# 3. Text Revisions

# 3.1 and 3.2 Introduction and Text Revisions



ESA

# CHAPTER 3
# Text Revisions

## 3.1 Introduction

The following revisions have been made to the Draft EIR (DEIR) text. These corrections include: minor corrections made by the EIR authors to improve writing clarity, grammar, and consistency; corrections, additions, or clarifications requested by a specific comment; or staff-initiated text changes to update information presented in the DEIR. The text revisions are organized by the chapter and page number that appear in the DEIR. ~~Strikethrough~~ text presented in this section indicates text that has been deleted from the DEIR. Text that has been added to the Draft EIR is presented as <u>underlined</u>.

# 3.2 Text Revisions

As a staff initiated change, Figure 3.3-OWTP-5 following Section 3.3 in the DEIR and Figure 5.1 on DEIR p. 5-33 were slightly revised to correct errors (. The revisions do not materially affect the analysis or conclusions presented in the DEIR. The revised figures are included at the end of this section.

## Chapter 2. Project Description

The last paragraph on DEIR p. 2-14 has been revised as follows:

> Under Alternative 1, the capacity of the Lafayette WTP would be expanded to meet this need and would include additional operational capacity to meet short-term water delivery requirements. Under Alternative 2, operations at the Orinda, Sobrante and Upper San Leandro WTPs would be altered such that the Orinda WTP could make up for the decommissioning of the Lafayette WTP.~~the Orinda WTP would meet this need~~. Under either Alternative 1 or 2, the Walnut Creek WTP operational capacity must be increased to meet short-term water delivery requirements for the Leland Pressure Zone.

Table 2-3 on DEIR p. 2-17 has been revised as shown on the following page.

The first full paragraph on DEIR p. 2-20 has been revised as follows:

> The purpose of the LT2 Rule is to reduce the incidence of disease associated with *cryptosporidium* and other pathogens in drinking water. The rule applies to all public water systems that use surface water. Key provisions in the LT2 Rule include (among other things) source water monitoring, criteria for the use of *cryptosporidium* treatment and control processes, and additional treatment requirements for higher risk systems (i.e., those with the highest source-water levels of *cryptosporidium*). The rule does not likely require any major changes to EBMUD's conventional plants (Upper San Leandro, Sobrante, and San Pablo); however, at the in-line WTPs (Walnut Creek, Lafayette, and Orinda), flocculation and sedimentation treatment of the raw water may eventually be needed. The WTTIP includes the addition of high-rate sedimentation processing at the in-line WTPs as a potential future project, which is evaluated programmatically in this EIR. The WTTIP also includes the addition of ultra-violet light disinfection systems at the Walnut Creek, Lafayette and Orinda WTPs as potential future projects to comply with the LT2 Rule. Otherwise, EBMUD compliance with the LT2 Rule dovetails with compliance with the *California Cryptosporidium Action Plan*, as described below.

The following is inserted as the third full sentence under the heading "Infrastructure Replacement and Technology Upgrades" on DEIR p.2-21:

> Ozonation system equipment at Upper San Leandro and Sobrante WTPs is nearing the end of its useful life and requires updating.

**REVISED TABLE 2-3**
**SUMMARY OF NEED ADDRESSED BY SPECIFIC WATER TREATMENT IMPROVEMENT PROJECTS**

| Facility & Project | Alternatives | Demand | Disinfection Byproduct Rules (Federal) | Surface Water Treatment Rules (Federal) | California Cryptosporidium Action Plan (State) | NPDES Permit (State) | Infrastructure and Technology |
|---|---|---|---|---|---|---|---|
| Lafayette WTP | | | | | | | |
| Increase Capacity from 25 mgd to 34 mgd | 1 | x | | | | | x |
| Clearwells | 1 | x | | | | | x |
| Chlorine Contact Basin | 1 | | x | | | | x |
| Blower Building | 1 | | | | | | x |
| Backwash Water Recycle System | 1 | x | | | x | | x |
| Sodium Hypochlorite Storage and Feed Building (Lafayette Aqueduct and WTP) | 1,2 | | x | | | | |
| Raw Water Bypass Pipe | 1 | | | | | | x |
| Leland and Bryant Pumping Plants and Pipelines | 1 | x | | | | | x |
| Electrical Substation | 1 | x | | | | | x |
| Lafayette Reclaimed Water Pipeline | 1 | | | | x | | x |
| High-Rate Sedimentation Units [a] | 1 | | | x | | | |
| Ultraviolet Light Disinfection [a] | 1 | | | x | | | |
| Orinda WTP | | | | | | | |
| Backwash Water Recycle System | 1,2 | | | | x | x | |
| Clearwell | 2 | x | | | | | |
| Los Altos Pumping Plant No. 2 | 2 | x | | | | | |
| Orinda-Lafayette Aqueduct | 2 | x | | | | | |
| Electrical Substation | 2 | x | | | | | |
| Additional Clearwell [a] | 1,2 | | | x[b] | | | |
| High-Rate Sedimentation Units [a] | 1,2 | | | x | | | |
| Chlorine Contact Basin [a] | 1,2 | | x | | | | |
| Ultraviolet Light Disinfection [a] | 1,2 | | | x | | | |
| Walnut Creek WTP | | | | | | | |
| Increase Capacity from 96 mgd to 115 mgd (add filters) | 1,2 | x | | | | | |
| Leland Pumping Plant | 1,2 | x | | | | | x |
| High-Rate Sedimentation Units [a] | 1,2 | | | x | | | |
| Ultraviolet Light Disinfection [a] | 1,2 | | | x | | | |
| Sobrante WTP | | | | | | | |
| Ozone Upgrades | 1,2 | | | | | | x |
| Filter-to-Waste Equalization Basin | 1,2 | | | | | | x |
| Backwash Water Equalization Basin | 1,2 | | | | | | x |
| High-Rate Sedimentation Units | 1,2 | | | | | | x |
| Chlorine Contact Basin | 1,2 | | x | | | | |
| Upper San Leandro WTP | | | | | | | |
| Ozone Upgrades | 1,2 | | | | | | x |
| Filter-to-Waste Equalization Basin | 1,2 | | | | | | x |
| Distribution System Improvements | 1,2 | x | | x[b] | | | x |

[a] Program-level projects

[b] As it relates to water aging and mixing

The following has been inserted as the first paragraph under the heading "2.4.6 Upper San Leandro Water Treatment Plant" on DEIR p. 2-54:

> Like the Sobrante WTP, the ozonation system at the Upper San Leandro WTP is undersized for handling poor raw water quality episodes occasionally experienced at the WTP. In addition, the rate at which the WTP's filters can be backwashed is limited because the backwash settling basins are also used as filter-to-waste basins when the filters are put back in service. The new filter-to-waste basin would enable the filters to be returned to service more quickly.

The first paragraph on DEIR p. 2-59 has been revised as follows:

> Map D-OWTP-2 shows the proposed layout for the Orinda WTP under Alternative 2. Map D-OWTP-3 provides two cross-sections drawings for Orinda WTP under Alternative 2. Section A is through the proposed clearwell and Los Altos Pumping Plant No. 2. Section B is through the Backwash Water Recycle System. ~~The Orinda WTP under this alternative would produce 175 mgd (average annualized rate), but would operate at the slightly higher rate of 180 mgd, an increase of 5 mgd over existing conditions. (It would also operate at this slightly higher rate under Alternative 1 during peak demand periods).~~ The Orinda WTP would operate at the slightly higher rate of 180 mgd, an increase 5 mgd over existing operations, during peak demand periods. The additional capacity would not require any changes to treatment processes as it can be accomplished by one of three existing standby filters. As with Alternative 1, the existing backwash water treatment system would be upgraded to treat and recycle backwash water to the head of the WTP. In addition, the facilities needed to store, pump, and convey treated water to the Lafayette WTP would be constructed; these proposed facilities include ~~a clearwell,~~ a pumping plant, a clearwell to support the pumping plant, an electrical substation, and the Orinda-Lafayette Aqueduct (the last facility is described in Section 2.5.3).

# Chapter 3. Environmental Settings, Impacts, and Mitigation Measures

## 3.2 Land Use, Planning, and Recreation

The first sentence of the first paragraph on DEIR p. 3.2-6 has been revised as follows:

> The tunnel portion of this project would be constructed entirely within Orinda, from the Orinda Sports Field west of the Orinda WTP to an exit shaft on East Altarinda Road, near the St. Stephens Drive/El Nido Ranch Road intersection (see Maps C-OLA-1 to C-OLA-5).

The third paragraph on DEIR p. 3.2-6 has been revised as follows:

> ***Orinda-Lafayette Aqueduct***
>
> The proposed location of the exit shaft is in Orinda, just west of the St. Stephens Drive/ El Nido Ranch Road intersection (see Map C-OLA-2). The exit shaft site is a narrow parcel

of undeveloped land between the Highway 24 right-of-way and Altarinda Drive, adjacent and to the east of a residence. ~~The tunnel portion of this project would be constructed entirely within Orinda, from the Orinda Sports Field west of the Orinda WTP to an exit shaft near the St. Stephens Drive/El Nido Ranch Road intersection (see Maps C-OLA-1 to C-OLA-5).~~ The tunnel would predominantly run beneath low-density residential land uses. The pipeline from the tunnel exit shaft would be constructed along El Nido Ranch Road, which has single-family residential development on the north side and Highway 24 and the Bentley School on the south side. The pipeline alignment would cross under Highway 24 from the Bentley School parking lot, then parallel Mt. Diablo Boulevard to the Lafayette WTP in the vicinity of Walter Costa Trail and the Lafayette Reservoir Recreation Area.

The first paragraph on DEIR p. 3.2-11 has been revised as follows:

### *Sunnyside Pumping Plant*

This proposed new pumping plant would be constructed on privately owned, currently undeveloped property located in Lafayette, on the Orinda border near the intersection of Happy Valley Road and Sundown Terrace (see Map C-SUNPP-1). The driveway to the proposed site, currently being used as access to the parcel, is within City of Orinda, and is identified by the City of Orinda as a parcel dedicated for preservation by the City (City of Orinda, 2006). The project site is adjacent to an existing horse paddock. EBMUD would purchase the project site prior to project construction. The site is surrounded by low-density single-family residential development and open space.

The fourth paragraph on DEIR p. 3.2-14 has been revised as follows:

The Happy Valley Pumping Plant, Sunnyside Pumping Plant, and Tice Pumping Plant project components would be located at properties that are currently privately owned. These properties are located within predominantly single-family residential and open space areas. The Highland Reservoir would be located in a relatively undeveloped area of the Lafayette Reservoir Recreation Area. The City of Orinda indicates that the driveway that would provide site access to the proposed Sunnyside Pumping Plant is on a parcel dedicated for preservation by the City of Orinda (City of Orinda, 2006). The proposed project component would be subject to an encroachment permit from the City of Orinda, which would include discussion of permissible uses for the proposed parcel. The proposed project components would be relatively small, compact facilities that would not disrupt or divide the existing communities they are located within; therefore, the Happy Valley Pumping Plant, Highland Reservoir, Sunnyside Pumping Plant, and Tice Pumping Plant project components would result in a less-than-significant land use impact.

## 3.3 Visual Quality

Table 3.3-4 on DEIR p. 3.3-21 has been revised as shown on the following page.

Measure 3.3-1 on DEIR p. 3.3-23 has been revised as follow:

> **Measure 3.3-1:** For stationary (non-pipeline) projects expected to be constructed over a period of one year or more, the District will require the contractor to ensure that construction-related activity is as clean and inconspicuous as practical by storing building materials and equipment within the proposed construction staging areas or in areas that are generally away from public view and by removing construction debris promptly at regular intervals and placing black fabric fence screening on fences where feasible.

The following text has been added as the last bullet on Measure 3.3-2a DEIR p. 3.3-25:

- The District will landscape areas that will not be disturbed by construction *before construction beings* in order to assist in preservation of views at the Walnut Creek WTP and proposed Ardith Reservoir site.

Measure 3.3-2c on DEIR p. 3.3-36 has been revised to include the following:

- For the Walnut Creek WTP, EBMUD will meet with the City to discuss integration of the design of the new Leland Pumping Plant to be consistent with the surrounding neighborhood environment and the existing WTP.

As a staff-initiated change, text on DEIR p. 3.3-47 is revised as follows:

### *Project Operations*

The District would install low-impact, vandal-resistant, motion-sensor lights for nighttime use during operations at some of the facility sites, including the new facilities at all of the WTPs (except at Lafayette WTP under Alternative 2). EBMUD would also install low-impact, vandal-resistant, motion-sensor lights at the Fay Hill and Ardith Reservoirs and at the ~~Happy Valley,~~ Sunnyside, Tice, and Withers Pumping Plant sites. New lighting would be focused on specific areas to minimize or avoid light spill onto adjoining properties. Because proposed exterior lighting would be motion-sensor lighting, it would only be activated in the event that maintenance workers need to access the facility at night. Under normal operations, new exterior lighting would be turned off at the end of the workday. Given its infrequent use, and the design of new lighting to avoid light spill on adjoining properties, new lighting proposed for the WTTIP projects is not expected to create substantial new sources of light and glare. Therefore, the project would not have a substantial effect on existing nighttime visual conditions at the facility sites or in surrounding areas.

**REVISED TABLE 3.3-4**
**SUMMARY OF POTENTIAL PROJECT-LEVEL VISUAL IMPACTS**

| Facility | Impact 3.3-1 Short-Term Visual Effects during Construction | Impact 3.3-2 Alteration of Appearance of WTTIP Sites | Impact 3.3-3 Effects on Views | Impact 3.3-4 Effects on Scenic Vista | Impact 3.3-5 New Sources of Light and Glare |
|---|---|---|---|---|---|
| Lafayette WTP | | | | | |
| *Alternative 1* | LTS | SM | SM | LTS | SM |
| *Alternative 2* | LTS | SM | SM | LTS | LTS |
| Orinda WTP | | | | | |
| *Alternative 1 or 2* | LTS | SM | SM | LTS | SM |
| Walnut Creek WTP | | | | | |
| *Alternative 1 or 2* | LTS | SM | SM | LTS | SM |
| Sobrante WTP | | | | | |
| *Alternative 1 or 2* | LTS | SM | SM | LTS | SM |
| Upper San Leandro WTP | | | | | |
| *Alternative 1 or 2* | LTS | LTS | LTS | LTS | SM |
| Orinda-Lafayette Aqueduct | | | | | |
| *Alternative 2 only* | LTS | LTS | LTS | LTS | SM |
| Ardith Reservoir/Donald Pumping Plant | LTS | SM | SM | LTS | SM |
| Fay Hill Pumping Plant and Pipeline Improvements | LTS | LTS | LTS | LTS | SM |
| Fay Hill Reservoir | LTS | LTS | LTS | LTS | SM |
| Glen Pipeline Improvements | LTS | LTS | LTS | LTS | LTS |
| Happy Valley Pumping Plant and Pipeline | LTS | SM | SM | LTS | LTS~~SM~~ |
| Highland Reservoir and Pipelines | LTS | SU | SU | SU | SM |
| Lafayette Reclaimed Water Pipeline | LTS | SM | SM | LTS | SM |
| Leland Isolation Pipeline and Bypass Valves | LTS | SM | SM | LTS | LTS |
| Moraga Reservoir | LTS | LTS | LTS | LTS | LTS |
| Moraga Road Pipeline | LTS | SM | SM | LTS | LTS |
| Sunnyside Pumping Plant | LTS | SM | SM | LTS | SM |
| Tice Pumping Plant and Pipeline | LTS | SM | SM | LTS | SM |
| Withers Pumping Plant | LTS | SM | SM | LTS | SM |

NOTE: With the exception of the Lafayette Creek crossing shown in Map C-HIGHRES-1, the Lafayette Reclaimed Water Pipeline would be constructed concurrently with and would be co-located with the Bryant and Leland Pipelines or the Orinda-Lafayette Aqueduct (depending on whether Alternative 1 or Alternative 2 is selected), as well as with the Highland Reservoir pipeline. Therefore, the Lafayette Reclaimed Water Pipeline impacts included in this table and throughout this section are for the Lafayette Creek crossing only. Impacts resulting from installation of the remaining portions of the Lafayette Reclaimed Water Pipeline are included within the discussions of the other above-referenced projects.

SM Significant Impact, Can Be Mitigated
SU Significant Impact, Unavoidable
LTS Less-Than-Significant Impact
– No Impact

## 3.4 Geology, Soils, and Seismicity

Measure 3.4-1 on DEIR p. 3.4-26 has been revised as follows:

> **Measure 3.4-1:** During the design phase for all WTTIP project components that require ground-breaking activities (excluding pipelines), the District will perform site-specific design-level geotechnical evaluations to identify adverse slope instability conditions and provide recommendations to reduce and eliminate potential slope hazards in the final design and if necessary, throughout construction. For all pipelines located in landslide hazard areas, appropriate piping material with the ability to deform without rupture (e.g. ductile steel) will be used. For large diameter pipes (greater than 12 inches diameter) located in high landslide hazard areas, a geotechnical evaluation will be conducted. The geotechnical evaluations will include detailed slope stability evaluations, which could include a review of aerial photographs, field reconnaissance, soil testing, and slope stability modeling. Slope stability evaluations would be completed for the Fay Hill Reservoir, Walnut Creek WTP, Sobrante WTP, Ardith Reservoir/Donald Pumping Plant, Happy Valley Pumping Plant, Highland Reservoir, Lafayette Reclaimed Water Pipeline, Moraga Reservoir, Moraga Road Pipeline, Sunnyside Pumping Plant, Tice Pumping Plant, and Withers Pumping Plant. Facilities design and construction will incorporate the slope stability recommendations contained in the geotechnical analysis. Unstable natural slopes, engineered slopes, and localized slope repairs shall be evaluated by a California registered engineer or certified engineering geologist and measures prescribed by the registered professional shall result in a factor of safety of at least 1.3 under pseudo-static (earthquake) loads and 1.5 under static loads. Measures to stabilize the slopes and achieve the required factor of safety may include the following:
>
> - Appropriate slope inclination (not steeper than 2 horizontal to 1 vertical)
> - Slope terracing
> - Fill compaction
> - Soil reinforcement
> - Surface and subsurface drainage facilities
> - Engineered retaining walls
> - Buttresses
> - Erosion control measures
>
> Mitigation measures included in the geotechnical report will be incorporated into the project construction specifications and become part of the project.

Measure 3.4-3a on DEIR p. 3.4-27 has been revised as follows:

> **Measure 3.4-3a:** During the design phase for all WTTIP project components that require ground-breaking activities (excluding pipelines), the District will perform site-specific design-level geotechnical evaluations to identify geologic hazards and provide recommendations to mitigate those hazards in the final design and during construction. The geotechnical evaluations, conducted by a California registered professional engineer, will include site-specific investigations, which may include, if necessary, soil sampling and testing to determine the presence and characteristics of potentially compressible soils, the engineering properties of the proposed foundation material, the depth and thickness of soil layers, and the depth to groundwater. Based on the findings of the investigations, the registered professional shall formulate adequate measures to reduce the expansivity index of the site soil to a low expansion potential (Expansivity Index (EI) less than 50) as defined

in the 1997 Uniform Building Code. For compressible soils, the registered professional would develop and implement a strategy to improve the soil to achieve settlements below what the proposed structure can tolerate, as determined through laboratory soils testing and professional judgment. Feasible mitigation measures, as listed below, are standard engineering practice and are common engineering design strategies used to overcome problematic soil conditions.

- Removal and replacement of problematic soil
- Soil pre-compression, using vertical drains, surcharge fills or dynamic compaction
- Installation of deep foundations (i.e., piles, drilled piers)
- Deep mixing of compressible or expansive soils with stabilizing agents

Mitigation measures included in the geotechnical evaluations will be incorporated into the project design specifications and would become part of the project.

Measure 3.4-3b on DEIR p. 3.4-28 has been revised as follows:

**Measure 3.4-3b:** The District will include in the contract specifications that any fill will be selected, placed, compacted, and inspected in accordance with plans and specifications prepared by a licensed professional engineer in accordance with standard and accepted engineering protocols (inspection, compaction-density testing, in-situ field testing) necessary to prevent engineered fill soils from becoming expansive or compressible after placement.

Measure 3.4-4 on DEIR p. 3.4-32 has been revised as follows:

**Measure 3.4-4:** During the design phase for all WTTIP project components that require ground-breaking activities (excluding pipelines), the District will perform site-specific design-level geotechnical evaluations to identify geologic hazards and provide recommendations to mitigate those hazards in the final design and during construction. The design-level geotechnical evaluations will include the collection of subsurface data for determining liquefaction potential. The evaluation and mitigation of liquefaction hazards shall be in conformance with the California Geological Survey's Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, which provides methods to identify, evaluate, and reduce the hazards and earthquake-induced landslide hazards as required under the Seismic Hazards Mapping Act (SHMA) of 1990. The evaluation and mitigation shall be conducted by a California registered professional engineer or California certified engineering geologist. When site-specific testing identifies a potential for significant liquefaction-induced ground failures and damage to project facilities, appropriate feasible measures, as recommended in SP-117, shall be developed and incorporated into the project design. Because the project sites are not located in an area zoned under the SHMA, review of the investigation report by the CGS is not required. For all pipelines located in liquefaction hazard areas, appropriate piping material with the ability to deform without rupture (e.g. ductile steel) will be used. For large diameter pipes (greater than 12 inches diameter) located in high liquefaction hazard areas, a geotechnical evaluation will be conducted. ~~The performance standard to be used in the geotechnical evaluations for mitigating liquefaction hazards will be minimization of the hazards.~~ Measures to minimize significant liquefaction hazards could include the following:~~, unless the site-specific soils analyses dictate otherwise~~:

- Densification or dewatering of surface or subsurface soils
- Construction of pile or pier foundations to support pipelines and/or buildings,
- Removal of material that could undergo liquefaction in the event of an earthquake, and replacement with stable material,
- Modification of site geometry to reduce the risk of translational site instability.

## 3.5 Hydrology and Water Quality

Table 3.5-2 on DEIR p. 3.5-24 has been revised as shown on the following page.

Based on Comment ORIN-52, text on several pages has been revised. The DEIR page being revised is noted below. [Note that only paragraphs with new or deleted text are included.]

*DEIR p. 3.5-42:*

Projects that involve the creation or replacement of less than 10,000 square feet of impervious surfaces and those that are constructed in a public right-of-way would not be subject to the C.3 requirements. ~~In addition, the creation or replacement of impervious surfaces at the WTPs would not be subject to the C.3 provisions because stormwater management at these facilities is addressed under the Regionwide General NPDES Permit for Discharges from Surface Water Treatment Facilities for Potable Supply and the site-specific BMP plan prepared for each WTP. However, the BMP plan would be revised to address any changes in stormwater runoff and potential stormwater pollutant sources, and the changes in the plan would be subject to approval by the RWQCB.~~ Therefore, water quality impacts related to an increase in impervious surfaces at <u>these projects</u> ~~each of the WTPs, the replacement of impervious surfaces in a public right-of-way, and the creation or replacement of less than 10,000 square feet of impervious surfaces~~ would be less than significant, and no mitigation is required.

<u>In accordance with the municipal stormwater permit, projects that create or replace 10,000 square feet or more of impervious surfaces would be required to incorporate site design and landscape features to maximize infiltration, promote retention or detention, slow runoff, and minimize impervious surfaces so that post-development pollutant loads from the site are reduced to the maximum extent possible. Types of site planning concepts that could be considered include treating stormwater runoff using infiltration or detention/retention, using biofilter BMPs, providing a vegetated buffer zone between the new impervious surfaces and nearby waterways, reducing the paved area, using porous pavement, retaining natural surfaces, minimizing the use of gutters and curbs that concentrate and direct runoff, and using vegetated areas to promote infiltration.</u>

<u>In accordance with the Clean Water Program Hydromodification Management Plan, projects that create or replace more than one-acre of impervious surfaces would also be required to manage post-construction runoff such that it would not exceed pre-construction levels if the increase in peak runoff flows or runoff volume could cause increased erosion</u>

**REVISED TABLE 3.5-2**
**SUMMARY OF POTENTIAL PROJECT-LEVEL HYDROLOGY AND WATER QUALITY IMPACTS**

| Facility | Impact 3.5-1 Degradation of Water Quality during Construction | Impact 3.5-2 Groundwater Dewatering | Impact 3.5-3 Diversion of Flood Flows | Impact 3.5-4 Discharge of Chloraminated Water during Construction | Impact 3.5-5 Operational Discharge of Chloraminated Water | Impact 3.5-6 Change in Impervious Surfaces |
|---|---|---|---|---|---|---|
| Lafayette WTP | | | | | | |
| *Alternative 1* | SM | LTS | – | LTS | LTS | LTS |
| *Alternative 2* | SM | – | – | LTS | – | LTS |
| Orinda WTP | | | | | | |
| *Alternative 1* | SM | LTS | – | LTS | – | LTS |
| *Alternative 2* | SM | LTS | – | LTS | LTS | LTS |
| Walnut Creek WTP – *Alternative 1 or 2* | SM | LTS | – | LTS | – | LTS |
| Sobrante WTP – *Alternative 1 or 2* | SM | LTS | – | LTS | – | LTS |
| Upper San Leandro WTP – *Alternative 1 or 2* | SM | – | – | LTS | – | LTS |
| Orinda-Lafayette Aqueduct *Alternative 2* | SM | LTS | SM | LTS | – | LTS |
| Ardith Reservoir and Donald Pumping Plant | SM | – | – | – | LTS | ~~SM~~LTS |
| Fay Hill Pumping Plant and Pipeline Improvements | SM | – | – | – | – | LTS |
| Fay Hill Reservoir | SM | – | – | LTS | – | ~~SM~~LTS |
| Glen Pipeline Improvements | SM | LTS | – | – | – | LTS |
| Happy Valley Pumping Plant and Pipeline | SM | LTS | SM | – | – | LTS |
| Highland Reservoir and Pipelines | SM | LTS | – | – | LTS | ~~SM~~LTS |
| Lafayette Reclaimed Water Pipeline | SM | LTS | – | – | LTS | LTS |
| Leland Isolation Pipeline and Bypass Valves | SM | – | SM | – | – | LTS |
| Moraga Reservoir | SM | – | – | LTS | – | ~~SM~~LTS |
| Moraga Road Pipeline | SM | LTS | SM | – | – | LTS |
| Sunnyside Pumping Plant | SM | – | – | – | – | LTS |
| Tice Pumping Plant and Pipeline | SM | LTS | SM | – | – | LTS |
| Withers Pumping Plant | SM | – | – | – | – | LTS |

SM = Significant Impact, Can Be Mitigated
SU = Significant Impact, Unavoidable
LTS = Less-Than-Significant Impact
– = No Impact

of creek beds or banks, silt pollutant generation, or other adverse effects that would affect beneficial uses of the receiving water.

All of the water treatment plant projects and the proposed reservoir construction and replacement projects (Ardith Reservoir and Donald Pumping Plant, Fay Hill Reservoir, Highland Reservoir, and Moraga Reservoir) would involve the creation of impervious surfaces. However, all of these sites, with the exception of the Walnut Creek WTP, disturb one or more acres of land for construction and will require a General Construction Stormwater Permit as described in the setting and Impact 3.5-1. Upon completion of construction, a post-construction stormwater management plan describing stormwater controls would be prepared, including a maintenance schedule for installed post-construction BMPs, as required by the General Construction Stormwater Permit, and coverage under the General Construction Stormwater Permit would not be terminated until this plan is in place, permanent erosion control measures are in place, and the site is in compliance with all local stormwater management requirements. With compliance with these requirements, water quality impacts related to creation or replacement of impervious surfaces would be less than significant.

In the case of the Walnut Creek WTP, the project would increase the impervious surface by 11,350 square feet under both alternatives. However, approximately 8,000 square feet of the impervious area is the construction of the filter basins which will retain rainfall and will not contribute to runoff from the site and therefore will have a less than significant impact.

~~The proposed reservoir construction and replacement projects (Ardith Reservoir and Donald Pumping Plant, Fay Hill Reservoir, Highland Reservoir, and Moraga Reservoir) are the only WTTIP projects that would involve the creation or replacement of over 10,000 square feet of impervious surfaces and are not located in a public right-of-way or at a WTP. Therefore, the District would implement Measure 3.5-6 for these projects, requiring incorporation of site design and landscape features to maximize infiltration, provide retention or detention, slow runoff, and minimize impervious surfaces so that post-development pollutant loads from the site are reduced to the maximum extent possible. Types of site planning concepts that could be considered include providing a vegetated buffer zone between impervious surfaces and nearby waterways, reducing the paved area, using porous pavement, retaining natural surfaces, minimizing the use of gutters and curbs that concentrate and direct runoff, and using existing vegetation to create new vegetated areas to promote infiltration.~~

*DEIR p. 3.5-43:*

**Orinda WTP – Alternative 1 or 2**

The total increase in impervious surfaces at the Orinda WTP would be 41,500 square feet under Alternative 1 and 90,000 square feet under Alternative 2. Under both alternatives, water quality impacts related to an increase in impervious surfaces would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan

prepared in accordance with the General Construction Stormwater Permit as described above. Under Alternative 2, the SWPPP and post construction stormwater control plan would also describe how peak flows would be managed to ensure that peak flows would not cause increased erosion of the San Pablo Creek beds or banks, silt pollutant generation, or other adverse effects that would affect beneficial uses of San Pablo Creek. ~~However, the WTP would not be subject to the C.3 requirements, because stormwater management is addressed under the Regionwide General NPDES Permit for Discharges from Surface Water Treatment Facilities for Potable Supply.~~

**Sobrante WTP**

The total increase in impervious surfaces at the Sobrante WTP under both alternatives would be 37,500 square feet. Water quality impacts related to an increase in impervious surfaces would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit as described above. ~~However, the WTP would not be subject to the C.3 requirements, because stormwater management is addressed under the Regionwide General NPDES Permit for Discharges from Surface Water Treatment Facilities for Potable Supply.~~

**Lafayette WTP – Alternative 1 or 2**

The total increase in impervious surfaces at the Lafayette WTP would be approximately 50,000 square feet under Alternative 1, and there would be no change in impervious surfaces under Alternative 2. Water quality impacts related to an increase in impervious surfaces would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit as described above. ~~However, the Lafayette WTP would not be subject to the C.3 requirements, because stormwater management is addressed under the Regionwide General NPDES Permit for Discharges from Surface Water Treatment Facilities for Potable Supply.~~

*DEIR p. 3.5-44:*

**Highland Reservoir and Pipelines**

The proposed Highland Pipelines would be constructed almost entirely in unpaved areas, and there would be no increase in impervious surfaces. The amount of impervious surfaces created for the proposed Highland Reservoir and access road would be approximately 33,500 square feet. Water quality impacts related to an increase in impervious surfaces would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit as described above.

*DEIR p. 3.5-45:*

**Walnut Creek WTP**

The total increase in impervious surfaces at the Walnut Creek WTP would be 11,350 square feet under both alternatives. However, approximately 8,000 square feet of the impervious area is the construction of the filter basins which will retain rainfall and will not contribute to runoff from the site and therefore this project will have a less than significant impact. ~~However, the WTP would not be subject to the C.3 requirements, because stormwater management is addressed under the Regionwide General NPDES Permit for Discharges from Surface Water Treatment Facilities for Potable Supply.~~

**Ardith Reservoir and Donald Pumping Plant**

The total increase in impervious surfaces for the proposed Ardith Reservoir and Donald Pumping Plant would be approximately 20,000 square feet. Water quality impacts related to an increase in impervious surfaces would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit as described above.

**Fay Hill Reservoir**

The existing impervious surfaces at the Fay Hill Reservoir are approximately 45,000 square feet; after construction, there would be approximately 24,000 square feet of impervious surfaces, a reduction of over 20,000 square feet. Water quality impacts related to an increase in impervious surfaces would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit as described above. ~~Therefore, this project would be subject to municipal stormwater permit requirements.~~

**Moraga Reservoir**

The existing impervious surfaces at the Moraga Reservoir are approximately 124,000 square feet; after construction, there would be approximately 45,000 square feet of impervious surfaces, a reduction of almost 80,000 square feet. Water quality impacts related to an increase in impervious surfaces would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit as described above. ~~Therefore, this project would be subject to municipal stormwater permit requirements.~~

*DEIR p. 3.5-46:*

**Upper San Leandro WTP**

The total increase in impervious surfaces at the Upper San Leandro WTP would be 7,000 square feet. ~~Regardless of the increase in impervious surfaces, the WTP would not be~~

~~subject to the C.3 requirements, because stormwater management is addressed under the Regionwide General NPDES Permit for Discharges from Surface Water Treatment Facilities for Potable Supply.~~

Measure 3.5-6 on DEIR p. 3.5-46 has been deleted.

*DEIR p. 3.5-47:*

Changes in impervious surfaces at the WTP as a result of program-level improvements under Alternative 1 would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit or applicable NPDES requirements at the time of construction. ~~not be subject to separate treatment measure/source control requirements because stormwater management would be addressed under the Regionwide General NPDES Permit for Discharges from Surface Water Treatment Facilities for Potable Supply and the site-specific BMP plan (or the NPDES permit in effect at the time of construction). The BMP plan would be revised to address any changes in stormwater runoff and potential stormwater pollutant sources, subject to approval by the RWQCB~~. Therefore, water quality impacts related to changes in impervious surfaces are expected to be less than significant.

*DEIR p. 3.5-48:*

Changes in impervious surfaces at the WTP as a result of program-level improvements under both alternatives would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit or applicable NPDES requirements at the time of construction. ~~not be subject to separate treatment measure/source control requirements because stormwater management would be addressed under the Regionwide General NPDES Permit for Discharges from Surface Water Treatment Facilities for Potable Supply and the site-specific BMP plan (or the NPDES permit in effect at the time of construction). The BMP plan would be revised to address any changes in stormwater runoff and potential stormwater pollutant sources, subject to approval by the RWQCB. Therefore, water quality impacts related to changes in impervious surfaces are expected to be less than significant.~~

*DEIR p. 3.5-49:*

The proposed replacement of the Leland Reservoir would likely involve the replacement of over 10,000 square feet of impervious surfaces. Furthermore, the threshold area for requiring compliance with municipal stormwater permits could decrease over time. Water quality impacts related to a change in impervious surfaces would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit or applicable NPDES requirements at the time of construction. ~~Therefore, this project would likely be required to comply with municipal stormwater permitting requirements at the time of construction and require~~

~~implementation of a measure similar to Measure 3.5-6, which would likely reduce water quality impacts related to stormwater runoff to a less-than-significant level.~~

*DEIR p. 3.5-50:*

Construction of the proposed New Leland Pressure Zone Reservoir would likely involve the creation of over 10,000 square feet of impervious surfaces. Furthermore, the threshold area for requiring compliance with municipal stormwater permits could decrease over time. Water quality impacts related to a change in impervious surfaces would be less than significant with compliance with the municipal stormwater permitting requirements as specified in the construction SWPPP and post construction stormwater control plan prepared in accordance with the General Construction Stormwater Permit or applicable NPDES requirements at the time of construction. ~~as regulatory requirements intensify. Therefore, this project would likely be required to comply with municipal stormwater permitting requirements at the time of construction and implement a measure similar to Measure 3.5-6, which would likely reduce water quality impacts related to stormwater runoff to a less-than-significant level.~~

## 3.6 Biological Resources

The text on DEIR p. 3.6-17 has been revised to acknowledge the fully protected status as follows:

**Other Statutes, Codes, and Policies Affording Limited Species Protection**

**Migratory Bird Treaty Act / California Fish and Game Code.** The federal Migratory Bird Treaty Act (16 USC, Section 703, Supp. 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. Birds of prey are protected in California under the Fish and Game Code (Section 3503.5, 1992). Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." ~~Construction d~~Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment would constitute a significant impact. Non-raptor native birds receive similar protection under California Fish and Game Code Section 3503. Finally, certain bird species, including white-tailed kite, which are known to occur in the project area, are considered Fully Protected under Section 3511 of the California Fish and Game Code. Project impacts to these species would not be considered significant unless the species are known to, or have a high potential to, nest in the WTTIP project area or rely on it for primary foraging.

The first paragraph on DEIR p. 3.6-22 has been revised as follows:

> The City of Walnut Creek Municipal Code (Title 3, Chapter 8) provides protection for several classes of trees. The Code defines highly protected trees as ~~protected~~ those ~~trees~~ with a circumference of 28 inches or more at standard height ~~as~~that are one of the following type of tree: (1) oak, madrone, buckeye, California black walnut, or ~~locust tree~~gray pine; (2) a rare example of a species native to Walnut Creek; or (3) an exceptional specimen in regard to size, age, health, location, or visual prominence.
>
> In addition, the City of Walnut Creek tree ordinance applies to trees of any species with a single stem of greater than 28 inches in circumference or multi-stemmed trees having an aggregate circumference greater than 40 inches. The ordinance also applies to multistemmed trees that include single stem greater than 28 inches. Finally, the ordinance applies to a tree of any size that is part of a grove, which is defined as three or more trees of any size that are part of an integral cover with stems with an aggregate circumference of forty inches or more.

Measure 3.6-1b on DEIR p. 3.6-33 has been revised as follows (bullets have been added to make the measure easier to read):

> **Measure 3.6-1b:** For each project site (except for the Walnut Creek WTP and the Lafayette WTP under Alternative 2), all pruning of preserved trees will be performed by a certified arborist. No more than 25 percent of a tree's canopy will be removed ~~during the pruning of retained trees~~. Tree replacement will adhere to the following guidelines:
>
> - If any protected tree native to the local area, such as valley oak and coast live oak, is removed, the District will replace ~~the tree~~it on a 3:1 basis with native trees of the same species as those removed.
> - All ~~removed~~ non-native protected trees which are removed will be replaced at a 1:1 ratio with a non-invasive tree species.
> - Non-native trees removed from a natural environment will be replaced with a native species that occurs ~~locally~~ in the area.
> - Replacement trees will be planted on site where feasible. Where this is not feasible, trees will be planted at ecologically appropriate sites on EBMUD watershed lands.
> - In natural areas, when the trees removed are locally native and when the replacement planting will occur on site, a species replacement ratio reflecting the tree species composition of the site will be used.
> - In lieu of tree replacement the District would consider the establishment of permanent conservation easements on EDMUD watershed lands that support high quality oak woodlands. Oak woodland acreage lost through individual tree removal will be quantified prior to initiation of project construction activities and concurrent with the mapping activities to occur under Measure 3.6-1a.

Measure 3.6.1c on DEIR p. 3.6-33 has been revised as follow:

> **Measure 3.6-1c:** For each project site (except for the Walnut Creek WTP and the Lafayette WTP under Alternative 2), the contractor will be required to warrant tree health for one year after project completion and the District will guarantee the health of all trees to be preserved within and adjacent to the construction corridor of project-related pipeline and facility sites for two additional years, for a total of three years. The guarantee period for a tree will be five years if the District constructs or installs improvements or performs approved mechanical excavation within the dripline of any tree. The District will replace any tree that is to be retained but that dies as a result of project construction activities during the guarantee period with a tree of the same species. The replaced trees would be subject to the same monitoring protocols as those protected trees removed due to construction.

Measure 3.6-1d on DEIR p. 3.6-34 has been revised follows:

> **Measure 3.6-1d:** For each project site (except for the Walnut Creek WTP and the Lafayette WTP under Alternative 2), the District will develop and implement a five-year tree monitoring program. ~~Appropriate p~~Performance standards may include, but are not limited to: a 75 percent survival rate of tree plantings and the ability to be self-sustaining at the end of five years.

Measure 3.6-1e on DEIR p. 3.6-34 has been revised as follows:

> **Measure 3.6-1e:** The District will implement the Revised Highland Reservoir Alternative to reduce impacts to large-diameter, multi-stemmed oak trees. The alignments for the Highland Reservoir pipelines and Moraga Road Pipeline will be refined in the field, to the extent feasible and within hydraulic constraints, to avoid removal of protected trees. Refined alignments will be flagged in the field, then surveyed and mapped in accordance with Measure 3.6-1a. District Biologists will review pipeline alignments, supervise delineation of construction work areas, and monitor initial vegetation removal for construction activities within the Lafayette Reservoir Recreation Area. Where removal of protected trees cannot be avoided, trees will be replaced in accordance with Measure 3.6-1b.

Measure 3.6-2d on DEIR p. 3.6-40 has been revised as follows:

> **Measure 3.6-2d:** Where applicable, for overflow discharges into a creek or reservoir, the District will install energy ~~dissipaters~~ diffusers, such as riprap, ~~in the creek~~ to minimize erosion and water quality effects. Such dissipaters shall be placed, whenever possible, to avoid fill of jurisdictional waters and impacts to aquatic or riparian habitat. When such secondary impacts cannot be avoided, compensation for loss of habitat shall be provided as described under Measure 3.6-2c.

As a staff-initiated change, text on DEIR p. 3.6-55 is revised as follows:

> Prior to construction activities (i.e., ground clearing and grading, including removal of trees or shrubs) within 200 feet of trees that potentially support special-status bats, EBMUD will retain a qualified bat biologist to survey for special-status bats. If no evidence of bats (i.e., direct observation, guano, staining, strong odors) is present, no further mitigation is required.

## 3.8 Traffic and Circulation

Measure 3.8-1 on DEIR p. 3.8-13 has been revised as follows:

> **Measure 3.8-1:** The ~~following requirements will be incorporated~~ District will incorporate into contract specifications for the project the following requirements:
>
> - The contractor(s) will obtain any necessary road encroachment permits prior to construction and will comply with conditions of approval attached to project implementation. As part of the road encroachment permit process, the contractor(s) will ~~submit~~ prepare a traffic safety / traffic management plan (for work in the public right-of-way), in accordance with professional traffic engineering standards, for review and approval by EBMUD. The plan will be submitted to the agencies having jurisdiction over the affected roads. Elements of the plan will likely include, but are not necessarily limited to, the following:

The following measures have been added to the list of requirements in Measure 3.8-1 on DEIR p. 3.8-13:

- The District will hold coordination meetings with the City of Orinda, the Orinda Unified School District, and the Moraga-Orinda Fire District to minimize the impact of road closures on Miner Road.

- As part of the coordination with school administrators, the District will coordinate with providers of school bus service regarding road closures, delays and detours during times that school buses run.

The following measure has been added to the list of mitigation requirements in Measure 3.8-1 on DEIR p. 3.8-13:

- The contractor(s) will post all construction sites with signs that state the permitted hours of construction. Those signs will identify the construction project as initiated by EBMUD, and will provide contact information for inquiries or comments.

The following measure has been added to the list of elements in Measure 3.8-1 on DEIR p. 3.8-14:

- Provide advance notification to property owners along Glen Road, Nordstrom Lane, Hilltop Drive and Hastings Court regarding road closures associated with the Glen Pipeline Improvements project. Signs will be posted at the location of the road closure at least two weeks in advance, and notices will be mailed to property owners at least three weeks in advance.

The following text has been added to the bullet list under Project Impact – Facility-Specific on DEIR p. 3.8-13:

- *Happy Valley Pumping Plant and Pipeline*. An increase in traffic volume on Lombardy Lane and Miner Road would be more noticeable than on higher-volume Camino Pablo.

Measure 3.8-1, last bulleted item on DEIR p. 3.8-14 has been revised as follows:

– Coordinate construction activities, to extent possible, to minimize traffic disturbances adjacent to schools (e.g., do work during summer months when there is less activity at schools). For construction activities that occur during the school year, then at the start and end of the school day at schools adjacent to a pipeline project (e.g., Bentley School on El Nido Ranch Road, and Campolindo High School on Moraga Road), the contractor(s) will provide flaggers in the school areas to ensure traffic and pedestrian safety. During periods when school children at the Wagner Ranch Elementary School are walking to and from school in the morning and in the afternoon on the asphalt trail along the north side of Camino Pablo, when construction truck traffic is present near the trail, the contractor(s) will provide flaggers and crossing guards (the latter as needed to supplement the school-provided crossing guards) to ensure pedestrian and traffic safety. School arrival and departure schedules will be monitored for changes such as vacation periods, and the school traffic and pedestrian safety plan will be modified as needed.

Measure 3.8-1, first sentence of the fourth bullet point on DEIR p. 3.8-14 has been revised as follows:

– Limit lane closures during peak hours to the extent possible (and unless otherwise approved by the local agency).

Measure 3.8-1, first sentence of the fifth bullet point on DEIR p. 3.8-14 has been revised as follows:

– As approved by the local agency, limit, where possible, the pipeline construction work zone to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone.

Measure 3.8-1, sixth, seventh, and eighth bullet points on DEIR p. 3.8-14 has been revised as follows:

– As approved by the local agency, include signage to direct pedestrians and bicyclists around ~~project~~ construction work zones that displace sidewalks ~~and/~~or bike lanes.

– As approved by the local agency, store all equipment and materials in designated contractor staging areas on or adjacent to the worksite in such a manner to minimize obstruction to traffic.

– As approved by the local agency, identify locations for parking by construction workers ~~(~~within the construction zone or, if needed, at a nearby location with transport ~~provided between the parking location and~~ to and from the worksite provided~~)~~.

The following text has been added to the list of project facilities where full onsite accommodation of parking demand would not occur (DEIR p. 3.8-19):

- *Happy Valley Pumping Plant*. The pumping plant site would serve as the construction staging area. A shuttle would be provided to transport workers to and from an offsite parking location to the extent area is not available on site.

The following text has been added as the fourth sentence in the second paragraph under Impact 3.8-5, DEIR p. 3.8-20:

> In addition, although not located on a road where pipeline installation would occur, access to the Sleepy Hollow Elementary School would be affected by installation of the pipeline on Lombardy Lane.

## 3.9 Air Quality

The last sentence of the first full paragraph on DEIR p. 3.9-13 has been revised as follows:

> Therefore, implementation of the BAAQMD's standard dust control procedures (Measure 3.9-1a) will be implemented for all WTTIP projects, while enhanced dust control procedures (Measure 3.9-1b) will be implemented on all but five WTTIP projects ~~scheduled between 2011 and 2018, where applicable~~."

## 3.10 Noise and Vibration

The following statement has been added on DEIR p. 3.10-25, paragraph 2, after the fifth sentence:

> However, pipeline construction would not affect any one receptor for more than about two weeks (plus a couple of additional days for paving the trench), reducing the potential for significant noise impacts.

Measure 3.10-1a, bullet 8, on DEIR p. 3.10-31 has been revised as follow:

- An EBMUD contact person will be designated ~~for~~to respond to construction-related issues, including noise. The name and phone number of the liaison will be conspicuously posted at construction areas, on all advanced notifications, and on the EBMUD project website. This person will take steps to resolve complaints, including periodic noise monitoring and the option of hotel accommodations, if necessary.

Measure 3.10-1b on DEIR p. 3.10-31 has been revised as follows:

> **Measure 3.10-1b:** Construction at the WTTIP project sites producing substantial noise will be restricted to the hours of operation specified by each jurisdiction's noise ordinance (as listed in Table 3.10-1, including restrictions provided in footnotes and any other ordinance exceptions and provisions in effect at the time of EIR publication), except during critical water service outages or other emergencies and special situations. Any equipment operating beyond these hours will be subject to the day and night noise limits of each jurisdiction (as listed in Table 3.10-1) for various activities in single-family residential zones. EBMUD will coordinate with local agencies regarding noise controls for any construction work that needs to occur after 6:00 p.m. and before 7:00 a.m. To ensure that these standards could be met at the closest sensitive receptors, EBMUD will conduct a noise monitoring program prior to implementation of any project where construction would extend beyond ordinance time limits to accurately determine baseline ambient noise levels at the closest residential receptors and to measure noise levels at these receptors during a test run of equipment

proposed to be operated on the site during the more noise-sensitive nighttime hours. Project noise limits will be adjusted appropriately depending on the existing ambient noise levels[1] to ensure noise disturbance is maintained at a less-than-significant level at the closest residential receptors. Measures that could be implemented to reduce noise levels (as demonstrated in Table 3.10-6) to meet local nighttime standards include engine controls listed in Measure 3.10-1a, tunnel-related measures listed in Measure 3.10-1c, and temporary sound barriers listed in Measure 3.10-1e.

The second bullet under Measure 3.10-3b on DEIR p. 3.10-40 has been revised as follow:

- To the extent possible, residents in the potentially affected area will be notified in advance of controlled detonation and piledriving activities, or if that is not possible, as soon as possible following the controlled detonation activity.

## 3.12 Public Services and Utilities

Table 3.12-3 on DEIR p. 3.12-5 has been revised as shown on the following pages (pp. 3.2-22 and 3.2-23).

As a staff-initiated change, Table 3.12-6 on DEIR p. 3.12-13, 1st row of 2nd column:

Change from "Measures 3.12-1a to 3.12-1~~g~~" to "Measures 3.12-1a to 3.12-1h"

Table 3.12-4 on DEIR p. 3.12-10 has been revised as follows:

**REVISED TABLE 3.12-4 (Continued)**
**EXISTING UNDERGROUND UTILITIES LOCATED WITHIN PROJECT-LEVEL PIPELINE ALIGNMENTS[a]**

| Facility | Street | Roadway Segment | Utility | Diameter (inches) |
|---|---|---|---|---|
| Tice Pumping Plant and Pipeline | Boulevard Way | Warren to Olympic Boulevard | Water<br>Sewer<br>Natural Gas<br>Storm Drain | 6, 12<br>12<br>2<br>Unknown |
| | Olympic Boulevard | Boulevard Way to Tice Pumping Plant | Water<br>Sewer<br>Natural Gas[b]<br><br>Storm Drain<br>Communication | 8, 12, 20<br>24, 45<br>4, 12,<br>16 (over 60 psi)<br>Unknown<br>Unknown |

[a] Due to the nature of underground construction, the exact location of under ground utilities cannot be guaranteed based on construction documents; the precise location can only be determined by careful probing or hand digging, in compliance with Article 6 of the Cal/OSHA Construction Safety Orders.

[b] The utility is considered to be high priority based on *Caltrans Project Development Procedures Manual* definition of high-risk facilities that include: (1) petroleum products; (2) oxygen; (3) chlorine; (4) toxic or flammable gases; (5) natural gas in pipelines greater than 6 inches nominal pipe diameter, or pipelines with normal operating pressures greater than 60 pounds per square inch gauge; (6) underground electric supply lines, conductors, or cables that have a potential to ground of more than 300 volts, either directly buried or in a duct or conduit, that do not have concentric grounded or other effectively grounded metal shields or sheaths (Caltrans, 1997).

SOURCE: McGowan, 2006b.

[1] If baseline noise levels already exceed standards at the closest residential receptors, the standards will be increased appropriately so that construction noise levels do not result in a noticeable increase in ambient noise levels at these receptors.

**REVISED TABLE 3.12-3**
**SCHOOLS, HOSPITALS, AND FIRE STATIONS IN PROJECT VICINITY**

| | Street Address |
|---|---|
| **City of Lafayette** | |
| Schools in the Vicinity of WTTIP Project Sites | |
| Burton Valley Elementary School | 561 Marriewood Drive |
| Lafayette Elementary School | 950 Moraga Road |
| M.H. Stanley Intermediate School | 3455 School Street |
| White Pony and Meher Elementary School | 999 Leland Drive |
| Happy Valley Elementary School | 3855 Happy Valley Road |
| Springhill Elementary School | 3301 Springhill Road |
| Acalanes High School | 1200 Pleasant Hill Road |
| Bentley School | 1000 Upper Happy Valley Road |
| Preschools in the Vicinity of WTTIP Project Sites | |
| The Child Day Schools | 1049 Stuart Street |
| French for Fun | 3470 Mt. Diablo Boulevard, A115 |
| Happy Days Learning Center | 3205 Stanley Boulevard |
| Joyful Beginnings | 955 Moraga Road |
| Merriewood Children's Center | 561 Merriewood Drive |
| Michael Lane Preschool | 682 Michael Lane |
| Seedlings Preschool | 49 Knox Drive |
| Hospitals in the Vicinity of WTTIP Project Sites | |
| John Muir Medical Center Sierra Surgi-Center | 970 Dewing Avenue |
| Fire Stations in the Vicinity of WTTIP Project Sites | |
| CCCFPD Station 15 | 3338 Mt. Diablo Boulevard |
| CCCFPD Station 16 | 4007 Los Arabis Drive |
| CCCFPD Station 17 | 620 St. Mary's Road |
| **City of Orinda** | |
| Schools in the Vicinity of WTTIP Project Sites | |
| Wagner Ranch Elementary | 350 Camino Pablo |
| ~~North Bay~~ Orinda Academy ~~School~~ | 19 Altarinda Road |
| ~~Springs Academy~~ | ~~89 Moraga Way~~ |
| Glorietta Elementary School | 15 Martha Road |
| Orinda Intermediate School | 80 Ivy Drive |
| ~~E~~Del Ray Elementary School | 25 El Camino Moraga |
| Miramonte High School | 750 Moraga Way |
| Sleepy Hollow Elementary School | 20 Washington Lane |
| Contra Costa Alternative School | 10 Irwin Way |
| Preschools in the Vicinity of WTTIP Project Sites | |
| Fountainhead Montessori School | 30 Santa Maria Way |
| Fire Stations in the Vicinity of WTTIP Project Sites | |
| Moraga Orinda Fire Department Station 43 | 20 Via Las Cruces |
| Moraga Orinda Fire Department Station 44 | 295 Orchard Road |
| Moraga Orinda Fire Department Station 45 | 33 Orinda Way |
| **Town of Moraga** | |
| Schools in the Vicinity of WTTIP Project Sites | |
| Camino Pablo Elementary School | 1111 Camino Pablo |
| Joaquine Moraga Intermediate School | 1010 Camino Pablo |
| Campolindo High School | 300 Moraga Road |
| Donald L. Rheem Elementary School | 90 Laird Drive |
| Los Perales Elementary School | 22 Wakefield Drive |
| Frederick Taylor University | 346 Rheem Boulevard |
| Preschools in the Vicinity of WTTIP Project Sites | |
| Creative Playhouse, Inc. | 1350 Moraga Way |
| Fountainhead Montessori School | 1450 Moraga Road |
| Moraga Bright Beginnings Christian Preschool | 1689 School Street |
| Mulberry Tree Preschool | 1455 St. Mary's Road |
| Saklan Valley School | 1678 School Street |
| The Child Day Schools | 372 Park Street |

**REVISED TABLE 3.12-3 (Continued)**
**SCHOOLS, HOSPITALS, AND FIRE STATIONS IN PROJECT VICINITY**

| | Street Address |
|---|---|
| Fire Stations in the Vicinity of WTTIP Project Sites | |
| Moraga Orinda Fire Department Station 41 | 1280 Moraga Way |
| Moraga Orinda Fire Department Station 42 | 555 Moraga Road |
| **City of Walnut Creek** | |
| Schools in the Vicinity of WTTIP Project Sites | |
| Dorris Eaton School | 1847 Newell Avenue |
| Las Lomas High School | 1460 South Main Street |
| St. Mary's School | 1158 Bont Lane |
| Muir Wood Elementary School | 2050 Vanerslice Avenue |
| Walnut Heights Elementary School | 4064 Walnut Boulevard |
| Buena Vista Elementary School | 2355 San Juan Avenue |
| Walnut Creek Christian Academy | 2336 Buena Vista Avenue |
| Parkmead Elementary School | 960 Ygnacio Valley Road |
| Walnut Creek Intermediate School | 2425 Walnut Boulevard |
| Palmer School for Boys and Girls | 2740 Jones Road |
| Contra Costa Christian High School | 2721 Larkey Lane |
| Eagle Peak Montessori | 800 Hutchinson Road |
| Del Oro High (Continuation) | 1969 Tice Valley Boulevard |
| Foothill Middle School | 2775 Cedro Lane |
| Bancroft Elementary School | 2200 Parish Drive |
| Northgate High School | 425 Castle Rock Road |
| Valle Verde Elementary School | 3275 Peachwillow Lane |
| Preschools in the Vicinity of WTTIP Project Sites | |
| Bianchi School | 2521 Walnut Boulevard |
| Bianchi School | 2850 Cherry Lane |
| Brenda's Infant Toddler Care | 2451 Mallard Drive |
| Children's World Learning Center | 2875 Mitchell Drive |
| Contra Costa Christian Preschool | 2721 Larkey Lane |
| Contra Costa Jewish Community Center | 2071 Tice Valley Boulevard |
| Gan B'nai Shalom | 74 Eckley Lane |
| Garden Gate Montessori School | 63 Sandy Lane |
| Kid Time, Inc. | 1547 Geary Road |
| Love and Care Learning Center | 1985 Geary Road |
| North Creek Preschool | 2303 Ygnacio Valley Road |
| Pied Piper Preschool | 2263 Whyte Park Avenue |
| St. Mary Pre-Kindergarten Program | 1158 Bont Lane |
| Preschool at Seven Hills School | 975 North San Carlos Drive |
| Trinity Lutheran School | 2317 Buena Vista Avenue |
| Walnut Creek Presbyterian Church Preschool | 1801 Lacassie Avenue |
| Hospitals in the Vicinity of WTTIP Project Sites | |
| Kaiser Permanente Medical Center | 1425 S. Main St. |
| Mt. Diablo Medical Center | 1601 Ygnacio Valley Road |
| National Specialty Hospital | 177 La Casa Via |
| Fire Stations in the Vicinity of WTTIP Project Sites | |
| CCCFPD Station 1 | 1330 Civic Drive |
| CCCFPD Station 3 | 1520 Rossmoor Parkway |
| CCCFPD Station 4 | 700 Hawthorne Drive |
| CCCFPD Station 7 | 1050 Walnut Avenue |
| **City of Oakland** | |
| Schools in the Vicinity of WTTIP Project Sites | |
| Burckhalter Elementary School | 3994 Burckhalter Avenue |
| Parker Elementary School | 7929 Ney Avenue |
| Reems (Ernestine C.) Academy of Technology and Art | 8425 MacArthur Boulevard |
| Howard Elementary School | 8755 Fontaine Street |
| **City of El Sobrante** | |
| Fire Stations in the Vicinity of WTTIP Project Sites | |
| CCCFPD Station 69 | 4640 Appian Way |

SOURCE: California Department of Education, 2006; East Bay Preschool Directory, 2006; Contra Costa County, 2005.

As a staff-initiated change, text under Impact 3.12-4 on DEIR p. 3.12-19 is revised as follows:

> To reduce this impact to a less-than-significant level, the District will implement Measures 3.12~~12.3-~~4a and 3.12~~12.3-~~4b.

Measures 3.12-4a and 3.12-4b on DEIR p. 3.12-20 have been revised as follows:

> **Measure 3.12-4a:** The District will ~~encourage~~ require project facility design and construction methods that produce less waste, or that produce waste that could more readily be recycled or reused.
>
> **Measure 3.12-4b:** The District will include in its construction specifications a requirement for the contractor to describe plans for recovering, reusing, and recycling 50 percent of projected solid waste~~s produced~~ through construction, demolition, and excavation activities.

# Chapter 5. Cumulative Impacts

Section 5.2.11, fifth paragraph on DEIR p. 5-12 has been revised as follows:

> The most significant source of solid waste ~~is~~ potentially requiring offsite disposal would be excavated material, estimated at approximately 230,000 –376,000 cubic yards for all WTTIP projects under Alternatives 1 and 2, respectively. The high end of the range represents less than 0.2% of the remaining capacity of two landfills in the WTTIP vicinity, Keller Canyon Landfill with 68,279,670 cubic yard and Altamont Landfill with 124,400,000 cubic yards. There are numerous other active landfills in Contra Costa and Alameda Counties that could also be used such that the impact on the capacity of these two landfills would be even less. As described under ~~Impacts~~ Measures 3.12-4a and 3.12-~~5~~4b ~~and presented in Table 3.12-5, however, most of this material would be reused onsite and, together with other measures designed to~~ contractors would be encouraged to ~~waste~~ recycle~~ing~~ and reuse excavated spoils and other construction materials to the extent feasible which could reduce the estimated totals. Therefore, this impact is not expected to result in a significant cumulative effect on landfill capacity in the area.

Table 5-1 on DEIR pp. 5-13 to 5-32 has been revised as shown on pp. 3.2-26 to 3.2-45 of this section.

The text in Table 5-1, DEIR p. 5-21 regarding CCCSD's Collection System Renovation Program has been revised as follows:

> Replace or renovate small-diameter sewers ~~in south~~ throughout Orinda (~~south~~ both sides of Highway 24 – many locations, not shown on figure).

The text in Table 5-1, DEIR p. 5-26 regarding CCCSD's Orinda Crossroads Pumping Station Force Main has been revised as follows:

> Evaluation and rehabilitation of existing force mains in various parts of downtown ~~Walnut Creek~~ Orinda towards Lafayette (Location not shown on map).

Table 5-2 on DEIR pp. 5-33 to 5-34 has been revised as shown on pp. 3.2-46 to 3.2-47 of this section.

The following measure has been added to the bottom of DEIR p. 5-45:

> **Measure C-7:** The District will provide regular, ongoing notification and communication (approximately every six to twelve months or more often if needed) with local jurisdictions with regard to the status, schedule and location of WTTIP projects and associated haul routes and any other District projects within that jurisdiction. This will include regular coordination with Orinda, Lafayette, Walnut Creek and Moraga, where there is a high potential for conflict with other proposed and planned projects, as well as regular coordination with Contra Costa County and Central Contra Costa Sanitary District. The District will make reasonable efforts to coordinate the scheduling of its project activities with other jurisdictions' activities in order to minimize the magnitude and duration of disruption to local communities.

# Chapter 6. Alternatives

The paragraph after the second bullet on DEIR p. 6-56 has been revised as follows:

> Although providing clearwell capacity at the Orinda WTP would allow the District to further reduce the size of the North, South and Central Reservoirs, ~~doing so~~ reducing the size of these reservoirs would not meet the fundamental objectives (managing water quality) of building the program-level clearwell at the Orinda WTP and therefore cannot be considered an alternative.

The third bullet on DEIR p. 6-70 has been revised as follows:

- **Moraga Road Pipeline.** Implementing the proposed project with the realignments through the Lafayette Reservoir Recreation Area identified under the Moraga Road Pipeline Alternative is considered environmentally preferable to either the project as proposed or the tunneling option~~. The tunnel option is considered environmentally superior to trenching the pipeline in Moraga Road between Nemea Court and Sky Hy Drive~~ because it would reduce the number of protected trees requiring removal by up to 25 and total number of trees by up to 40. Removing fewer trees, particularly those of large-diameter, would in turn reduce impacts to the habitat of upland special status species.

**THE FOLLOWING PROJECT NUMBERS HAVE BEEN ADDED TO THIS TABLE: A-3, B-18, D-5, F-14, G-16, L-26, AND L-27**

**REVISED TABLE 5-1**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| LAFAYETTE | | | | | | |
| Overlapping Haul Routes with Lafayette WTP, Orinda-Lafayette Aqueduct, Highland Reservoir and Pipeline, Moraga Road Pipeline | | | | | | |
| A-1 | EBMUD | Folsom South Canal Connection Projects | Install stop logs and isolation valve at Lafayette WTP. | All | Approved / construction date uncertain | EBMUD, 2005g |
| A-2 | Contra Costa Transportation Authority | Lafayette Carpool Lots | Construct a carpool lot on Mt. Diablo Boulevard at Risa Road. | All | Approved / 2007 | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |
| A-3 | Central Contra Costa Sanitary District | Lamorinda-Mt. Diablo Blvd. Parallel Sewer | Sewer project in Mt. Diablo Blvd., from El Nido Ranch Road to Dolores Drive | All | 2019-2020 | Central Contra Costa Sanitary District, 2006 |
| South Projects with Overlapping Haul Routes with Fay Hill Reservoir Replacement, Fay Hill Pumping Plant and Pipeline, Glen Pipeline Improvements, Moraga Road Pipeline, Moraga Reservoir, Sunnyside Pumping Plant, St. Mary's Road/Rohrer Drive Pipeline | | | | | | |
| B-1 | EBMUD | Brook Street Pipeline | Replace 2,700 feet of 6- and 8-inch transmission pipeline with 16-inch pipeline. Located on Brook Street from Mountain View Drive to Moraga Road. | Moraga Road Pipeline, Glen Pipeline Improvements | Planned / Apr. 2012 through Jan. 2013 | EBMUD, 2005c |
| B-2 | EBMUD | Sunset Reservoir Rehabilitation | Rehabilitate 0.07-million-gallon tank located east of Lafayette Reservoir. | Moraga Road Pipeline | Planned / Apr. 2010 through Sept. 2010 | EBMUD, 2005b |
| B-3 | EBMUD | Folsom South Canal Connection Projects | Install a new pump control panel, dechlorination improvements, and electrical improvements at the Moraga Pumping Plant. | Moraga Road Pipeline, Glen Pipeline Improvements | Approved / construction date uncertain | EBMUD, 2005g |
| B-4 | City of Lafayette | Veteran's Memorial Building | 10,500-square-foot community facility located at 3491 Mt. Diablo Boulevard. | Moraga Road Pipeline, Glen Pipeline Improvements | Construction completed 2005 | City of Lafayette, 2005 |
| B-5 | City of Lafayette | Soldier Field Subdivision | 87.9-acre subdivision for eight residential lots and approximately 60 acres of open space at the boundary between Lafayette and Walnut Creek. | St. Mary's Road/Rohrer Drive Pipeline | Proposed | City of Lafayette, 2005 |
| B-6 | City of Lafayette | Lafayette Library and Learning Center | 30,321-square-foot library and 33,019-square-foot garage at Mt. Diablo Boulevard and First Street. | Glen Pipeline Improvements | Approved / 2006 | City of Lafayette, 2005 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| B-7 | City of Lafayette | Lafayette Mercantile | 22,000-square-foot retail and 33,000-square-foot office building at Mt. Diablo Boulevard at Dewing Avenue. | Glen Pipeline Improvements | Approved / 2005–2006 | City of Lafayette, 2005 |
| B-8 | City of Lafayette | Town Center Phase III | 75-unit apartment building at Mt. Diablo Boulevard at Dewing Avenue. | Glen Pipeline Improvements | Planned (in approval process) / 2006 | City of Lafayette, 2005 |
| B-9 | PG&E | Rule 20 Electric Undergrounding Program | Undergrounding of utilities along 1,000 feet of Lafayette Circle. | Glen Pipeline Improvements | Approved / 2008 | Pflaum, 2006 |
| B-10 | Contra Costa Transportation Authority | Moraga Road Corridor Improvements – Phases I and II | Eliminated a signal and crosswalks at the intersection of Brook Street and Moraga Road (involved closure of Brook Street). Installed traffic signal at intersection of Moraga Road and Moraga Boulevard. | Glen Pipeline Improvements | Completed in 2005 | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |
| B-11 | Contra Costa Transportation Authority | Moraga Road Corridor Improvements – Phases III and IV | Acquire right-of-way and realign Brook Street with School Street. Construct a pedestrian walkway along Moraga Road from Old Jones Hill Road to Hillsdale. | Glen Pipeline Improvements | Completed in 2005 | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |
| B-12 | Contra Costa Transportation Authority / City of Lafayette | Moraga Road Structural & Safety Improvements | Structural and safety improvements on Moraga Road between St. Mary's Road and Moraga city limit. Improvements include access improvements at intersections, shoulder work, potential slope stabilization, pavement rehabilitation, removal of safety hazards, and related improvements. Improvements from the Lafayette/Moraga town limit to Rim Rock Road are completed. | Moraga Road Pipeline | Completed in 2005 | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a; City of Lafayette, 2006; Coe, 2006 |
| B-13 | City of Lafayette | Lafayette Valley Estates Storm Drain Improvement Project | Repair and replacement of approximately 1,600 feet of broken concrete ditches and 600 feet of corroded metal pipes of the original storm drain system at several locations within the subdivision as the first phase to upgrading and renewing the area drainage system. | St. Mary's Road/Rohrer Drive Pipeline | Approved / 2006 | City of Lafayette, 2006; Coe, 2006 |
| B-14 | City of Lafayette | St. Mary's Road Storm Drain Improvements | Construct 1,000 feet of underground storm drainage pipe to replace existing open ditch where standing water occurs between Huertas Road and Hope Lane. | St. Mary's Road/Rohrer Drive Pipeline | Approved / 2006 | City of Lafayette, 2006; Coe, 2006 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| B-15 | Contra Costa Transportation Authority | Mt. Diablo Boulevard Corridor Improvements | Added a third east-bound lane to Mt. Diablo Boulevard between Oak Hill Road and Moraga Road. At the intersection with Moraga Road, a third south-bound lane was added. Other improvements were made to Plaza Way and Golden Gate Way. The project included some landscape work that mitigated the loss of landscaped medians and park area. Plaza park was rebuilt using local funds. | Glen Pipeline Improvements | Construction completed in 2001 | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |
| B-16 | EBMUD | Folsom South Canal Connection Projects | Install isolation butterfly valve on the branch line from Lafayette Aqueduct No. 1 to Moraga Pumping Plant. | Moraga Road Pipeline | Approved / 2006 | EBMUD, 2005g |
| B-17 | EBMUD | Happy Valley Road Pipeline | Replace 3,150 feet of pipeline on Dolores Street, under Highway 24, and on Happy Valley Road. | Glen Pipeline Improvements | Planned / completion expected by April 2007 | Kirkpatrick, 2006 |
| B-18 | Central Contra Costa Sanitary District | Lamorinda-Olympic Blvd.1 Parallel Sewer | Sewer project in Golden Gate Way, Second Street, Moraga Blvd., Olympic Blvd. | Glen Pipeline Improvements | 2019-2020 | Central Contra Costa Sanitary District, 2006 |
| North Projects with Overlapping Haul Routes with Fay Hill Reservoir Replacement, Fay Hill Pumping Plant and Pipeline, Glen Pipeline Improvements, Moraga Road Pipeline, Moraga Reservoir, Sunnyside Pumping Plant, St. Mary's Road/Rohrer Drive Pipeline | | | | | | |
| C-1 | EBMUD | Valory Reservoir Replacement | Replace 0.27-million-gallon reservoir with a 0.5-million-gallon reservoir off of Panorama Drive | Glen Pipeline Improvements | In construction / completion expected by Jun. 2006 | EBMUD, 2005e |
| C-2 | Caltrans | Deer Hill Road/Oak Road Interchange | Improve interchange and signals at westbound off-ramp at Highway 24 Deer Hill Road/Oak Road interchange. | Glen Pipeline Improvements | Status being determined | Caltrans, 2006 |
| C-3 | City of Lafayette | Happy Valley Road Storm Drain Improvements | Replace 100 feet of roadside ditch on Happy Valley Road, just east of Crestmont Drive, with an underground pipe. | Glen Pipeline Improvements | Approved / 2006 | City of Lafayette, 2006; Coe, 2006 |
| Overlapping Haul Routes with Tice Pumping Plant and Leland Reservoir Replacement | | | | | | |
| D-1 | EBMUD | Old Tunnel Road Pipeline | Replace 1,300 feet of 8-inch transmission pipeline with a 12-inch pipeline. Located on Old Tunnel Road from Buchanan Drive to Linda Vista Lane. | Leland Reservoir Replacement | Planned / Apr. 2013 through Jan. 2014 | EBMUD, 2005c |
| D-2 | Central Contra Costa Sanitary District | Trunk Sewer Project – Lower Pleasant Hill Road Trunk | Replace approximately 3,300 feet of trunk sewer with a 21-inch line in Pleasant Hill Road, south of Highway 24. | Leland Reservoir Replacement | Approved / 2012 | Central Contra Costa Sanitary District, 2005 |
| D-3 | City of Lafayette | Hidden Oaks | 21-lot single-family residential subdivision near Kinney Drive. | Leland Reservoir Replacement | Approved / under construction | City of Lafayette, 2002 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| D-4 | Caltrans / City of Lafayette | Pleasant Hill Road Bike/Pedestrian Path Improvements | Construct multipurpose pathways, tree-lined strips, bike lanes, and narrow travel lanes in Pleasant Hill Road between Mt. Diablo Boulevard and Condit Lane. | Leland Reservoir Replacement | Under construction / completion expected by 2006 | Caltrans, 2006; Contra Costa Transportation Authority, 2006a; City of Lafayette, 2006 |
| D-5 | Central Contra Costa Sanitary District | Lamorinda-Olympic Blvd. 2 Parallel Sewer | Sewer project in Olympic Blvd., from Reliez Station Road to Newell Avenue | Leland Reservoir, Tice Pumping Plant | 2016-2017 | Central Contra Costa Sanitary District, 2006 |
| Other Overlaps | | | | | | |
| E-1 | EBMUD | Diablo Vista Reservoir Replacement | Drain and decommission 2.9-million-gallon reservoir and replace with a new 0.62-million-gallon reservoir at the existing reservoir site at a higher overflow elevation. | Walnut Creek WTP | Planned / Feb. 2010 through Jul. 2011 | EBMUD, 2005c |
| | City of Lafayette | 2006 Pavement Management Program | Rehabilitation and maintenance of 25 streets citywide, including Happy Valley Road, Mt. Diablo Boulevard, and St. Mary's Road (not shown on figure). | Various locations | Approved for 2006 | City of Lafayette, 2006 |
| | Central Contra Costa Sanitary District | Collection System Renovation Program | Replace or renovate small-diameter sewers in Lafayette at various locations (allowance for future projects – not shown on figure). | Various locations | Planned / no certain dates | Central Contra Costa Sanitary District, 2005 |
| MORAGA | | | | | | |
| Overlapping Haul Routes with Fay Hill Reservoir Replacement, Fay Hill Pumping Plant and Pipeline, Glen Pipeline Improvements, Moraga Road Pipeline, Moraga Reservoir, Sunnyside Pumping Plant, St. Mary's Road/Rohrer Drive Pipeline | | | | | | |
| F-1 | EBMUD | Decommission Jonas Hill Reservoir | Decommission existing reservoir. | Moraga Road Pipeline | Completed in 2005 | EBMUD, 2005b |
| F-2 | Central Contra Costa Sanitary District | Concrete Corrosion Control Work on St. Mary's Road | Install 2,850 feet of cured-in-place pipe inside existing 33-inch sewer along easement paralleling St. Mary's Road beginning at Bollinger Canyon Road and extending southeast along Lafayette Moraga Trail (all internal work, no trench excavation); parallels one segment of the St. Mary's Road/Rohrer Drive Pipeline. | St. Mary's Road/Rohrer Drive Pipeline | Approved / 2006 | Central Contra Costa Sanitary District, 2005 |
| F-3 | Central Contra Costa Sanitary District | Moraga Way Pumping Station Force Main | Evaluation and rehabilitation of existing force main paralleling St. Mary's Road near St. Mary's College and Bollinger Canyon Road. May overlap with one segment of the St. Mary's Road/Rohrer Drive Pipeline. | St. Mary's Road/Rohrer Drive Pipeline | Approved / 2014 | Central Contra Costa Sanitary District, 2005 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| F-4 | Town of Moraga | Rancho Laguna Housing Development | 43-single-family housing development on 180 acres of existing open space. Currently in approval process. | Moraga Road Pipeline, Fay Hill Reservoir Replacement, Fay Hill Pumping Plant and Pipeline | Planned / construction date uncertain | Town of Moraga, 2005 |
| F-5 | Town of Moraga | Palos Colorados Housing Development | 120-lot single-family housing development and 18-hole golf course on existing open space. Currently in approval process. | Moraga Road Pipeline | Planned / construction date uncertain | Town of Moraga, 2005 |
| F-6 | Contra Costa County Building Department | Relay Module<br>APN 255-015-13 | Relay module for commercial electrical at southwest corner of Moraga Road and Rheem Boulevard at or very near the same site as the Fay Hill Pumping Plant. | Fay Hill Pumping Plant and Pipeline, Moraga Road Pipeline, Fay Hill Reservoir Replacement | Approved / construction date uncertain | Gomez, 2005 |
| F-7 | Contra Costa County Building Department | Metro PCS<br>APN 255-015-14 | Metro PCS cell site on Rheem Boulevard just west of Moraga Road; on other side of Center Street from the Fay Hill Pumping Plant. Currently in for plan check. | Fay Hill Pumping Plant and Pipeline, Moraga Road Pipeline, Fay Hill Reservoir Replacement | Approved / construction date uncertain | Gomez, 2005 |
| F-8 | EBMUD | Rheem Pumping Plant Upgrade | Upgrade Rheem Pumping Plant from 1.6 million gallons per day (mgd) to 3.2 mgd. | Fay Hill Pumping Plant and Pipeline, Moraga Road Pipeline, Fay Hill Reservoir Replacement | Approved / Dec. 2006 through Nov. 2007 | EBMUD, 2005a |
| F-9 | EBMUD | Lamorinda Recycled Water Project | As part of its water recycling program, EBMUD may implement a recycled water project in the Lamorinda area. This potential project could serve the proposed Palos Colorados development in Moraga (project F-5, above). Facilities would consist of a satellite recycled water treatment plant located next to the development to produce approximately 200,000 gallons per day of recycled water for irrigation of the golf course proposed as part of the development. The source of wastewater for the project would be an existing sewer located along Moraga Road, which would overlap with a part of the Moraga Road Pipeline. Construction of the recycled water project is dependent upon approval of the Palos Colorados development. | Moraga Road Pipeline | Proposed / timing dependent on approval of Palos Colorados project | Hu, 2006 |
| F-10 | Town of Moraga | New Office Building | Construction of a new office building and site improvements at 533 Moraga Road. | Fay Hill Pumping Plant and Pipeline, Moraga Road Pipeline, Fay Hill Reservoir Replacement | Approved / construction date uncertain | Town of Moraga, 2005 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| F-11 | Town of Moraga | Hetfield Conceptual Development Plan | Subdivision of 58.2 acres on Hetfield Place into six lots. | St. Mary's Road/Rohrer Drive Pipeline | Application under consideration by the design review board / construction date uncertain | Dennsler, 2006 |
| F-12 | Town of Moraga | Los Encinos Housing Development | Single-family housing development. | St. Mary's Road/ Rohrer Drive Pipeline | April 2006 | Dennsler, 2005 |
| F-13 | Town of Moraga | Bollinger Canyon General Plan Amendment and Rezoning Study | Single-family housing development. | St. Mary's Road/ Rohrer Drive Pipeline | Application submitted but project on hold because of additional studies required | Town of Moraga, 2005 |
| F-14 | Town of Moraga | Repave Moraga Road | Repave Moraga Road between Lafayette town line and Buckingham Drive | Fay Hill Pumping Plant and Pipeline, Moraga Road Pipeline, Fay Hill Reservoir Replacement | 2009 | Town of Moraga, 2006 |
| Other Overlaps | | | | | | |
| | Central Contra Costa Sanitary District | Collection System Renovation Program | Replace or renovate small-diameter sewers in Moraga (allowance for future projects – not shown on figure). | Various locations | Planned / no certain dates | Central Contra Costa Sanitary District, 2005 |
| ORINDA | | | | | | |
| Overlapping Haul Routes with Orinda WTP, Orinda-Lafayette Aqueduct, Happy Valley Pumping Plant and Pipeline, and San Pablo Pipeline | | | | | | |
| G-1 | Central Contra Costa Sanitary District | Lower Orinda Pumping Station Force Main | Rehabilitation of existing force main on Camino Pablo between Miner Road and Crossroads Shopping Center. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Approved / 2012 | Central Contra Costa Sanitary District, 2005 |
| G-2 | EBMUD | Orinda Reservoir | Decommission existing reservoir. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Completed in 2005 | EBMUD, 2005b |
| G-3 | EBMUD | Encinal Reservoir Replacement | Replace 0.26-million-gallon redwood reservoir with a new 0.19-million-gallon steel-bolted tank at the same site. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Planned / Jan. 2009 through Jun. 2010 | EBMUD, 2005d |
| G-4 | EBMUD | Westside Reservoir Replacement | Replace the 0.49-million-gallon Encinal Reservoir with a new 0.36-million-gallon reservoir and demolish the existing reservoir. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Completed in 2005 | EBMUD, 2005d |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| G-5 | EBMUD | Claremont Tunnel Seismic Improvements | Seismic improvements to the existing Claremont Tunnel, including construction of short bypass tunnel at west end in Berkeley and repairs to the tunnel from the Orinda WTP portal (Figure shows only Orinda WTP portion of project.) | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Under construction / completion expected by 2007 | EBMUD, 2003b |
| G-6 | EBMUD | Folsom South Canal Connection Projects | Construct spillway improvements at Orinda WTP. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Approved / 2008–2009 | EBMUD, 2005g |
| G-7 | Central Contra Costa Sanitary District | Flushkleen Force Main Renovation | Replace existing force main on Camino Pablo between Manzanita and Miner Road. Overlaps the Orinda WTP site and segments of the San Pablo Pipeline. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Approved / 2007 | Central Contra Costa Sanitary District, 2005 |
| G-8 | Central Contra Costa Sanitary District | Trunk Sewer Project – Miner Road, Orinda | Replace approximately 7,200 feet of trunk sewer in Miner Road and Lombardy Lane with lines ranging in size from 15 to 27 inches. Overlaps with segments of the Happy Valley Pipeline. | Happy Valley Pumping Plant and Pipeline | Approved / 2008 | Central Contra Costa Sanitary District, 2005 |
| G-9 | Central Contra Costa Sanitary District | Trunk Sewer Project – Camino Pablo, Orinda | Replace approximately 1,500 feet of trunk sewer in Camino Pablo near Miner Road with a 15-inch line. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Approved / 2008 | Central Contra Costa Sanitary District, 2005 |
| G-10 | City of Orinda | Orinda Grove Development | 80-dwelling housing development, relocation of city-owned ballfields, and construction of new office building. Project is located on 14.1-acre site, northeast of the intersection of Camino Pablo and Altarinda Road. In approval process; construction anticipated to begin in 2006. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Planned / 2006 | City of Orinda, Planning Department, 2006 |
| G-11 | Contra Costa County Building Department | APN 266-010-04 | Retaining wall work on two parcels west of the Happy Valley Pumping Plant parcel on Lombardy Lane. | Happy Valley Pumping Plant and Pipeline | Approved / construction schedule uncertain | Gomez, 2005 |
| G-12 | City of Orinda | Manzanita Drive Bride | Rebuilding Manzanita Drive bridge over San Pablo Creek because of seismic safety concerns and because the bridge is flooded during some storm events. Requires right-of-way for construction of temporary bridge on EBMUD Orinda WTP property. Some overhead utilities have already been relocated to accommodate construction. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Approved / 2007 | Lowry, 2006 |
| G-13 | PG&E | Rule 20 Electric Undergrounding Program | Undergrounding of utilities along 5,000 feet of Miner Road between Camino Pablo and Lombardy Lane. | Happy Valley Pumping Plant and Pipeline | Approved / 2007 or 2008 | Pflaum, 2006 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| G-14 | Contra Costa Transportation Authority | Santa Maria Intersection Improvements | Review of traffic volumes and movements along Camino Pablo, extending northerly from Highway 24 to Santa Maria intersection. Recommendations may include addition of second lane on Camino Pablo. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Tentative | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |
| G-15 | EBMUD | Sleepy Hollow Reservoir Replacement | Replace 0.14-million-gallon temporary reservoir with a 0.4-million-gallon reservoir. | Happy Valley Pumping Plant and Pipeline | Under construction / expected to be completed by Sept. 2006 | EBMUD, 2005e |
| G-16 | Central Contra Costa Sanitary District | Orinda-EBMUD Filter Plant Sewer Replacement | Sewer project in easement through EBMUD right of way near EBMUD Orinda filter plant. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | 2021-2022 | Central Contra Costa Sanitary District, 2006 |
| Overlapping Haul Routes with Ardith Reservoir and Donald Pumping Plant | | | | | | |
| H-1 | EBMUD | Laguna Pumping Plant Replacement | Replace 0.2-mgd pumping plant with a 0.75-mgd pumping plant. To be located within the Montanera Development. | Ardith Reservoir and Donald Pumping Plant | Approved / Mar. 2007 through Jan. 2008 | EBMUD, 2005a |
| H-2 | EBMUD | Laguna No. 2 Reservoir | Construct new 0.27-million-gallon Laguna Reservoir adjacent to existing Laguna Reservoir. | Ardith Reservoir and Donald Pumping Plant | Approved / Mar. 2007 through Jun. 2008 | EBMUD, 2005a |
| H-3 | EBMUD | Cross Roads Pumping Plant Replacement | Replace 0.3-mgd pumping plant with a 0.9-mgd pumping plant at existing site and replace 400 feet of 6-inch suction pipeline in Spring Road from pumping plant to Knickerbocker Lane with 8-inch pipeline. | Ardith Reservoir and Donald Pumping Plant | Approved / May 2006 through Jun. 2007 | EBMUD, 2005a |
| H-4 | Central Contra Costa Sanitary District | Trunk Sewer Project – Moraga Way, Orinda | Replace approximately 3,400 feet of existing trunk sewer with 12- and 15-inch lines in Moraga Way in the vicinity of El Camino Moraga and Del Rey School. | Ardith Reservoir and Donald Pumping Plant | Approved / 2009 | Central Contra Costa Sanitary District, 2005 |
| H-5 | Central Contra Costa Sanitary District | Hall Drive Sewer Improvements – Phase 2B Construction | Renovation/replacement of the old easement sewer that serves 18 homes. The new line will be constructed in front yards of homes and tie into the bypass sewer in Hall Drive. Trenchless technologies will be utilized to minimize disruption of the front yards. | Ardith Reservoir and Donald Pumping Plant | Approved / 2011 | Central Contra Costa Sanitary District, 2005 |
| H-6 | City of Orinda | Southwood Valley Subdivision | 16 lot subdivision on 43 acres in Southwood Valley (Southwood Drive and Tara Road). EIR scoping in January 2006. | Ardith Reservoir and Donald Pumping Plant | Planned / construction Date uncertain | Parkman, 2005 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| H-7 | City of Orinda | Stein Way Subdivision | 2-parcel subdivision (will probably be subdivided further) at Stein Way and Oak Road. Application is being appealed. | Ardith Reservoir and Donald Pumping Plant | Planned / construction date uncertain | Parkman, 2005 |
| H-8 | EBMUD | New Siesta Reservoir | Construct a new 0.73-million-gallon reservoir and 1,160 feet of 12-inch inlet/outlet pipeline within the Montanera Development. (Figure shows only a generalized location within the Montanera site.) | Ardith Reservoir and Donald Pumping Plant | Approved / Mar. 2007 through Jun. 2008 | EBMUD, 2005a |
| H-9 | City of Orinda | Montanera | 245-unit single-family housing development in Gateway Valley (western Orinda). Approved; EIR certified; construction to begin in 2006. | Ardith Reservoir and Donald Pumping Plant | Approved / 2006 | City of Orinda, Planning Department, 2006 |
| H-10 | EBMUD | Moraga Way Pipeline Replacement | Replacement of aging water pipelines on Moraga Way between Overhill Road and Camino Encinas. | Ardith Reservoir and Donald Pumping Plant | Completed in 2005 | EBMUD, 2005h |
| H-11 | City of Orinda | Asphalt Reconstruction on Moraga Way | Repave Moraga Way between Camino Encinas and Ivy Drive. | Ardith Reservoir and Donald Pumping Plant | Approved / 2007 | Lowry, 2006 |
| H-12 | Contra Costa Transportation Authority | Moraga Way/Ivy Drive Roadway Improvement & Signalization Project | Modify intersection of Ivy Drive and Moraga Way to provide free right-turn lane from southbound Moraga Way to Westbound Ivy Drive. Replace existing signal and widen sidewalks to meet Americans with Disabilities Act standards. | Ardith Reservoir and Donald Pumping Plant | Completed in 2004 | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |
| H-13 | Contra Costa Transportation Authority | Bryant Way/Moraga Way Improvements | Provide pedestrian and bicycle connection between St. Stephens Trail, downtown Orinda, and the Orinda BART station. Areas encompassed are Bryant Way/Davis Road from St. Stephens Trail to the BART station connection near Camino Pablo; and Moraga Way from Brookwood Road to Bryant Way. | Ardith Reservoir and Donald Pumping Plant | Competed in 2005 | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |
| H-14 | Contra Costa Transportation Authority | Moraga Way at Glorietta Boulevard and Camino Encinas | Improvements of Moraga Way at the intersections with Glorietta Boulevard and Camino Encinas. | Ardith Reservoir and Donald Pumping Plant | Completed in 2001 | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |
| H-15 | Contra Costa Transportation Authority | Moraga Way Safety Improvements | Construction of safety features on Moraga Way between Glorietta Boulevard and Ivy Drive, including separate walkways, crosswalks, roadway widening, speed bumps, and other traffic calming devices. | Ardith Reservoir and Donald Pumping Plant | Completed in 2002 | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| H-16 | Contra Costa Transportation Authority | Widen Eastbound Highway 24 Off-Ramp at Brookwood Road | Widen the eastbound Highway 24 off-ramp at Brookwood Road. | Ardith Reservoir and Donald Pumping Plant | Tentative | Contra Costa Transportation Authority, 2006b; Contra Costa Transportation Authority, 2006a |
| Other Overlaps | | | | | | |
| I-1 | City of Orinda | Asphalt Reconstruction on El Nido Ranch Road | Repave El Nido Ranch Road between Stephens Drive and city limit. Would not be implemented until WTTIP would be completed. | Orinda-Lafayette Aqueduct | Approved / construction schedule dependent on WTTIP | Lowry, 2006 |
| | Central Contra Costa Sanitary District | Collection System Renovation Program | Replace or renovate small-diameter sewers throughout Orinda (both sides of Highway 24 – many locations, not shown on figure). | Various locations | Planned / no certain dates | Central Contra Costa Sanitary District, 2005 |
| | Central Contra Costa Sanitary District | Orinda Crossroads Pumping Station Force Main | Evaluation and rehabilitation of existing force mains in various parts downtown Orinda towards Lafayette (location not shown on map). | Various locations | Approved / 2013 | Central Contra Costa Sanitary District, 2005 |
| WALNUT CREEK | | | | | | |
| J-1 | EBMUD | Walnut Creek – San Ramon Improvement Project | Treatment, transmission, and distribution system improvements to correct deficiencies and increase reliability through Walnut Creek and Alamo. Includes four main components: (1) upgrades at Walnut Creek WTP where construction is scheduled to be completed in 2006; (2) northern pipeline and tunnel, where construction began in March 2003 and is scheduled for completion in 2006 and includes a completed segment on Lacassie Avenue, which is the same location as the Leland Isolation Pipeline, and pipeline construction along South Broadway between Newell Avenue and Rudgear Road is scheduled for completion in fall 2006 and is the same location as the New Leland Reservoir and Pipeline and Valve Improvements; (3) recently completed construction of Danville Pumping Plant in Alamo just south of Rudgear Road Trailhead near the New Leland Reservoir and Pipeline and Valve Improvements; and (4) completed construction of the Iron Horse corridor pipeline in Alamo. | Walnut Creek WTP, Leland Isolation Pipeline, New Leland Reservoir and Pipeline and Valve Improvements | Approved / partly completed and partly under construction, construction began in 2003 and scheduled for completion in 2006 | EBMUD, 2000; EBMUD, 2006 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| Overlapping Haul Routes with Walnut Creek WTP | | | | | | |
| K-1 | EBMUD | Folsom South Canal Connection Projects | Install isolation butterfly on the north raw water line to the Walnut Creek WTP. | Walnut Creek WTP | Approved / construction date uncertain | EBMUD, 2005g |
| K-2 | City of Walnut Creek | Contra Costa Christian School Expansion | Remove two portable buildings, construct new two-story 22,955-square-foot gymnasium/classroom building on seven-acre site at 2721 Larkey Lane. | Walnut Creek WTP | Under Review | City of Walnut Creek, Planning Division, 2006b |
| K-3 | City of Walnut Creek | Trailside Glen Subdivision | Subdivision on 3.77 acres with seven lots for single-family residential – each lot over 12, 000 square feet at 2637 Larkey Lane. | Walnut Creek WTP | Under Review | City of Walnut Creek, Planning Division, 2006b |
| Overlapping Haul Routes with Leland Isolation Pipeline | | | | | | |
| L-1 | Central Contra Costa Sanitary District | Trunk Sewer Project – South Broadway Walnut Creek | Replace approximately 2,000 feet of the existing trunk sewer with a 15-inch line between Newell Avenue and Mt. Diablo Boulevard. | Leland Isolation Pipeline | Approved / 2009 | Central Contra Costa Sanitary District, 2005 |
| L-2 | Central Contra Costa Sanitary District | Trunk Sewer Project – Walnut Boulevard, Walnut Creek | Replace approximately 7,000 feet of the existing trunk sewer in Walnut Boulevard between Homestead Avenue and Norlyn Drive with lines ranging in size from 18 to 22 inches. | Leland Isolation Pipeline | Approved / 2015 | Central Contra Costa Sanitary District, 2005 |
| L-3 | Central Contra Costa Sanitary District | Walnut Creek Civic Center Main Improvements | Replace several deteriorated sewer lines along and adjacent to Civic Drive in downtown Walnut Creek. | Leland Isolation Pipeline | Tentative – dependent on Walnut Creek Plan | Central Contra Costa Sanitary District, 2005 |
| L-4 | Central Contra Costa Sanitary District | Locust Street Improvements | Replace several deteriorated sewers along and crossing Locust Street in downtown Walnut Creek, with one end overlapping with the Leland Isolation Pipeline. | Leland Isolation Pipeline | Tentative – dependent on Walnut Creek Plan | Central Contra Costa Sanitary District, 2005 |
| L-5 | Central Contra Costa Sanitary District | Mt. Diablo Boulevard Main Improvements | Replace several deteriorated sewers along and adjacent to Mt. Diablo Boulevard in downtown Walnut Creek. | Leland Isolation Pipeline | Tentative – dependent on Walnut Creek Plan | Central Contra Costa Sanitary District, 2005 |
| L-6 | Central Contra Costa Sanitary District | North Main Street Trunk Improvements | Replace several deteriorated sewers along North Main Street in downtown Walnut Creek between Civic Drive and Mt. Diablo Boulevard. | Leland Isolation Pipeline | Tentative – dependent on Walnut Creek Plan | Central Contra Costa Sanitary District, 2005 |
| L-7 | City of Walnut Creek | The Mercer | 2.95-acre mixed-use residential and retail project, including 181 residential condominiums, 21,000 square feet of retail space, and two levels of parking. Located at 1655 North California Boulevard, between Trinity Avenue and Cole Avenue. Construction estimated from August 2005 to April 2007 (20 months). | Leland Isolation Pipeline | Approved / 2005–2007 | City of Walnut Creek, Planning Division, 2006a |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| L-8 | City of Walnut Creek | North Creek Church Expansion | Phased expansion including 69,885 square feet of a two-story sanctuary and 22,785 square feet of a gym/multipurpose room on 7.1 acres at 2303 Ygnacio Valley Road. | Leland Isolation Pipeline | Approved | City of Walnut Creek, Planning Division, 2006b |
| L-9 | City of Walnut Creek | Walnut Creek Ford Remodel | 29,000-square-foot facility at 1800 North Main Street and 5,370-square-foot facility across the street on Carlback, with street frontage improvements along Carlback and North Broadway. Very close to some sections of the Leland Isolation Pipeline. | Leland Isolation Pipeline | Approved | City of Walnut Creek, Planning Division, 2006a |
| L-10 | City of Walnut Creek | Talbot's Apparel | 20,000-square-foot retail facility at 1201 South Main Street at Olympic Boulevard. | Leland Isolation Pipeline | Completed fall 2004 | City of Walnut Creek, Planning Division, 2006a |
| L-11 | City of Walnut Creek | Montecito Apartments | 120-unit apartment building at 1315 Alma Avenue. | Leland Isolation Pipeline | Completed in 2004 | City of Walnut Creek, Planning Division, 2006a |
| L-12 | City of Walnut Creek | Bonanza Street Apartments | 24-unit residential project at 1852 Bonanza Street. | Leland Isolation Pipeline | Approved / under construction | City of Walnut Creek, Planning Division, 2006a |
| L-13 | City of Walnut Creek | SBC Switching Building | 30,000-square-foot office building at 1755 Locust Street, under construction or near completion. Very close to some sections of the Leland Isolation Pipeline. | Leland Isolation Pipeline | Approved / under construction | City of Walnut Creek, Planning Division, 2006a |
| L-14 | City of Walnut Creek | Ygnacio Valley Road Condominiums | Five-story residential, mixed-use development with 83 condominium units and five livework units at 547 and 565 Ygnacio Valley Road. | Leland Isolation Pipeline | Approved | City of Walnut Creek, Planning Division, 2006a |
| L-15 | City of Walnut Creek | John Muir Medical Center Master Plan Amendment | Construction of numerous improvements and demolition of some structures on 30.66-acre site at 1601 Ygnacio Valley Road. | Leland Isolation Pipeline | Under Review | City of Walnut Creek, Planning Division, 2006b |
| L-16 | City of Walnut Creek | Citrus Walk | Construction of 47 homes on 3.81 acres at 3063 Citrus Circle. | Leland Isolation Pipeline | Under construction | City of Walnut Creek, Planning Division, 2006b |
| L-17 | City of Walnut Creek | Kinross Terrace | 12-lot residential subdivision on 3.58 acres of existing common-area open space at the end of Kinross Drive. | Leland Isolation Pipeline | Under construction | City of Walnut Creek, Planning Division, 2006b |
| L-18 | City of Walnut Creek | Bancroft Garden | Four-phased development on 3.5 acres to include office/library, multi-use building, gift shop, plant display, sales area, garden maintenance building, and overflow parking at 1500 Bancroft Road. | Leland Isolation Pipeline | Under construction | City of Walnut Creek, Planning Division, 2006b |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| L-19 | City of Walnut Creek | St. John Vianney Church Expansion | 13,106 square feet of additions to a church at 1650 Ygnacio Valley Road. | Leland Isolation Pipeline | Under construction | City of Walnut Creek, Planning Division, 2006b |
| L-20 | City of Walnut Creek | Springfield Montessori Educational Center | Construction of 11,500-square-foot child daycare facility at 2780 Mitchell Drive. | Leland Isolation Pipeline | Under construction | City of Walnut Creek, Planning Division, 2006b |
| L-21 | City of Walnut Creek | Casa Montego II | Construction of 33 multifamily units on 3.65 acres at 1485 Montego. | Leland Isolation Pipeline | Under construction | City of Walnut Creek, Planning Division, 2006b |
| L-22 | City of Walnut Creek | Stoneridge Condo Conversion | 340 units converted from apartments to condominiums on 17.25 acres at 1400 Marchbanks Drive. | Leland Isolation Pipeline | Approved | City of Walnut Creek, Planning Division, 2006b |
| L-23 | City of Walnut Creek | Walnut Creek BART Transit Village | Construction of 574 residential units, 30,000 square feet of commercial space, and parking for 1,500 vehicles on 16.2 acres located at 200 Ygnacio Valley Road. | Leland Isolation Pipeline | Approved | City of Walnut Creek, Planning Division, 2006b |
| L-24 | City of Walnut Creek | Ygnacio Valley Road Planned Development | Construction of 109-unit, five-story condominium development with three work/live lofts on 1.01 acres at 547/565 Ygnacio Valley Road. | Leland Isolation Pipeline | Under review | City of Walnut Creek, Planning Division, 2006b |
| L-25 | City of Walnut Creek | Berean Christian High School Field Restoration | Football field renovation, parking lot extension, and other site improvements on seven acres at El Divisadero Avenue. | Leland Isolation Pipeline | Under review | City of Walnut Creek, Planning Division, 2006b |
| L-26 | Central Contra Costa Sanitary District | Contra Costa Canal Sewer Replacement | Sewer project along Canal between Oak Grove Road and Amberwood Lane | Leland Isolation Pipeline | 2016-2017 | Central Contra Costa Sanitary District, 2006 |
| L-27 | Central Contra Costa Sanitary District | Lamorinda-Olympic Blvd. 3 Parallel Sewer | Sewer project in Olympic Blvd. at Alpine Road easement to California Blvd. | Leland Isolation Pipeline | 2016-2017 | Central Contra Costa Sanitary District, 2006 |
| Overlapping Haul Routes with Leland Bypass Valve and New Leland Reservoir and Pipeline | | | | | | |
| M-1 | Central Contra Costa Sanitary District | South Main Sewer Sliplining | Slipline or rehabilitate approximately 800 feet of existing 36-inch corrugated-metal pipe in South Main Street just south of I-680 between the South Main off-ramp and Rudgear Road. | New Leland Pressure Zone Reservoir and Pipeline and Valve Improvements | Approved / 2008 | Central Contra Costa Sanitary District, 2005 |
| M-2 | EBMUD | Rezone Hill Mutual Pressure Zone | Construct Hill Mutual Pipeline Intertie consisting of 1,600 feet of 12-inch steel pipeline extending from the end of Grey Eagle Drive to the southern end of Castle Crest Road, connecting Ridgewood and Holly Pressure Zones. | New Leland Pressure Zone Reservoir and Pipeline and Valve Improvements | Planned / Jan. 2016 through Dec. 2016 | EBMUD, 2003a |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| | | | Install individual pressure regulators on 55 homes in the Hill Mutual Pressure Zone.<br>Demolish 0.003-million-gallon Hill Mutual Pressure Tank and 0.4-mgd Hill Mutual Pumping Plant.<br>Demolish 0.12-million-gallon Crest Reservoir and 0.1-mgd Crest pumping plant. | | | |
| M-3 | Central Contra Costa Sanitary District | Trunk Sewer Project – Rudgear Road Sewer Improvements | Replace approximately 13,000 feet of the existing trunk sewer line in Rudgear Road, Sylvan Road, and Palmer Road with lines ranging in size from 8 to 24 inches. | New Leland Pressure Zone Reservoir and Pipeline and Valve Improvements | Approved / 2009 | Central Contra Costa Sanitary District, 2005 |
| M-4 | Central Contra Costa Sanitary District | Trunk Sewer Project – Lancaster Road | Replace approximately 5,100 feet of the existing trunk sewer in Lancaster Road and Meadow Road with 15- and 18-inch lines. | New Leland Pressure Zone Reservoir and Pipeline and Valve Improvements | Approved / 2010 | Central Contra Costa Sanitary District, 2005 |
| M-7 | City of Walnut Creek | 4 Seasons Condo Conversion | Conversion of 176 apartment units into condominiums on 2.72 acres at 1385 Creekside Drive. | Leland Isolation Pipeline | Under review | City of Walnut Creek, Planning Division, 2006b |
| Overlapping Haul Routes with Tice Pumping Plant and Pipeline | | | | | | |
| M-5 | City of Walnut Creek | Contra Costa Jewish Community Center | Construction of 138 condominium units and reconstruction and enlargement of existing community center up to a total of 68,587 square feet on 8.26 acres at 2071 Tice Valley Boulevard. | Tice Pumping Plant and Pipeline | Under review | City of Walnut Creek, Planning Division, 2006b |
| M-6 | City of Walnut Creek | Rossmoor Detention Basin | Expansion of Tice Creek detention basin at the entrance to Rossmoor. | Tice Pumping Plant and Pipeline | Constructed | City of Walnut Creek, 2006c |
| Other Overlaps | | | | | | |
| N-1 | EBMUD | Folsom South Canal Connection Projects | Install new pump control panel and surge pressure control measures at Walnut Creek Pumping Plant | | Approved / construction date uncertain | EBMUD, 2005g |
| | Central Contra Costa Sanitary District | Collection System Renovation Program | Replace or renovate small-diameter sewers in Walnut Creek (allowance for future projects – not shown on figure). | Various Locations | Planned / no certain dates | Central Contra Costa Sanitary District, 2005 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| UNINCORPORATED CONTRA COSTA COUNTY (INCLUDING EL SOBRANTE) | | | | | | |
| Overlapping Haul Routes with Orinda WTP, Orinda-Lafayette Aqueduct, Happy Valley Pumping Plant and Pipeline, and San Pablo Pipeline | | | | | | |
| O-1 | EBMUD | San Pablo Dam Seismic Upgrade Project | Upgrade of San Pablo Dam to meet seismic safety requirements. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Planned / Mar. 2008 through Mar. 2010 | EBMUD, 2005f |
| O-2 | EBMUD | Water Education Center | Construct a new water education center and offices for conservation division staff (23 employees) at the upper parking lot of the San Pablo Recreation Area. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Planned / 2009 | Harris, 2006 |
| O-3 | EBMUD | San Pablo Recreation Center Tank Replacement Project | Replacement of 100,000-gallon redwood water tank in the northwest corner of the main recreation area parking lot with a steel tank of the same size to provide fire flows for the Water Education Center. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Planned / 2009 | Hanoian, 2006a |
| O-4 | EBMUD | Remodel San Pablo Recreation Area Visitor's Center | Small interior remodel of existing recreation area visitor's center for better customer service for food and retail. | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Planned / 2009 | Hanoian, 2006b |
| O-5 | SBC | Utility Undergrounding Project | Underground cable on the east side of San Pablo Road from 800 feet south of entrance to recreation area to approximately 3,200 feet north of entrance (near dam). | Orinda WTP, Orinda-Lafayette Aqueduct, San Pablo Pipeline | Constructed in 2005 | Colosito, 2006 |
| O-7 | Contra Costa County Department of Public Works | San Pablo Dam Road Type III Slurry Seal | Apply type 3 slurry seal surface treatment to San Pablo Dam Road between Wildcat Canyon Road and San Pablo Reservoir spillway. | Sobrante WTP | Approved / 2007–2008 | Contra Costa County, Department of Public Works, 2005 |
| O-8 | EBMUD | San Pablo Dam Drain Valve Replacement | Repair or replace 60-inch butterfly emergency drain valve | Orinda WTP, Orinda-Lafayette Aqueduct | Planned / 2007 | EBMUD |
| Overlapping Haul Routes with Sobrante WTP | | | | | | |
| P-1 | Contra Costa County Department of Public Works | Castro Ranch Road Widening | Widen Castro Ranch Road between San Pablo Dam Road and Olinda Road. | Sobrante WTP | Planned | Contra Costa County, Department of Public Works, 2005 |
| P-2 | Contra Costa County Department of Public Works | El Portal Drive Widening | Widen El Portal Drive from Richmond city limits to San Pablo Dam Road. | Sobrante WTP | Planned | Contra Costa County, Department of Public Works, 2005 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| P-3 | Contra Costa County Department of Public Works | Olinda Road Pedestrian Facilities | Provide walking facility for students and other pedestrians from Valley View Road to Olinda Elementary School on Olinda Road. | Sobrante WTP | Approved | Contra Costa County, Department of Public Works, 2005 |
| P-4 | Contra Costa County Department of Public Works | El Sobrante Area Micro Surface | Refurbish existing roadway on Appian Way between San Pablo Dam Road and Pinole city limit; Sobrante Avenue between Appian Way and Valley View Road; and Valley View Road between Appian Way and Richmond city limit. | Sobrante WTP | Planned / 2008–2009 | Contra Costa County, Department of Public Works, 2005 |
| P-5 | Contra Costa County Department of Public Works | San Pablo Dam Road Pedestrian Improvements | Install curb and sidewalk and widen the road in the areas where the frontage improvements have not been installed between Tri Lane and Appian Way. | Sobrante WTP | Approved | Contra Costa County, Department of Public Works, 2005 |
| P-6 | Contra Costa County Department of Public Works | San Pablo Dam Road Surface Treatment | Apply surface treatment to San Pablo Dam Road between El Portal Drive and Appian Way. | Sobrante WTP | Planned / 2005–2006 | Contra Costa County, Department of Public Works, 2005 |
| P-7 | City of Richmond | Knobcone | Subdivision of one lot into five lots at 5801 Knobcone Court. | Sobrante WTP | EIR in preparation / construction schedule unknown | City of Richmond, 2006; Boyce, 2006 |
| P-8 | Contra Costa County Department of Public Works | San Pablo Dam Road Micro Surfacing | Apply micro surface to San Pablo Dam Road between El Portal Drive and the Richmond city limit at Tri Lane. | Sobrante WTP | Approved / 2007 | Pullman, 2006 |
| P-9 | Contra Costa County Department of Public Works | San Pablo Dam Road Type II Micro Surface | Apply Type II micro surface treatment to San Pablo Dam Road between Appian Way and the Richmond city limit. | Sobrante WTP | Planned / 2005–2006 | Contra Costa County, Department of Public Works, 2005 |
| P-10 | Contra Costa County Department of Public Works | San Pablo Dam Road Middle Turn Lane | Add a middle turn lane to San Pablo Dam Road between Appian Way and Castro Ranch Road. | Sobrante WTP | Planned | Contra Costa County, Department of Public Works, 2005 |
| P-11 | Contra Costa County Department of Public Works | San Pablo Dam Road Improvements | Construct San Pablo Dam Road improvements and widening from Appian Way to the Richmond city limit. | Sobrante WTP | Planned | Contra Costa County, Department of Public Works, 2005 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| P-12 | Contra Costa County Department of Public Works | Amend Road Overlay | Pavement overlay on Amend Road. | Sobrante WTP | Completed / 2003 | Finch, 2006 |
| P-13 | City of San Pablo | San Pablo Dam Road East Utility Undergrounding | Undergrounding of utilities, construction of sidewalk, curb, and gutter, repair of failing pavement sections, edge grinding, and overlay of existing pavement at the eastern end of San Pablo Dam Road within the city limits of San Pablo. | Sobrante WTP | Completed in 2005 | City of San Pablo, 2006 |
| P-14 | City of San Pablo | San Pablo Dam Road Pedestrian, Amador Street to Morrow Drive | Install a pedestrian path where there are currently no pedestrian facilities on San Pablo Dam Road. | Sobrante WTP | Planned / 2006 | City of San Pablo, 2006 |
| P-15 | City of San Pablo | I-80/San Pablo Dam Road Interchange Reconstruction | Reconstruction of freeway interchange to improve traffic flow and better accommodate pedestrians and bicyclists. | Sobrante WTP | Planned / 2009 | City of San Pablo, 2006 |
| P-16 | City of San Pablo | San Pablo Dam Road Storm Drain Repair | In-place repair of a 24-inch-diameter storm drain line between Morrow Drive and El Portal Drive that carries stormwater runoff from San Pablo Dam Road to San Pablo Creek. | Sobrante WTP | Completed in 2005 | City of San Pablo, 2006 |
| P-17 | City of San Pablo | San Pablo Dam Road Subdrain Manhole Relocation | Construction of new intercept wells to tie into an existing subdrain system and convey subsurface drainage to the storm drain system between Morrow Drive and El Portal Drive. Needed to maintain proper drainage of a former landslide repair. | Sobrante WTP | Completed in 2005 | City of San Pablo, 2006 |
| P-18 | City of Richmond | Forest Green Estates | 120 single-family residential units at the end of Wesley Road near Clark Road and San Pablo Dam Road. | Sobrante WTP | EIR expected in Feb. 2003 / construction schedule unknown | City of Richmond, 2006; Light, 2006 |
| P-19 | City of Richmond | The Oaks | Possible 54 single-family homes at 1201 Castro Ranch Road. | Sobrante WTP | Approved, but tentative | City of Richmond, 2006; Light, 2006 |
| P-20 | City of Richmond | Canyon Oaks II | 36 single-family homes north of Castro Ranch Road intersection with San Pablo Dam Road. | Sobrante WTP | EIR in preparation / construction schedule unknown | City of Richmond, 2006; Light, 2006 |
| P-21 | West Contra Costa Unified School District | De Anza High School | Phased demolition of existing campus on Valley View and building of a new facility. Proposed access route Appian Way to Valley View. | Sobrante WTP | Approved / 2006–2009 | Blackwell, 2006 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| Overlapping Haul Routes With Tice Pumping Plant and Pipeline | | | | | | |
| Q-1 | Contra Costa County Building Department | APN 189-011-033 | Grading for new residence; retaining wall on Tice Valley Boulevard just south of Olympic Boulevard. | Tice Pumping Plant | Approved | Gomez, 2005 |
| Q-2 | Contra Costa County Department of Public Works | Olympic Avenue Overlay | 200 feet of pavement overlay on Olympic Avenue, west of Tice Valley Boulevard. | Tice Pimping Plant and Pipeline | Completed / 2001 | Finch, 2006 |
| Q-3 | Contra Costa County Department of Public Works | Saranap Area Micro Surface | Apply micro surface treatment to Olympic Boulevard between the Lafayette city limit and Tice Valley Boulevard and to Tice Valley Boulevard between 1620 Tice Valley Boulevard and the Walnut Creek city limit. | Tice Pumping Plant and Pipeline | Approved / 2008–2009 | Contra Costa County, Department of Public Works, 2005 |
| Overlapping Haul Routes with Withers Pumping Plant | | | | | | |
| R-1 | Caltrans/Contra Costa County Department of Public Works | Reliez Valley Road Pedestrian Path | Construct pedestrian path along Reliez Valley Road from Grayson Road to the end of the existing sidewalk, one-half mile to the south. | Withers Pumping Plant | Approved / 2006–2007 | Caltrans, 2006; Contra Costa County, Department of Public Works, 2005 |
| R-2 | Contra Costa County Department of Public Works | Reliez Valley Road Overlay | Pavement sealant projects on Reliez Valley Road between Alhambra Road and the Lafayette city limit. | Withers Pumping Plant | Completed / 2001–2005 | Finch, 2006 |
| R-3 | Contra Costa County Department of Public Works | Reliez Valley Road Overlay | Apply micro surface treatment to Reliez Valley Road between 2319 Reliez Valley Road and Withers Avenue. | Withers Pumping Plant | Approved / 2007–2008 | Contra Costa County, Department of Public Works, 2005 |
| R-4 | City of Pleasant Hill | Best Western Hotel | Construction of three-story hotel at 1432 Contra Costa Boulevard. | Withers Pumping Plant | Constructed | City of Pleasant Hill, 2006 |
| R-5 | Central Contra Costa Sanitary District | Contra Costa Boulevard Slipling Project | Sliplining a 33-inch pipe into the existing sewer main underneath Contra Costa Boulevard from Gregory Lane to Chilpancingo Parkway. | Withers Pumping Plant | Constructed | Central Contra Costa Sanitary District, 2005 |
| R-6 | Contra Costa Water District | Patterson Boulevard Water Pipeline | Reconstruct the Patterson Boulevard main water pipeline between Boyd Road and Oak Park Boulevard. | Withers Pumping Plant | Constructed in 2005 | City of Pleasant Hill, 2006 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| R-7 | Central Contra Costa Sanitary District | Pleasant Hill Road Corridor | Replace 2,800 feet of existing trunk sewer with an 18-inch line on Pleasant Hill Road between Mercury Way and near Virginia Hills Drive. | Withers Pumping Plant | Planned / 2012 | Central Contra Costa Sanitary District, 2005 |
| R-8 | Central Contra Costa Sanitary District | Pleasant Hill Grayson Creek | Construct approximately 5,600 feet of 18- and 24-inch trunk sewer from intersection of Pleasant Hill Road and Mercury Way to the Pleasant Hill relief interceptor in Tayolor Boulevard. | Withers Pumping Plant | Constructed in 2001 | Central Contra Costa Sanitary District, 2005 |
| Other Overlaps | | | | | | |
| | Central Contra Costa Sanitary District | Collection System Renovation Program | Replace or renovate small-diameter sewers in unincorporated Contra Costa County (allowance for future projects – not shown on a figure). | Various Locations | Tentative | Central Contra Costa Sanitary District, 2005 |
| | City of Pleasant Hill | 2005 Citywide Pavement Rehabilitation Project | Reconstruction of various streets, including Patterson Boulevard. | Various locations | | City of Pleasant Hill, 2006 |
| OAKLAND | | | | | | |
| S-1 | PG&E | Rule 20 Electric Undergrounding Program | Undergrounding of utilities on MacArthur Boulevard between Alvingroom Court and 98th Avenue. | Upper San Leandro WTP | Ongoing, expected to be complete by Dec. 2006 | PG&E, 2006; Chen, 2006 |
| S-2 | PG&E | Rule 20 Electric Undergrounding Program | Undergrounding of utilities on MacArthur Boulevard between Alvingroom Court and 73rd Avenue. | Upper San Leandro WTP | Dec. 2006 to Mar. 2007 | PG&E, 2006; Chen, 2006 |
| S-3 | City of Oakland | Sewer Rehabilitation Project | Sewer rehabilitation projects west of MacArthur Boulevard and generally north of 73rd Avenue. | Upper San Leandro WTP | 2011 | Amirzehni, 2006 |
| S-4 | City of Oakland | Sewer Rehabilitation Project | Sewer rehabilitation projects south of S-3 and generally north of El Monte. | Upper San Leandro WTP | Ongoing | Amirzehni, 2006 |
| S-5 | City of Oakland | Sewer Rehabilitation Project | Sewer rehabilitation projects south of S-4. | Upper San Leandro WTP | 2012 | Amirzehni, 2006 |
| MAJOR HIGHWAY PROJECTS | | | | | | |
| CT-1 | Caltrans | Caldecott Tunnels to El Curtola Overcrossing Rehabilitation | Rehabilitate Highway 24 between Caldecott Tunnels and El Curtola overcrossing. | To be determined | Status being determined | Caltrans, 2006 |
| CT-2 | Caltrans | Orinda and Lafayette Restore Planting and Irrigation | Restore planting and irrigation on Highway 24 from 0.6 miles west of Camino Pablo to the Lafayette city line. | To be determined | Status being determined | Caltrans, 2006 |
| CT-3 | Caltrans | Acalanes Road to El Curtola Boulevard Rehab | Rehabilitate Highway 24 between Acalanes Road and El Curtola overcrossing. | To be determined | Status being determined | Caltrans, 2006 |

**REVISED TABLE 5-1 (continued)**
**OTHER PROJECTS IN THE WTTIP AREA WITH POTENTIAL FOR CUMULATIVE IMPACTS**

| No.[a] | Planning Jurisdiction | Project Name | Project Description | Closest WTTIP Project Element[b] | Project Status / Construction Schedule | Source |
|---|---|---|---|---|---|---|
| CT-4 | Caltrans | Replace Lighting | Replace lighting on Highway 24 between Acalanes Road and El Curtola Boulevard. | To be determined | Status being determined | Caltrans, 2006 |
| CT-5 | Caltrans | I-680 Alameda County Line to Rudgear Road – Rehabilitate Roadway | Rehabilitate I-680 between Alameda County line and Rudgear Road. | To be determined | Status being determined | Caltrans, 2006 |
| CT-6 | Caltrans | I-680 Alameda County Line to Rudgear Road – Rehabilitate Roadway | Rehabilitate I-680 between Alameda County line and Rudgear Road. | To be determined | Status being determined | Caltrans, 2006 |
| CT-7 | Caltrans | Newell/Ygnacio/El Curtola Replacement Planting | Conduct replacement planting on I-680 and Highway 24 from Newell Avenue to Ygnacio Valley Road and El Curtola. | To be determined | Status being determined | Caltrans, 2006 |
| CT-8 | Caltrans | I-680 HOV Lane, Marina Vista to North Main | Widen I-680 between North Main Street and Marina Vista Boulevard for high-occupancy vehicle lanes. | To be determined | Status being determined | Caltrans, 2006 |
| CT-9 | Caltrans | Parkside Drive/Contra Costa Boulevard Replacement Planting | Replacement planting on I-680 between Parkside Drive and Contra Costa Boulevard. | To be determined | Status being determined | Caltrans, 2006 |
| CT-10 | Contra Costa Transit Authority | Caldecott Tunnel Improvement Project | Construct a fourth bore between Contra Costa and Alameda Counties. | To be determined | Preparation of environmental documents is underway | Contra Costa Transportation Authority, 2006b |
| SYSTEMWIDE | | | | | | |
| | Freeport Regional Water Authority (Sacramento County Water Agency and EBMUD) | Freeport | The Freeport Regional Water Project (FRWP) is a cooperative effort of the Sacramento County Water Agency (SCWA) and EBMUD to provide surface water from the Sacramento River just below its confluence with the American River to customers in Sacramento County and the East Bay. The project will divert water from the Sacramento River at the Freeport Bend, upstream of the town of Freeport, and convey it through new, large pipelines to SCWA and EBMUD facilities. SCWA will treat and distribute water throughout the year to its service area in central Sacramento County. EBMUD will rely on the FRWP for a supplemental water supply during dry years only, estimated to be three out of every 10 years. The project does not include construction of any major facilities in the WTTIP study area, but the addition of this water supply to the EBMUD system may affect existing water treatment and transmission operations. | To be determined | Approved / construction 2006–2009 | Freeport Regional Water Authority, 2006 |

**REVISED TABLE 5-2**
**PROPOSED WTTIP PROJECT CONSTRUCTION SCHEDULES**

| WTTIP Facility | Land Use Jurisdiction | Proposed Construction Schedule | | | | Cumulative Project with Potential Overlapping Schedule[a] |
|---|---|---|---|---|---|---|
| | | | 2006–2010 | 2011–2015 | 2016–2020 | |
| Sobrante WTP | Contra Costa County | 2011–2013 | | X | | P-21 |
| Tice Pumping Plant and Pipeline | Contra Costa County | 2008–2010 | X | | | Q-3 |
| Withers Pumping Plant | Contra Costa County | 2011–2013 | | X | | R-7 |
| Lafayette WTP | Lafayette | Alternative 1: 2012–2018<br>Alternative 2: 2015–2017 | | X<br>X | X<br>X | A-3<br>A-3 |
| Lafayette WTP Reclaimed Water Pipeline | Lafayette | 2007–2009 | X | | | A-2 |
| Glen Pipeline Improvements | Lafayette | 2011–2012 | | X | | |
| Glen Reservoir Decommission | Lafayette | 2011–2013 | | X | | |
| Highland Reservoir and Pipelines | Lafayette | 2007–2009 | X | | | A-2 |
| *Leland Reservoir Replacement* | Lafayette | 2014–2016 | | X | | D-1, D-2 |
| Moraga Road Pipeline | Lafayette/Moraga | 2007–2009 | X | | | B-2, B-17, F-14 |
| Fay Hill Pumping Plant, Reservoir, and Pipeline Improvements[a] | Moraga | 2015–2017 | | X | X | |
| Moraga Reservoir | Moraga | 2016–2018 | | | X | |
| *St. Mary's Road/Rohrer Drive Pipeline* | Moraga / Lafayette / Walnut Creek | 2018–2020 | | | X | |
| Upper San Leandro WTP | Oakland | 2011–2013 | | X | | S-3, S-5 |
| Orinda WTP | Orinda | Alternative 1: 2011–2013<br>Alternative 2: 2012–2018 | | X<br>X | <br>X | G-1 |
| Ardith Reservoir and Donald Pumping Plant | Orinda | 2013–2015 | | X | | H-5 |
| Happy Valley Pumping Plant and Pipeline | Orinda | 2011–2013 | | X | | G-1 |
| *San Pablo Pipeline* | Orinda / Contra Costa County / Richmond | 2016 – 2018 | | | X | |
| Sunnyside Pumping Plant and Pipeline | Orinda and Lafayette | 2011–2013 | | X | | |

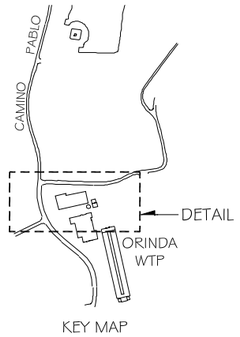
**REVISED TABLE 5-2 (continued)**
**PROPOSED WTTIP PROJECT CONSTRUCTION SCHEDULES**

| WTTIP Facility | Land Use Jurisdiction | Proposed Construction Schedule | | | | Cumulative Project with Potential Overlapping Schedule[a] |
|---|---|---|---|---|---|---|
| | | | 2006–2010 | 2011–2015 | 2016–2020 | |
| Orinda-Lafayette Aqueduct | Orinda / Lafayette | 2015–2017 | | X | X | A-3 |
| Walnut Creek WTP | Walnut Creek | Alternative 1 or 2: 2007–2010 | X | | | J-1 |
| Leland Isolation Bypass Valve and Pipeline | Walnut Creek | 2010–2011 | X | | | J-1, L-1, L-7 |
| Leland Pumping Plant | Walnut Creek | 2009–2010 | X | | | |
| *New Leland Pressure Zone Reservoir and Pipeline* | Walnut Creek | 2011–2013 | | X | | M-4 |

Notes: Italics indicate program-level project.

[a] Cumulative projects in the same vicinity as a WTTIP facility with proposed schedules within the same five-year period. See **Table 5-1** for names and descriptions.

SOURCE: EBMUD, 2006.




KEY MAP

NOTES:

1. Final landscape plans shall insure that tree canopies do not extend over underground pipelines.

2. Locations of existing/proposed underground pipelines are approximate. For locations of the new underground pipelines proposed as part of the WTTIP project refer to figures at the end of chapter 2.

3. EBMUD intends to install replacement landscaping in the area north of Manzanita Drive for additional screening of new facilities.

4. EBMUD intends to install a new gate north of Manzanita Drive, at the existing access drive.

PLANT PALETTE LEGEND

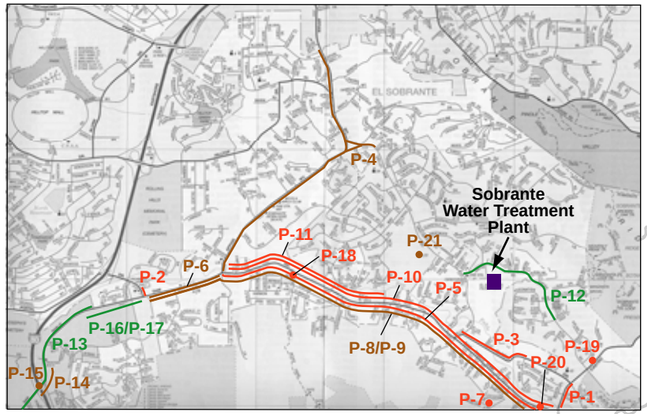
| SYMBOL | TYPE OF PLANT | SUGGESTED SPECIES* | FUNCTION |
|---|---|---|---|
| | Coniferous/evergreen tree | Calocedrus decurrens | Screening |
| | Broad leaf evergreen/ deciduous canopy tree | Quercus agrifolia<br>Quercus lobata | Accent |
| | Large evergreen shrubs | Arbutus unedo | Screening |
| | Small to medium deciduous/evergreen shrubs and groundcovers | Rhamnus californica<br>Salvia sp.<br>Teucrium fruticans | Foreground visual interest<br>erosion control |
| | Ground covers and/or cobbles | Native bunch grasses | |

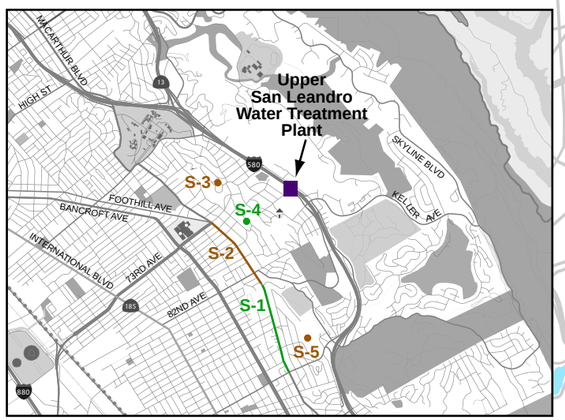
*Recommended species per EBMUD *Plants and Landscapes for Summer-Dry Climates*, 2004


SOURCE: Environmental Vision

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Revised Figure 3.3-OWTP-5**
Conceptual Landscape Plan -
Orinda WTP Alternative 1 or 2






Project Level
Program Level
Water Treatment Plant
Pumping Plant
Reservoir
Other Facilities
Pipeline
Tunnel

**Major Projects in the WTTIP Project Area with Potential for Cumulative Impacts**

- Recently completed or currently under construction
- Approved and construction scheduled
- Proposed, planned, or approved but construction not scheduled
- Status Unknown

(See Table 5-1 for Project Names)

SOURCE: East Bay Municipal Utility District; ESA



**Revised Figure 5-1**
Major Projects in the WTTIP Project Area with Potential for Cumulative Impacts

# 3.3 Revised Highland Reservoir Site

# 3.3 Revised Highland Reservoir Site

## 3.3.1 Description

The following nomenclature is used to discuss sites associated with the Highland Reservoir and Pipelines project:

- DEIR Proposed Highland Reservoir site – the site presented as the preferred site in the DEIR (described in Chapter 2 Project Description).
- DEIR Alternative Highland Reservoir site – the site presented as an alternative under consideration in the DEIR (described in Chapter 6 Alternatives).
- Revised Highland Reservoir site – the site presented in Section 3.3 of this Response to Comments document which is being proposed for approval as part of the FEIR.

As stated in Chapter 1 of this Response to Comments document, EBMUD is proposing to revise the site plan for the Highland Reservoir in response to public comment received on the DEIR, primarily comments regarding the loss of mature oak trees and potential effects on views. Construction of the tank at the revised site would require removal of fewer heritage oak trees than at the DEIR Proposed site. This section of the Response to Comments document contains a description and analysis of impacts for the Revised Highland Reservoir site. Additional graphics for this site can also be found in this section.

### Location

The Revised Highland Reservoir site is close to the DEIR Proposed Highland Reservoir site and the DEIR Alternative Highland Reservoir site (see Figure 10). The revised site is approximately 120 feet north and 20 feet west of the DEIR Proposed Highland Reservoir site (see Figure 11). The access road, paved parking area, and fencing would be the same (or virtually the same) as with the DEIR Proposed Highland Reservoir site plan, but shifted north and west. The staging area would be at the same location as the stockpile area (see Figure 10). A few construction worker vehicles would park within the limit of construction just west of the tank site while the rest would park at the existing parking lot at Lafayette Dam.

The shift in location of the tank would place it directly in the path of the Lafayette Reservoir Rim Trail; the Rim Trail would be permanently re-routed as shown on Figure 10. As with the DEIR Alternative site, implementation of the Revised Highland Reservoir site would require the rerouting of an 8-inch underground high pressure gas line.

### Design Characteristics

#### *Reservoir Design*

Like the DEIR Proposed Reservoir design, the Revised Highland Reservoir tank design has a diameter of 133 feet, a base elevation of 532 feet, and roof elevation of 563 feet. The Revised

Reservoir would require more excavation than the DEIR Proposed Reservoir; however, more soil would be used for backfilling (burying) much of the tank and, consequently, the tank would have a lower profile (see Figure 12). About 15 feet of tank would protrude above-ground on the downhill side of the tank as compared to up to 30 feet above-ground for the DEIR Proposed Highland Reservoir (see Map D-HIGHRES-2 in the DEIR). During construction, a temporary retaining wall (shown in Figure 11) would be built around most of the tank pad. The retaining wall would reduce the overall construction footprint of the project, thereby preserving more trees; after construction of the tank, the space between the retaining wall and the tank would be backfilled. A retaining wall would also be constructed on the downhill side of the tank, partially surrounding the valve pit structure.

### *Pipeline Design*

The pipeline alignments for the Revised Highland Reservoir site would be the same as those for the DEIR Proposed Highland Reservoir site except in the immediate vicinity of the tank due to its revised location, as follows (see Figure 11 in this Response to Comments document and compare to Map D-HIGHRES-1 in the DEIR):

- *Inlet-Outlet Pipeline*. As shown on Figure 10, near the tank, the altered alignment of the Inlet/Outlet Pipeline follows the temporary construction access road alignment instead of following the Lafayette Reclaimed Water Pipeline (see Figure 10).

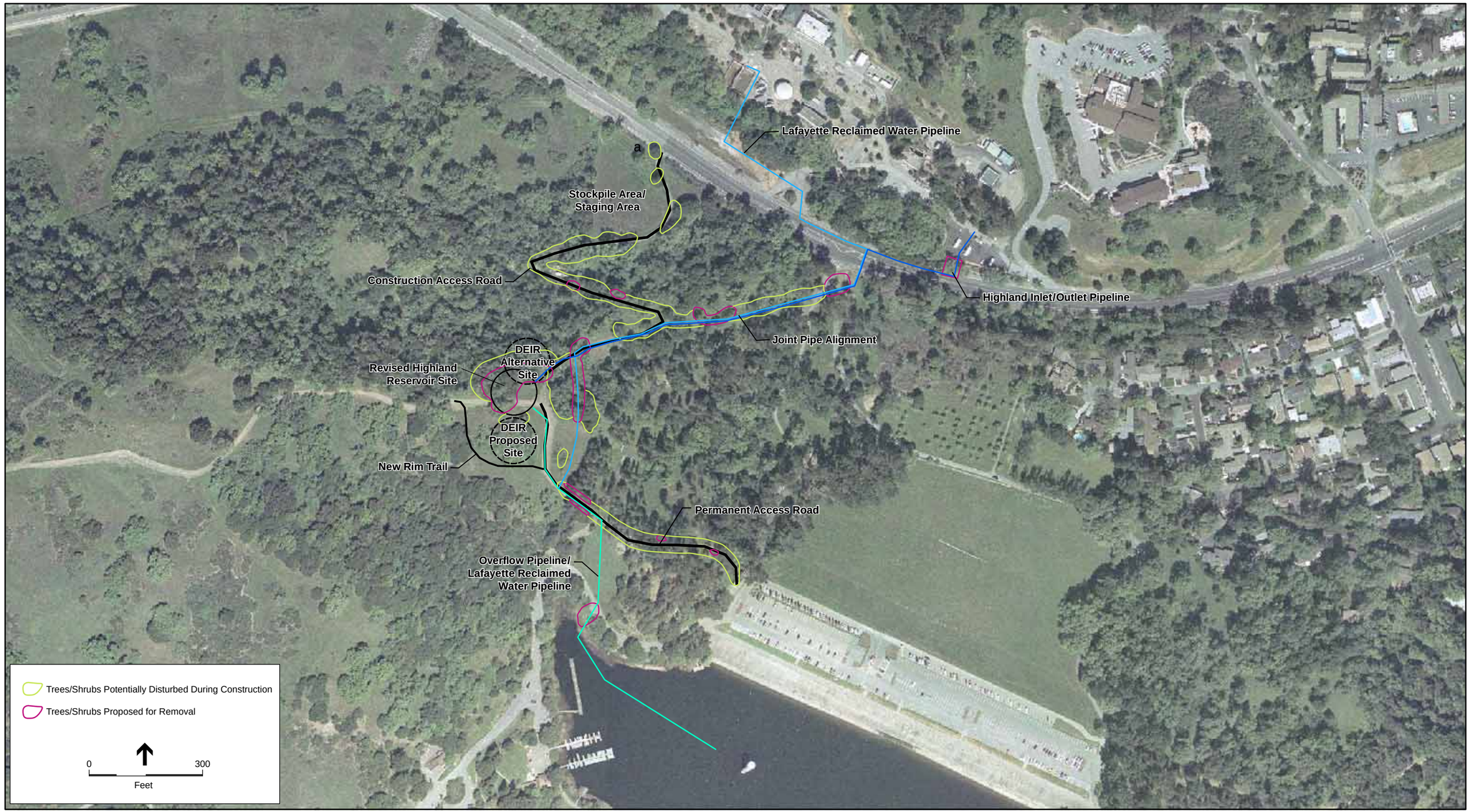
- *Overflow Pipeline*. The altered alignment of the Overflow Pipeline starts at the tank and follows the existing Rim Trail to where it intersects the proposed alignment of the Lafayette Reclaimed Water Pipeline (shown on Figure 10). From this point (as described on DEIR p. 2-41), the Lafayette Reclaimed Water Pipeline and Highland Reservoir overflow pipeline are the same.

## Construction Characteristics

### *Schedule, Work Hours, and Staging*

There would be no change to the proposed work hours or schedule for design and construction (see DEIR Tables 2-7 and 2-9, pp. 2-36 and 2-68). A revised version of Table B-HIGHRES-1 is presented herein and indicates that overall, the number of construction vehicles for this project would not change. Although the amount of cut would increase relative to the DEIR Proposed Highland Reservoir tank (see table below), the amount of off-haul would decrease because twice as much material would remain onsite under the Revised Highland Reservoir site project.

| | Cut (CY) | Stockpile and Backfill (CY) | Offhaul (CY) |
|---|---|---|---|
| DEIR Proposed Highland Reservoir site | 25,600 | 5,184 | 20,416 |
| Revised Highland Reservoir site | 29,000 | 11,000 | 18,000 |

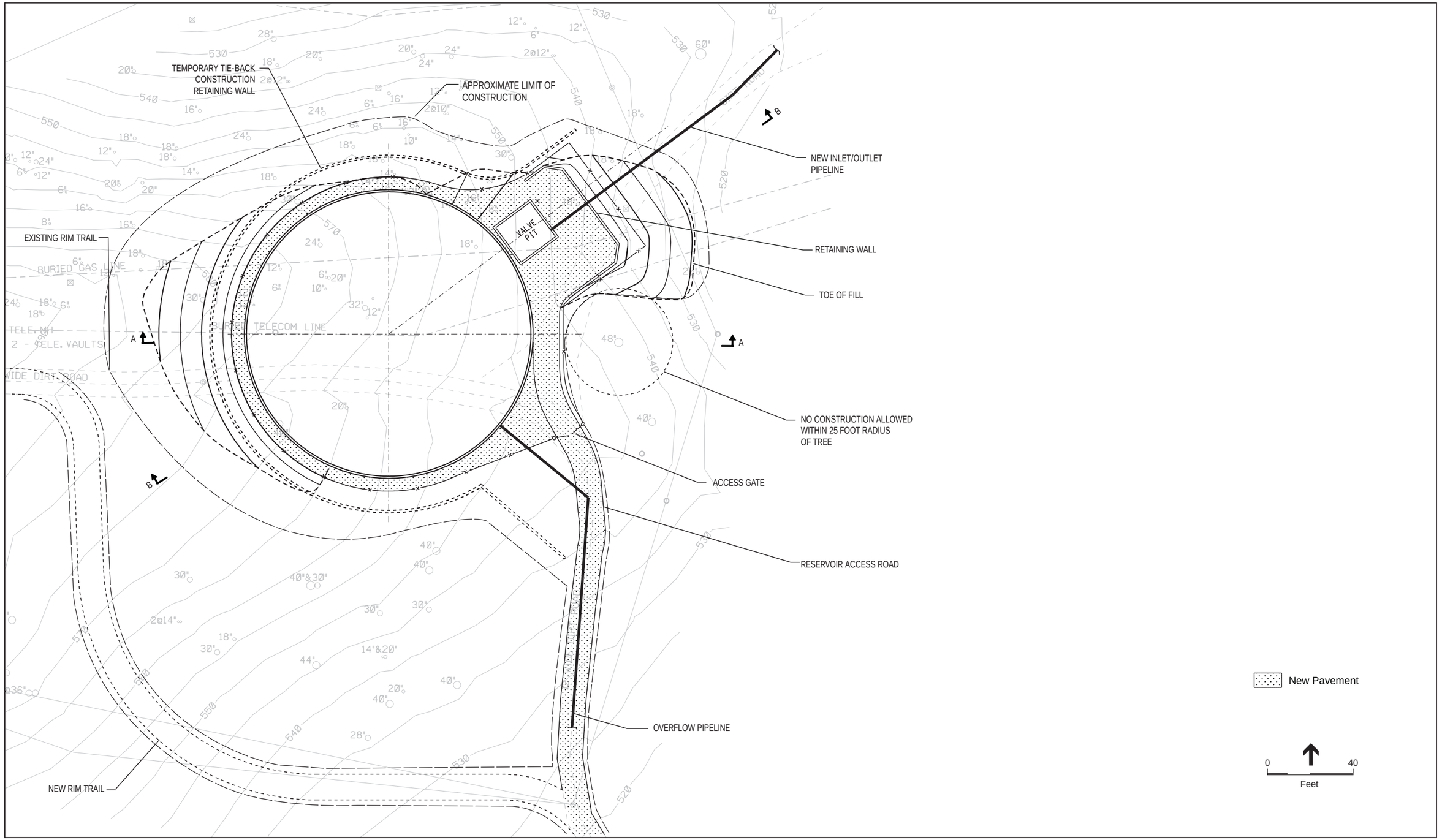



SOURCE: EBMUD

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 10**

Highland Reservoir and Pipelines;
Lafayette Reclaimed Water Pipeline

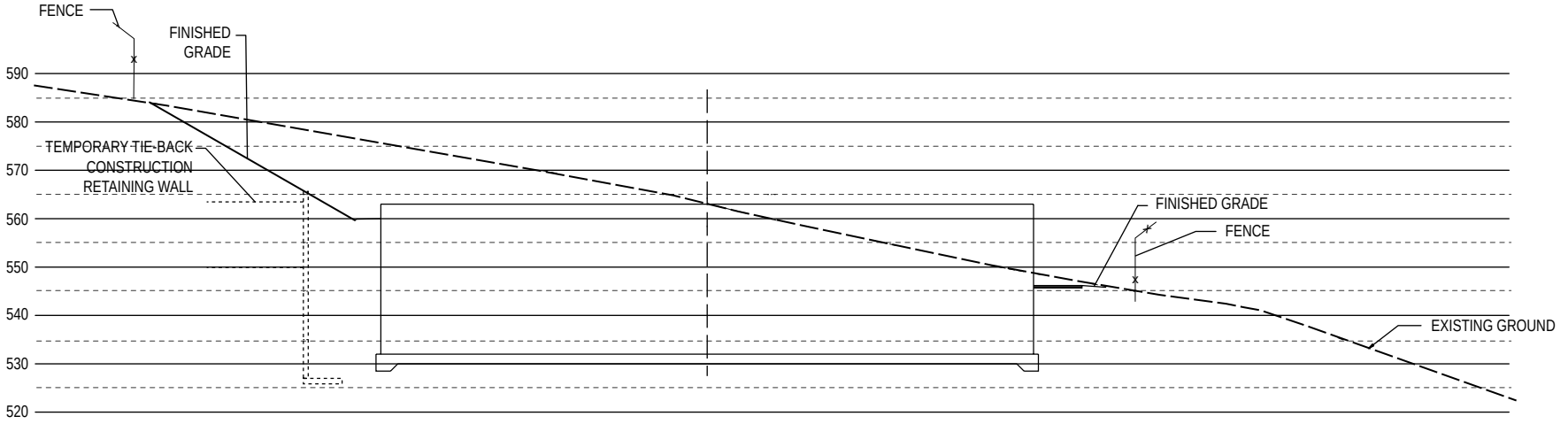



SOURCE: EBMUD

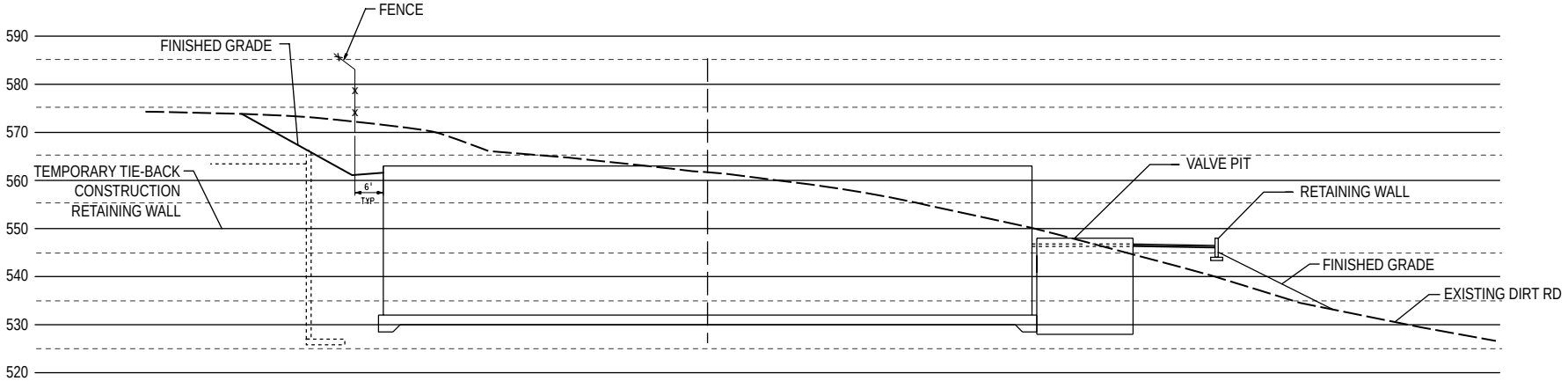
EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 11**

Highland Reservoir and Pipelines - Site Plan




**SECTION A**




**SECTION B**

0 40

Feet

SOURCE: EBMUD

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 12**

Highland Reservoir and Pipelines - Cross-Section

**WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM**
**Trip Generation Estimate - Revised Highland Reservoir site**

| Construction Phase | Approx. Duration (weeks) | Haul Trucks (per day) | Materials Trucks (per day) | Worker Vehicles (per day) | One-Way Trips (per day) | Max. One-Way Trips Per Hour | |
|---|---|---|---|---|---|---|---|
| Mobilization | 1 | 0 | 4 | 2 | 12 | 4<br>2 | Trucks<br>Vehicles |
| Excavation | 8 | 84 | 0 | 5 | 178 | 24<br>5 | Trucks<br>Vehicles |
| Reservoir foundation & floor slab | 3 | 0 | 20 | 15 | 70 | 5<br>15 | Trucks<br>Vehicles |
| Reservoir walls | 12 | 0 | 8 | 12 | 40 | 2<br>12 | Trucks<br>Trucks |
| Reservoir roof | 4 | 0 | 44 | 12 | 112 | 11<br>12 | Trucks<br>Trucks |
| Valve Pit & Piping | 4 | 0 | 5 | 5 | 20 | 1<br>5 | Trucks<br>Vehicles |
| Field Testing and Startup | 6 | 0 | 1 | 6 | 14 | 1<br>6 | Trucks<br>Vehicles |
| Backfilling | 4 | 69 | 0 | 5 | 148 | 18<br>5 | Trucks<br>Vehicles |
| Site Restoration | 7 | 4 | 4 | 6 | 28 | 8<br>6 | Trucks<br>Vehicles |
| Access Road | 3 | 14 | 9 | 8 | 62 | 6<br>8 | Trucks<br>Vehicles |
| Demobilization | 1 | 0 | 4 | 4 | 16 | 4<br>4 | Trucks<br>Vehicles |
| | | | | **MAXIMUM ONE-WAY TRIPS PER DAY =** | **178** | | |
| | | | | **MAXIMUM ONE-WAY TRIPS PER HOUR =** | | **24<br>15** | **Trucks<br>Vehicles** |

Assumptions:

Truck and vehicle trip are peak rates.
Haul trucks are for soil disposal and import of new fill.
Excavation and Off-hauling trucks average 9 cubic yards per load, one load every 5 minutes with 7 hour production per day.
Backfilling trucks average 9 cubic yards per load, one load at approximately 6.5 minutes with 7.5 hour production per day.
Backfilling trucks would travel on Construction Access Road to/from the Stockpile Area (i.e. would not use external roads)
29,000 CY of Cut; 11,000 CY of stockpile and backfill; 18,000 CY offhauled.
Material trucks are for forms, rebar, concrete, prestressing materials, paving, and equipment.
Concrete trucks average 9 cubic yards per load.
Aggregate base (for Access Road and Parking Lot) will be delivered to site at a rate of 2 trucks per hour for 7 hours a day.
Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm, with 7 hours of production per day.
Rates for reservoir floor slabs, walls, and roofs do not last the entire durations.
Reservoir construction peak rate durations: floor slabs -1 day, wall sections 2 weeks, roof-1day
Doesn't show down time nor reflect total duration

### *Construction Activities*

The access route proposed for the Highland Reservoir project (DEIR p.2-76) would not change. Construction activities and equipment described on DEIR pp. 2-76 and 2-77 would remain essentially the same.

As with the DEIR proposed project, the Revised Highland Reservoir would require closure of the Rim Trail from construction staging through the end of construction; the trail realignment would be constructed following completion of construction of the tank.

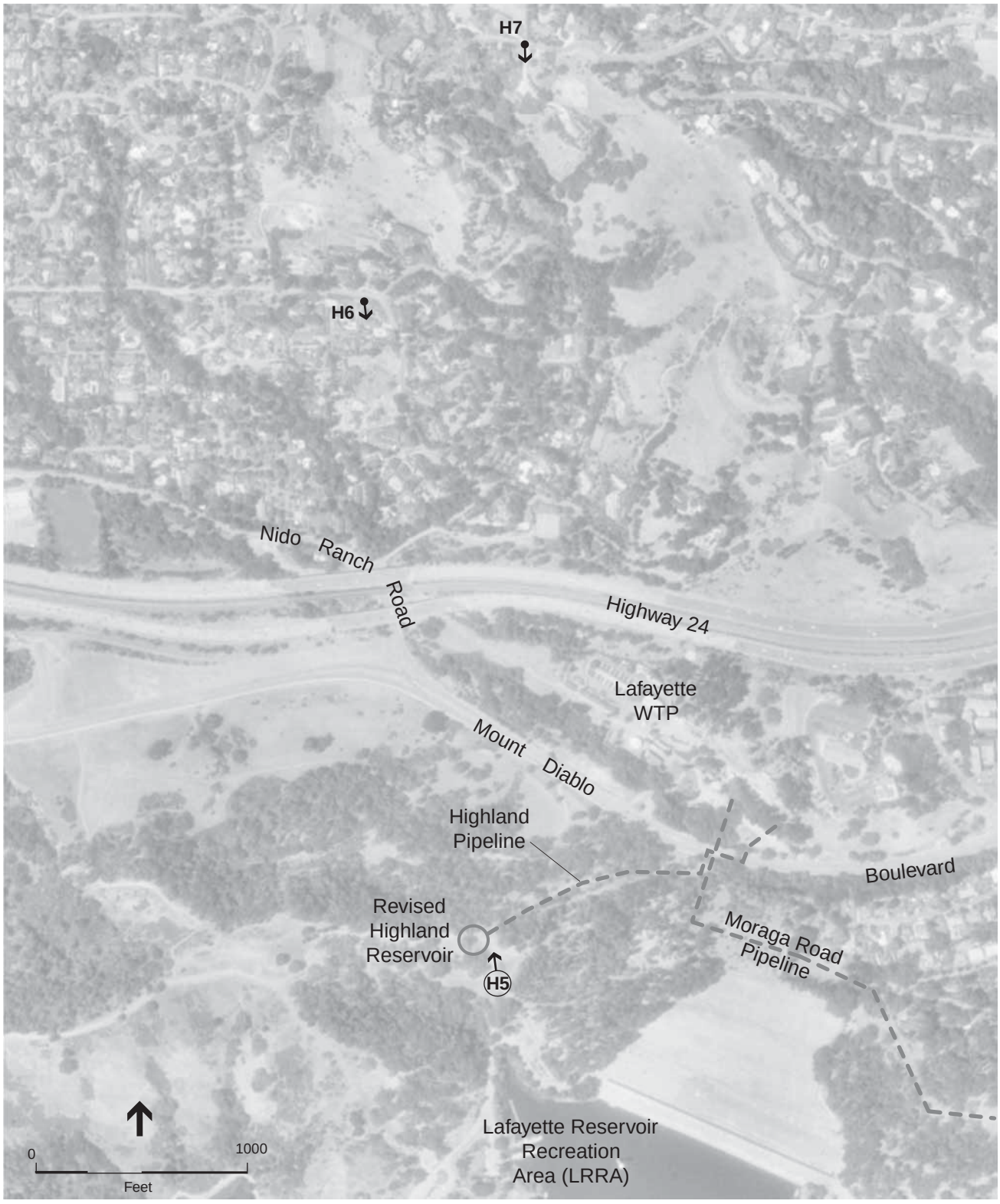
## 3.3.2 Environmental Impacts

Overall, none of the impacts identified in the DEIR would become more severe based on the revised project site, and some would become less severe, most notably impacts to protected trees. Two key topics, visual quality and biological resources, are discussed below. Table 3-3 indicates the severity and magnitude of all impacts associated with the Revised Highland Reservoir Site relative to impacts of the DEIR Proposed Highland Reservoir Site, and specifies those measures to mitigate environmental impacts and community disruption that the District would adopt as conditions of approving the Revised Highland Reservoir Site.

### Visual Quality

Constructing the project at the Revised Highland Reservoir site would substantially alter the site's appearance, but would be somewhat less visually prominent in views from the Rim Trail relative to development of the originally proposed Highland Reservoir Site because the trail would be re-routed past (rather than immediately around) the tank (see Figures 17 through 20 and DEIR Figures 3.3-HIGHRES-1 and 3.3-HIGHRES-5 and 3.3-HIGHRES-6). The re-routed trail would be located downhill from the tank site closer to Lafayette Reservoir, much of it separated from the Revised Highland Reservoir site by a grove of trees. Overall, the Revised Highland Reservoir would be less visible from within the Lafayette Reservoir Recreation Area than the DEIR Proposed Highland Reservoir.

The Revised site is located near the ridge top and some tree removal would occur in this area. These changes could potentially affect a scenic vista as seen from points north. Figure 13 provides viewpoints used for new photos presented in Figures 14 and 15. As seen from the hillside residential area to the north of Highway 24 the reservoir would appear against a landscape backdrop and would be partially screened by existing vegetation (see Figure 14). Additionally, landscaping would be installed following construction. A conceptual landscape plan is provided in Figure 16. The new tank and proposed tree removal would not be particularly visible from this location given the viewing distance of about three quarters of a mile and the presence of a landscape backdrop as well as the screening provided by intervening vegetation. Over time, the proposed landscaping would provide additional screening. A fleeting glimpse of the tank could be available from Highway 24; however, the tank would not generally be seen from the highway. Effects on views from points north of the Revised Highland Reservoir Site




Refer to DEIR Figures 3.3-HIGHRES-1and 2 for additional photos.

**1 → Photo Viewpoint** **(3) → Simulation Viewpoint**

SOURCE: Environmental Vision

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 13**
Location of Photo Viewpoints - Revised Highland Reservoir Site


H6. Annotated Photo from Arabis Drive at Timothy Lane looking south


H7. Annotated Photo from Quail Ridge Road near Via Roble looking south

For Viewpoint Location Refer to: Figure 13

SOURCE: Environmental Vision

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 14**

Photos - Revised Highland Reservoir Site from the North


Annotated photo looking northwest from Rim Trail (H1)

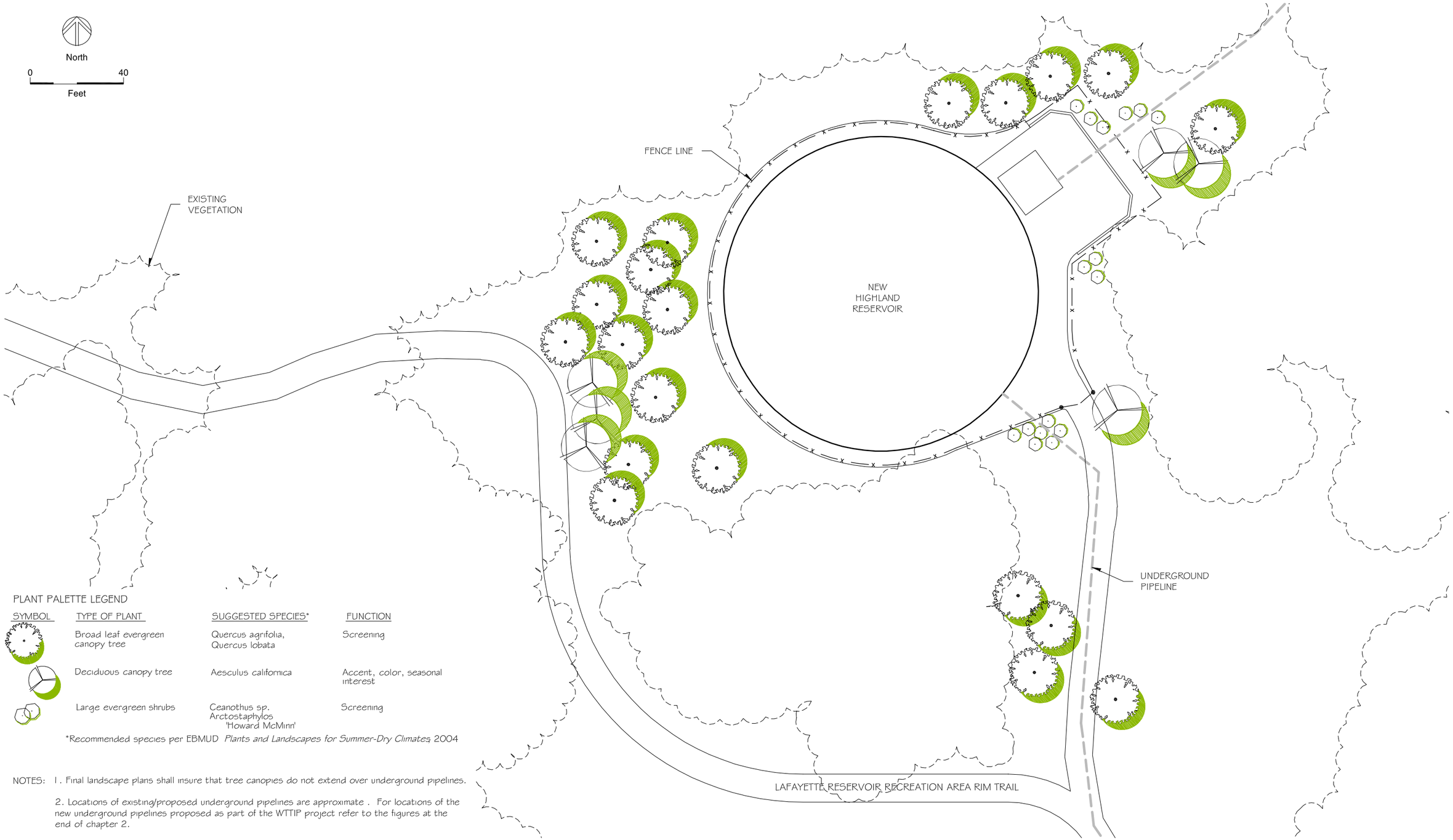
For Viewpoint Location Refer to: DEIR Figure 3.3-HIGHRES-1

EBMUD Water Treatment and Transmission Improvements Program . 204369

SOURCE: Environmental Vision

**Figure 15**

Photo - Revised Highland Reservoir Site from Rim Trail




SOURCE: Environmental Vision

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 16**

Conceptual Landscape Plan - Revised Highland Reservoir Site

Existing View looking north from Rim Trail (H5)

Visual Simulation of Proposed Improvements without landscaping

For Viewpoint Location Refer to: Figure 13

SOURCE: Environmental Vision

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 17**

Visual Simulation without Landscaping-
Revised Highland Reservoir Site from Rim Trail

Existing View looking north from Rim Trail (H5)

Visual Simulation of Proposed Improvements with landscaping

For Viewpoint Location Refer to: Figure 13

SOURCE: Environmental Vision



**Figure 18**

Visual Simulation with Landscaping-
Revised Highland Reservoir Site from Rim Trail

Existing View looking northwest from Big Oak Trail


Visual Simulation of Proposed Improvements without landscaping

For Viewpoint Location Refer to: Figure 13

SOURCE: Environmental Vision

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 19**

Visual Simulation without Landscaping-
Revised Highland Reservoir Site from Big Oak Trail

Existing View looking northwest from Big Oak Trail


Visual Simulation of Proposed Improvements with landscaping at 5 years maturity

For Viewpoint Location Refer to: Figure 13

SOURCE: Environmental Vision

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 20**

Visual Simulation with Landscaping-
Revised Highland Reservoir Site from Big Oak Trail

would not constitute a significant impact *per se*. However, like the DEIR Proposed Highland Reservoir Site, the Revised Highland Reservoir Site also would be in the Hillside Overlay District and would involve development within 250 feet of a Class II ridgeline. Under either the project or this alternative nighttime construction for the Highland Reservoir Inlet/Outlet Pipeline would occur, requiring lighting.

## Biological Resources

The Revised Highland Reservoir site and the DEIR Proposed Highland Reservoir site are very close to one another and the pipeline alignments would remain virtually identical for the Revised Highland site as they were for the DEIR Proposed site; therefore most potential impacts to biological resources related to pipeline and tank construction would be similar between the two sites. The number of protected trees estimated to be removed at each site is similar, with an estimated 32 trees removed at the Proposed DEIR site and an estimated 34 trees removed at the Revised Highland site. However, impacts to large diameter "heritage" trees would differ substantially between the DEIR Proposed Reservoir site and the Revised Highland Reservoir site. The DEIR Proposed site supports a grove dominated by large multi-stemmed valley oak and coast-live oak, with 17 trees having a diameter at breast height (dbh) of 30 inches or greater and eight of these having a dbh of 40 inches or greater. The Revised Highland site also supports a mix of primarily coast live oak and valley oak. However, many of these are smaller trees and the site also contains open grasslands. Of the estimated 34 trees to be removed at this site, only eight are 30 inches or greater in diameter and of these, only three have a dbh of 40 inches or greater. Therefore, while the loss of eight trees of heritage quality would still be considered significant and unmitigable, construction of the tank at the Revised site would result in a 50 percent reduction in the number of heritage trees removed relative to the DEIR Proposed site.

**TABLE 3-3**
**COMPARISON OF DEIR PROPOSED HIGHLAND RESERVOIR SITE WITH REVISED HIGHLAND RESERVOIR SITE**

| Impacts | Highland Reservoir and Pipelines | Revised Highland Reservoir Site | Discussion | Mitigation Measures (as Revised in this Response to Comments Document) |
|---|---|---|---|---|
| Land Use, Planning, and Recreation | | | | |
| Divide an Established Community | LTS | LTS= | Like the proposed project, the Revised Highland Reservoir Site would not divide an established community or affect agricultural resources. (Like the project, a segment of the Rim Trail would be temporarily closed during construction and permanently realigned.) | None Required |
| Agricultural Resources Impacts | LTS | LTS= | | None Required |
| Recreation Resources Impacts | LTS | LTS= | | None Required |
| Visual Quality | | | | |
| Short-Term Visual Effects during Construction | LTS | LTS= | See text in Section 3.3.2 of the Response to Comments document. | Implement Measure 3.3-1, DEIR p. 3.3-23 |
| Alteration of Appearance of WTTIP Sites | SU | SU= | | Implement Measures 3.3-2a, 3.3-2b, and 3.3-2c, DEIR pp. 3.3-35 and 3.3-36 |
| Effects on Views | SU | SU - | | Implement Measures 3.3-2a, 3.3-2b, and 3.3-2c, DEIR pp. 3.3-35 and 3.3-36 |
| Effects on Scenic Vistas | SU | SU + | | Implement Measures 3.3-2a, 3.3-2b, and 3.3-2c, DEIR pp. 3.3-35 and 3.3-36 |
| New Sources of Light and Glare | SM | SM= | | None Required |
| Geology, Soils, and Seismicity | | | | |
| Slope Stability | SM | SM= | The topography at the Revised Highland Reservoir site consists of moderate to steep slopes. The revised tank site remains outside of a mapped landslide on the northern slope of the ridgeline. Like the proposed site, the alternative site contains similar upland soils. Slope stability, groundshaking, and soils impacts would be similar under this alternative to those at the proposed site. | Implement Measure 3.4-1, DEIR p. 3.4-25 |
| Groundshaking | SM | SM= | | Implement Measure 3.4-2, DEIR p. 3.4-27 |
| Expansive Soils | SM | SM= | | Implement Measures 3.4-3a and 3.4-3b, DEIR p. 3.4-27 |
| Liquefaction | SM | SM= | | Implement Measure 3.4-4, DEIR p. 3.4-32 |
| Squeezing Ground | -- | -- | | |

[a] Impacts summarized; please see DEIR Chapter 3 for details.

LTS = Less Than Significant
SM = Significant and Mitigable
SU = Significant and Unavoidable
-- = Impact does not apply
CBD = Cannot Be Determined

\+ Impact would be greater under this alternative than under the proposed project.
– Impact would be less under this alternative than under the proposed project.
= Impact would be the same (or similar) under this alternative as under the proposed project.

**TABLE 3-3 (Continued)**
**COMPARISON OF DEIR PROPOSED HIGHLAND RESERVOIR SITE WITH REVISED HIGHLAND RESERVOIR SITE**

| Impacts | Highland Reservoir and Pipelines | Revised Highland Reservoir Site | Discussion | Mitigation Measures (as Revised in this Response to Comments Document) |
|---|---|---|---|---|
| Hydrology and Water Quality | | | | |
| Degradation of Water Quality during Construction | SM | SM+ | Hydrology and water quality issues would be similar under the proposed project as compared to this alternative because the site is in the same general area, would require similar construction, and would result in a similar though slightly less net change in impervious surfaces. The Revised Highland project would involve more excavation, stockpiles, and grading which could lead to an increase in the potential for erosion and siltation of Lafayette Reservoir. The footprint of disturbance at reservoir site will be smaller than under the proposed project making the increase in impervious surfaces smaller, although still greater than 10,000 square feet. | Implement Measures 3.5-1a and 3.5-1b, DEIR p. 3.5-31 |
| Groundwater Dewatering | LTS | LTS= | | None Required |
| Diversion of Flood Flows | -- | -- | | None Required |
| Discharge of Chloraminated Water during Construction | -- | -- | | None Required |
| Operational Discharge of Chloraminated Water | LTS | LTS= | | None Required |
| Change in Impervious Surfaces | SM | SM- | | Implement Measure 3.5-6, DEIR p. 3.5-46 |
| Biological Resources | | | | |
| Loss of or Damage to Protected Trees | SU | SU- | See text in Section 3.3.2 of the Response to Comments document. | Implement Measures 3.6-1a through 3.6-1e, DEIR pp. 3.6-33-3.6- |
| Degradation to Streams, Wetlands, and Riparian Habitats | SM | SM= | | Implement Measures 3.6-2a through 3.6-2f, DEIR pp. 3.6-39–3.6-41 |
| Loss of or Damage to Special-Status Plants | SM | SM= | | Implement Measures 3.6-3a through 3.6-3c, DEIR pp. 3.6-42–3.6-43 |
| Disturbance to Special-Status Birds | SM | SM= | | Implement Measure 3.6-4a, DEIR pp. 3.6-49-3.6-50 |
| Disturbance to Special-Status Bats | SM | SM= | | Implement Measure 3.6-5, DEIR pp. 3.6-55–3.6-56 |
| Disturbance to San Francisco Dusky-Footed Woodrat | SM | SM= | | Implement Measure 3.6-6, DEIR pp. 3.6 58–3.6-59 |
| Degradation of Special-Status Aquatic Species Habitat | SM | SM= | | Implement Measure 3.6-7a, DEIR pp. 3.6-63-3.6-64 |
| Disruption to Wildlife Corridors | LTS | LTS= | | None required |

[a] Impacts summarized; please see DEIR Chapter 3 for details.

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– Impact would be less under this alternative than under the proposed project.
= Impact would be the same (or similar) under this alternative as under the proposed project.

**TABLE 3-3 (Continued)**
**COMPARISON OF DEIR PROPOSED HIGHLAND RESERVOIR SITE WITH REVISED HIGHLAND RESERVOIR SITE**

| Impacts | Highland Reservoir and Pipelines | Revised Highland Reservoir Site | Discussion | Mitigation Measures (as Revised in this Response to Comments Document) |
|---|---|---|---|---|
| Cultural Resources | | | | |
| Archaeological Resources, including Unrecorded Cultural Resources | SM | SM= | There are no known cultural resources at the Revised Highland site. Like the DEIR Proposed site, this alternative could result in the discovery of unrecorded resources. Construction of pipelines would be near Bryant Pumping Plant, a potentially historic resource. No adverse impacts would be associated with pipeline construction. | Implement Measures 3.7-1a and 3.7-1b, DEIR p. 3.7-24 |
| Paleontological Resources | SM | SM= | | Implement Measure 3.7-2, DEIR p. 3.7-26 |
| Historic Settings | LTS | LTS= | | Implement Measure 3.7-3, DEIR p. 3.7-31 |
| Traffic and Circulation | | | | |
| Increased Traffic | SM | SM= | The estimated maximum number of one-way trips per day would be the same for the Revised Highland site and the DEIR Proposed site (because it is based on truck capacity and the rate at which trucks can be filled during the peak construction phase: excavation). The overall cubic yardage of cut would be greater for the Revised Highland site, but more stockpiling and backfilling would occur onsite as compared to the DEIR Proposed site. Therefore, slightly less soil would be off-hauled, and total truck trips would remain the same as for the DEIR Proposed site. Otherwise, traffic and circulation impacts would be the same as for the DEIR Proposed site. | Implement Measure 3.8-1, DEIR p. 3.8-13 |
| Reduced Road Width | SM | SM= | | Implement Measure 3.8-1, DEIR p. 3.8-13 |
| Parking | SM | SM= | | Implement Measure 3.8-1, DEIR p. 3.8-13 |
| Traffic Safety | SM | SM= | | Implement Measure 3.8-1, DEIR p. 3.8-13 |
| Access | LTS | LTS= | | None required |
| Transit | LTS | LTS= | | None required |
| Pavement Damage/Wear | LTS | LTS= | | None required |
| Air Quality | | | | |
| Construction Emission | SM | SM= | The haul route for the Revised Highland site would be the same as for the DEIR Proposed site. Construction-related emissions, including diesel particulate from trucks, would be the same for the Revised Highland site as for the DEIR Proposed site as soil offhauled would be only be slightly less (~2000 cy) than under the DEIR Proposed site. | Implement Measures 3.9-1a, 3.9-1b, and 3.9-1c, DEIR p. 3.9-24 |
| Diesel Particulate Emissions along Haul Routes | LTS | LTS= | | None required |
| Tunnel-Related Emissions | -- | -- | | None required |
| Operational Pollutant Emissions at Treatment Facilities | -- | -- | | None required |
| Operational Odor Emissions | LTS | LTS= | | None required |
| Secondary Emissions from Electricity Generation | LTS | LTS= | | None required |

[a] Impacts summarized; please see DEIR Chapter 3 for details.

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– Impact would be less under this alternative than under the proposed project.
= Impact would be the same (or similar) under this alternative as under the proposed project.

**TABLE 3-3 (Continued)**
**COMPARISON OF DEIR PROPOSED HIGHLAND RESERVOIR SITE WITH REVISED HIGHLAND RESERVOIR SITE**

| Impacts | Highland Reservoir and Pipelines | Revised Highland Reservoir Site | Discussion | Mitigation Measures (as Revised in this Response to Comments Document) |
|---|---|---|---|---|
| Noise and Vibration | | | | |
| Construction Noise Increases | SM | SM= | Noise impacts would be similar to the DEIR Proposed project | Implement Measures 3.10-1a, 3.10-1b, 3.10-1c, 3.10-1d, and 3.10-1e, DEIR pp. 3.10-30 to 3.10-33 |
| Noise Increases along Haul Routes | LTS | LTS= | | None required |
| Construction-Related Vibration Effects | LTS | LTS= | | Implement Measure 3.10-3a, DEIR p. 3.10-40 |
| Operational Noise Increases | LTS | LTS= | | None required |
| Hazards and Hazardous Materials | | | | |
| Hazardous Materials in Soil and Groundwater | SM | SM= | There is no known contamination at the existing or alternative site. Impacts would be similar to the proposed project. The inlet/outlet pipeline alignment for both alternatives is the same (the proposed alignment crosses a high-pressure gas line). However, the alternative requires relocation of this gas line because the gas line crosses directly under the alternative tank site. | Implement Measure 3.11-1, DEIR p. 3.11-27 |
| Hazardous Building Materials | -- | -- | | None required |
| Gassy Conditions in Tunnels | -- | -- | | None required |
| High-Pressure Gas Line Rupture | SM | SM+ | | Implement Measure 3.12-1c, DEIR p. 3.12-16 |
| Wildland Fires | -- | -- | | None required |
| Release from Construction Equipment | LTS | LTS= | | None required |
| Accidental Release during Operation | -- | -- | | None required |
| Public Services and Utilities | | | | |
| Disruption of Utility Lines | SM | SM+ | Impacts would be similar to the DEIR Proposed site except that an 8-inch transmission pressure gas main (over 60 psi) and a buried telephone conduit would need to be relocated at the Revised Highland site. The inlet/outlet pipeline alignment for both alternatives is the same. There would be slightly less soil offhauled (~2000 cy) than under the DEIR Proposed site. | Implement Measures 3.12-1a through 3.12-1g, DEIR pp. 3.12-16 to 3.12-17 |
| Increase in Electricity Demand | LTS | LTS= | | None required |
| Increase in Public Services Demand | LTS | LTS= | | Implement Measures 3.12-1a through 3.12-1g, DEIR pp. 3.12-16 to 3.12-17 |
| Adverse Effect on Landfill Capacity | SM | SM= | | Implement Measures 3.12-4a and 3.12-4b, DEIR p. 3.12-20 |
| Failure to Achieve State Diversion Mandates | SM | SM= | | Implement Measures 3.12-4a and 3.12-4b, DEIR p. 3.12-20 |

[a] Impacts summarized; please see DEIR Chapter 3 for details.

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– Impact would be less under this alternative than under the proposed project.
= Impact would be the same (or similar) under this alternative as under the proposed project.

# 3.4 Happy Valley Pumping Plant Alternative Site

# 3.4 Supplemental Analysis of the Happy Valley Pumping Plant Alternative Site

## 3.4.1 Introduction

The following nomenclature is used to discuss sites associated with the Happy Valley Pumping Plant and Pipeline project:

- DEIR Proposed Happy Valley Pumping Plant site – the site presented as the preferred site in the DEIR (described in Chapter 2 Project Description).
- Happy Valley Pumping Plant Alternative site – the site presented as an alternative under consideration in the DEIR (described in Chapter 6 Alternatives).

As stated in Chapter 1 of this Response to Comments document, the DEIR Proposed Happy Valley Pumping Plant site is on Lombardy Lane (DEIR p. 2-74 *et seq*), and the Happy Valley Pumping Plant Alternative site is on Miner Road near Camino Sobrante (DEIR p. 6-33 *et seq*). As indicated in **Comment RCW-1**, the owners of the Lombardy Lane parcel are not willing to sell their property to EBMUD; as indicated in **Comment TU-2**, the owner of the alternative site for the pumping plant is receptive to discussing the sale of a portion of his property. As stated on DEIR p. 6-2, the EBMUD Board of Directors could adopt an alternative in lieu of the WTTIP as proposed. Accordingly, District staff is recommending that the Board of Directors approve the alternative site for the Happy Valley Pumping. Because (a) the alternative site could be obtained from a willing seller and therefore is more desirable to EBMUD, (b) residents living near the alternative site have requested additional information, and (c) there has been a change in the construction characteristics of the Happy Valley Pumping Plant alternative (namely, that numerous trees along Miner Road could, in fact, be preserved), EBMUD has prepared additional design information and supplemental environmental analyses, presented in this section. This additional information does not materially affect the conclusions in the DEIR, but amplifies the description and analysis of development of the Happy Valley Pumping Plant at the alternative site, and specifies those measures to mitigate environmental impacts and community disruption that the District would adopt as conditions of approving the alternative site.

## 3.4.2 Description

### Location

The alternative site is the same location as shown in DEIR Figure 6-6 (DEIR p. 6-34) and as described in DEIR Section 6.8 (pp. 6-33 to 6-35). Figure 21 of this Response to Comments document presents another, larger-scale aerial photograph of the Happy Valley Pumping Plant Alternative Site. Figure 21 indicates trees that would require removal as well as trees that are not proposed for removal but that, without mitigation, could sustain damage during construction.


Trees/Shrubs Potentially Disturbed During Construction

Trees/Shrubs Proposed for Removal

Potentially Jurisdictional Perennial Stream

Potentially Jurisdictional Seasonal Drainage

0 200

Feet

SOURCE: ESA; Aerial Photos: Contra Costa County, 2004

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 21**

Happy Valley Pumping Plant Alternative Site

## Design Characteristics

Figures 22 and 23 depict the proposed site plan and cross-sections for the Happy Valley Pumping Plant Alternative site. As noted above, the only change to the design concept presented in the DEIR is that trees along Miner Road (presumed to require removal in the DEIR) would be preserved. DEIR Table 2-11 (p.2-70) indicates pumping plant design characteristics (proposed capacity in mgd, number and horsepower of the pumps).

There would be no change to the pipeline alignment as characterized on DEIR p. 6-35; the pipeline would terminate 450 feet short of the DEIR Proposed Happy Valley Pumping Plant site.

## Construction Characteristics

### *Schedule, Work Hours, and Staging*

There would be no change to the proposed work hours or schedule for design and construction (see DEIR Tables 2-7 and 2-9, pp. 2-36 and 2-68). Construction of the pumping plant and pipeline would occur at the same time. There are no revisions to Table B-HVPP-1 in DEIR Appendix B**,** which provides construction sequencing, duration of specific construction activities, construction staffing, and parking information.

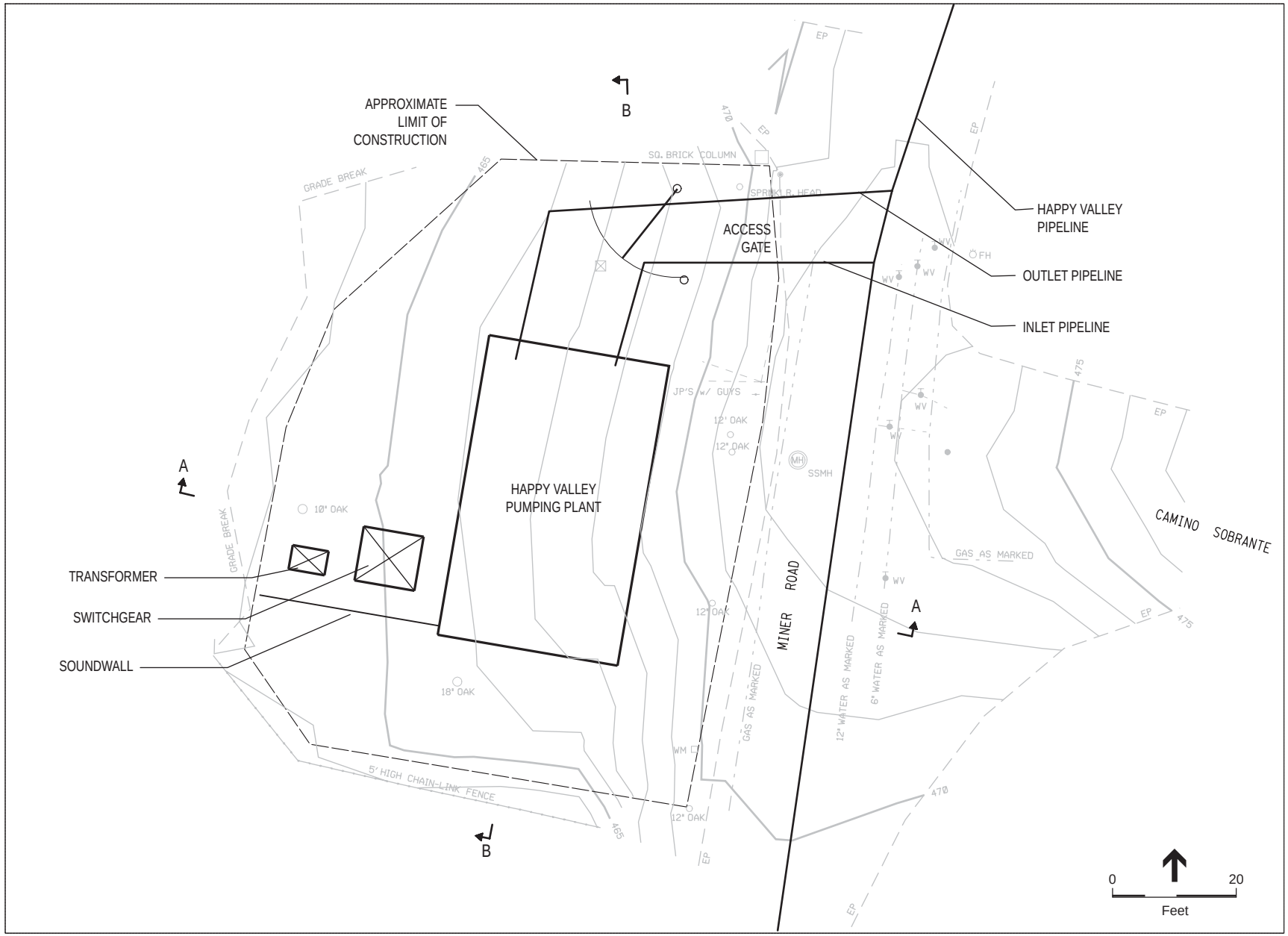
Construction staging would occur onsite and at the Orinda Water Treatment Plant; a shuttle would be provided to transport workers to and from an offsite parking location. A small amount of construction parking may be available on site.

### *Construction Activities*

Construction activities and equipment described on DEIR pp. 2-76 and 2-77 would be the same. As for the DEIR Proposed Happy Valley Pumping Plant: the pumping plant would be constructed on native material; EBMUD contractors would grade the area proposed for the pumping plant and construction staging, construct the concrete/rebar building pad, and then construct the pumping plant building and appurtenant features. Excavated material (estimated at 300 cubic yards) would be incorporated into final site grading. Once the building is finished, the site would be landscaped and disturbed natural areas replanted. Construction equipment would be the same as that listed on DEIR p. 2-75.

# 3.4.3 Environmental Impacts

Overall, none of the impacts identified in the DEIR for the Happy Valley Pumping Plant Alternative site would be more severe than disclosed in Chapter 6 and some would become less severe, most notably impacts to protected trees. Three key topics, visual quality, biological resources, and noise, are discussed below. Table 3-4 is a reprint of DEIR Table 6-5, and indicates the severity and magnitude of all impacts associated with the Happy Valley Pumping Plant Alternative site relative to impacts of the DEIR Proposed Happy Valley Pumping Plant, and specifies those measures to mitigate environmental impacts and community disruption that the District would adopt as conditions of approving the Happy Valley Pumping Plant Alternative site.

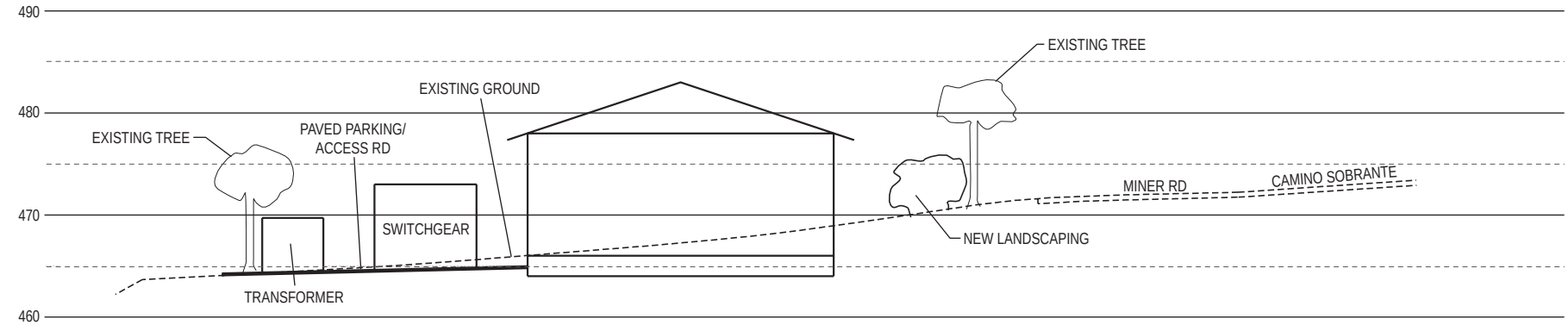



SOURCE: EBMUD

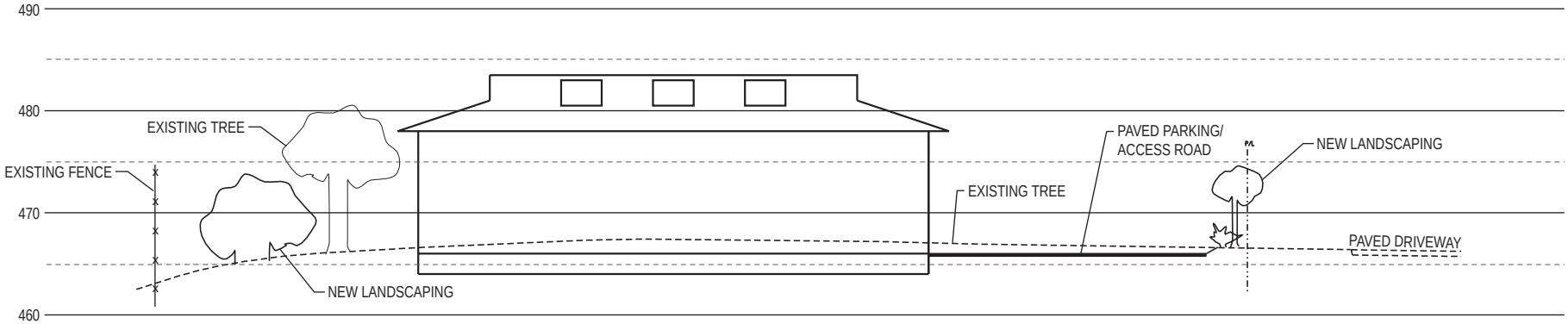
EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 22**

Happy Valley Pumping Plant and Pipeline Alternative Site - Site Plan




**SECTION A**




**SECTION B**

0 20

Feet

SOURCE: EBMUD

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 23**

Happy Valley Pumping Plant Alternative Site-Cross-Section

## Visual Quality

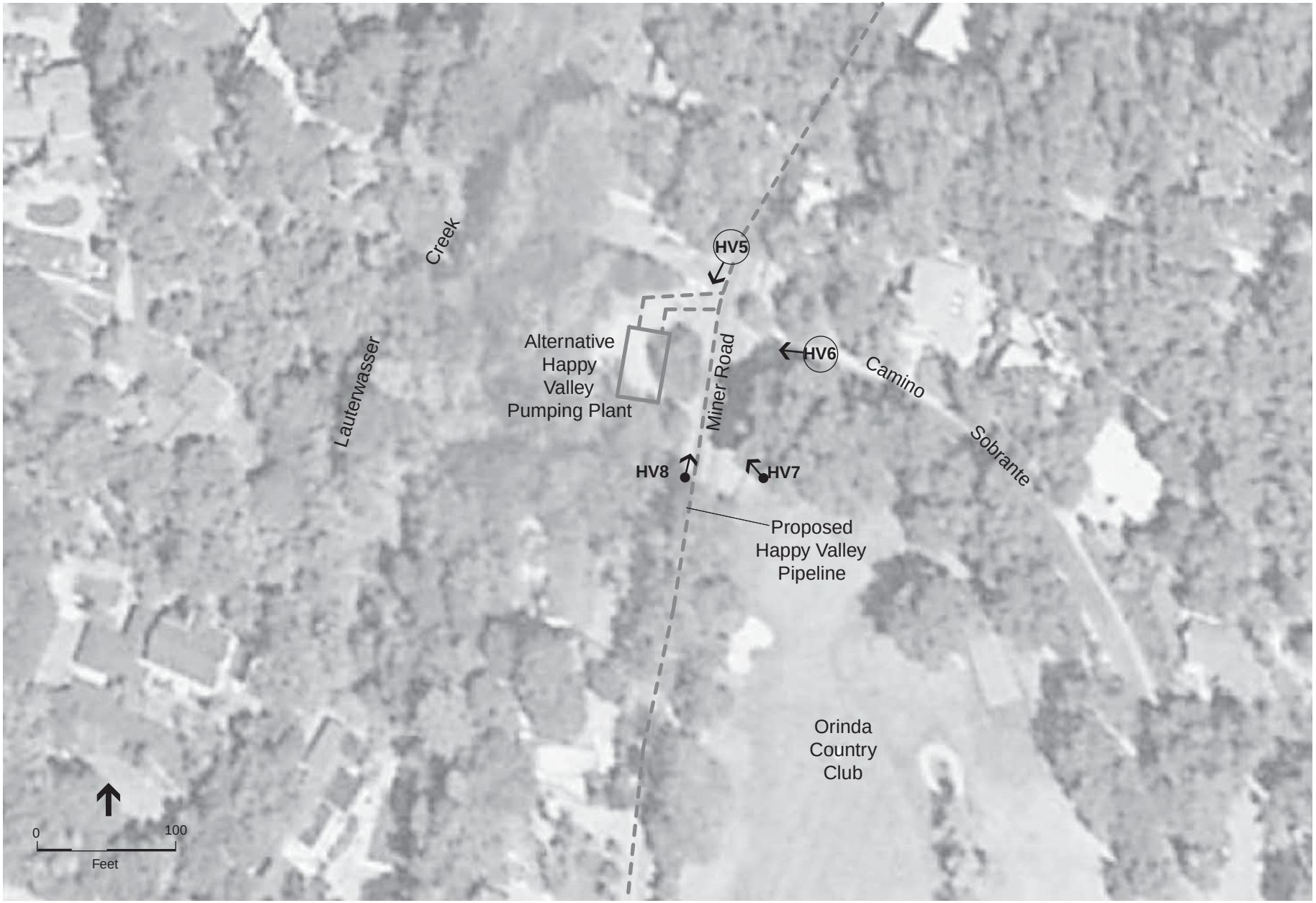
In response to requests for more specific information regarding visual impacts associated with development of the pumping at the alternative site, several photographs and visual simulations were prepared. Figure 24 indicates viewpoint locations of photographs and simulations prepared for the Happy Valley Pumping Plant Alternative site. Figure 25 presents photographs taken of the Happy Valley Pumping Plant Alternative site from the south, southeast, east, and north. As shown in the photos, and in Figure 21 (an aerial photograph), dense roadside vegetation, mature residential landscaping, and houses screen views of the site from much of the surrounding area. Close-range publicly accessible views of the site through gaps in vegetation are available from limited areas located primarily to the north (Photo HV5). Onsite and adjacent trees and shrubs screen views of the site's interior. Relatively dense surrounding vegetation and a garage to the north screens views from some neighboring residential properties; parts of the site are visible from the residence to the south.

Figure 26 depicts a conceptual landscape plant developed for the alternative site. The proposed project landscape concept calls for drought-tolerant shrubs and groundcover to be clustered on site. The new landscaping would provide additional screening, particularly along the site's street frontage. The new planting would complement the sites existing vegetation pattern. As the landscaping becomes established, it would create visual interest and provide additional screening of the new structures. Over time, the proposed project landscaping would integrate the appearance of the new facility into the overall landscape setting. Implementation of Measures 3.3-2a through 3.3-2c, in addition to tree-related mitigation measures (3.6-1a through 3.6-1d), would reduce this impact to a less-than-significant level. Consistent with Measure 3.3-2a, EBMUD would coordinate with and involve neighborhood representatives during development of final landscape plans.

Figures 27 through 30 present visual simulations of the Happy Valley Pumping Plant Alternative site from Camino Sobrante and from Miner Road north of the site. Portions of the roof and sides of the new pumping plant, fence and gate would be visible from these locations. The new building would appear against a backdrop of dense vegetation. The existing vegetation would partially screen the new pumping plant building. As stated in the DEIR, the alteration of the alternative site would be more visually prominent because it would be closer to the road and the site is closer to the road's elevation at Miner Road versus Lombardy Lane. Views of the site from the golf course would be obstructed by existing intervening vegetation. The pumping plant also would be partially visible from the residence to the south.

## Biological Resources

Like the proposed site, the alternative site contains protected trees and is bordered by Lauterwasser Creek and a drainage. Site development would require removal of one tree (not "numerous trees", as stated on DEIR p. 6-36). The tree to be removed is a 10-inch oak tree near the west side of the parcel, represented by a dark pink circle on Figure 21. Consequently impacts to protected trees would be less at the alternative site than at the DEIR Proposed Happy Valley Pumping Plant site. The site is less suitable for special-status species than the proposed site but, given the adjacent riparian habitat, their potential presence cannot be ruled out.




SOURCE: Environmental Vision

1 → Photo Viewpoint

3 → Simulation Viewpoint

EBMUD Water Treatment and Transmission Improvements Program . 204369

**Figure 24**

Location of Photo Viewpoints - Happy Valley Pumping Plant Alternative Site

HV5. Looking southwest from Miner Road*

HV6. Looking west from Camino Sobrante*

HV7. Looking northwest from Orinda Country Club Golf Course

HV8. Looking north from Miner Road

SOURCE: Environmental Vision

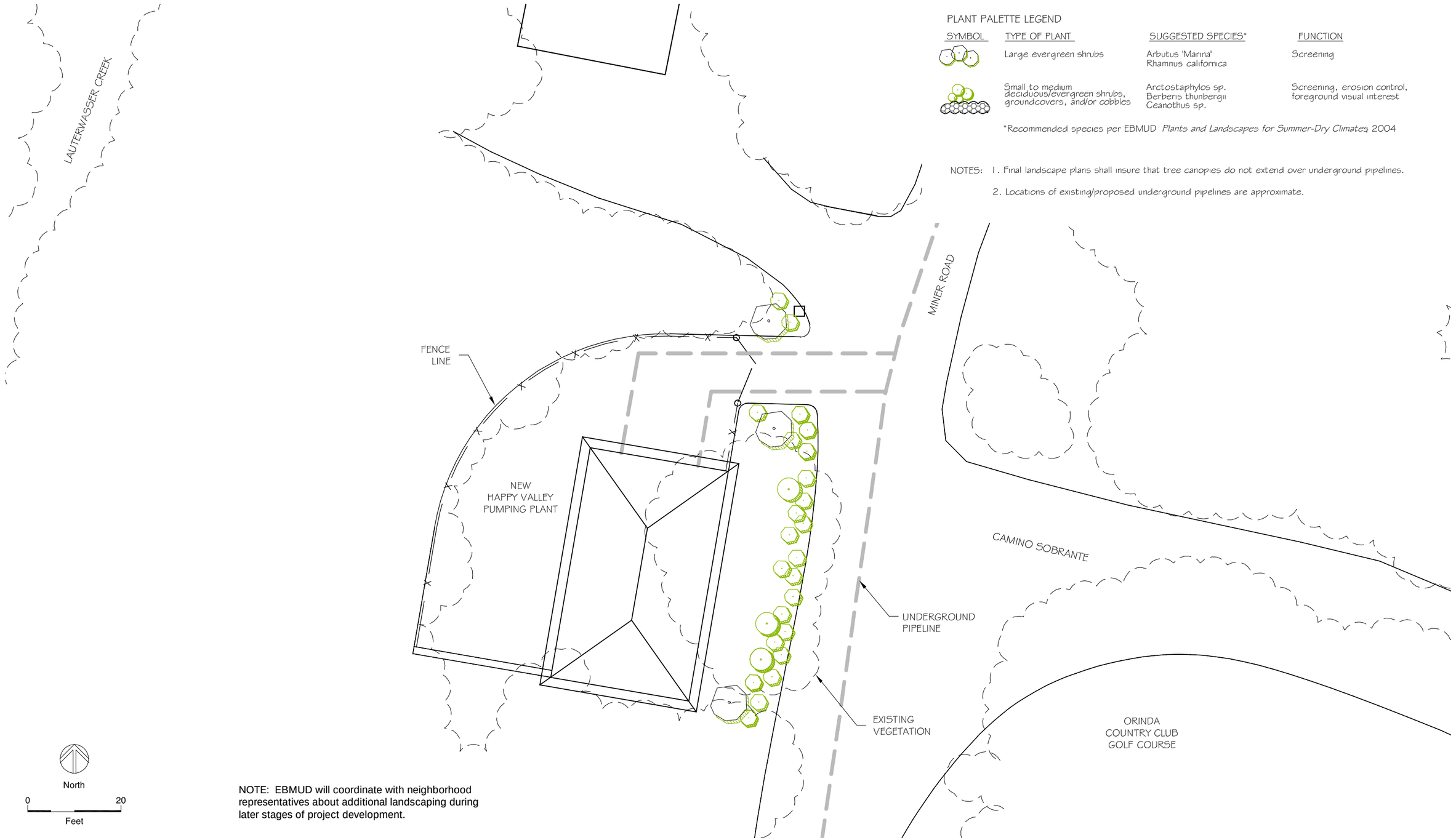
*Simulation Photo

For Viewpoint Locations Refer to: Figure 22



**Figure 25**

Photographs of Happy Valley Pumping Plant Alternative Site and Surroundings




PLANT PALETTE LEGEND

| SYMBOL | TYPE OF PLANT | SUGGESTED SPECIES* | FUNCTION |
|---|---|---|---|
| | Large evergreen shrubs | Arbutus 'Marina'<br>Rhamnus californica | Screening |
| | Small to medium deciduous/evergreen shrubs, groundcovers, and/or cobbles | Arctostaphylos sp.<br>Berberis thunbergii<br>Ceanothus sp. | Screening, erosion control, foreground visual interest |

*Recommended species per EBMUD *Plants and Landscapes for Summer-Dry Climates* 2004

NOTES: 1. Final landscape plans shall insure that tree canopies do not extend over underground pipelines.

2. Locations of existing/proposed underground pipelines are approximate.

NOTE: EBMUD will coordinate with neighborhood representatives about additional landscaping during later stages of project development.

SOURCE: Environmental Vision



**Figure 26**

Conceptual Landscape Plan - Happy Valley Pumping Plant Alternative Site

Existing View looking southwest from Miner Road

Visual Simulation of Proposed Improvements without landscaping

For Viewpoint Location Refer to: Figure 24

EBMUD Water Treatment and Transmission Improvements Program . 204369

SOURCE: Environmental Vision

**Figure 27**

Visual Simulation without Landscaping -
Happy Valley Pumping Plant Alternative Site from Miner Road

Existing View looking southwest from Miner Road

Visual Simulation of Proposed Improvements with landscaping at 5 years Maturity

For Viewpoint Location Refer to: Figure 24

EBMUD Water Treatment and Transmission Improvements Program . 204369

SOURCE: Environmental Vision

**Figure 28**

Visual Simulation with Landscaping -
Happy Valley Pumping Plant Alternative Site from Miner Road


Existing View looking west from Camino Sobrante


Visual Simulation of Proposed Improvements without landscaping

For Viewpoint Location Refer to: Figure 24

EBMUD Water Treatment and Transmission Improvements Program . 204369

SOURCE: Environmental Vision

**Figure 29**

Visual Simulation without Landscaping -
Happy Valley Pumping Plant Alternative Site from Camino Sobrante


Existing View looking west from Camino Sobrante


Visual Simulation of Proposed Improvements with landscaping at 5 years Maturity

For Viewpoint Location Refer to: Figure 24

EBMUD Water Treatment and Transmission Improvements Program . 204369

SOURCE: Environmental Vision

**Figure 30**

Visual Simulation with Landscaping -
Happy Valley Pumping Plant Alternative Site from Camino Sobrante

## Noise

Development of the Happy Valley Pumping Plant Alternative site would locate the pumping plant and transformer approximately 50 feet from the existing home to the north and 150 feet from the existing home to the south. At such proximities, noise levels associated with construction and operation of a pumping plant at the alternative site would be similar to those described for the DEIR Proposed site for the closest residences to the east and west (see DEIR pp. 3.10-25 and 3.10-46).

Noise measurements taken at the alternative site[1] confirm that the magnitude of noise impacts at the Happy Valley Pumping Plant Alternative Site would be less than at the DEIR Proposed site (and mitigable) because ambient noise is higher and there would be fewer receptors near the noise sources at the plant (the vent and transformer). The measurement taken at the alternative site for existing noise levels would be 54 CNEL, which is 2 dB higher than the measurement taken at the DEIR Proposed site (52 CNEL).

Like at the DEIR Proposed site, noise impacts at the alternative site also would be considered less than significant with mitigation. The same construction-related noise controls and operational design measures (orienting vents away from the residences to the north and south) would be required (see discussion in Table 6-5 of the DEIR). However, there appear to be fewer residential receptors close to the alternative site, and ambient noise levels are likely to be slightly higher than at the DEIR Proposed site due to traffic on Miner Road. At the alternative site, this would provide more options for locating vents away from sensitive receptors, and there would be fewer receptors potentially affected by the location of pumping plant vents or openings.

1 Noise measurements were taken at the Happy Valley Pumping Plant Alternative site in November, 2006.

**TABLE 3-4**
**COMPARISON OF DEIR PROPOSED HAPPY VALLEY PUMPING PLANT AND PIPELINE PROJECT WITH DEIR ALTERNATIVE SITE**

| Impacts | DEIR Proposed Happy Valley Pumping site | Happy Valley Pumping Plant Alternative site | Discussion | Mitigation Measures (as Revised in this Response to Comments document) |
|---|---|---|---|---|
| Land Use, Planning, and Recreation | | | | |
| Divide an Established Community | LTS | LTS= | Like the proposed site, the alternative site would not divide an established community or affect agricultural resources. (Construction activities would be noticeable at the golf course across Miner Road.) | None Required |
| Agricultural Resources Impacts | -- | -- | | |
| Recreation Resources Impacts | LTS | LTS= | | |
| Visual Quality | | | | |
| Short-Term Visual Effects during Construction | LTS | LTS+ | See Text in Section 3.4.3. | |
| Alteration of Appearance of WTTIP Sites | SM | SM+ | | |
| Effects on Views | SM | SM+ | | |
| Effects on Scenic Vistas | LST | LTS= | | |
| New Sources of Light and Glare | SM | SM= | | |
| Geology, Soils, and Seismicity | | | | |
| Slope Stability | SM | SM= | Like the proposed site, Lauterwasser Creek traverses the parcel and a drainage abuts the parcel to the west. The topography is nearly level at the proposed plant location and steepens considerably toward the creek. Like the proposed site, the alternative site contains lowland soils. Slope stability, groundshaking, liquefaction and soils impacts would similar under this alternative as for the proposed site. | Implement Measure 3.4-1, DEIR p. 3.4-25 |
| Groundshaking | SM | SM= | | Implement Measure 3.4-2, DEIR p. 3.4-27 |
| Expansive Soils | SM | SM= | | Implement Measures 3.4-3a and 3.4-3b, DEIR p. 3.4-27 |
| Liquefaction | SM | SM= | | Implement Measure 3.4-4, DEIR p. 3.4-32 |
| Squeezing Ground | -- | -- | | |

[a] Impacts summarized; please see DEIR Chapter 3 for details.

LTS = Less Than Significant
SM = Significant and Mitigable
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**TABLE 3-4 (Continued)**
**COMPARISON OF DEIR PROPOSED HAPPY VALLEY PUMPING PLANT AND PIPELINE PROJECT WITH DEIR ALTERNATIVE SITE**

| Impacts | DEIR Proposed Happy Valley Pumping site | Happy Valley Pumping Plant Alternative site | Discussion | Mitigation Measures (as Revised in this Response to Comments document) |
|---|---|---|---|---|
| Hydrology and Water Quality | | | | |
| Degradation of Water Quality during Construction | SM | SM= | Hydrology and water quality issues would be similar under the proposed project and this alternative because both sites are bordered by creeks, would require similar excavation and construction, and would result in a similar net change in impervious surfaces. | Implement Measures 3.5-1a and 3.5-1b, DEIR p. 3.5-31 |
| Groundwater Dewatering | LTS | LTS= | | |
| Diversion of Flood Flows | SM | SM= | | |
| Discharge of Chloraminated Water during Construction | -- | -- | | |
| Operational Discharge of Chloraminated Water | -- | LTS= | | |
| Change in Impervious Surfaces | LTS | LTS= | | Implement Measure 3.5-6, DEIR p. 3.5-46 |
| Biological Resources | | | | |
| Loss of or Damage to Protected Trees | SM | SM- | See Text in Section 3.4.3. | Implement Measures 3.6-1a through 3.5-1e, DEIR p. 3.6-33 |
| Degradation to Streams, Wetlands, and Riparian Habitats | SM | SM= | | Implement Measures 3.6-2a through 3.5-2f, DEIR p. 3.6-40 |
| Loss of or Damage to Special-Status Plants | SM | SM- | | Implement Measures 3.6-3a through 3.5-3c, DEIR p. 3.6-42 |
| Disturbance to Special-Status Birds | SM | SM- | | Implement Measures 3.6-4a through 3.5-4c, DEIR p. 3.6-49<br>Implement Measure 3.6-5, DEIR p. 3.6-55 |
| Disturbance to Special-Status Bats | SM | SM- | | Implement Measure 3.6-6, DEIR p. 3.6-58 |
| Disturbance to San Francisco Dusky-Footed Woodrat | SM | SM- | | Implement Measures 3.6-7a through 3.5-7c, DEIR p. 3.6-63 |
| Degradation of Special-Status Aquatic Species Habitat | SM | SM | | |
| Disruption to Wildlife Corridors | LTS | LTS- | | |

[a] Impacts summarized; please see DEIR Chapter 3 for details.

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**TABLE 3-4 (Continued)**
**COMPARISON OF DEIR PROPOSED HAPPY VALLEY PUMPING PLANT AND PIPELINE PROJECT WITH DEIR ALTERNATIVE SITE**

| Impacts | DEIR Proposed Happy Valley Pumping site | Happy Valley Pumping Plant Alternative site | Discussion | Mitigation Measures (as Revised in this Response to Comments document) |
|---|---|---|---|---|
| Cultural Resources | | | | |
| Archaeological Resources, including Unrecorded Cultural Resources | SM | SM= | There are no structures and no known cultural resources at the alternative site. Like the proposed project, this alternative could result in the discovery of unrecorded resources. | Implement Measures 3.7-1a and 3.7-1b, DEIR p. 3.7-24 |
| Paleontological Resources | SM | SM= | | Implement Measure 3.7-2, DEIR p. 3.7-26 |
| Historic Settings | -- | -- | | |
| Traffic and Circulation | | | | |
| Increased Traffic | SM | SM- | The estimated maximum number of one-way trips per day would be the same for the alternative site and the proposed site (because it is based on truck capacity and the rate at which trucks can be filled during the peak construction phase: excavation). There would be less truck traffic on Lombardy Lane east of the alternative site. Traffic safety and parking issues would be incrementally greater because the alternative site is smaller than the proposed site (1.6 acres versus 1.9 acres), has less room for construction staging, and is adjacent to a road that receives more traffic. Impacts to roadway width and transit are related to pipeline construction (which would be the same under the alternative and the project). | Implement Measure 3.8-1, DEIR p. 3.8-13 |
| Reduced Road Width | SM | SM= | | |
| Parking | SM | SM+ | | |
| Traffic Safety | SM | SM+ | | |
| Access | SM | SM= | | |
| Transit | SU | SU= | | |
| Pavement Damage/Wear | SM | SM- | | Implement Measure 3.8-7, DEIR p. 3.8-23 |
| Air Quality | | | | |
| Construction Emission | SM | SM- | The haul route for the alternative site would be shorter than for the proposed project, and therefore construction emissions would be incrementally less, and receptors would be exposed to less diesel particulate. Excavation quantities would be similar. | Implement Measures 3.9-1a through 3.9-1c, DEIR p. 3.9-24 |
| Diesel Particulate Emissions along Haul Routes | LTS | LTS- | | |
| Tunnel-Related Emissions | -- | -- | | |
| Operational Pollutant Emissions at Treatment Facilities | -- | -- | | |
| Operational Odor Emissions | LTS | LTS= | | |
| Secondary Emissions from Electricity Generation | LTS | LTS= | | |

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**TABLE 3-4 (Continued)**
**COMPARISON OF DEIR PROPOSED HAPPY VALLEY PUMPING PLANT AND PIPELINE PROJECT WITH DEIR ALTERNATIVE SITE**

| Impacts | DEIR Proposed Happy Valley Pumping site | Happy Valley Pumping Plant Alternative site | Discussion | Mitigation Measures (as Revised in this Response to Comments document) |
|---|---|---|---|---|
| Noise and Vibration | | | | |
| Construction Noise Increases | SM | SM= | See text in Section 3.4.3 | Implement Measures 3.10-1a, 3.10-1b and 3.10-1e, DEIR p. 3.10-30 |
| Noise Increases along Haul Routes | LTS | LTS- | | |
| Construction-Related Vibration Effects | LTS | LTS- | | |
| Operational Noise Increases | SM | SM= | | |
| Hazards and Hazardous Materials | | | | |
| Hazardous Materials in Soil and Groundwater | SM | SM= | There are no structures and no known contamination at the alternative site. The alignment for the Happy Valley Pipeline would be the same under the alternative (and is proximate to a high-priority utility). Hazards and hazardous materials impacts would be the same as for the proposed project. | Implement Measure 3.11-1, DEIR p. 3.11-27 |
| Hazardous Building Materials | -- | -- | | |
| Gassy Conditions in Tunnels | -- | -- | | |
| High-Pressure Gas Line Rupture | SM | SM= | | |
| Wildland Fires | LTS | LTS= | | |
| Release from Construction Equipment | LTS | LTS= | | |
| Accidental Release during Operation | -- | -- | | |
| Public Services and Utilities | | | | |
| Disruption of Utility Lines | SM | SM= | Impacts would be similar to the proposed project. | Implement Measures 3.12-1a through 3.9-1h, DEIR p. 3.12-16 |
| Increase in Electricity Demand | LTS | LTS= | | |
| Increase in Public Services Demand | LTS | LTS= | | |
| Adverse Effect on Landfill Capacity | SM | SM= | | Implement Measures 3.12-4a and 3.12-4b, DEIR p. 3.12-20 |
| Failure to Achieve State Diversion Mandates | SM | SM= | | |

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