

Happy Valley Pumping Plant
Water Treatment and Transmission Improvements Program
Environmental Impact Report
Responses to Comments Document
Chapter 3 Text Revisions pp 3.4-1 – 3.4-19
November 2006

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.

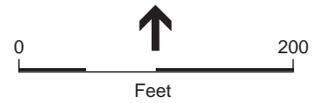
3.4.2 Description

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



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.

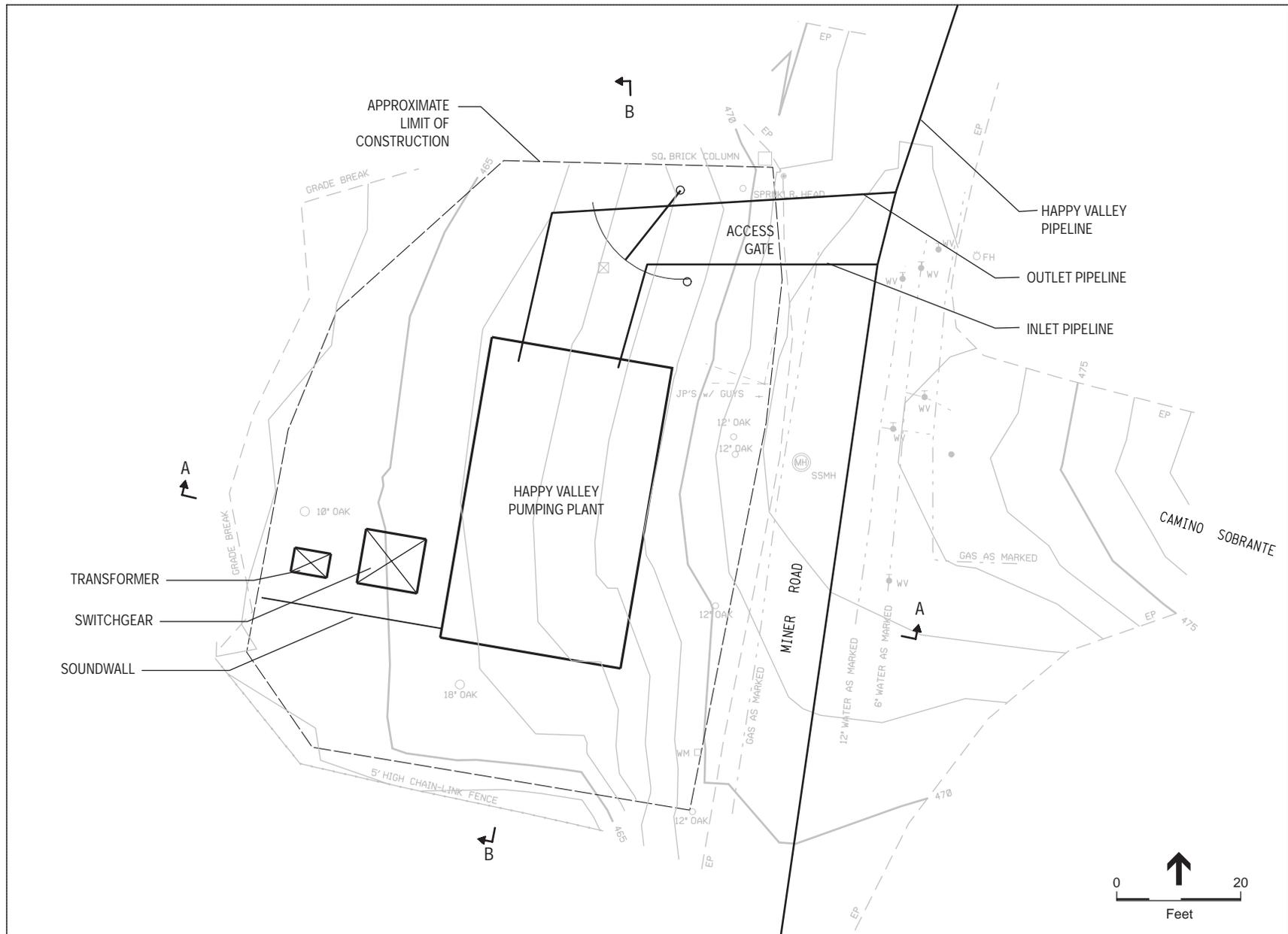
Construction staging would occur onsite and at the Orinda Water Treatment Plant; a shuttle would be provided to transport workers to and from an offsite parking location. A small amount of construction parking may be available on site.

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

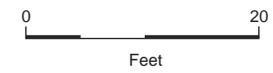
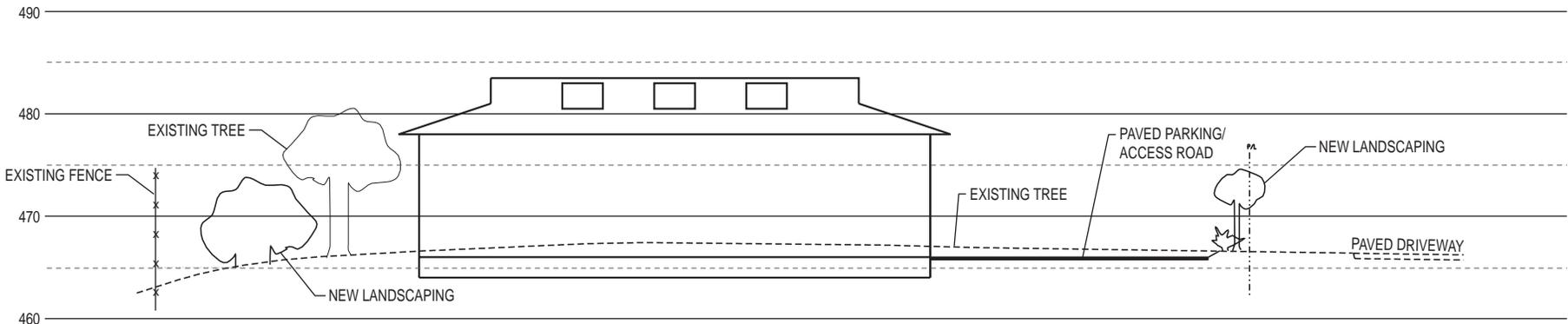
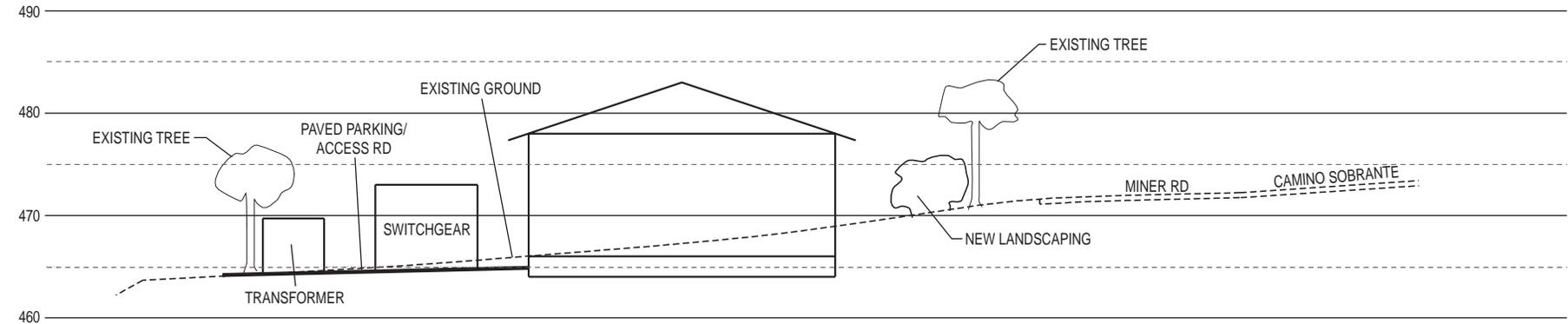
Overall, none of the impacts identified in the DEIR for the Happy Valley Pumping Plant Alternative site would be more severe than disclosed in Chapter 6 and some would become less severe, most notably impacts to protected trees. Three key topics, visual quality, biological resources, and noise, are discussed 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



SOURCE: EBMUD

EBMUD Water Treatment and Transmission Improvements Program . 204369

Figure 23
Happy Valley Pumping Plant Alternative Site-
Cross-Section

Visual Quality

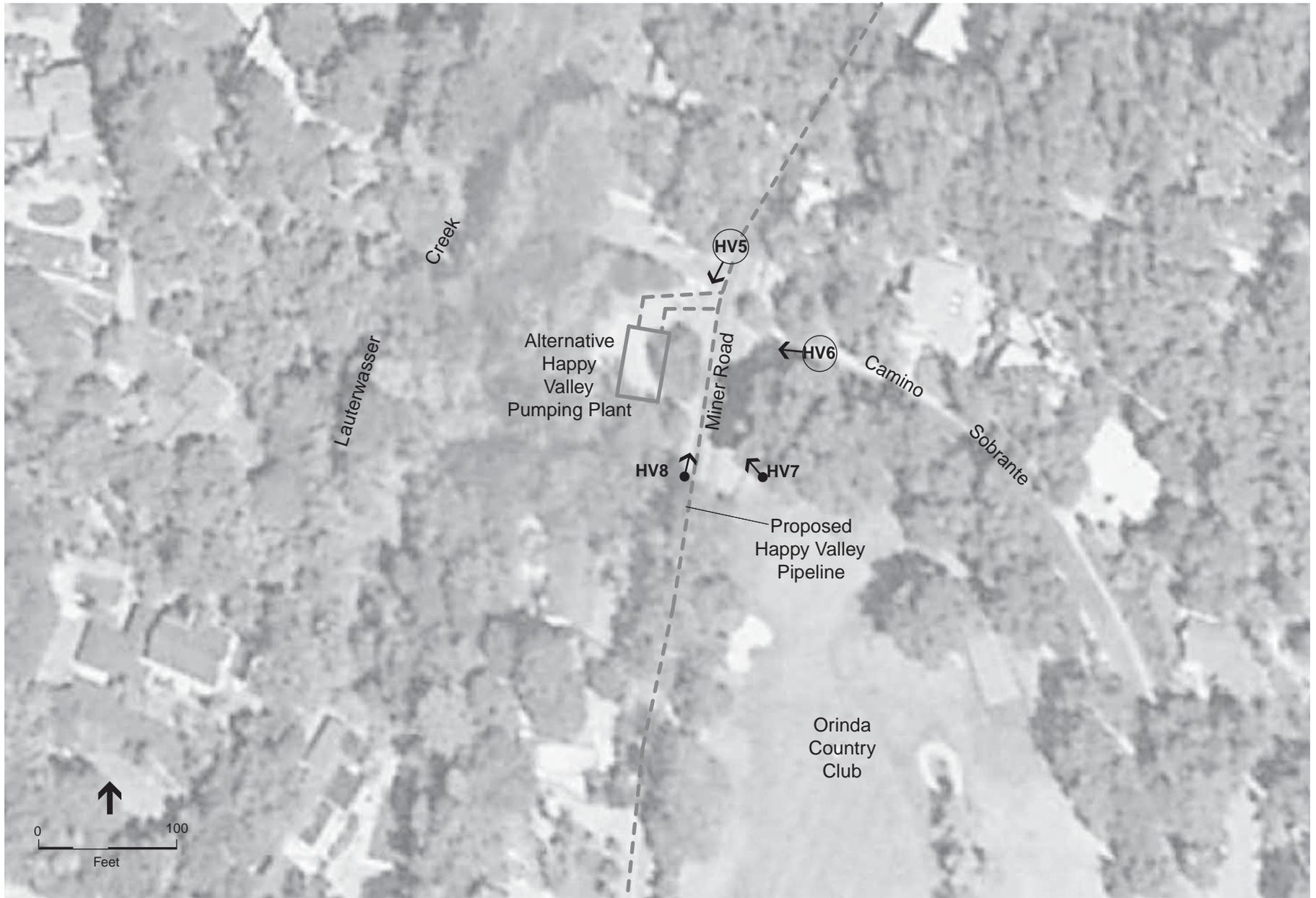
In response to requests for more specific information regarding visual impacts associated with development of the pumping at the alternative site, several photographs and visual simulations were prepared. Figure 24 indicates viewpoint locations of photographs and simulations prepared for the Happy Valley 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 plan 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

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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

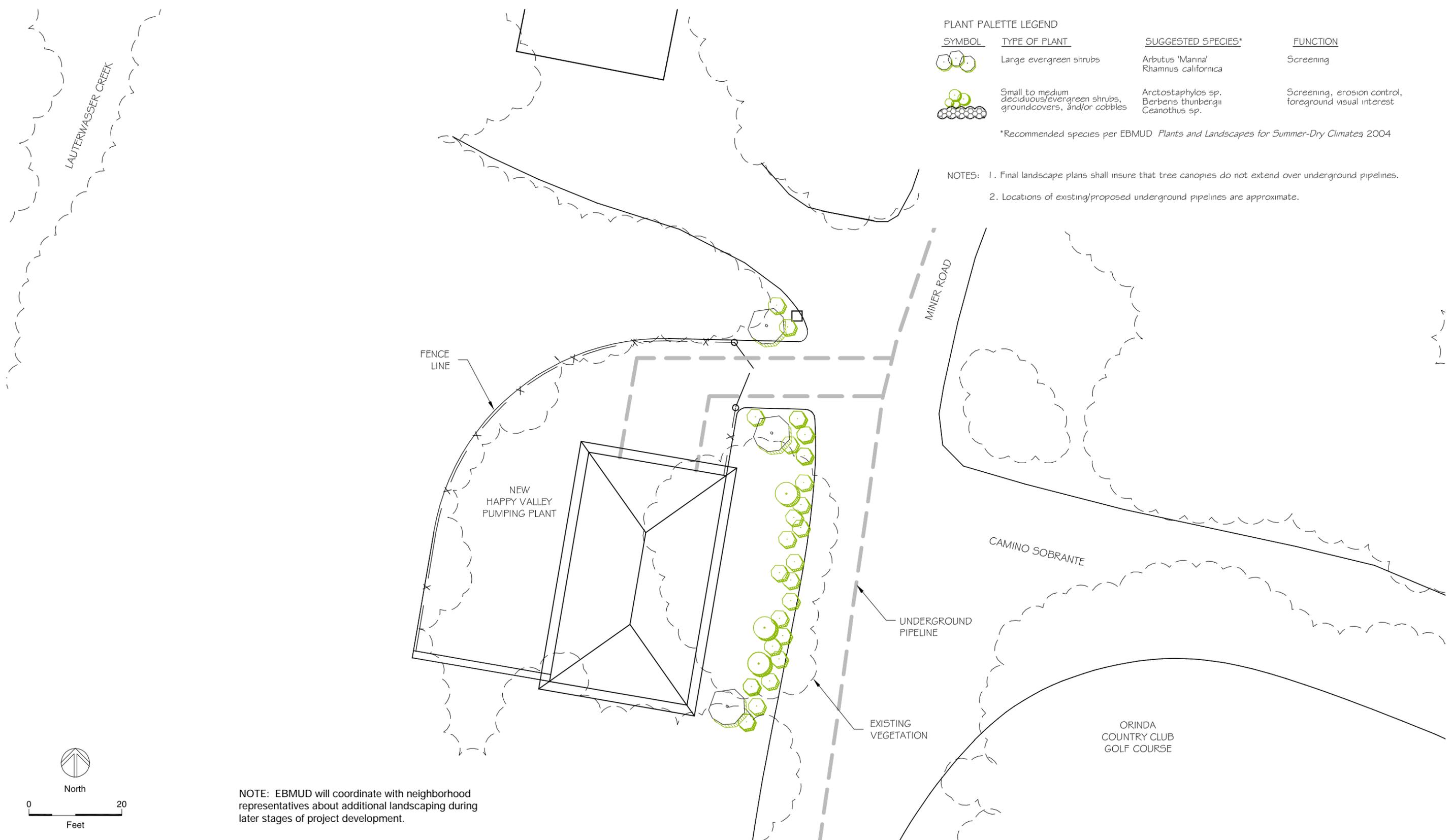
For Viewpoint Locations Refer to: Figure 22

*Simulation Photo

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Figure 25

Photographs of Happy Valley Pumping Plant
Alternative Site and Surroundings





Existing View looking southwest from Miner Road



Visual Simulation of Proposed Improvements without landscaping

For Viewpoint Location Refer to: Figure 24



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



Existing View looking west from Camino Sobrante



Visual Simulation of Proposed Improvements without landscaping

For Viewpoint Location Refer to: Figure 24

SOURCE: Environmental Vision

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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

SOURCE: Environmental Vision

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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 site¹ 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 be similar under this alternative as for the proposed site.	Implement Measure 3.4-1, DEIR p. 3.4-25
Groundshaking	SM	SM=		
Expansive Soils	SM	SM=		
Liquefaction	SM	SM=		
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 3-4 (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
				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-		

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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=		

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

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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=		

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

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