review at a more detailed project-specific and site-specific level is necessary, including analysis of potential cumulative effects.

## References – CEQA Required Sections

Artunian and Kinney, 1975, *Wunderlich Park Concept Plan*.

Borck, Carol, Planning Technician II, Town of Portola Valley, telephone communication on May 23rd, 2007

Folger Estate Stable Committee, 2003, *Folger Estate Stable Project: A Concept Paper for Moving Forward*.

Mallison, Debra, Planner, Town of Woodside, telephone communication on May 28th, 2007

Planning Collaborative, 1982, *Huddart County Park Master Plan*.

San Mateo County, Department of Environmental Management, Planning and Building Services, 1986, *San Mateo County General Plan*. Accessed online on January 15, 2007 at [www.co.sanmateo.ca.us/vgn/images/portal/cit\\_609/10073472gp\\_polis.pdf](http://www.co.sanmateo.ca.us/vgn/images/portal/cit_609/10073472gp_polis.pdf)

San Mateo County, Environmental Services Agency, Planning and Building Division, 1999, *Zoning Regulations*. Accessed online on January 16<sup>th</sup>, 2007 at [www.co.sanmateo.ca.us/vgn/images/portal/cit\\_609/9441580Zregs-wp.pdf](http://www.co.sanmateo.ca.us/vgn/images/portal/cit_609/9441580Zregs-wp.pdf)

Town of Portola Valley, Portola Valley General Plan, April 1998.

# CHAPTER 6

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## Report Preparers

### 6.1 Project Sponsor / Lead Agency

#### San Mateo County Parks Department

County Government Center, 455 County Center, 4th Floor, Redwood City, CA 94063

This document was prepared under the direction of:

- Dave Holland – Director
- Sam Herzberg – Senior Planner
- Dave Moore – Superintendent
- Priscilla Alvarez – Senior Park Ranger

### 6.2 EIR Authors and Consultants

#### ESA

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- Tom Roberts – Project Director
- Darcey Rosenblatt – Project Manager, Project Description and Alternatives
- Leah Katz – Deputy Project Manager, Land Use and Agriculture, Recreation, Visual Resources, Public Services and Utilities, and Cumulative Effects
- Robert Eckard – Geology, Soils and Seismicity, Hydrology and Water Quality
- Martha Lowe – Biological Resources
- Brad Brewster – Historic Resources
- Dean Martorana, RPA – Archaeological Resources
- Lesley Lowe – Traffic and Circulation
- Jyothi Iyer – Air Quality, Noise and Vibration
- Bill Boynton – Geographic Information Systems
- Lisa Bautista – Publications and Word Processing
- Gus JaFolla – Word Processing
- Anthony Padilla – Production

#### Wildland Fire Management

123 Journey's End, Alamo, CA 94507

- Carol Rice – Hazards and Hazardous Material

## **APPENDIX A**

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### Notice of Preparation

***Notice of Preparation***

**HUDDART-WUNDERLICH MASTER PLAN,  
ENVIRONMENTAL IMPACT REPORT**

**San Mateo County Parks Department  
of the Environmental Services Agency**

To Responsible and Trustee Agencies:

The San Mateo County Parks Department of the Environmental Services Agency (the County) is proposing the adoption of the Huddart-Wunderlich Master Plan. The project would establish a framework for the County to provide a variety of recreational opportunities at Huddart-Wunderlich County Parks in an environmentally sound and sensitive manner.

The County will act as lead agency under the California Environmental Quality Act (CEQA) in preparing an Environmental Impact Report (EIR) for the project. Responsible and trustee agencies under CEQA may include San Francisco Regional Water Quality Control Board, California Department of Fish and Game, US Fish and Wildlife Service, and National Marine Fisheries Service.

The County needs to know your views regarding the scope and content of the environmental information associated with the proposed project. CEQA requires that your response be submitted to San Mateo County Parks Department at the earliest possible date, but not later than January 15<sup>th</sup>, 2006. Responses should be sent to:

Sam Herzberg, Senior Planner  
San Mateo County Parks Department  
Environmental Services Agency  
455 County Center, 4th Floor  
Redwood City, CA 94063

Attachment 1 provides an overview of the scoping process and Draft EIR schedule, the project background, and a description of the alternatives. Attachment 2 provides the environmental factors potentially affected by the proposed project that will be addressed in the EIR.

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Sam Herzberg  
Senior Planner, San Mateo County Parks  
Department, Environmental  
Services Agency

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Date

# Attachment 1

## ***Scoping and Draft EIR Schedule***

San Mateo County Parks Department (County) is seeking input on the scope and content of environmental information relevant to the proposed project, including input on alternatives and issues to be addressed in the EIR. The Draft EIR is scheduled for circulation in spring 2007.

## ***Background***

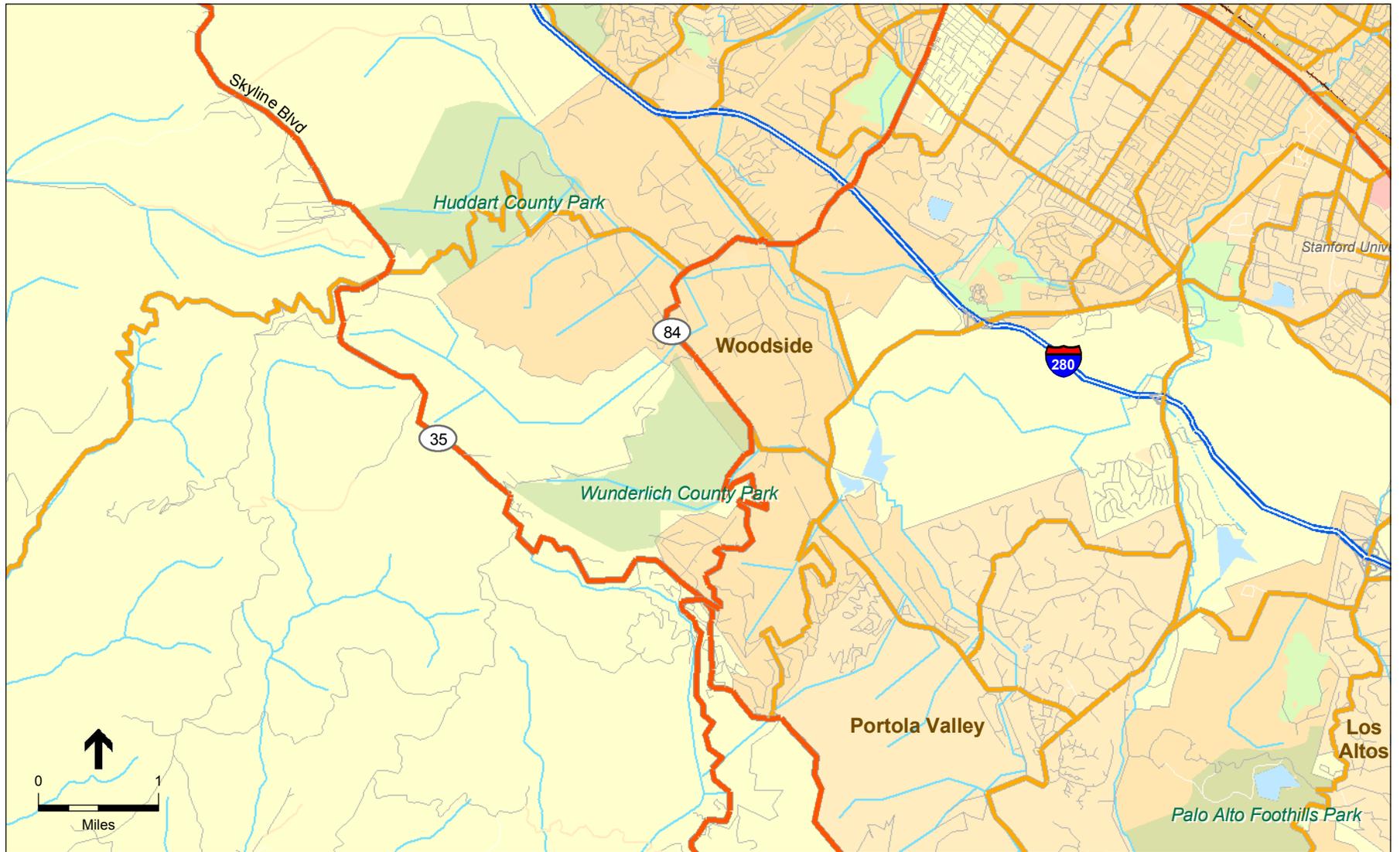
In 2004, the County initiated a Master Planning effort for two of its 16 premier parks, Huddart and Wunderlich Parks, located in the Santa Cruz Mountains of central San Mateo County (See Figure 1). Huddart and Wunderlich County Parks were addressed in this combined Master Plan effort to reflect the fact these two parks are an integrated management unit. This Master Plan is part of a County-wide effort to prepare and update master plans for every County Park facility on a 20-year basis. In the San Mateo County Park System, Master Plans are the primary management documents that guide daily decision-making for each park, and serve as the foundation for developing more detailed management and site-specific project plans. In general, they are designed to provide a guiding framework for land use and stewardship, natural resource enhancement, and the development of appropriate recreation facilities including trails, staging areas, and group gathering areas.

Huddart and Wunderlich Parks are large, rural, rustic areas set within a regional greenbelt of open space lands (See Figures 2 and 3). The parks are located in the Santa Cruz Mountains in central San Mateo County, west of the towns of Woodside and Portola Valley and are connected via the Skyline Trail. Park elevations range from 500 to 2000 feet above sea level. Separated from the built-out urban area of the San Francisco Peninsula, these parks provide a semi-wilderness environment, situated close to a major urban population.

In preparation for the Master Planning effort, the County conducted an inventory and assessment of existing conditions at Huddart and Wunderlich parks, reviewed previous plans and related data (including the First Huddart Park Master Plan, a Wunderlich Park Concept Plan, and the Folger Estate Stable Feasibility and Master Plan Study), and had extensive public involvement opportunities that included focus groups, public workshops, and committee meetings. These planning efforts served to define the goals, objectives, and priority recommendations for the Huddart and Wunderlich Parks Master Plan, and culminated in the creation of a 20-year vision. The Huddart and Wunderlich Parks Master Plan (May 2006), which defines the future development, operation and maintenance of these two parks, is the subject of this CEQA document.

## ***Project Description***

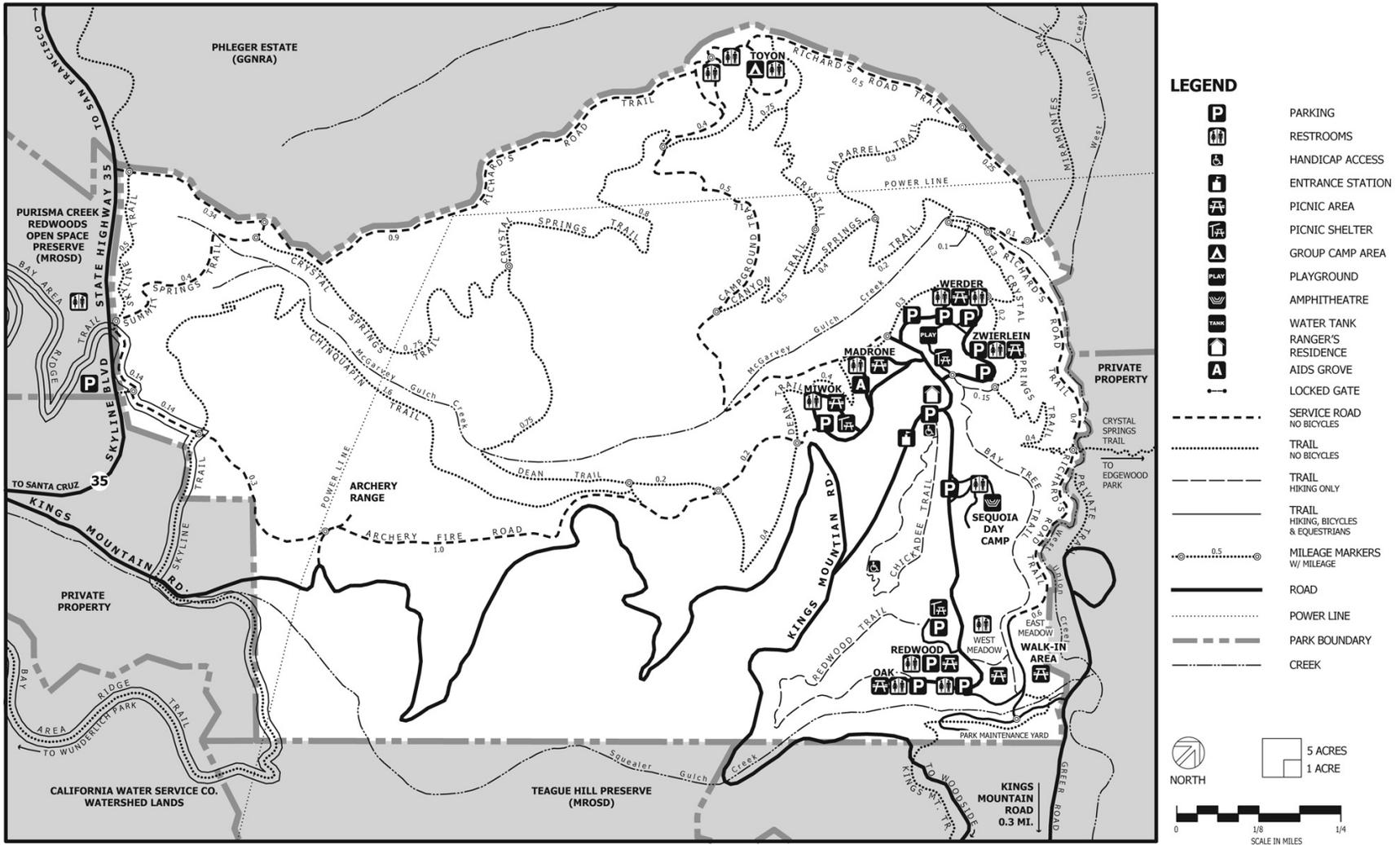
San Mateo County Parks Department manages 15,680 acres located throughout their jurisdiction and is responsible for preserving the County's natural and cultural treasures, and



SOURCE: ESRI, 2005

Huddart and Wunderlich Parks Master Plan EIR . 206310

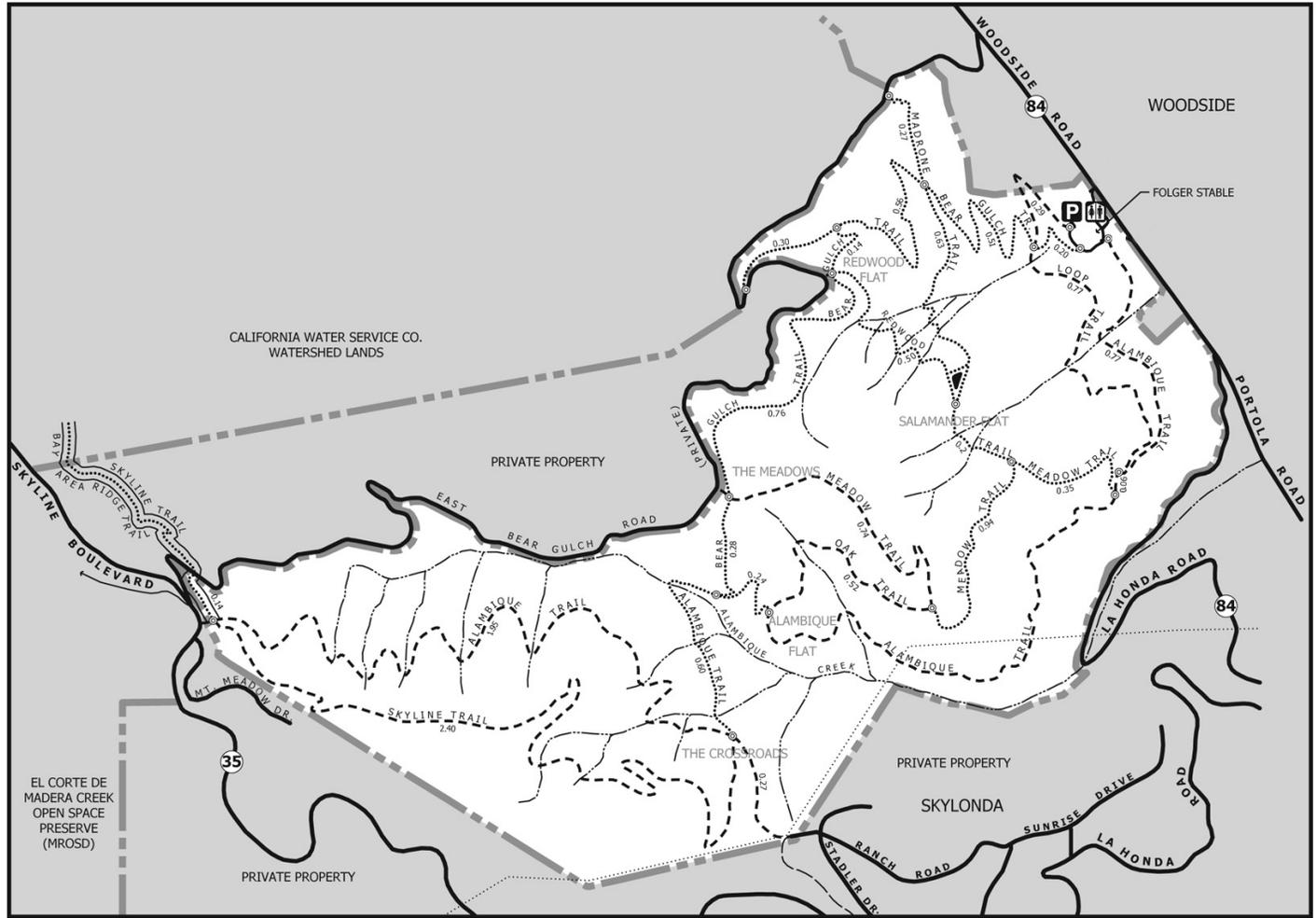
**Figure 1**  
Regional Location Map



SOURCE: County of San Mateo

Huddart and Wunderlich Parks Master Plan EIR . 206310

**Figure 2**  
 Huddart Park



**LEGEND**

-  PARKING
-  RESTROOMS
-  LOCKED GATE
-  SERVICE ROAD  
NO BICYCLES
-  TRAIL  
NO BICYCLES
-  TRAIL  
HIKING ONLY
-  TRAIL  
HIKING, BICYCLES  
& EQUESTRIANS
-  MILEAGE MARKERS  
W/ MILEAGE
-  ROAD
-  POWER LINE
-  PARK BOUNDARY
-  CREEK

 NORTH

 5 ACRES  
1 ACRE

 0 1/8 1/4  
SCALE IN MILES

providing safe, accessible parks, recreation and learning opportunities to enhance the community's quality of life. The proposed Huddart and Wunderlich Parks Master Plan, completed in 2006, establishes a framework for the County to provide a variety of recreational opportunities in an environmentally sound and sensitive manner. It also contains a range of recommendations for the two individual parks, as well as recommendations that span the two areas.

The Master Plan is organized first by park, followed by topic areas, including: trail recommendations, signage guidelines, erosion and sedimentation control, site utilities, fisheries recommendations, and fire hazard recommendations. The final chapter addresses implementation by setting next steps, review processes, and phasing and priorities.

#### *Proposed Master Plan Goals and Objectives*

The proposed Master Plan goals define the County's long-range vision for the management of the properties. Goals include:

- Concentrate development of new facilities in the already-developed portions of the parks. Protect the wild character of the undeveloped portions
- Improve vehicular circulation, pedestrian circulation, and increase available parking and picnic areas
- Increase revenue generation capability of each park
- Identify physical improvements that will decrease ongoing operation and maintenance costs
- Ensure the continued equestrian use of the parks

The proposed Master Plan goals are carefully designed to balance multiple objectives, including:

- Developing a plan that can be implemented over time, taking into account available financial resources, potential phasing, and long-term management implications;
- Creating achievable proposals to address each park's unique challenges and problems;
- Serving as a working tool that can be implemented with flexibility to respond to changing conditions over the 20-year planning horizon; and
- Providing consistency with other adopted County plans, including the County General Plan and County Trails Plan.

The proposed Master Plan was designed using a phased approach. There are three different implementation timelines- short, medium, and long-term – each of which correspond with a timeframe of 5, 10, and 20-years. The rationale for phasing was based on the following goals:

- Phase I improvements were designed to address public safety concerns, code requirements, environmental damage, or to respond to a pressing need.
- Phase II includes improvements to reduce ongoing operation and maintenance costs or that respond to a pressing need, but require a longer lead-time for planning and design.
- Phase III includes facilities that will improve the level of recreational service to the park visitor.

This proposed approach to Master Plan implementation provides a structured method for better meeting the public's recreational needs and for preserving and enhancing the wild portions of the park.

### **Project Alternatives**

A No Project Alternative, required under CEQA to be evaluated in an EIR, will identify reasonably foreseeable consequences of the failure to implement the proposed project. In addition, the EIR will evaluate a reasonable range of alternatives to the proposed project that attain the basic objectives of the project, but would avoid or reduce significant effects of the project. This could include alternatives evaluated as part of the early stages of the Master Plan development.

### **Public Information Meetings**

The County will conduct information meetings with local agencies and interested members of the community before and after publication of the Draft EIR.

### **Other San Mateo County, Parks Department Projects**

Other significant San Mateo County Parks Department projects in the area include:

- Trail Master Plan
- Decision-Making Guidelines for Vegetation Management in San Mateo County (June 2006)

Information on these projects is available on San Mateo County website: <http://www.eparks.net/> under "Latest Parks Planning Efforts"

### **Additional Information**

Additional information about the Huddart-Wunderlich Master Plan effort can also be obtained by clicking on "Park Planning" link located on the sidebar of the <http://www.eparks.net/> website.

The staff contact for project-related questions is:

Sam Herzberg, Senior Planner  
455 County Center, 4th Floor  
Redwood City, CA 94063  
650-363-4020

## Attachment 2

### Environmental Factors Potentially Affected

The environmental factors checked below potentially would be affected by this project, involving at least one impact that is a “potentially significant impact.”

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> Aesthetics                    | <input type="checkbox"/> Agriculture Resources                | <input checked="" type="checkbox"/> Air Quality              |
| <input checked="" type="checkbox"/> Biological Resources          | <input checked="" type="checkbox"/> Cultural Resources        | <input checked="" type="checkbox"/> Geology / Soils          |
| <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology / Water Quality | <input checked="" type="checkbox"/> Land Use / Planning      |
| <input type="checkbox"/> Mineral Resources                        | <input checked="" type="checkbox"/> Noise                     | <input type="checkbox"/> Population / Housing                |
| <input checked="" type="checkbox"/> Public Services               | <input checked="" type="checkbox"/> Recreation                | <input checked="" type="checkbox"/> Transportation / Traffic |
| <input checked="" type="checkbox"/> Utilities / Service Systems   |   |  |

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814 – 916/445-0613

ENVIRONMENTAL DOCUMENT TRANSMITTAL FORM

See <i>NOTE</i> BELOW
SCH# _____

- |  |                                       |
|--|---------------------------------------|
| 1. Project Title <u>Huddart-Wunderlich Master Plan</u>   | 3. Contact Person <u>Sam Herzberg</u> |
| 2. Lead Agency <u>San Mateo County, Parks Department</u> | 3. Contact Person _____               |
| 3a. Street Address <u>455 County Center, 4th Floor</u>   | 3b. City <u>Redwood City 94063</u>    |
| 3c. County <u>San Mateo</u> 3d. Zip <u>94063</u>         | 3e. Phone <u>650-363-4020</u>         |

Project Location

- |   |   |
|---|---|
| 4. County <u>San Mateo</u>  | 4a. City/Community <u>Woodside</u>  |
| 4b. Assessor's Parcel No. <u>NA</u>   | 4c. Section _____ Twp. _____ Range _____  |
| 5a. Cross Streets <u>Kings Mountain Rd (Huddart)</u><br><u>Woodside Rd (Wunderlich)</u> | 5b. For Rural, Nearest Community _____  |
| 6. With 2 miles: a. State Hwy# <u>Hwy 84</u>  | b. Airports <u>NA</u>   |
| c. Railways <u>NA</u>   | d. Waterways <u>Huddart: West Union Creek, McGarvey Gulch Creek, and Squealer Gulch Creek</u><br><u>Wunderlich: Alambique Creek</u> |

7. Document Type

- |  |  |  |   |
|--|--|--|---|
| CEQA 01. <input checked="" type="checkbox"/> NOP | 05. <input type="checkbox"/> Supplement/Subsequent EIR | NEPA 09. <input type="checkbox"/> NOI  | OTHER 13. <input type="checkbox"/> Joint Document |
| 02. <input type="checkbox"/> Early Cons          | (Prior SCH No.: _____)                                 | 10. <input type="checkbox"/> FONSI     | 14. <input type="checkbox"/> Final Document       |
| 03. <input type="checkbox"/> Neg Dec             | 06. <input type="checkbox"/> NOE                       | 11. <input type="checkbox"/> Draft EIS | 15. <input type="checkbox"/> Other _____          |
| 04. <input type="checkbox"/> Draft EIR           | 07. <input type="checkbox"/> NOC                       | 12. <input type="checkbox"/> EA        |   |
|  | 08. <input type="checkbox"/> NOD                       |  |   |

8. Local Action Type

- |   |   |   |   |
|---|---|---|---|
| 01. <input type="checkbox"/> General Plan Update    | 05. <input type="checkbox"/> Annexation     | 09. <input type="checkbox"/> Rezone   | 12. <input type="checkbox"/> Waste Mgmt Plan    |
| 02. <input type="checkbox"/> New Element            | 06. <input type="checkbox"/> Specific Plan  | 10. <input type="checkbox"/> Land Division (Subdivision, Parcel Map, Tract Map, etc.) | 13. <input type="checkbox"/> Cancel Ag Preserve |
| 03. <input type="checkbox"/> General Plan Amendment | 07. <input type="checkbox"/> Community Plan | 11. <input type="checkbox"/> Use Permit   | 14. <input type="checkbox"/> Other _____        |
| 04. <input checked="" type="checkbox"/> Master Plan | 08. <input type="checkbox"/> Redevelopment  |   |   |

9. Development Type

- |  |   |
|--|---|
| 01. <input type="checkbox"/> Residential: Units _____ Acres _____                          | 07. <input type="checkbox"/> Mining: Mineral _____              |
| 02. <input type="checkbox"/> Office: Sq.ft. _____ Acres _____ Employees _____              | 08. <input type="checkbox"/> Power: Type _____ Watts _____      |
| 03. <input type="checkbox"/> Shopping/Commercial: Sq.ft. _____ Acres _____ Employees _____ | 09. <input type="checkbox"/> Waste Treatment: Type _____        |
| 04. <input type="checkbox"/> Industrial: Sq.ft. _____ Acres _____ Employees _____          | 10. <input type="checkbox"/> OCS Related                        |
| 05. <input type="checkbox"/> Water Facilities: MGD _____                                   | 11. <input checked="" type="checkbox"/> Other: Recreation _____ |
| 06. <input type="checkbox"/> Transportation: Type _____                                    |   |

- |                 |                            |                        |    |
|-----------------|----------------------------|------------------------|----|
| 10. Total Acres | Approximately 1916 acres   | 11. Total Jobs Created | NA |
|                 | 942 acres: Wunderlich Park |                        |    |
|                 | 974 acres: Huddart Park    |                        |    |

12. Project Issues Discussed in Document

- |   |  |   |  |
|---|--|---|--|
| 01. <input checked="" type="checkbox"/> Aesthetic/Visual          | 09. <input checked="" type="checkbox"/> Geologic/Seismic | 17. <input type="checkbox"/> Social                         | 25. <input checked="" type="checkbox"/> Wetland/Riparian   |
| 02. <input type="checkbox"/> Agricultural Land                    | 10. <input type="checkbox"/> Jobs/Housing Balance        | 18. <input checked="" type="checkbox"/> Soil Erosion        | 26. <input checked="" type="checkbox"/> Wildlife           |
| 03. <input checked="" type="checkbox"/> Air Quality               | 11. <input type="checkbox"/> Minerals                    | 19. <input checked="" type="checkbox"/> Solid Waste         | 27. <input type="checkbox"/> Growth Inducing               |
| 04. <input checked="" type="checkbox"/> Archaeological/Historical | 12. <input checked="" type="checkbox"/> Noise            | 20. <input checked="" type="checkbox"/> Toxic/Hazardous     | 28. <input type="checkbox"/> Incompatible Land Use         |
| 05. <input type="checkbox"/> Coastal Zone                         | 13. <input checked="" type="checkbox"/> Public Services  | 21. <input checked="" type="checkbox"/> Traffic/Circulation | 29. <input checked="" type="checkbox"/> Cumulative Effects |
| 06. <input type="checkbox"/> Economic                             | 14. <input type="checkbox"/> Schools                     | 22. <input checked="" type="checkbox"/> Vegetation          | 30. <input type="checkbox"/> Other <u>Recreation</u>       |
| 07. <input checked="" type="checkbox"/> Fire Hazard               | 15. <input type="checkbox"/> Septic Systems              | 23. <input checked="" type="checkbox"/> Water Quality       |  |
| 08. <input checked="" type="checkbox"/> Flooding/Drainage         | 16. <input type="checkbox"/> Sewer Capacity              | 24. <input type="checkbox"/> Water Supply                   |  |

- |                       |                     |                   |                |
|-----------------------|---------------------|-------------------|----------------|
| 13. Funding (approx.) | Federal \$ <u>0</u> | State \$ <u>0</u> | TOTAL \$ _____ |
|-----------------------|---------------------|-------------------|----------------|

14. Present Land Use and Zoning

San Mateo County General Plan designates the project area as a Park and Recreation Facility with Resource Management zoning

15. Project Description

San Mateo County has prepared a joint Master Plan for Huddart and Wunderlich County Parks to provide a guiding framework for land use and stewardship, natural resource enhancement, and the development of appropriate recreation facilities including trails, staging areas, and group gathering areas. This Master Plan would be the primary management document that guides daily decision-making for both parks, and would serve as the foundation for developing more detailed management and site-specific project plans.

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16. Signature of Lead Agency

Date

Representative

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

**REVIEWING AGENCIES**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Resources                             | <input checked="" type="checkbox"/> Caltrans District #4                        |
| <input type="checkbox"/> Boating / Waterways                              | <input type="checkbox"/> Dept. of Transportation Planning                       |
| <input checked="" type="checkbox"/> Conservation                          | <input type="checkbox"/> Aeronautics  |
| <input checked="" type="checkbox"/> Fish and Game                         | <input type="checkbox"/> California Highway Patrol                              |
| <input checked="" type="checkbox"/> Forestry                              | <input type="checkbox"/> Housing and Community Development                      |
| <input type="checkbox"/> Colorado River Board                             | <input type="checkbox"/> Statewide Health Planning                              |
| <input checked="" type="checkbox"/> Dept. Water Resources                 | <input type="checkbox"/> Health   |
| <input type="checkbox"/> Reclamation                                      | <input type="checkbox"/> Food and Agriculture                                   |
| <input type="checkbox"/> Parks and Recreation                             | <input type="checkbox"/> Public Utilities Commission                            |
| <input checked="" type="checkbox"/> Office of Historic Preservation       | <input type="checkbox"/> Public Works   |
| <input checked="" type="checkbox"/> Native American Heritage Commission   | <input type="checkbox"/> Corrections  |
| <input type="checkbox"/> S.F. Bay Conservation and Development Commission | <input type="checkbox"/> General Services                                       |
| <input type="checkbox"/> Coastal Commission                               | <input type="checkbox"/> OLA  |
| <input type="checkbox"/> Energy Commission                                | <input type="checkbox"/> Santa Monica Mountains                                 |
| <input type="checkbox"/> State Lands Commission                           | <input type="checkbox"/> TRPA   |
| <input checked="" type="checkbox"/> Air Resources Board                   | <input type="checkbox"/> OPR – OLGA   |
| <input type="checkbox"/> Solid Waste Management Board                     | <input type="checkbox"/> OPR – Coastal  |
| <input type="checkbox"/> SWRCB: Sacramento                                | <input type="checkbox"/> Bureau of Land Management                              |
| <input checked="" type="checkbox"/> RWQCB: Region #2                      | <input type="checkbox"/> Forest Service   |
| <input type="checkbox"/> Water Rights                                     | <input checked="" type="checkbox"/> Other <u>U.S. Army Corps of Engineers</u>   |
| <input checked="" type="checkbox"/> Water Quality                         | <input checked="" type="checkbox"/> Other <u>U.S. Fish and Wildlife Service</u> |
|   | <input checked="" type="checkbox"/> Other <u>Town of Woodside</u>               |

**For SCH Use Only:**

Date Received at SCH \_\_\_\_\_ Catalog Number \_\_\_\_\_

Date Review Starts \_\_\_\_\_ Applicant \_\_\_\_\_

Date to Agencies \_\_\_\_\_ Consultant \_\_\_\_\_

Date to SCH \_\_\_\_\_ Contact \_\_\_\_\_ Phone \_\_\_\_\_

Clearance Date \_\_\_\_\_ Address \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# **APPENDIX B**

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## **List of NOP Respondents**

The duration of the NOP period was from November 28<sup>th</sup>, 2006 through January 15<sup>th</sup>, 2007.

### **Federal Agencies**

National Park Service (NPS/GGNRA) - January 12, 2007

### **State Agencies**

California Department of Transportation (Caltrans) – December 6, 2006

### **Local Agencies**

None received

### **Individuals**

Virginia Dare – November 28, 2006

Martha Dunn – December 18, 2006

Mark Foti, Dee Janis, Dot Juby, Marian Marra, Adda Quinn – December 18, 2006

Bob Garcia – December 18, 2006

Caroll Ann Hodges – November 28, 2006

Susan Lang – December 5<sup>th</sup>, 2006

Alex MacBride – December 8, 2006

Ernst Meissner – No date

Rolly Steele – January 13, 2007

Robert Susk – November 29, 2006

Ann Barry – December 5<sup>th</sup>, 2006

George and Karen McCown – November 29, 2006

## **APPENDIX C**

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Erosion, Sedimentation, and Water Quality-  
Related Measures (*Original Draft Master Plan  
Appendices*)

**Erosion and Sedimentation Control Measures**

(Appendix E in the Draft Master Plan)

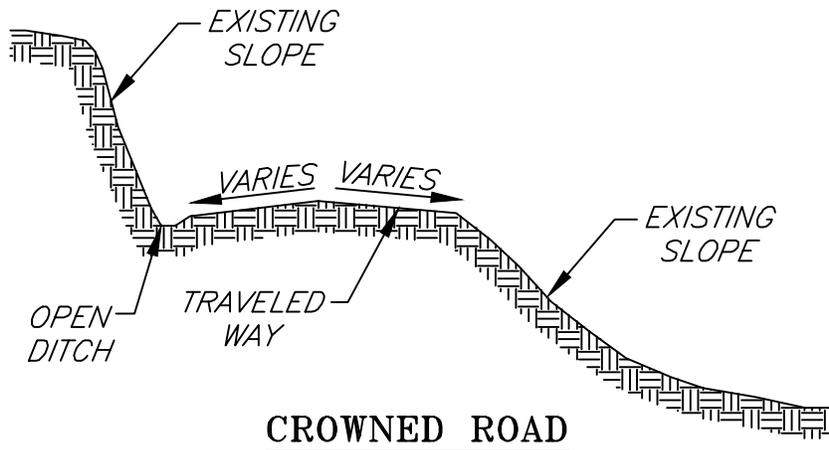
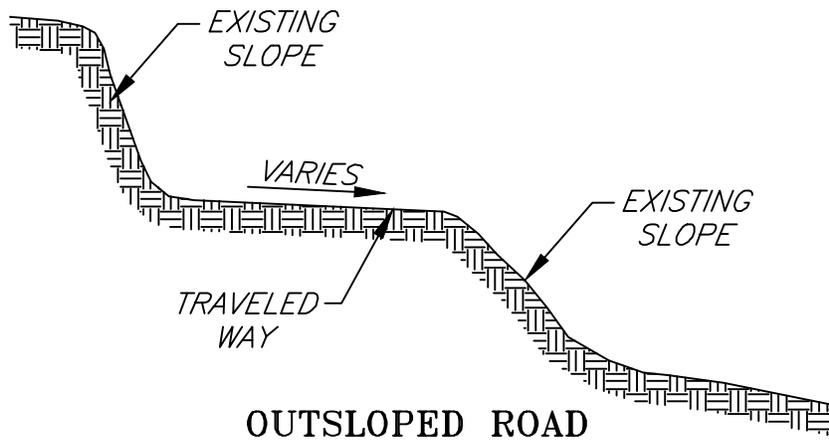
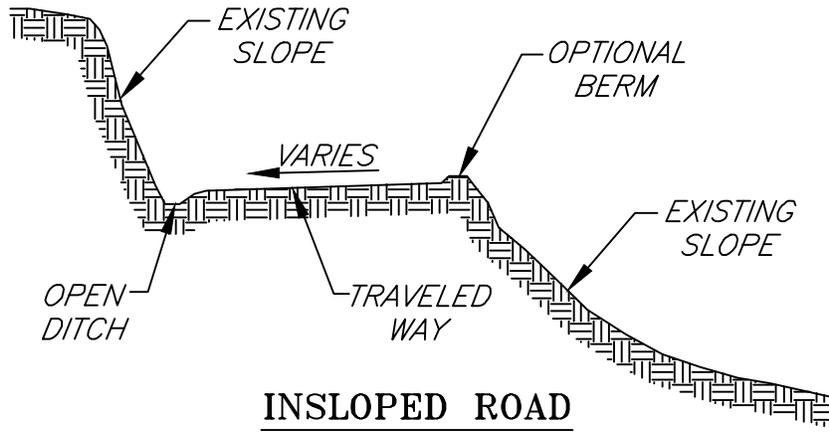
**Equine Facilities Assistance Program Guidelines**

(Appendix F in the Draft Master Plan)

# **APPENDIX E**

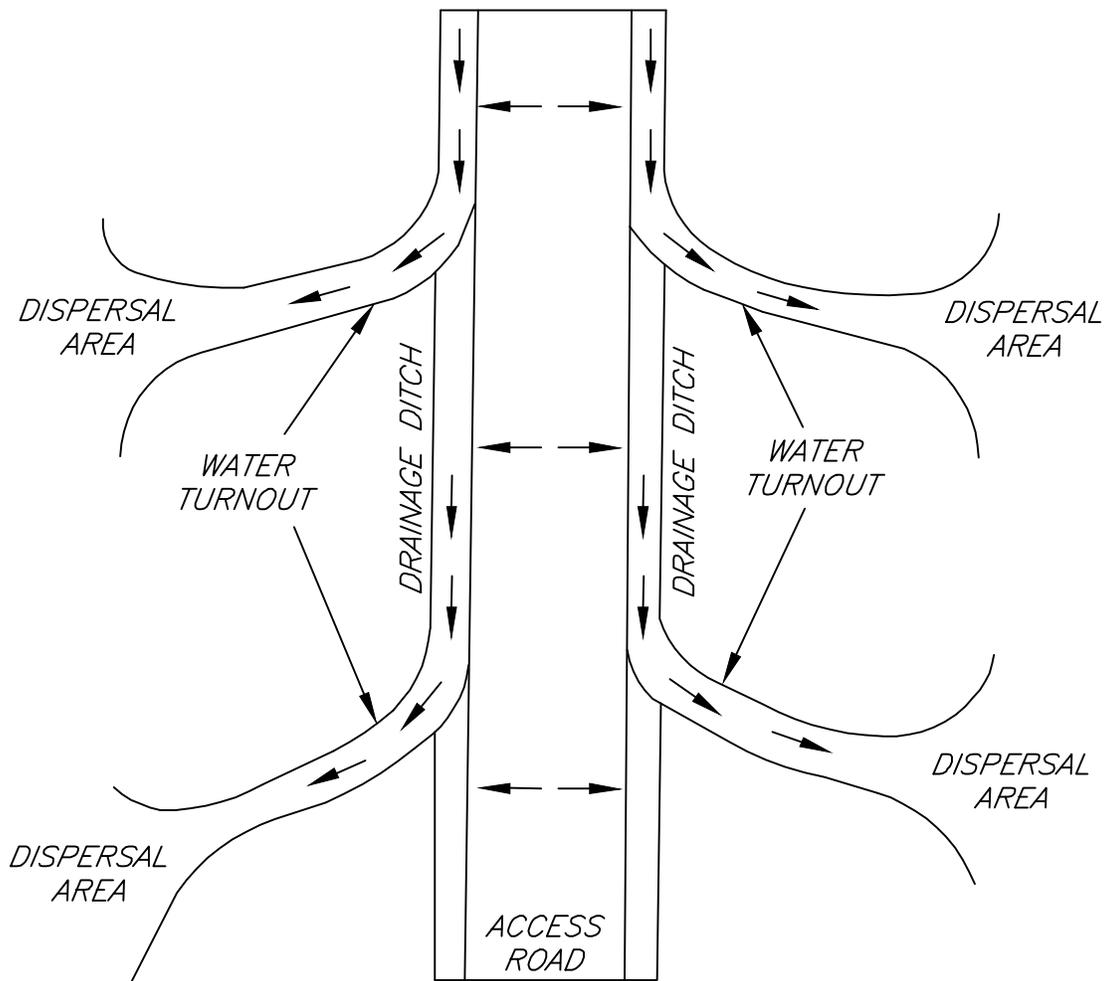
## **EROSION AND SEDIMENTATION CONTROL MEASURES**





**SLOPING ROADWAY GRADES**

**FIGURE 2**



PLAN

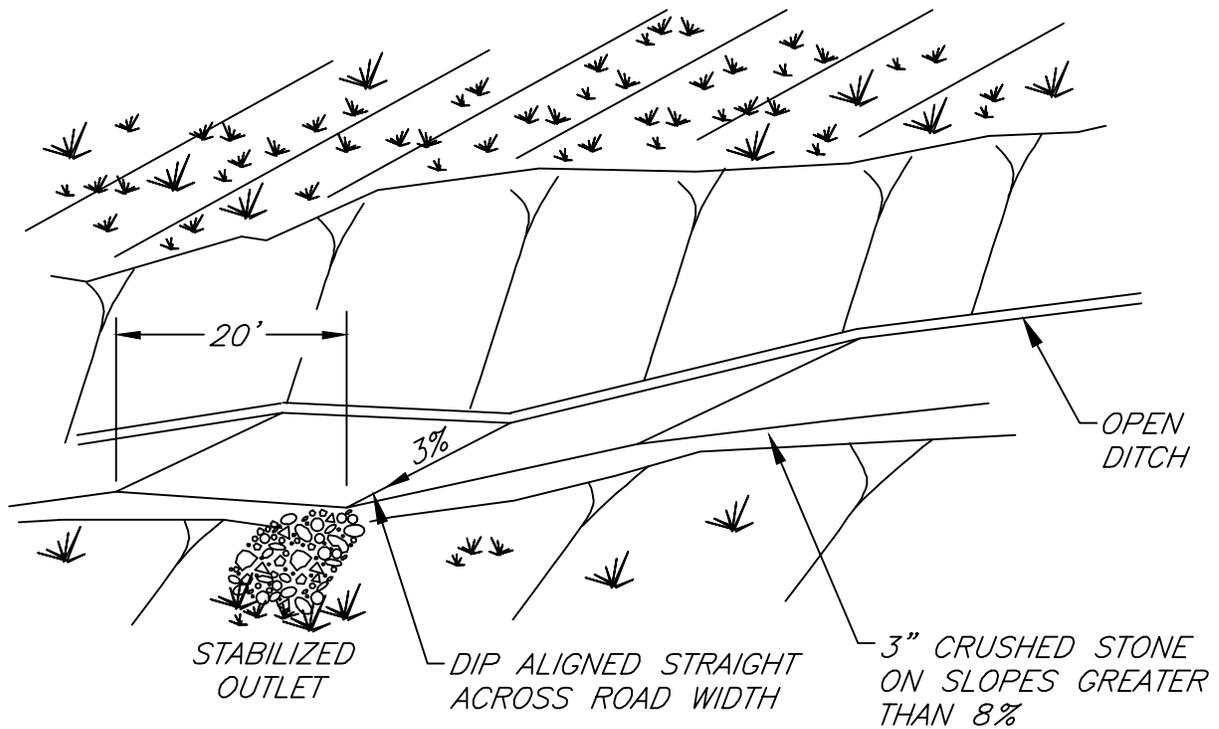


SECTION

NOTE: WATER TURNOUTS SHALL DIVERT WATER AWAY FROM THE ROAD AND CARRY IT TO UNDISTURBED AREAS, BUT SHOULD NOT EMPTY DIRECTLY INTO ADJACENT CHANNELS. WATER TURNOUTS SHOULD BE OUTSLOPED AT 1%–3% (30–45 DEGREES ON SLOPING ROADS).

**WATER TURNOUT**

**FIGURE 3**



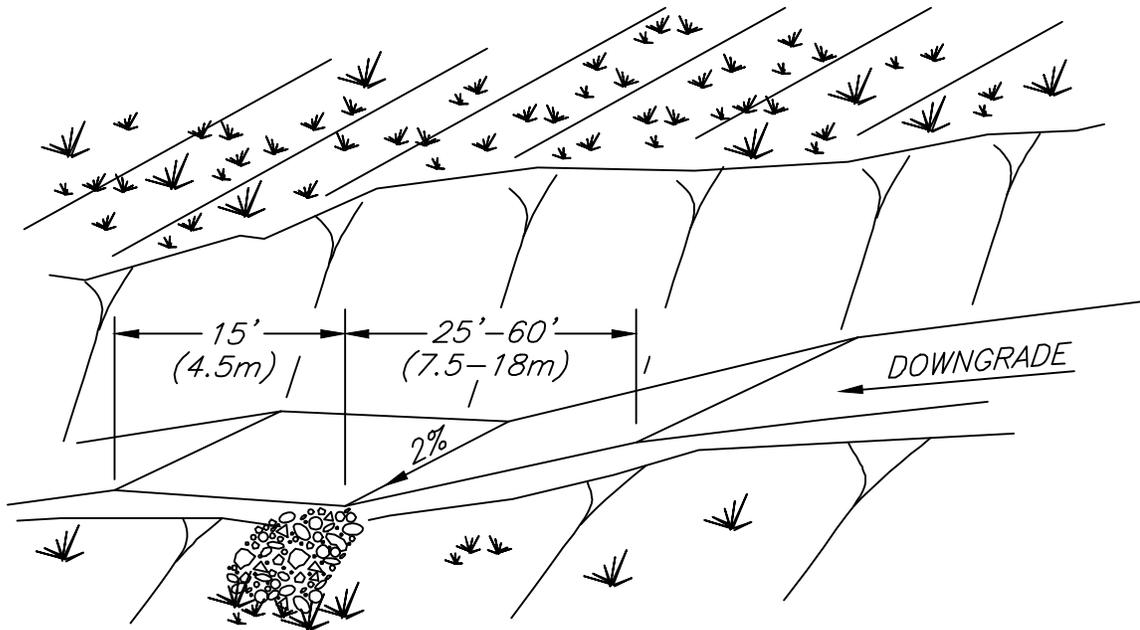
ROAD GRADE (%)
2-4
5-7
8-10

BROAD-BASED DIP SPACING (FEET)
200-300
160-180
140-150

NOTE: BROAD-BASED DIPS ARE BUILT INTO THE SURFACE OF A FLAT OR INSLOPED ROAD AND ARE USUALLY APPLIED TO HAUL ROADS WITH SLOPES LESS THAN 12%. INSTALL DIP AT A 30 DEGREE DOWNSLOPE AND A CROSS-DRAIN OUTSLOPE OF APPROXIMATELY 3%.

**BROAD-BASED  
DRAINAGE DIPS**

FIGURE 4



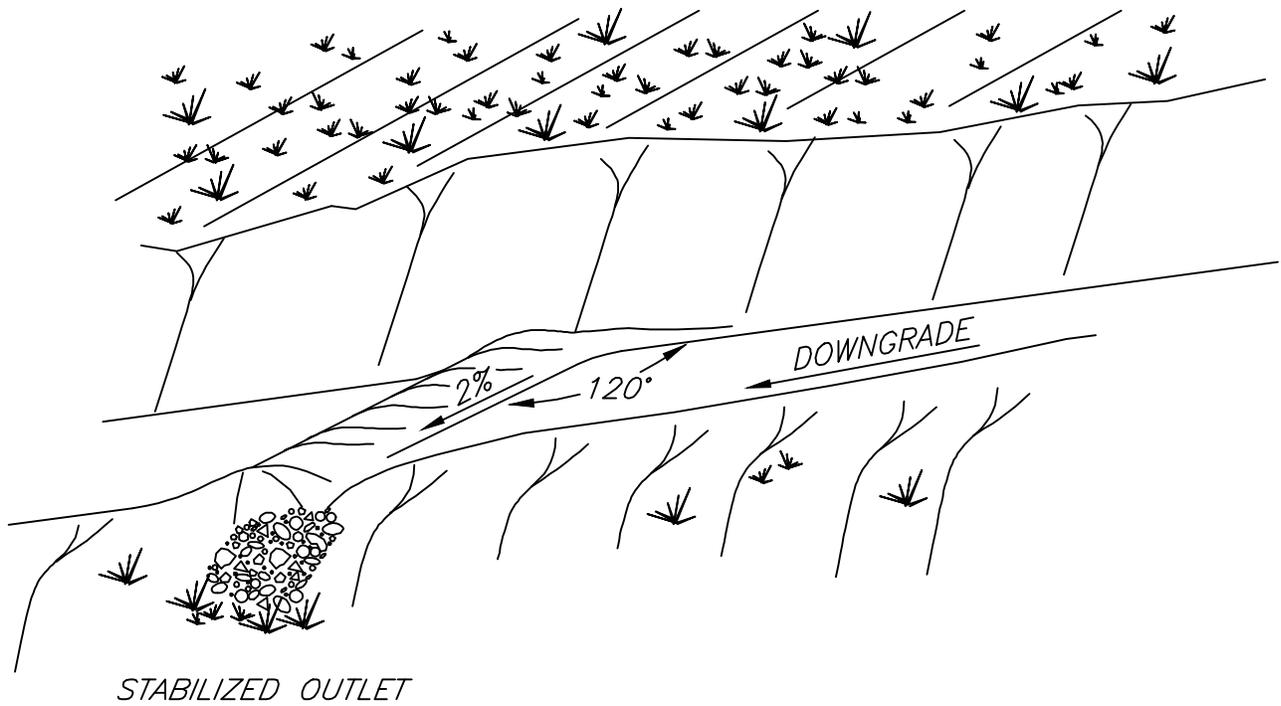
STABILIZED OUTLET

<u>GRADE OF SKID TRAIL</u>	<u>DISTANCE BETWEEN ROLLING DIPS (FEET)</u>
5-10	150
11-15	135
16+	120

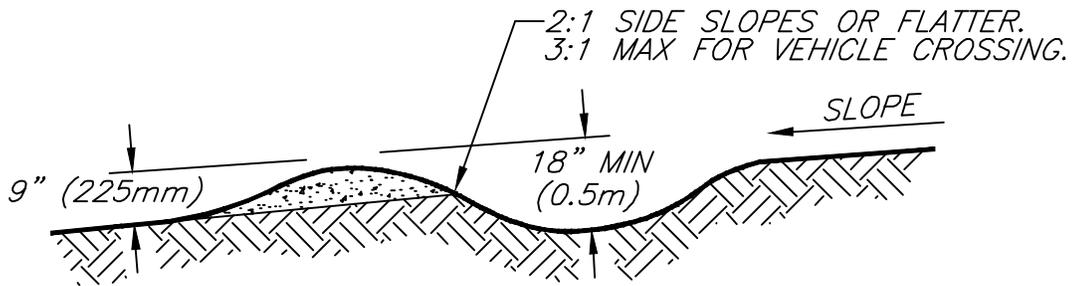
NOTE: ROLLING DIPS ARE TYPICALLY USED ON SKID TRAILS AND STEEP ROADS OVER 12% AND CONSIST OF 12'-15' LONG REVERSE GRADES (3%-8%).

ROLLING DIP

FIGURE 5



STABILIZED OUTLET



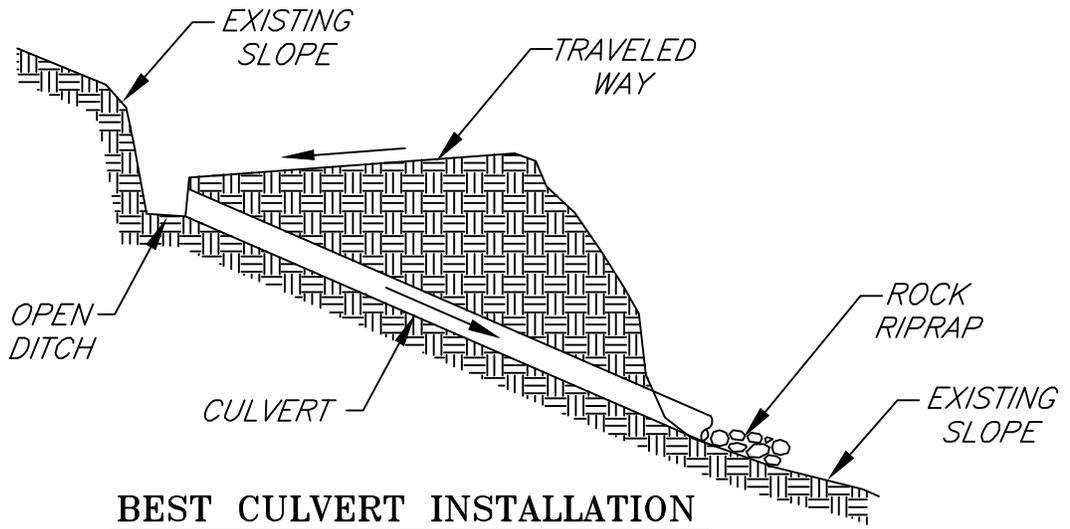
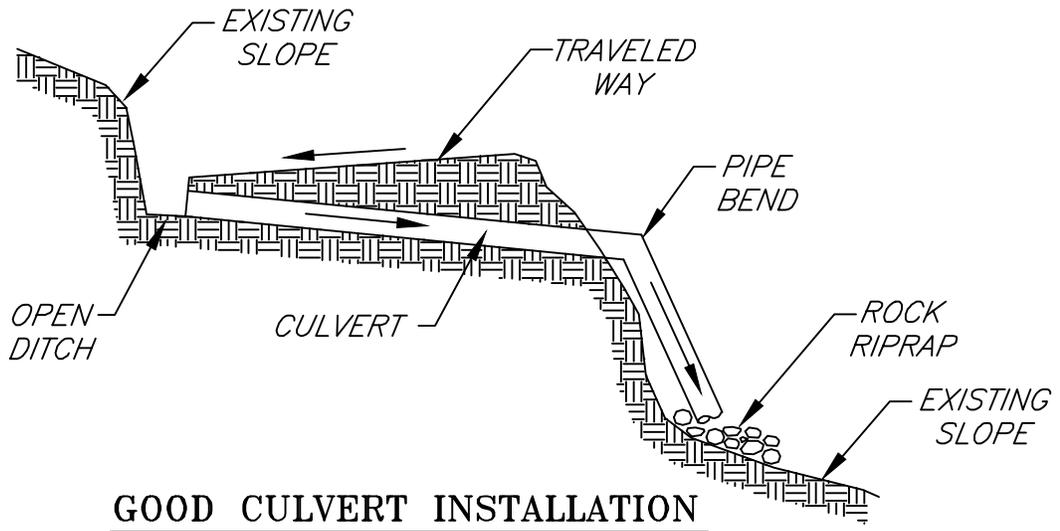
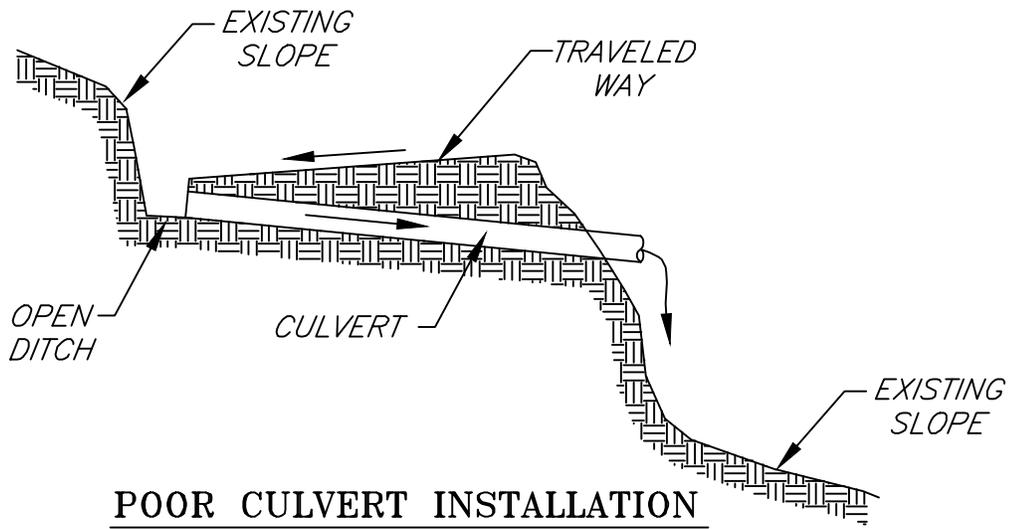
SECTION

NOTE: WATERBARS ARE INSTALLED AFTER REGULAR USE OF ROADS OR TRAILS AND SHALL BE BUILT INTO THE ROAD OR TRAIL AT A 15 TO 30 DEGREE DOWNSLOPE.

GRADE OF ROAD/TRAIL	SPACING (FEET) BETWEEN WATER BARS
5	135
10	80
15	60
20	45
30	35

WATERBAR

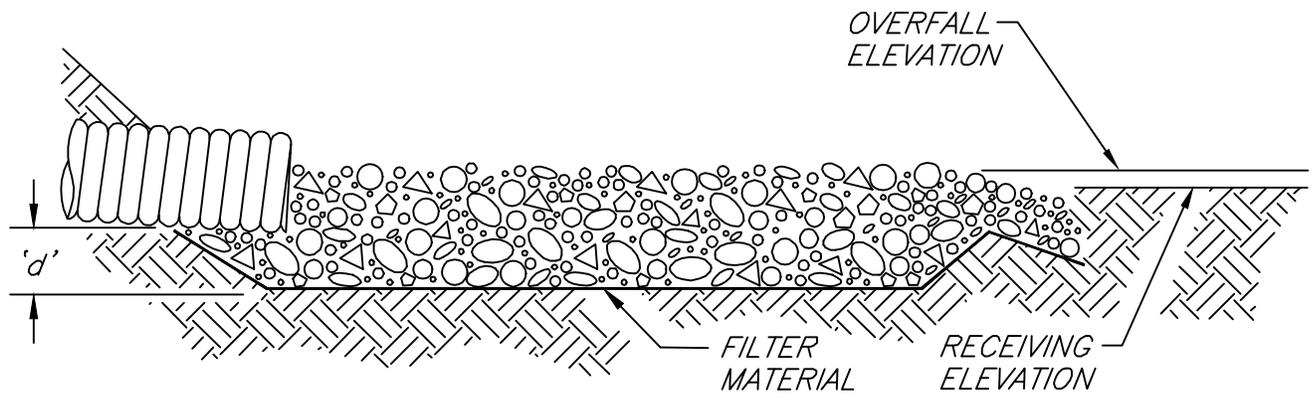
FIGURE 6



NOTE:  
 CROSS ROAD DRAINAGE BY A CULVERT IS RECOMMENDED FOR INSLOPED ROADS WITH SIDE DITCHES, NATURAL DRAWS, AND DRAINING SEEPS. CULVERT SHOULD CROSS ROAD AT A 30 DEGREE ANGLE DOWN SLOPE TO THE DITCH TO LESSEN INLET EROSION AND PLUGGING.

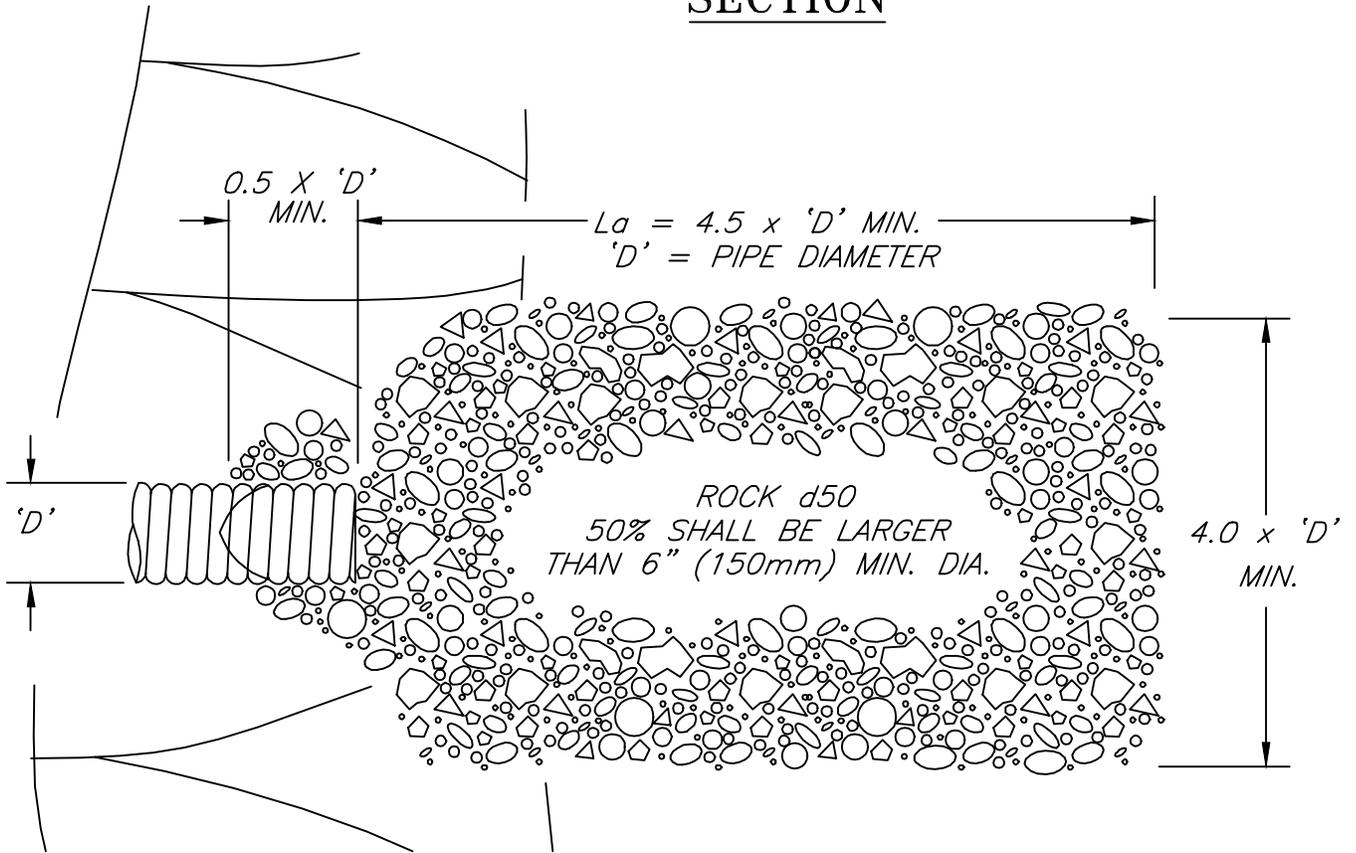
**CROSS ROAD DRAINAGE BY CULVERT**

**FIGURE 7**



THICKNESS ('d') = 1.5 x MAX. ROCK DIAMETER - 6" (150mm) MIN.

**SECTION**



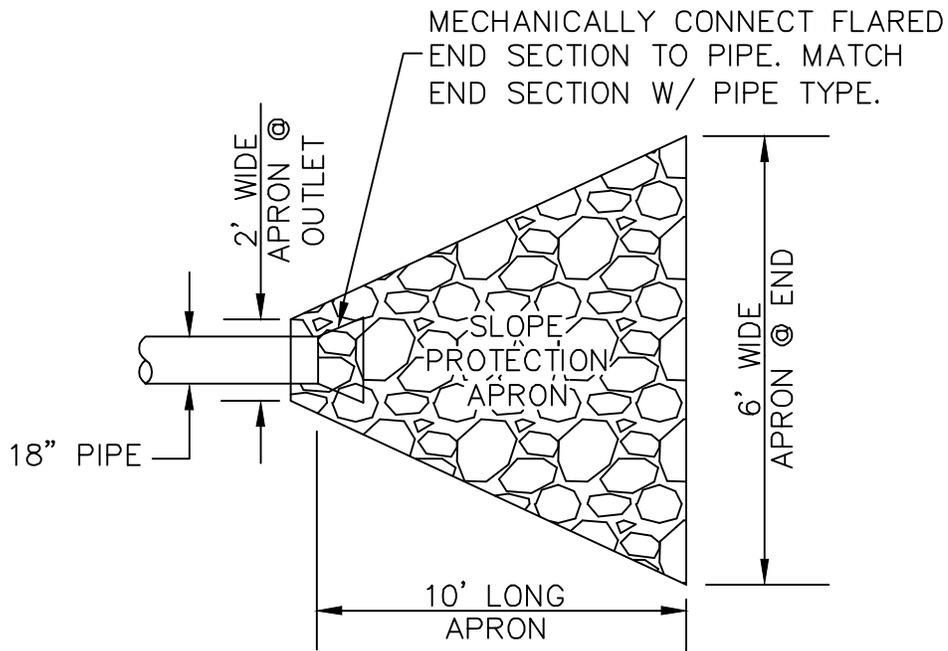
**PLAN**

**NOTES:**

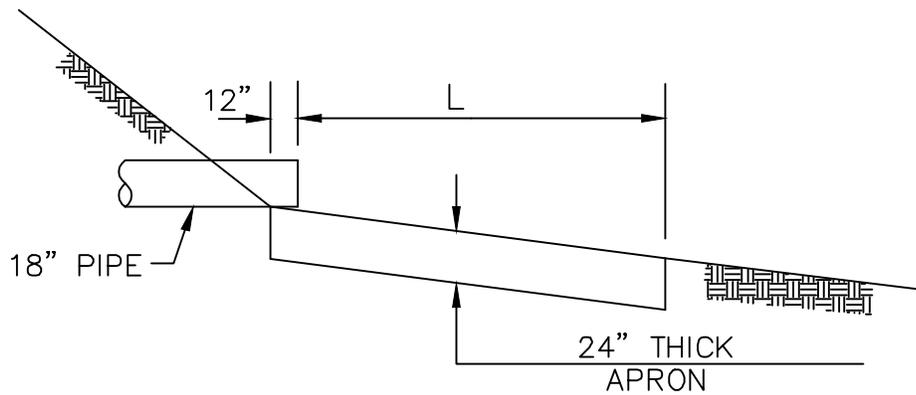
1. 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.

**ENERGY  
DISSIPATOR**

**FIGURE 8**



**PLAN**

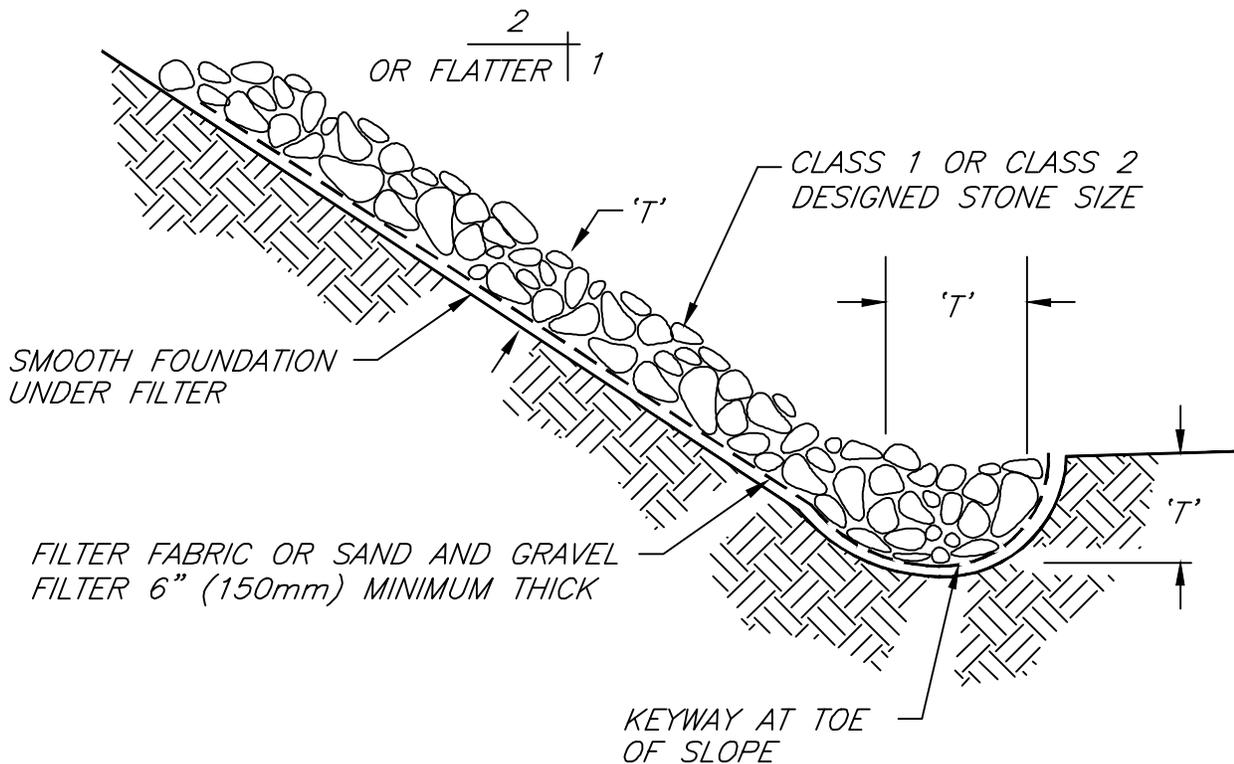


**SECTION**

NOTE: MEDIAN ROCK SIZE TO BE APPROXIMATELY 1 FOOT IN DIAMETER AND 80 POUNDS. USE TYPE NO. 1 CALTRANS SLOPE PROTECTION MATERIAL SPEC PER SECTION 72. ROCKS TO BE PLACED PER SECTION 72, METHOD B.

**STORM DRAIN  
OUTFALL PROTECTION**

**FIGURE 9**



**TYPICAL SECTION**

*NOTE:*

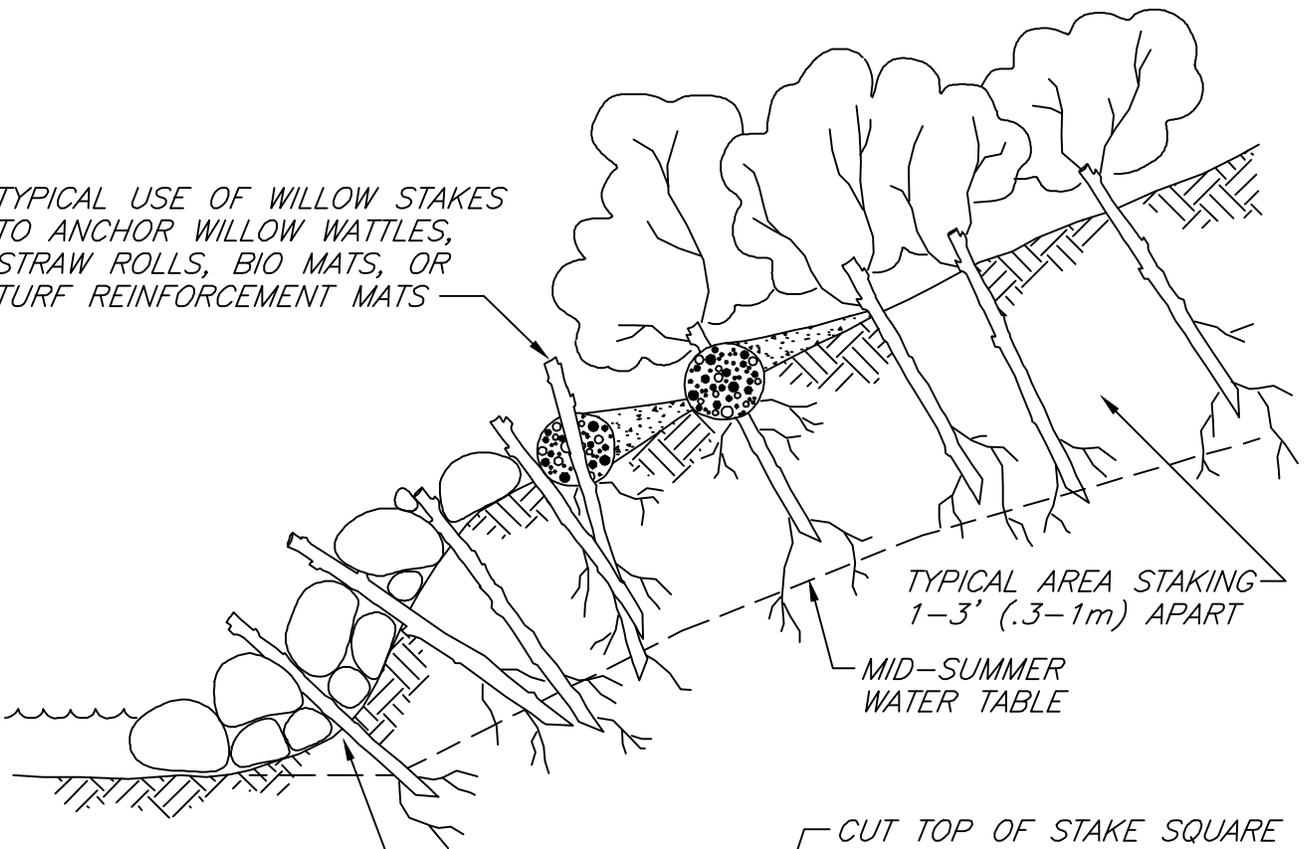
*'T' = THICKNESS: THICKNESS SHALL BE DETERMINED BY THE ENGINEER.*

*MINIMUM THICKNESS SHALL BE 1.5x THE MAXIMUM STONE DIAMETER, NEVER LESS THAN 6" (150mm).*

**RIPRAP  
PROTECTION**

**FIGURE 10**

TYPICAL USE OF WILLOW STAKES TO ANCHOR WILLOW WATTLES, STRAW ROLLS, BIO MATS, OR TURF REINFORCEMENT MATS

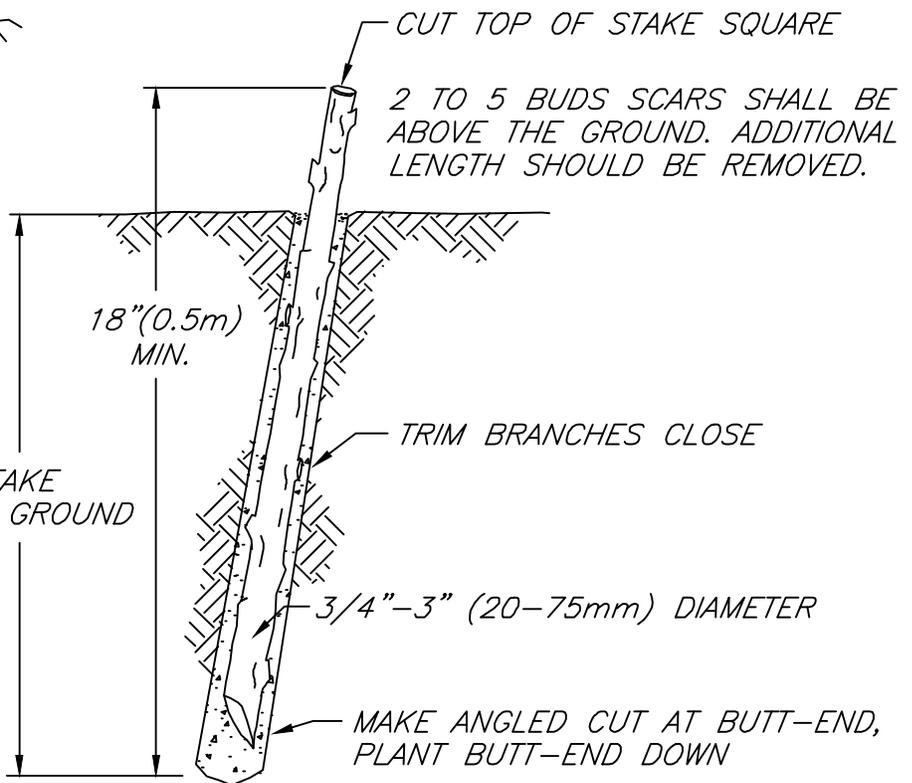


TYPICAL AREA STAKING  
1-3' (.3-1m) APART

MID-SUMMER  
WATER TABLE

TYPICAL - DRIVE OR  
PLANT WILLOW STAKES  
THROUGH OPENINGS IN  
RIPRAP OR GABIONS

PLANT 80% OF STAKE  
LENGTH INTO THE GROUND



CUT TOP OF STAKE SQUARE

2 TO 5 BUDS SCARS SHALL BE  
ABOVE THE GROUND. ADDITIONAL  
LENGTH SHOULD BE REMOVED.

18" (0.5m)  
MIN.

TRIM BRANCHES CLOSE

3/4"-3" (20-75mm) DIAMETER

MAKE ANGLED CUT AT BUTT-END,  
PLANT BUTT-END DOWN

NOTES:

1. HARVEST AND PLANT STAKES DURING THE DORMANT SEASON.
2. USE HEALTHY, STRAIGHT AND LIVE WOOD AT LEAST 1 YEAR OLD.
3. MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION, USE A PILOT BAR IN FIRM SOILS.
4. SOAK CUTTINGS FOR 24 HOURS (MIN.) PRIOR TO INSTALLATION.
5. TAMP THE SOIL AROUND THE STAKE.

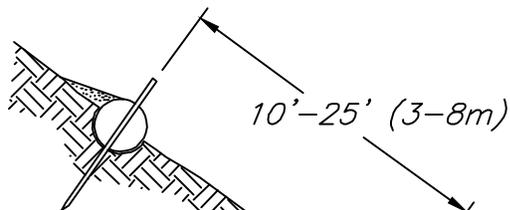
NOT TO SCALE

LIVE STAKING

FIGURE 11

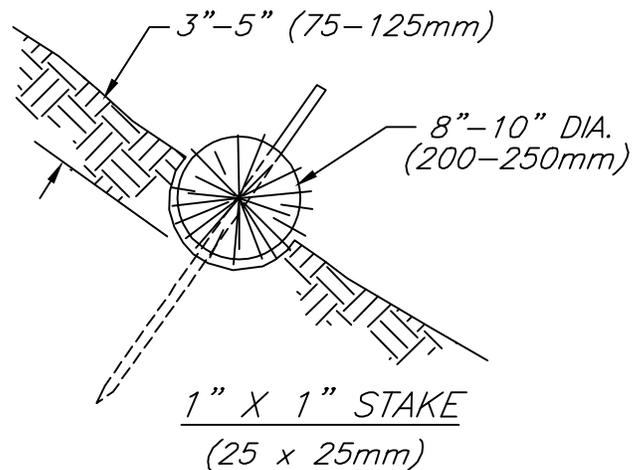
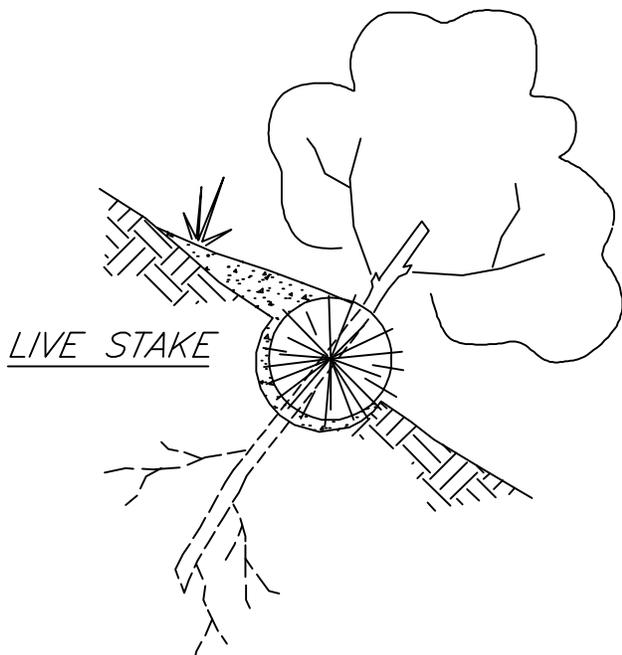
STRAW ROLLS MUST BE PLACED ALONG SLOPE CONTOURS

ADJACENT ROLLS SHALL TIGHTLY ABUT



SPACING DEPENDS ON SOIL TYPE AND SLOPE STEEPNESS

SEDIMENT, ORGANIC MATTER, AND NATIVE SEEDS ARE CAPTURED BEHIND THE ROLLS.



NOT TO SCALE

NOTE:

1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" (75-125mm) DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

STRAW ROLLS

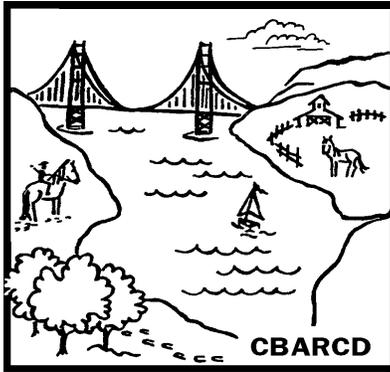
FIGURE 12



# **APPENDIX F**

## **HORSEKEEPING MEASURES**





Council of Bay Area Resource Conservation Districts

Equine Facilities Assistance Program

*“Working with horse owners to protect San Francisco Bay Area water resources.”*

# Horse Manure Management

Number 9

July 2000

Horses are a valued part of California’s suburban and rural environment. Just as horse owners plan the input (feed) for horses, they need to plan for the output (manure). Horse facility owners should develop a waste management plan to ensure clean and safe facilities, protect creeks and ground water, reduce odors and insect breeding opportunities. The plan can be functional — not an elaboration creation. Document the manure use or disposal options you plan on using, such as utilizing manure as a soil amendment or hauling manure off-site. Consider visual impact, odor, health and safety implications, as well as economic costs and benefits in developing and implementing the waste management plan. Effective horse manure management helps protect water quality.

Benefits of implementing a comprehensive waste management plan:

- Healthier environment for horses
- Cleaner and safer work area
- Utilization of manure as a soil amendment
- Protect creeks and streams
- Reduce waste volume
- Reduce odors
- Reduce insect breeding opportunities
- Reduce neighbor complaints

Natural land features must be considered when developing a waste management plan. Evaluate slopes, soils, vegetation, and proximity to creeks and drainageways to avoid polluting water. With growing concern about groundwater protection, land characteristics below the soil surface also need evaluation.

A successful manure management plan involves collection, storage, and disposal or utilization.

## Collection

- Clean-up manure from stalls and paddocks daily; scrape (or otherwise clean out) turn-outs and corrals regularly.
- Horses on pasture generally disperse their manure where it is recycled naturally by the land. If horses deposit manure in one area, periodically spread it around.

## Storage

Manure must be properly stored to maintain good condition, be easy to handle, and avoid leaching nutrients to ground or surface water. Management measures include:

- Locate the storage facility away from creeks, ponds and wells.
- Storage facilities may be covered bins, sheds of concrete or lumber, piles covered with tarps, dumpsters, or covered garbage cans. The type and size of the storage facility depends on how much manure will be stored and the method of disposal or utilization. Include the volume of bedding when sizing a storage facility. Two cubic feet per day of manure and bedding is an estimate of what a 1000 lb. horse can generate.

- The storage facility may require a concrete base depending on the permeability of the soil.
- Be sure the area is convenient for loading and unloading. If motorized equipment will be used, construct the facility large enough and strong enough for the equipment.
- Clear out manure storage areas before the winter rains.
- Grading of the site may be necessary. Check regulations and required permits, and avoid working around environmentally sensitive areas like wetlands or creeks.

### Control Drainage

Use drainage improvements to protect stored manure from rainfall, surface runoff and flooding.

- Use a cover to prevent stored manure and liquid drainage from manure piles (leachate) from entering creeks and waterways.
- Locate the storage facility on an impervious surface such as concrete, compacted clay, or plastic to reduce the potential for seepage into groundwater.
- Divert any runoff that does leave the storage site to a grass filter strip.

### Utilization

- Manure can be applied to land as a fertilizer and soil amendment. Composted horse manure decreases the risk of spreading internal parasites and weed seeds.
- Composting manure and bedding materials reduces bulk, eliminates odor, improves handling qualities, and produces a valuable product that can be given away or used on the property. Composting requires sufficient nearby level space, equipment, labor, and a source of water. (See Fact Sheet #2 — *Composting Horse Manure.*)

- Large horse facilities might want to hire a consultant to help plan a workable, environmentally safe manure management system.

### Disposal

- Local or regional “green waste” composters will accept manure for a fee.
- CALMAX (California Materials Exchange program) lists horse stables that have manure to give away. Contact is: (916) 255-2369 or [www.ciwmb.ca.gov/calmax](http://www.ciwmb.ca.gov/calmax)
- Hauling off manure can be expensive, but may be the only alternative. Neighbors, landscapers, gardeners, and nurseries may want horse manure, but they usually want composted or aged manure.
- Ask your local waste management/recycling authority if there is a list of outlets.

A sound manure management plan needs careful attention to detail. It uses principles from engineering, animal science, economics, and crop and soil science to maximize the value of using animal waste as a soil amendment and to minimize the potential for environmental damage. Also, anyone keeping a horse should be aware of zoning, health, and water quality regulations. Resource Conservation Districts, USDA Natural Resources Conservation Service, University of California Cooperative Extension, and private consultants offer assistance in the development of these plans.

### References:

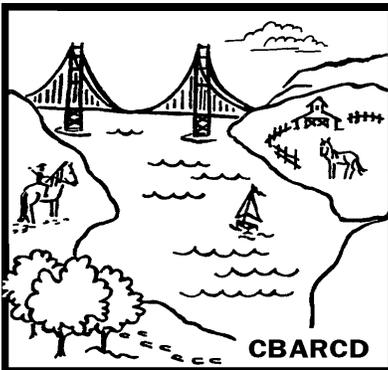
USDA Soil Conservation Service, Agricultural Waste Management Field Handbook, April 1992.

For more information contact:

Council of Bay Area RCDs  
1301 Redwood Way, Suite 170  
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(707) 794-1242 ext 121

This fact sheet is part of a series prepared and published by the Council of Bay Area Resource Conservation Districts in cooperation with the USDA Natural Resources Conservation Service and the University of California Cooperative Extension. The Equine Facilities Assistance Program’s goal is to protect San Francisco Bay Area water resources by assisting in effective management of possible non-point source pollutants associated with horses. Resource Conservation Districts (RCD) are non-regulatory, special districts governed by a volunteer board of directors. In addition to educational

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Council of Bay Area Resource Conservation Districts

Equine Facilities Assistance Program

*“Working with horse owners to protect San Francisco Bay Area water resources.”*

## Conservation Measures to Reduce Non-point Source Pollution at Horse Facilities

Number 3

July 2000

### Participating Resource Conservation Districts

Alameda County RCD  
Contra Costa RCD  
Marin County RCD  
San Mateo County RCD  
Southern Sonoma County RCD

### Non-point source pollution

consists of the diffuse discharge of pollutants that can occur over an extensive area. As water from rainfall, snowmelt, or human activity moves over and through the ground it picks up and transports natural and manmade pollutants, eventually depositing them into surface and ground water.

**Water quality:** a neutral term that relates to water's chemical, biological and physical characteristics. The quality of water often determines its specific use or its ability to support various beneficial uses.

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Horse owners' responsible management of land and water resources improves horses' health, land productivity, property value, and relationships with neighbors while protecting the environment. Although horse facilities generate a small percentage of the Bay Area's total non-point source water pollutants, their high visibility draws attention. It is important for the horse community to demonstrate good stewardship of our natural resources.

Non-point source pollutants commonly associated with horses are:

- Sediment from soil erosion
- Organic matter, ammonia, nutrients and salts in horse waste (manure, urine and soiled bedding)

The siting of horse facilities near streams, in drainage swales that feed streams, and on steep slopes increases the likelihood of pollutants entering waterways. The basic strategies to prevent non-point source pollution are to:

1. Regularly clean-up and properly store and dispose of horse waste
2. Maintain moist and aerobic (where oxygen is present) conditions in paddocks to break down residual waste, however excessive wetness can cause hoof and disease problems
3. Keep “clean water clean” by diverting rainfall runoff around unvegetated and manured areas
4. Capture and contain “contaminated” rainfall runoff before it enters waterways

Visual observation during a heavy rain will help identify possible pollutant sources and routes of transport. With a little time and training horse owners can self-monitor their operations using simple water quality test kits.

If observations or tests indicate water quality impairment consider implementing one or more of the **conservation measures** outlined on back. Conservation measures do not need to be costly. Often, a slight change in operations will achieve the desired result.

A horse facility should consider the following conservation measures to limit water quality impacts:

### Manure Management

1. Collect manure on a regular basis to limit the seepage of salts and nutrients into ground water, or the runoff of manure into waterbodies.
2. Store manure and soiled bedding in a manner that does not allow runoff or leaching from the storage area to affect water quality.
3. Implement an adequate on-site use or off-site disposal system for the waste.
4. During dry months, water, by sprinklers, areas where urine and manure accumulate to assist the aerobic breakdown of ammonium compounds.

### Stream Protection

1. Do not allow horses unmanaged access to creeks, wetlands or other biologically sensitive areas. Create alternative sources for drinking water, shade and forage.
2. Preserve, enhance or recreate vegetated riparian zones to filter runoff, stabilize streambanks, reduce solar heating of creek water, and provide aquatic wildlife habitat. Even a zone of grass around waterways will help.
3. Design stream crossings that limit erosion.

### Pasture Management

1. Manage pastures to prevent erosion.
2. Cross fence and graze pastures in rotation to allow grass time for regrowth.
3. Control horse trampling and churning of wet pasture.

### Stormwater Runoff Management

1. Divert “clean” upslope runoff around corrals, paddocks, arenas, waste storage facilities, and other areas that are likely to contain horse waste or be void of vegetation. Diversion may lead to a concentration of runoff that can cause erosion unless it is adequately planned.
2. Employ a system of gutters, downspouts, and drains to convey “clean” roof runoff away from manured or bare soil areas in a non-erosive manner.
3. Route “contaminated” runoff from paddocks, corrals, arenas, and other areas void of vegetation or where horse waste is likely to accumulate, into a retention pond or an area with sufficient vegetation to filter the flow.
4. Do not allow horse wash water or irrigation runoff to enter directly into waterbodies.
5. Construct roads, parking areas, impervious surfaces, trails, and associated ditches and culverts to drain runoff in a non-erosive manner.

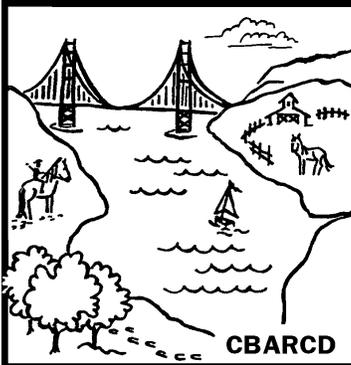
### Other Conservation Measures

1. Determine correct application rates of fertilizer or manure to pastures.
2. Implement Integrated Pest Management techniques to reduce the use of pesticides.
3. Take steps to reduce the possibility of the airborne transport of pesticides, herbicides, and fungicides into waterbodies.
4. Plant or construct windbreaks around bare soil areas to reduce wind erosion and to provide shelter for wildlife.

*Prepared by Alistair Bleifuss, Alameda County Resource Conservation District*

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Council of Bay Area Resource Conservation Districts

Equine Facilities Assistance Program

“Working with horse owners to protect San Francisco Bay Area water resources.”

## Horse Paddocks: Designed and Managed to Protect Water Quality

Number 5

July 2000

### Participating Resource Conservation Districts

Alameda County RCD  
Contra Costa RCD  
Marin County RCD  
San Mateo County RCD  
Southern Sonoma County RCD

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### Non-point source pollution

consists of the diffuse discharge of pollutants that can occur over an extensive area. As water from rainfall, snowmelt, or human activity moves over and through the ground it picks up and transports natural and manmade pollutants, eventually depositing them into surface and ground water.

**Water quality:** a neutral term that relates to water's chemical, biological and physical characteristics. The quality of water often determines its specific use or its ability to support various beneficial uses.

**Paddocks\*** (corrals) refer to small, non-irrigated, non-grazable holding pens or exercise lots, often adjacent to horse stalls. They are used as a place to hold horses rather than as a source of pasture feed. Paddocks may appear as bare, dry lots because of heavy usage. Even though most of the ground in a paddock is not protected by vegetation, paddocks should be managed to protect soil and water resources.

**Size.** Minimize the size of the paddock or corrals. There should be at least 600 sq. ft per horse but paddocks should be less than one acre.

**Shape.** Adjust the shape of the paddock to account for the topography, drainage patterns, availability of land, and horse's requirements, e.g. consider a paddock 20' x 100' versus 40' x 50'.

**Surface.** The weather, slope, soil conditions and local regulations may dictate the type of surface required. The surface can be as simple as adding 2 inches of sand to the existing surface or more complex such as building a drain field under the entire surface (Figure 1 and 2). Keeping the paddock surface dry with adequate drainage will not only minimize contaminated runoff but also may prevent hoof disease and parasite problems.

**Fencing.** Fencing around a paddock should be strong and free from sharp or jagged protrusions. There are a variety of fencing materials available. Wood rails are attractive, but require a lot of maintenance. Horses confined to stalls or paddocks frequently resort to chewing wood or other material. Non-toxic repellents can be painted on wood surfaces to discourage chewing. Pipe fencing or smooth wire may be the most economical and attractive fencing material in the long run. Never use barbed wire for a horse paddock.

\* This definition of a paddock should not be confused with the division of a pasture into grazing cells which may also be called paddocks.

**Location.** Locate the paddock where there is proper drainage, with less than 5% slope. Any drainage should go into a buffer area or vegetated filter strip and never directly into a creek or waterbody.

- Avoid low, frequently wet and muddy areas.
- Do not locate a paddock over any part of a septic system, including the leach field.
- Locating a paddock to the south, west and east of structures will help it to dry out, especially compared to paddocks placed to the north which are more often in the shade.
- Route any irrigation water or rain-water runoff away from the paddock to keep it dry.

## Paddock Design Examples

A single horse can be housed in a paddock 12 ft wide and 24 ft long. A 2% slope from a three-sided shelter to an absorption pit improves drainage. The absorption area can vary according to need. The pit can be from 1 ft to 5 ft deep. It can be filled with rock and gravel. The surface can be covered with sand or turf. If the paddock is to be built on level ground or if the slope must be otherwise adjusted, an area equal to the area of the paddock can be excavated to a depth of 1 ft. The soil from this excavation can then be used to adjust the slope and elevate the shelter to improve drainage. Surround paddocks with grass "buffer" strips to filter any additional runoff.

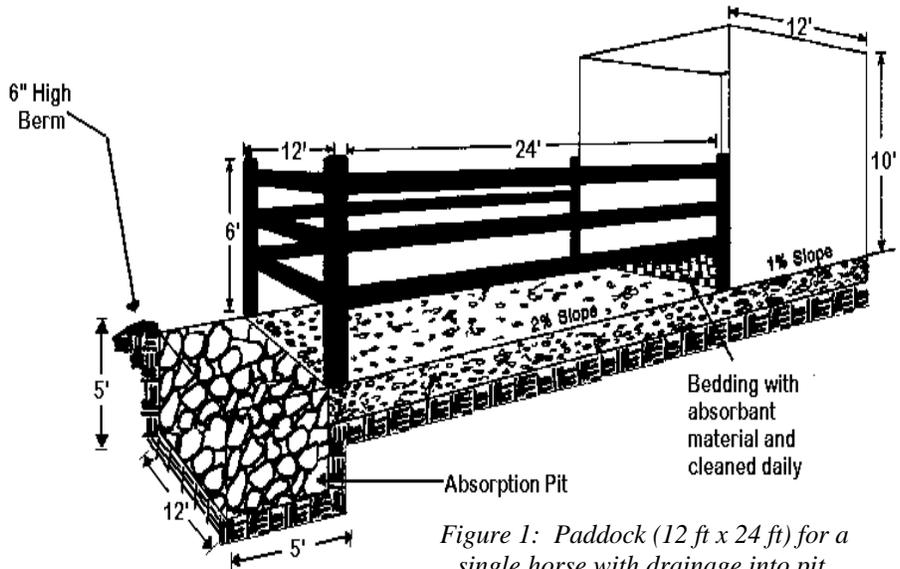


Figure 1: Paddock (12 ft x 24 ft) for a single horse with drainage into pit.

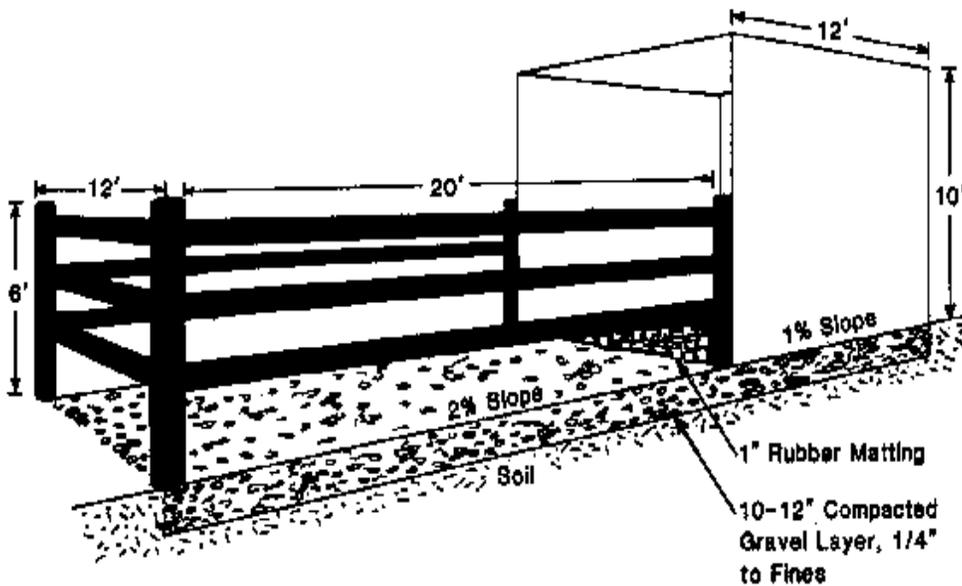


Figure 2 provides another example of a paddock (12 ft. wide by 20 ft. long) for a single horse. In this design the entire surface is prepared for adequate drainage. A 10" to 12" layer of pea gravel is covered with decomposed granite (DG) to serve as a cushion and help prevent foot sores and lameness. Under the shelter, the DG layer is covered with 1" rubber matting.

Both of these paddock designs provide for a single horse. Additional horses could be housed in similar paddocks or in larger paddocks with appropriate shelter space.

*Prepared by Sheila Barry, Alameda County Resource Conservation District*

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## **APPENDIX D**

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# **Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings**

## **Secretary of the Interior's Standards for Rehabilitation**

The Secretary of the Interior's Standards for Rehabilitation are ten basic principles created to help preserve the distinctive character of a historic building and its site, while allowing for reasonable change to meet new needs.

The Standards (36 CFR Part 67) apply to historic buildings of all periods, styles, types, materials, and sizes. They apply to both the exterior and the interior of historic buildings. The Standards also encompass related landscape features and the building's site and environment as well as attached, adjacent, or related new construction.

Rehabilitation projects must meet the following Standards, as interpreted by the National Park Service, to qualify as “certified rehabilitations” eligible for the 20% rehabilitation tax credit.

The Standards are applied to projects in a reasonable manner, taking into consideration economic and technical feasibility.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

## **Guidelines for Rehabilitating Historic Buildings**

### **Buildings Choosing Rehabilitation as a Treatment**

In Rehabilitation, historic building materials and character-defining features are protected and maintained as they are in the treatment Preservation; however, an assumption is made prior to work that existing historic fabric has become damaged or deteriorated over time and, as a result, more repair and replacement will be required. Thus, latitude is given in the Standards for Rehabilitation and Guidelines for Rehabilitation to replace extensively deteriorated, damaged, or missing features using either traditional or substitute materials. Of the four treatments, only Rehabilitation includes an opportunity to make possible an efficient contemporary use through alterations and additions.

### **Identify, Retain, and Preserve Historic Materials and Features**

Like Preservation, guidance for the treatment Rehabilitation begins with recommendations to identify the form and detailing of those architectural materials and features that are important in defining the building's historic character and which must be retained in order to preserve that character. Therefore, guidance on identifying, retaining, and preserving character-defining features is always given first. The character of a historic building may be defined by the form and detailing of exterior materials, such as masonry, wood, and metal; exterior features, such as roofs, porches, and windows; interior materials, such as plaster and paint; and interior features, such as moldings and stairways, room configuration and spatial relationships, as well as structural and mechanical systems.

## Protect and Maintain Historic Materials and Features

After identifying those materials and features that are important and must be retained in the process of Rehabilitation work, then protecting and maintaining them are addressed. Protection generally involves the least degree of intervention and is preparatory to other work. For example, protection includes the maintenance of historic material through treatments such as rust removal, caulking, limited paint removal, and re-application of protective coatings; the cyclical cleaning of roof gutter systems; or installation of fencing, alarm systems and other temporary protective measures. Although a historic building will usually require more extensive work, an overall evaluation of its physical condition should always begin at this level.

## Repair Historic Materials and Features

Next, when the physical condition of character-defining materials and features warrants additional work repairing is recommended. Rehabilitation guidance for the repair of historic materials such as masonry, wood, and architectural metals again begins with the least degree of intervention possible such as patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading them according to recognized preservation methods. Repairing also includes the limited replacement in kind--or with compatible substitute material--of extensively deteriorated or missing parts of features when there are surviving prototypes (for example, brackets, dentils, steps, plaster, or portions of slate or tile roofing). Although using the same kind of material is always the preferred option, substitute material is acceptable if the form and design as well as the substitute material itself convey the visual appearance of the remaining parts of the feature and finish.

## Replace Deteriorated Historic Materials and Features

Following repair in the hierarchy, Rehabilitation guidance is provided for replacing an entire character-defining feature with new material because the level of deterioration or damage of materials precludes repair (for example, an exterior cornice; an interior staircase; or a complete porch or storefront). If the essential form and detailing are still evident so that the physical evidence can be used to re-establish the feature as an integral part of the rehabilitation, then its replacement is appropriate. Like the guidance for repair, the preferred option is always replacement of the entire feature in kind, that is, with the same material. Because this approach may not always be technically or economically feasible, provisions are made to consider the use of a compatible substitute material. It should be noted that, while the National Park Service guidelines recommend the replacement of an entire character-defining feature that is extensively deteriorated, they never recommend removal and replacement with new material of a feature that--although damaged or deteriorated--could reasonably be repaired and thus preserved.

## Design for the Replacement of Missing Historic Features

When an entire interior or exterior feature is missing (for example, an entrance, or cast iron facade; or a principal staircase), it no longer plays a role in physically defining the historic character of the building unless it can be accurately recovered in form and detailing through the

process of carefully documenting the historical appearance. Although accepting the loss is one possibility, where an important architectural feature is missing, its replacement is always recommended in the Rehabilitation guidelines as the first or preferred, course of action. Thus, if adequate historical, pictorial, and physical documentation exists so that the feature may be accurately reproduced, and if it is desirable to re-establish the feature as part of the building's historical appearance, then designing and constructing a new feature based on such information is appropriate. However, a second acceptable option for the replacement feature is a new design that is compatible with the remaining character-defining features of the historic building. The new design should always take into account the size, scale, and material of the historic building itself and, most importantly, should be clearly differentiated so that a false historical appearance is not created.

## **Alterations/Additions for the New Use**

Some exterior and interior alterations to a historic building are generally needed to assure its continued use, but it is most important that such alterations do not radically change, obscure, or destroy character-defining spaces, materials, features, or finishes. Alterations may include providing additional parking space on an existing historic building site; cutting new entrances or windows on secondary elevations; inserting an additional floor; installing an entirely new mechanical system; or creating an atrium or light well. Alteration may also include the selective removal of buildings or other features of the environment or building site that are intrusive and therefore detract from the overall historic character. The construction of an exterior addition to a historic building may seem to be essential for the new use, but it is emphasized in the Rehabilitation guidelines that such new additions should be avoided, if possible, and considered only after it is determined that those needs cannot be met by altering secondary, i.e., non character-defining interior spaces. If, after a thorough evaluation of interior solutions, an exterior addition is still judged to be the only viable alternative, it should be designed and constructed to be clearly differentiated from the historic building and so that the character-defining features are not radically changed, obscured, damaged, or destroyed. Additions and alterations to historic buildings are referenced within specific sections of the Rehabilitation guidelines such as Site, Roofs, Structural Systems, etc., but are addressed in detail in New Additions to Historic Buildings.

## **Energy Efficiency/Accessibility Considerations/Health and Safety Code Considerations**

These sections of the guidance address work done to meet accessibility requirements and health and safety code requirements; or retrofitting measures to improve energy efficiency. Although this work is quite often an important aspect of Rehabilitation projects, it is usually not a part of the overall process of protecting or repairing character-defining features; rather, such work is assessed for its potential negative impact on the building's historic character. For this reason, particular care must be taken not to radically change, obscure, damage, or destroy character-defining materials or features in the process of meeting code and energy requirements.